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1. GENERAL INFORMATION

GH 225-630 type machines are designed to meet and exceed the rigorous performance requirements of industrial applications. Their exemplary electrical and mechanical designs assure flawless operation in the most severe, heavy duty service.

All stator cores contain high performance electrical steel laminations, with compensating windings provided in main poles. The standard winding insulation system employs Class H materials, but standard performance is limited to Class F temperatures to extend machine life. Where required, size GH 225 can be supplied without compensation.

Mechanically, modular components are featured to allow the greatest flexibility to meet Customer's varied needs.

GH four-pole series of motors utilizes frames having seven shaft axis heights: 225, 250, 280, 315, 355, 400, and 450 mm.

GH six-pole series covers three shaft axis heights: 500, 560, and 630 mm.

While the usual mounting arrangement is horizontal foot mounted (IM B3 [code I] or IM 1001 [code II] in accordance with EN 60034-7) alternate arrangements are available on request. The factories are equipped with up-to-date machinery and modern manufacturing techniques for the production of the highest quality interchangeable parts.

The motors described in this catalogue cover a range of power output from 160 kW at 1500 rpm (1,019 kNm) [GH225SK] to 1800 kW at 500 rpm (34,38 kNm) [GH630ZK].

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2. STANDARDS AND QUALITY

2.1. REFERENCE STANDARDS

The GH series of motors is designed and manufactured to comply with the International Standard IEC 34-1 and the CENELEC harmonized standards EN 60034 and HD53 for European countries. In particular, the ratings and performance characteristics are in full compliance with EN 60034-1.

Upon request, motors can be supplied to meet the performance requirements of other standards (e.g. NEMA MG-1).

2.2. CE MARKING

GH series machines are manufactured in conformance to European Directive 73/23/EEC mod. 93/68/EEC (LVD) and meet the essential protective requirements specified in the European Directive 89/336/EEC (EMC) mod. 92/31/EEC and 93/68/EEC. The "CE" mark is applied to each machine to certify compliance with these directives.

2.3. QUALITY SYSTEM

The Quality System of NIDEC ASI S.p.A. covers the design, manufacturing and testing of DC machines. Related activities, such as procurement, component quality verification, project management and customer service, are also included within the system's comprehensive scope.

This Quality System is certified by CISQ/RINA (certification n. 50/92) – EQNet (Registration n. IT-2624) to comply with European standards UNI-EN 29001 (ISO 9001).



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3. IDENTIFICATION CODE

	GH	355	P	K
1 Machine series				
2 Frame size (shaft height in mm)				
3 Armature core length identification				
4 Machine with compensating winding (if present)				



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4. DESIGN FEATURES

4.1. ROTOR

The armature core is made up of preinsulated steel laminations, and is heatshrunk on the shaft to obtain rigid mechanical integrity. Armature windings are manufactured from preinsulated copper rectangular wire having a Class H enamel coating or enamel covered with glass yarn. Ground insulation is NOMEX®.

Wave or frog-leg armature winding patterns are employed according to the customer's requirements for electrical performance. Commutation capability of the motor can be improved considerably where a frog-leg type arrangement is used instead of lap winding. The armature coil leads are secured to the commutator by means of TIG welding system. Armature winding end turns are supported by special metallic or insulated rings and anchored by pre-impregnated fiberglass bandings. After assembly of the winding, the complete rotor is impregnated with Class H resin, using a Vacuum Pressure Impregnation (VPI) system and oven cured for polymerization. Additionally, a second impregnation with Class H resin is performed in open tank, followed by oven cure (polymerization).

4.2. COMMUTATOR

The commutator is designed to have an overspeed capability greater than that required of the motor. To ensure long term operational stability, these components are mechanically rotated and thermally aged prior to being secured to the shaft by an interference fit.

4.3. STATOR

The magnetically active stator core component, main and commutating poles are fully laminated to provide for rapid response times to transients in load or speed. During assembly these laminations are hydraulically compressed under tons of pressure, then bound to form a rigid, stable assembly. Stator coils are formed from Class H insulated copper wire, and include NOMEX® ground wall insulation materials.

These coils are bonded to the pole cores with special epoxy resins and interconnected with flexible cables. These cables are braced with high strength, extreme temperature tolerant lacing material. After completion, stator assembly is Vacuum Pressure Impregnated (VPI) with Class H resin and cured in a temperature controlled oven. For severe applications where high humidity, carbon dust or abrasive material is encountered, an additional highbuild resin coating is applied by immersion and thermal catalyzation.

4.4. BRUSHHOLDER YOKE

Designed for strength and stiffness, the brush yoke is mounted to the mechanically rigid end shield. This yoke supports the brush holders, and allows individual adjustment of the brushes for optimal neutral zone alignment. Such design also incorporates sensitivity for the 1% positioning required for tough bi-directional rotating applications.

The brushes are split type, and are manufactured from high quality electrographitic grade material. The brushes are selected to consider the motor rating, application and environmental conditions.

4.5. BEARINGS

Tables 1 and 2 list the standard bearings furnished with each motor frame. These bearings are sized in accordance with the largest rated torque for that frame size, regardless of the length of the machine, to provide for lower bearing temperatures, improved vibrational stability and improved bearing life. In horizontal, direct coupled use, the B10 life is in excess of 40,000 hours, and 20,000 hours for belted applications.

Bearing seals are provided for totally enclosed motors having an IP 55 degree of protection.

Figures 1 and 2 illustrate the bearing arrangement for both the drive and non-drive end.



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4. DESIGN FEATURES

TABLE 1

Bearings for GH Series (4 poles)

FRAME	OPPOSITE DRIVE END				DRIVE END					
					ELASTIC COUPLING				BELT COUPLING	
	B3-B5	Grease g	V1-V3	Grease g	B3-B5	Grease g	V1-V3	Grease g	B3-B5-V1-V3	Grease g
GH 225	6217 2Z C3	-	6217 2Z C3	-	6218 2Z C3	-	6218 2Z C3	-	NU 218 ECP C3	25
GH 250	6217 2Z C3	-	6217 2Z C3	-	6218 2Z C3	-	6218 2Z C3	-	NU 218 ECP C3	25
GH 280	6219 C3	30	7219 BE	30	6221 C3	35	6221 C3	35	NU 221 ECJ C3	35
GH 315	6221 C3	35	7221 BE	35	6222 C3	40	6222 C3	40	NU 222 ECJ C3	40
GH 355	6224 C3	45	7224 B	45	6224 C3	45	6224 C3	45	NU 224 ECJ C3	45
GH 400	6228 C3	55	7228 B	55	NU 228 ECM C3	55	6228 M C3	55	NU 228 ECM C3	55
GH 450	6232 M C3	70	7232 BCB	70	NU 232 ECM C3	70	6232 M C3	70	NU 232 ECM C3	70





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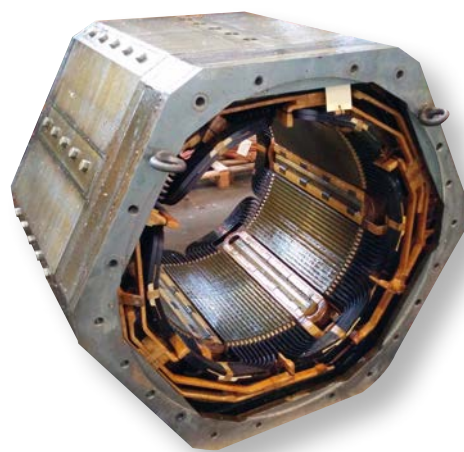
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4. DESIGN FEATURES

TABLE 2

Bearings for GH Series (6 poles)

FRAME	SHAFT	OPPOSITE DRIVE END				DRIVE END					
						ELASTIC COUPLING				BELT COUPLING	
		B3-B5	Grease	V1-V3	Grease	B3-B5	Grease	V1-V3	Grease	B3-B5-V1-V3	Grease
			g		g		g		g		g
GH 500	ø150	6232 M C3	70	7232 BCB M	70	NU232 EC M C3	70	6232 M C3	70	NU232 EC M C3	70
	ø170	6236 M C3	83	7236 BCB M	83	NU236 EC M C3	83	6236 M C3	83	NU236 EC M C3	83
GH 560	ø170	6236 M C3	83	-	-	NU236 EC M C3	83	-	-	NU236 EC M C3	83
	ø190	NU1040 M C3 + 6040 M C3	160	-	-	NU1040 M C3	80	-	-	NU1040 M C3	80
GH 630	ø170	6236 M C3	83	-	-	NU236 EC M C3	83	-	-	NU236 EC M C3	83
	ø190	NU1040 M C3 + 6040 M C3	160	-	-	NU1040 M C3	80	-	-	NU1040 M C3	80
	ø210	NU1044 M C3 + 6044 M C3	190	-	-	NU1044 M C3	95	-	-	NU1044 M C3	95



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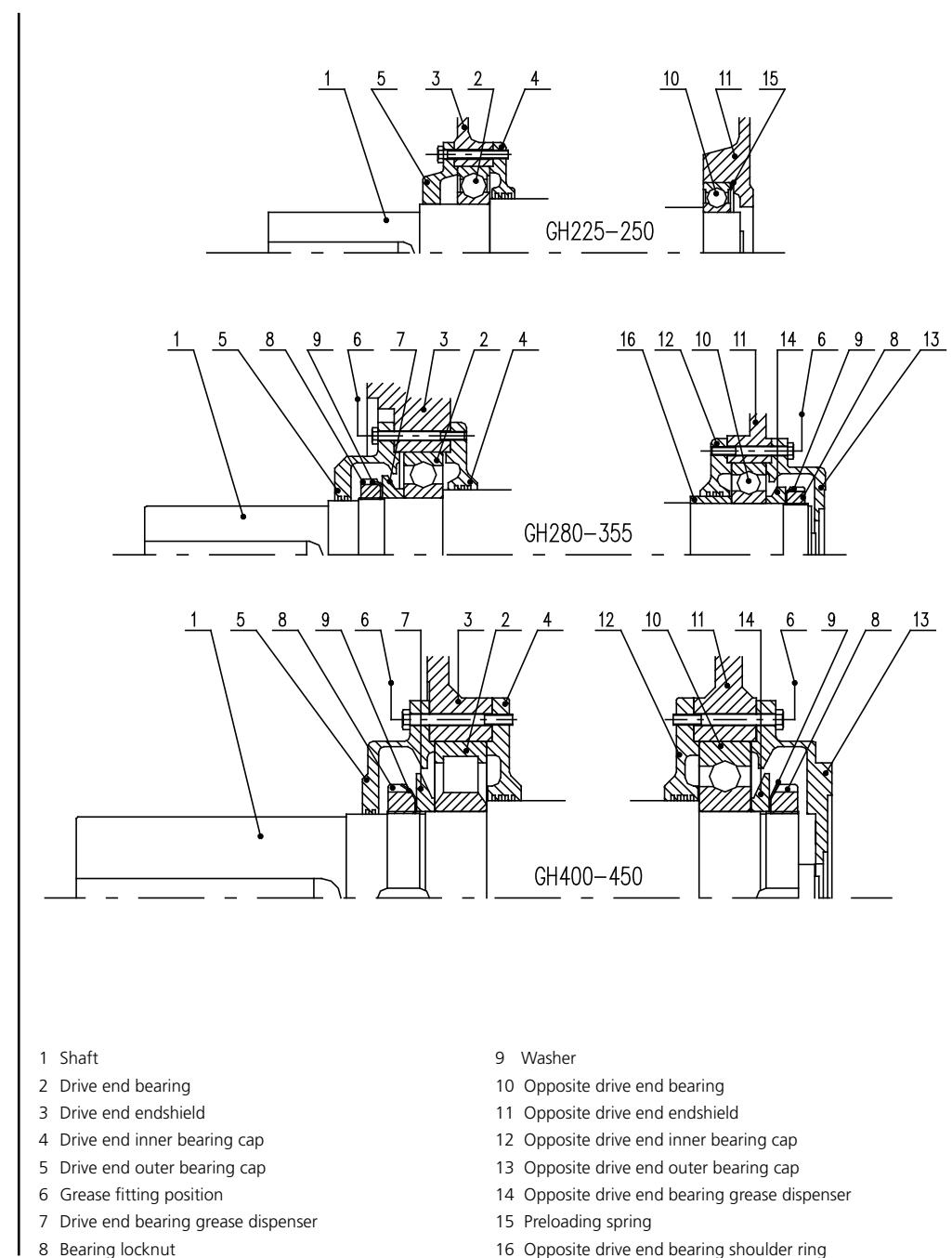
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FIGURE 1
Bearing assembly



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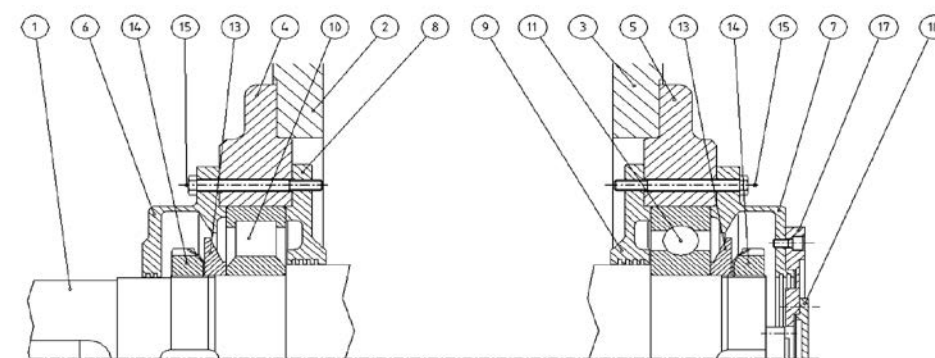
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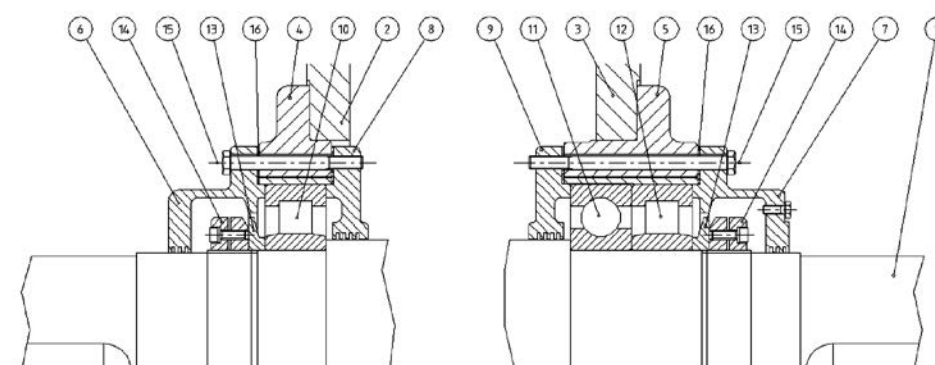
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4. DESIGN FEATURES

FIGURE 2
Bearing assembly (Size GH500-630)



GH500-GH630
(shaft end
Ø150-170 mm)



GH560-GH630
(shaft end
Ø190-210 mm)

- | | |
|--|--|
| 1 Shaft | 10 Drive end bearing (roller) |
| 2 Drive end endshield | 11 Opposite drive end endshield (ball) |
| 3 Opposite drive end endshield | 12 Opposite drive end bearing (roller) |
| 4 Drive end hub | 13 Grease valve |
| 5 Opposite drive end hub | 14 Ferrule |
| 6 Drive end outer bearing cap | 15 Grease fitting position |
| 7 Opposite drive end outer bearing cap | 16 Insulator disc (only GH630 IM 1002) |
| 8 Drive end inner bearing cap | 17 Accessories support flange |
| 9 Opposite drive end inner bearing cap | 18 Opposite drive end closing cap |



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4.6. BELTED AND RADIAL THRUST APPLICATION

Power transmission components (pulleys, sheaves and belts) must be designed and selected in accordance with the manufacturers recommendations. Once the motor side pulley or sheave has been selected, the allowable radial (side) thrust load must be within the values listed in Table 3 for ball bearings or Table 4 for roller bearings (for other cases, please contact Nidec ASI).

TABLE 3

ALLOWABLE RADIAL THRUST ON BALL BEARINGS (N)										
SIZE	BEARING	SPEED [RPM]								MAXIMUM SPEED [RPM]
		400	600	1000	1500	2000	2500	3000	4000	
GH225	6218-2Z	12200	11500	10650	9700	9100	8650	8300	-	3000
GH250	6218-2Z	12200	11500	10650	9700	9100	8650	-	-	2800
GH280	6221	17300	16300	1500	13800	12900	12300	-	-	2600

TABLE 4

ALLOWABLE RADIAL THRUST ON ROLLER BEARINGS (N)										
SIZE	BEARING	SPEED [RPM]								MAXIMUM SPEED [RPM]
		400	600	1000	1500	2000	2500	3000	4000	
GH225	NU 218 ECP	24800	24500	23330	21600	20200	19200	18500	-	3000
GH250	NU 218 ECP	24800	24500	23330	21600	20200	19200	-	-	2800
GH280	NU 221 ECP	36800	36000	33500	31300	29700	28500	-	-	2600

It is necessary that pulley length be no more than twice shaft end length, whereas an air gap of about 10 mm has to be kept between the pulley and motor end shield (bearing bracket).



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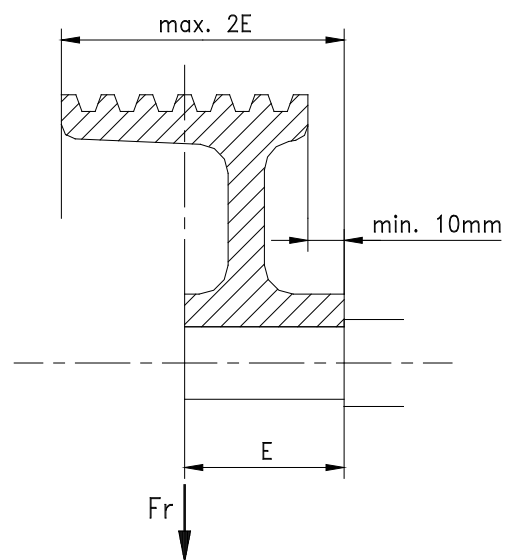
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Radial thrust can be obtained from the equation below:



$$Fr = 19.5 \times 10^6 \times \frac{P}{n \times D} \times K$$

Fr = radial thrust (N)
 P = rated motor power (kW)
 n = motor speed (rpm)
 D = pulley diameter (mm)
 K = tension factor (given by the pulley manufacturer)

If K is not available, use as approximate assumption:

$K = 3,5 \div 4$ for flat leather belts

$K = 2,2 \div 2,5$ for V-belts or for high adhesion belts

If the radial thrust so obtained is higher than the value specified in the tables, roller bearings or special bearings must be used, or the pulley diameter must be increased.

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GH315

GH355

GH400

GH450

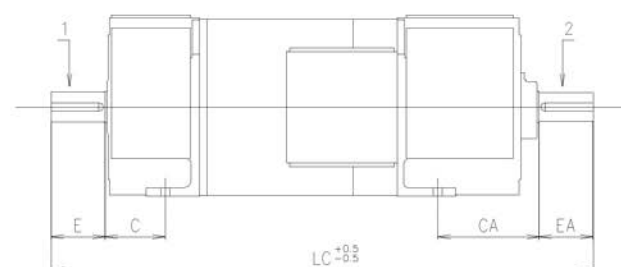
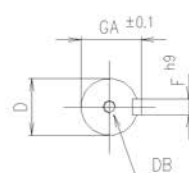
5. CONSTRUCTION FEATURES

5.1. COUPLING AND SHAFT EXTENSION

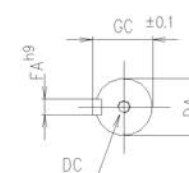
Standard machines are furnished with one drive end extension which is cylindrical with a keyway (IM 1001). On request, machines are available with two shaft extensions (IM 1002) for a tandem arrangement, and the shaft end dimensions may be of different size from the standard solution and are shown in Table 5.

Unless otherwise specified, standard machines are designed for direct drive using flexible type couplings.

Shaft extension 1



Shaft extension 2



* Please enquire the manufacturer NIDEC ASI

Dimensions without tolerance UNI ISO 2768 - c



DC MOTORS

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5. CONSTRUCTION FEATURES

TABLE 5
Machines (GH225-450) with two shaft extensions (IM 1002)

TYPE	SIZE	LC	C	E	D	F	GA	DB	CA	EA	DA	FA	GC	DC
GH225	S	1365	149	170	80M6	22	85	M20X40	221	170	80M6	22	85	M20X40
	M	1415												
	L	1460												
	P	1510												
	X	1560												
GH250	M	1569	168	170	85M6	22	90	M20X40	251	170	80M6	22	85	M20X40
	L	1629												
	X	1709												
GH280	S	1710	190	170	95M6	25	100	M20X40	320	170	90M6	25	95	M20X40
	M	1760												
	L	1810												
	P	1870												
GH315	M	2067	216	210	110M6	28	116	M20X50	471	210	100M6	28	106	M20X50
	L	2117												
	P	2177												
	X	2247												
GH355	S	2195	254	250	130M6	32	137	M24X65	521	210	110M6	28	116	M20X50
	M	2245												
	L	2305												
	P	2375												
GH400	M	2400	280	250	130M6	32	137	M24X65	500	250	130M6	32	137	M24X65
	L	2480			*	*	*							
	P	2570												
GH450	M	2490	315	250	150M6	36	158	M42X80	315	250	150M6	36	158	M42X3X80
	L	2550		300	170M6	40	179			300	170M6	40	179	
	P	2720												
	X	2800												
	Y	2890												

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5. CONSTRUCTION FEATURES

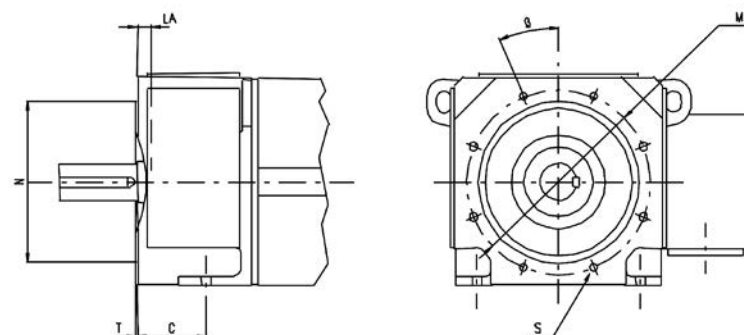
5.2. MOUNTING ARRANGEMENT

Machines are furnished in accordance with EN 60034-7 standard mounting arrangement IM B3 (code I) or IM 1001 (code II). Vertical machines in the IM V1 (code I) or IM 3011 (code II) mounting arrangement and those shown in Figure 3 are available upon request.

For the IM B5 or IM 3001 arrangement, the mounting flange holes and dimensions are shown in Table 6.

TABLE 6

Machines with im B5 mounting arrangement



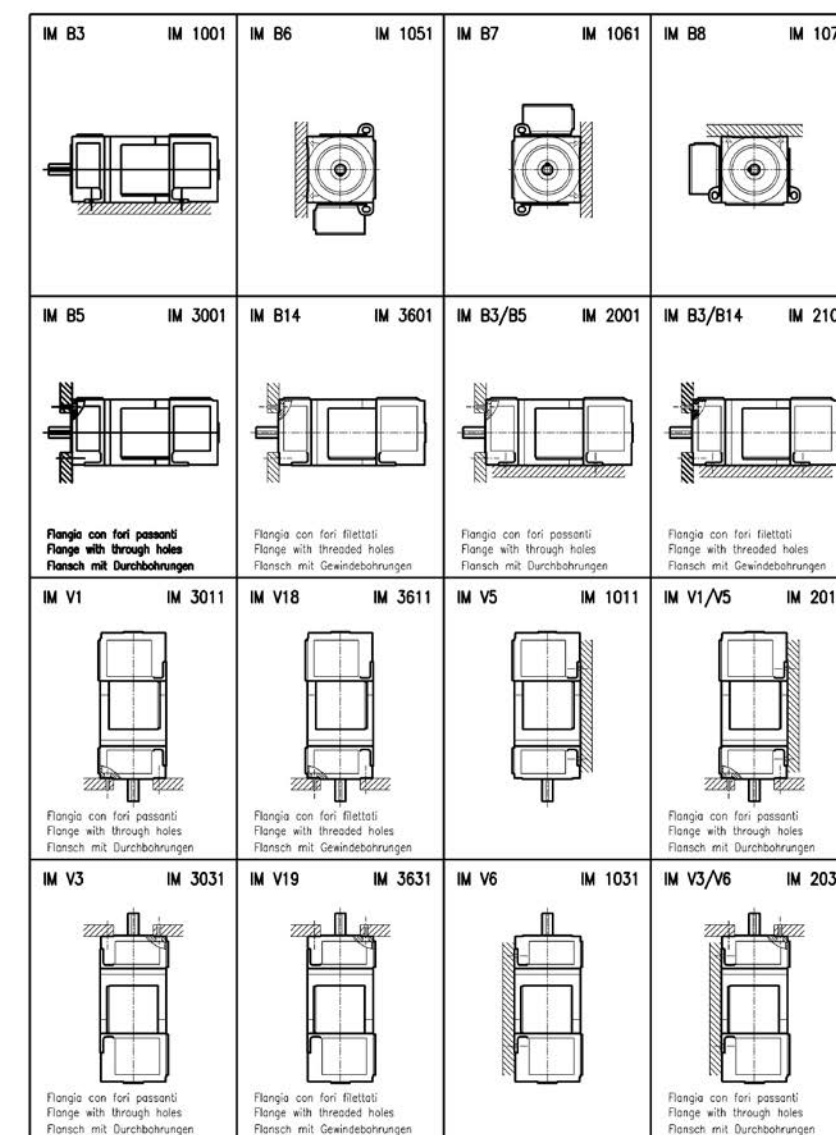
* Deve essere in forma costruttiva IM2001 (B3/B5)
Only in mounting arrangement IM2001 (B3/B5)
Nur für Bauform IM2001 (B3/B5)

Quote senza indic. di tolleranza
Dimensions without tolerance
Abmessungen ohne Toleranzangabe
UNI ISO 2768 - m

TYPE	C	N	T	M	S	β	LA
GH225	149	350J6	5	400	8 X Ø18	22.5°	20
GH250 *	168	350J6	5	400	8 X Ø18	22.5°	20

FIGURE 3

Main Mounting Arrangements



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5. CONSTRUCTION FEATURES

5.3. DEGREE OF PROTECTION

Machines are normally furnished with one of the following degrees of protection, in accordance with EN 60034-5:

IP 23: Protected machine

IP 44: Enclosed machine

Other enclosures or more restrictive degrees of protection are available on request.

5.4. COOLING METHOD

The various standard cooling methods are listed in Table 7. Cooling method IC666 (air-to-air heat exchanger with primary and secondary air blowers) or IC410 (enclosed machine, not ventilated) require special handling by the factory (Table 8).

Normal environmental conditions according to EN 60034-1:

- altitude: 0 ÷ 1000 m above sea-level;
- temperature: -15°C ÷ +40°C;
- humidity: not less than 5 g/m³ in absolute value, not more than 90% in relative value;
- cooling air: free of dust, oils, or aggressive gases such as, in particular, ammonia, chlorine, sulfur and silicon.

Applications using water-to-air heat exchangers may require special handling due to water temperatures or non-fresh water sources.

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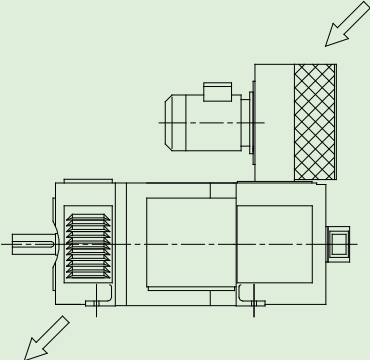
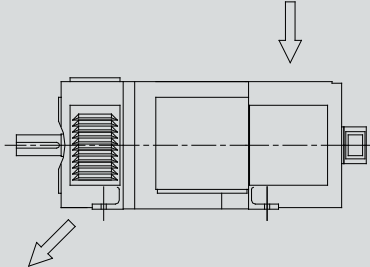
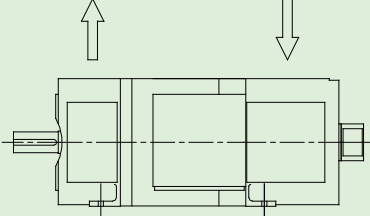
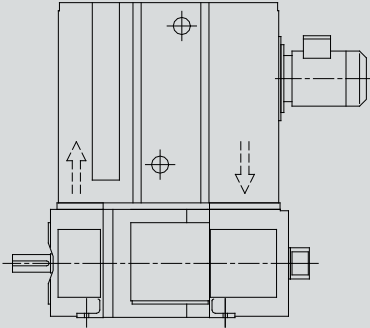
GH355

GH400

GH450

5. CONSTRUCTION FEATURES

TABLE 7
Standard cooling methods

TIPO DI RAFFREDDAMENTO EN 60034-6	GRADO DI PROTEZIONE EN 60034-5	DESCRIPTION	
IC06	IP 23	SEPARATE VENTILATION USING A MOTOR-DRIVEN BLOWER MOUNTED ON THE OPPOSITE DRIVE END ENDSHIELD	
IC17	IP 23	SEPARATE VENTILATION FROM AN AIR DUCT CONNECTED TO THE OPPOSITE DRIVE END	
IC37	IP 44	SEPARATE VENTILATION FROM AIR DUCTS CONNECTED TO BOTH ENDS. AIR INLET ON THE OPPOSITE DRIVE END	
IC86W	IP 44	TOTALLY ENCLOSED WITH AIR TO WATER HEAT EXCHANGER	



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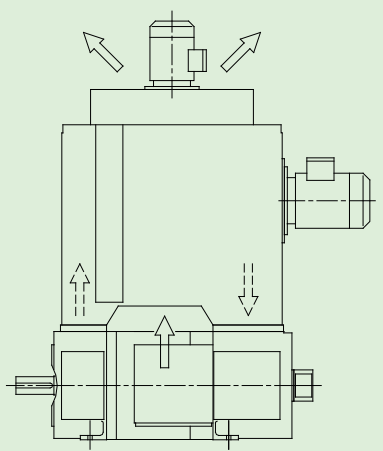
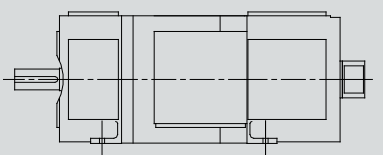
GH355

GH400

GH450

5. CONSTRUCTION FEATURES

TABLE 8
Special cooling methods

TIPO DI RAFFREDDAMENTO EN 60034-6	GRADO DI PROTEZIONE EN 60034-5	DESCRIPTION	
IC666	IP 44	TOTALLY ENCLOSED WITH AIR TO AIR HEAT EXCHANGER	
IC410	IP 44 / IP 55	TOTALLY ENCLOSED NON VENTILATED	



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5.4.1. COOLING METHOD IC06 WITH BLOWER MOUNTED ON THE MOTOR (PVA)

For frames 225 through 450 the blower assembly is normally mounted on the non-drive end shield.

Frames 500 and 630 have the blower assembly mounted on the drive end shield.

Blower assemblies are always furnished with a filter.

The blower motor kW ratings are listed in Table 9, with the normal power supply of 400 V, 3 Ph, 50 Hz. Other voltages and frequencies may be available upon request.

TABLE 9

Blower motor power (50 Hz)

SIZE	GH225	GH250	GH280	GH315	GH355
POWER [KW]	2.2	3.0	5.5	5.5	7.5
SIZE	GH400	GH450	GH500	GH560	GH630
POWER [KW]	7.5	9.2	9.2	11.0	11.0

5.4.2. COOLING METHOD IC17 AND IC37 WITH AIR DUCTS (PVB AND CVB)

When cooling air is supplied from separate ventilation ducts (provided by the Customer), the required air flow and expected pressure drop across the motor are listed in Table 10.

TABLE 10

Ventilation data

FRAME	AIR FLOW [m³/min]	INTERNAL PRESSURE DROP OF THE MACHINE	
		IC17 [Pa]	IC37 [Pa]
GH225	50	1400	1300
GH250	70	1400	1300
GH280	85	2050	1950
GH315	120	1800	1700
GH355	140	2050	1950
GH400	180	1600	1500
GH450	220	1250	1150
GH500	260	1200	1200
GH560	320	1200	1200
GH630	380	1200	1200

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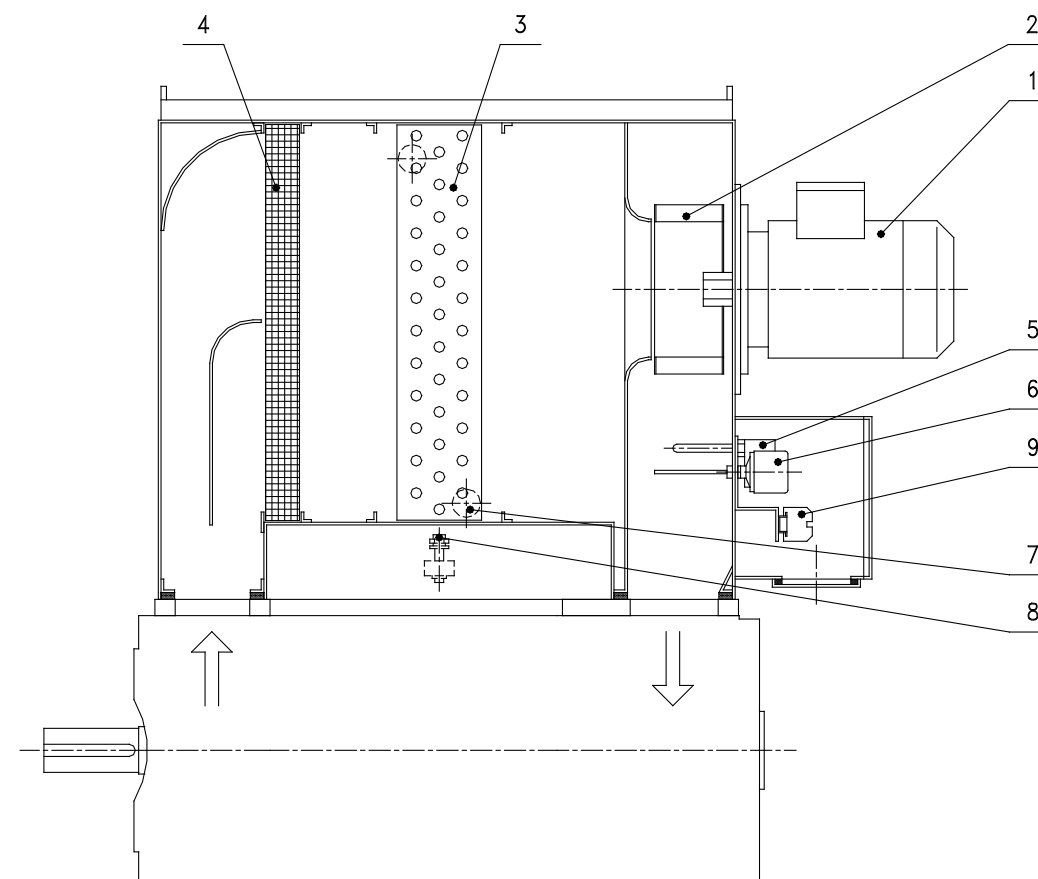
GH400

GH450

5. CONSTRUCTION FEATURES

FIGURE 4

Air to water heat exchanger (4-pole GH motors)



- 1 Blower motor
- 2 Blower impeller
- 3 Air to water heat exchanger

- 4 Air filter
- 5 Thermostat
- 6 Internal air circulation switch

- 7 Water flow detector
- 8 Water leak detector
- 9 Terminal box

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5. CONSTRUCTION FEATURES

5.4.3. COOLING METHOD IC86W, TOTALLY ENCLOSED WATER-TO-AIR COOLED (TEWAC)

The air-to-water heat exchanger, available for fresh water, is of simple tube type with finned tube bundles. The tubes are made of copper and the fins of anticorodal. A motor-driven centrifugal blower circulates the internal air through the motor and then through the finned heat exchanger.

All standard air-to-water heat exchangers are normally provided with a filter for the internal air and provided with the following accessories:

- water flow indicator (connected on water inlet pipe) with electric contacts;
- water leak detector with electric contacts;
- internal air flow indicator with electric contacts;
- air thermostat with electric contacts;
- inlet and outlet water block valves (pipe thread connection, flanged alternate).

As an alternate it is possible to limit the accessories to the air thermostat only.

The water supply system must be connected to the heat exchanger through flexible pipes to avoid the transmission of vibrations. The above mentioned heat exchangers are built for fresh water only. In addition the water hardness should not exceed 15 French degrees. Other special heat exchangers may be supplied for particular water types (seawater, dirty or acid water, etc.).

The standard heat exchanger is designed for an inlet water temperature of 30°C and a temperature difference between inlet and outlet of about 3-4 K. The rated water pressure is 500 kPa (5 bar) and the test pressure is 1000 kPa (10 bar).

The normal pressure drop in the water circuit is about 50 kPa (500 mbar). Figure 4 shows a cross-section drawing of an air to water heat exchanger. In sizes GH 500-630 (6 poles motor) the internal air circulates in the opposite direction (cold air entering the motor on drive end).

The blower motor power ratings at 50 Hz are given in Table 11. The accessories terminal markings are shown on Figure 6.

TABLE 11

Blower motor power for air to water heat exchangers (50 Hz)

SIZE	GH225	GH250	GH280	GH315	GH355
POWER [KW]	4.0	4.0	5.5	7.5	9.2

SIZE	GH400	GH450	GH500	GH560	GH630
POWER [KW]	15.0	15.0	11.0	11.0	18.5

5.4.4. COOLING METHOD IC666, AIR-TO-AIR COOLED (TEAAC)

Use of an air-to-air heat exchanger requires consultation with the manufacturer for proper application and design. Standard heat exchangers consist of aluminum alloy tubes (< 0.2% copper), steel tube sheets and a fabricated steel plate housing.

This assembly is mounted to the machine frame, and is provided with two blowers. One blower, mounted on the opposite drive end of the machine (GH225-450) or on the drive end of the machine (GH500-630), circulates internal air through the tube bundle. A second blower, mounted on the top of the assembly, moves external air up through the heat exchanger tubes. A washable filter is mounted in the air duct assembly at the hot air entrance.

The following accessories are provided:

- internal air flow indicator with electric contacts;
- external air flow indicator with electric contacts
- air thermostat with electric contacts.

Other accessories are available on request.

Figure 5 shows a sectional view of a TEAAC machine.

Terminal markings for the accessory devices are shown in Figure 7.

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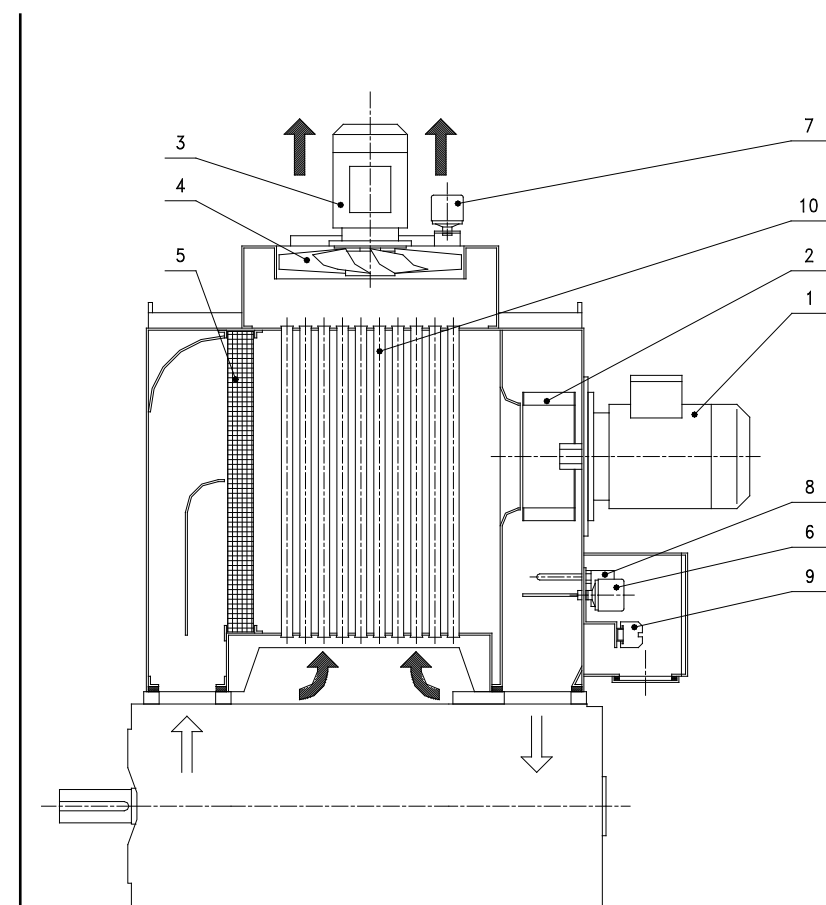
GH400

GH450

5. CONSTRUCTION FEATURES

FIGURE 5

Air-to-air heat exchanger (4-pole GH motors)



- 1 Internal air flow blower motor
- 2 Internal air flow blower impeller
- 3 External air flow blower motor
- 4 External air flow blower impeller
- 5 Filter
- 6 Internal air flow circulation switch
- 7 External air flow circulation switch (on request)
- 8 Thermostat
- 9 Terminal box
- 10 Air-to-air heat exchanger

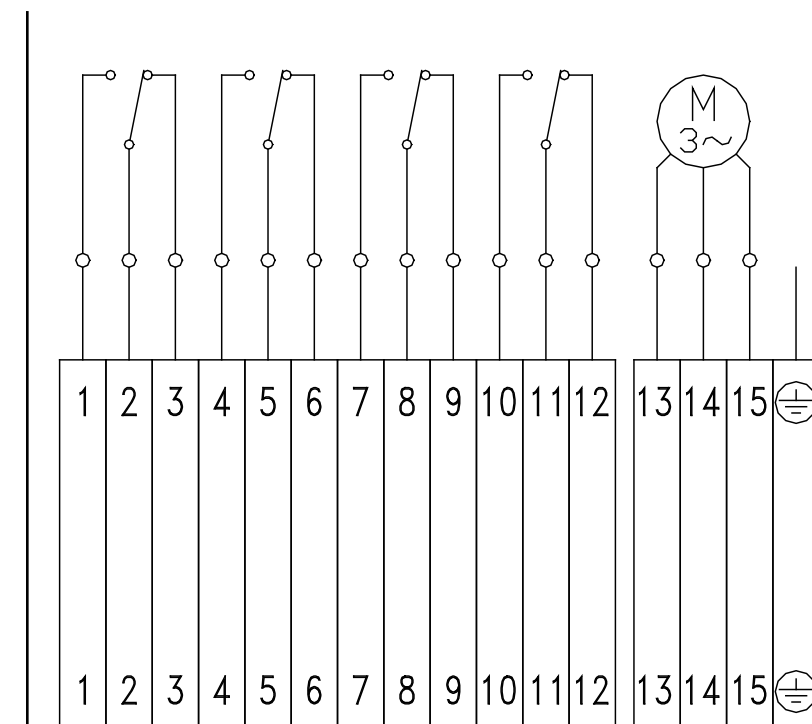
5.4.5. 5.4.5 COOLING METHOD IC410 (CNV)

Enclosed Machine with protection degree between IP 44 and IP 55, without internal and external air heat exchanger.

Cooling systems by natural convection: the heat is dissipated through the machine. This cooling method requires consultation with the manufacturer for proper application and design.

FIGURE 6

Connection diagram of air-to-water heat exchanger



- 1 - 2 - 3 Water leak detector
- 4 - 5 - 6 Water flow detector
- 7 - 8 - 9 Internal air circulation switch
- 10 - 11 - 12 Air thermostat
- 13 - 14 - 15 Blower motor

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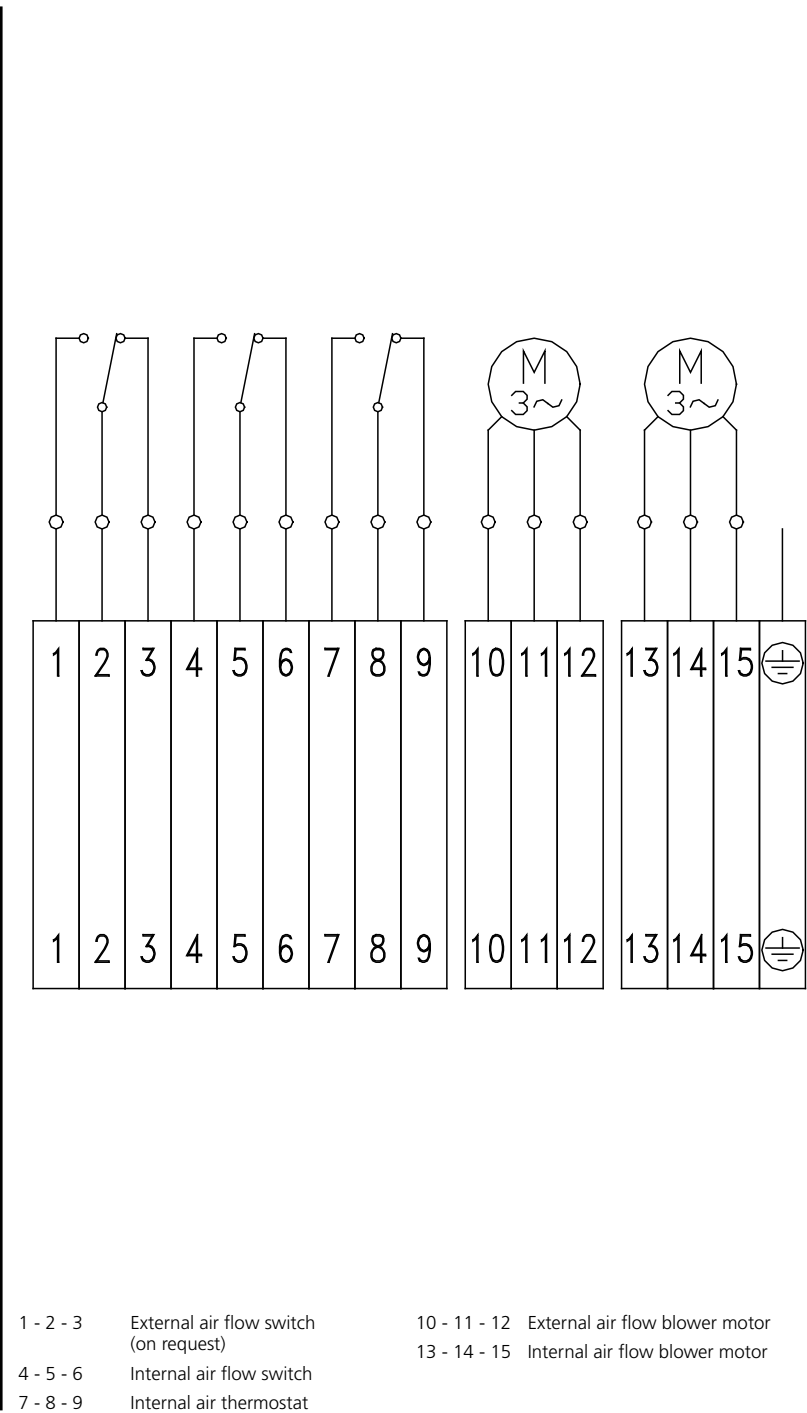
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FIGURE 7
Connection diagram of air-to-air heat exchanger



5.5. MAXIMUM ALLOWABLE SPEEDS

Table 12 lists the maximum allowable operating speeds, maximum mechanical speeds and maximum overspeeds for 4 pole machines ¹.

TABLE 12
Maximum allowable speeds

SIZE	MAXIMUM OPERATING SPEED (*) [rpm]	MAXIMUM MECHANICAL SPEED [RPM]	OVERSPEED [RPM]
GH225	3000	3000	3450
GH250 M, L	2800	2800	3300
GH250 X	2700	2700	3100
GH280	2600	2600	3050
GH315 M, L, P	2400	2400	2800
GH315 X	2300	2300	2600
GH355 S, M, L	2200	2200	2650
GH355 P	2100	2100	2350
GH400 M, L	2000	2000	2400
GH400 P	1900	1900	2250
GH450 M, L, P	1800	1800	2160
GH450 X	1700	1700	2050
GH450 Y	1600	1600	1950

(*) With 160% maximum load and 1:2 maximum speed range by field control.
¹ This product catalogue excludes the performance of 6 pole machines, so in case you need to make assessments on the maximum allowable speed for a motor GH 500-560-630 it is recommended to ask for a verification to the technical office of Nidec ASI.

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5.6. NOISE LEVEL

Motor noise levels are evaluated on the weighted A scale basis, by either the Sound Pressure Level L_p , or the Sound Power Level L_w , and are measured in accordance with ISO 1680/1. Standard machine noise levels comply with the limits of EN 60034-9. Machines with reduced noise levels can be furnished upon request.

5.7. VIBRATIONS AND BALANCING

Where the shaft extension includes a keyway, rotor balancing is performed with a half key secured in the slot. Otherwise, the rotor is balanced without the half coupling, pulley or other device mounted. Any component added to the rotor after this must be independently balanced.

All machines comply EN 60034-14 and CENELEC HD 53.14.51 with vibration level "A" for all frames. On request, the motors may be supplied in compliance with level "B" (special).

Motor vibration levels are listed in Table 13, with a tolerance of +10%. These values are applicable also where the operating speed of the motor exceeds the maximum speed listed in the table (CENELEC HD 53.14.51).

TABLE 13

Limits of maximum vibration magnitude (in displacement, velocity and acceleration)

VIBRATION GRADE	SHAFT HEIGHT, H [mm]	$56 \leq H \leq 132$			$132 < H \leq 280$			$H > 280$		
		DISPLAC.	VEL.	ACC.	DISPLAC.	VEL.	ACC.	DISPLAC.	VEL.	ACC.
		μm	mm/s	m/s ²	μm	mm/s	m/s ²	μm	mm/s	m/s ²
A	FREE SUSPENSION	25	1.6	2.5	35	2.2	3.5	45	2.8	4.4
	RIGID MOUNTING	21	1.3	2.0	29	1.8	2.8	37	2.3	3.6
B	FREE SUSPENSION	11	0.7	1.1	18	1.1	1.7	29	1.8	2.8
	RIGID MOUNTING				14	0.9	1.4	24	1.5	2.4

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5.8. CONDUIT BOX

Terminal box, usually supplied for all motor frames, is manufactured in IP 55 protection, and it is normally mounted on motor right side, seeing from drive end; position on the left is always possible, whereas position on motor top generally requires a confirmation by Nidec ASI, based on motor frame.

Terminal box position cannot be the same as blower position; for motors with air-to-water heat exchanger, standard position for terminal box is opposite to water connections.

Terminal box is usually supplied closed; on request it is possible to have it provided with cable glands.

Terminal box types are shown in Figure 8 and Figure 9, for four-pole and six-pole machines respectively; terminal end markings are shown in Table 14. On request different solutions can be adopted (for example, execution with free cable ends).

5.9. GROUD TERMINALS

To ground the machine, two terminals are provided with threaded holes and screws. One terminal is available in the conduit box; the other is on the frame near the box, complete of identification nameplate.

TABLE 14

Terminal head markings

MARKING ACCORDING TO IEC 60034-8		DESCRIPTION
A1	A2	ARMATURE WINDING (ROTOR)
B1	B2	COMMUTATING POLES WINDING
C1	C2	COMPENSATING WINDING
D1	D2	SERIES EXCITATION WINDING
E1	E2	SHUNT EXCITATION WINDING
F1	F2	SEPARATE EXCITATION WINDING

FIGURE 8

Terminal box for 4-pole GH machines

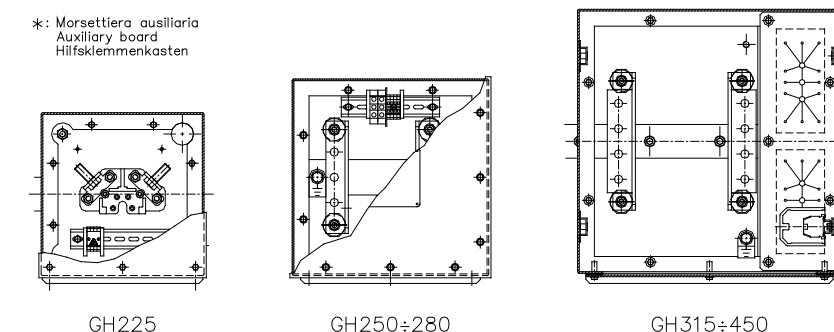
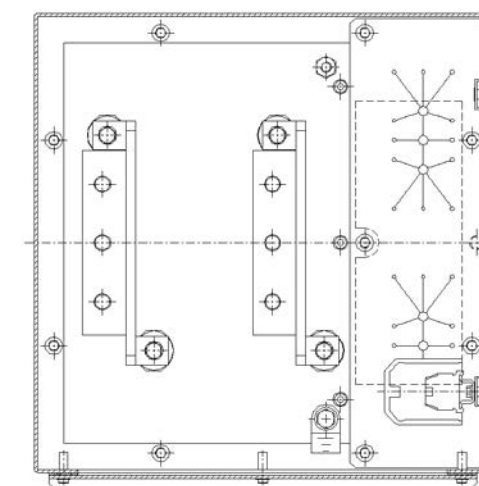


FIGURE 9

Terminal box for GH500-630 machines



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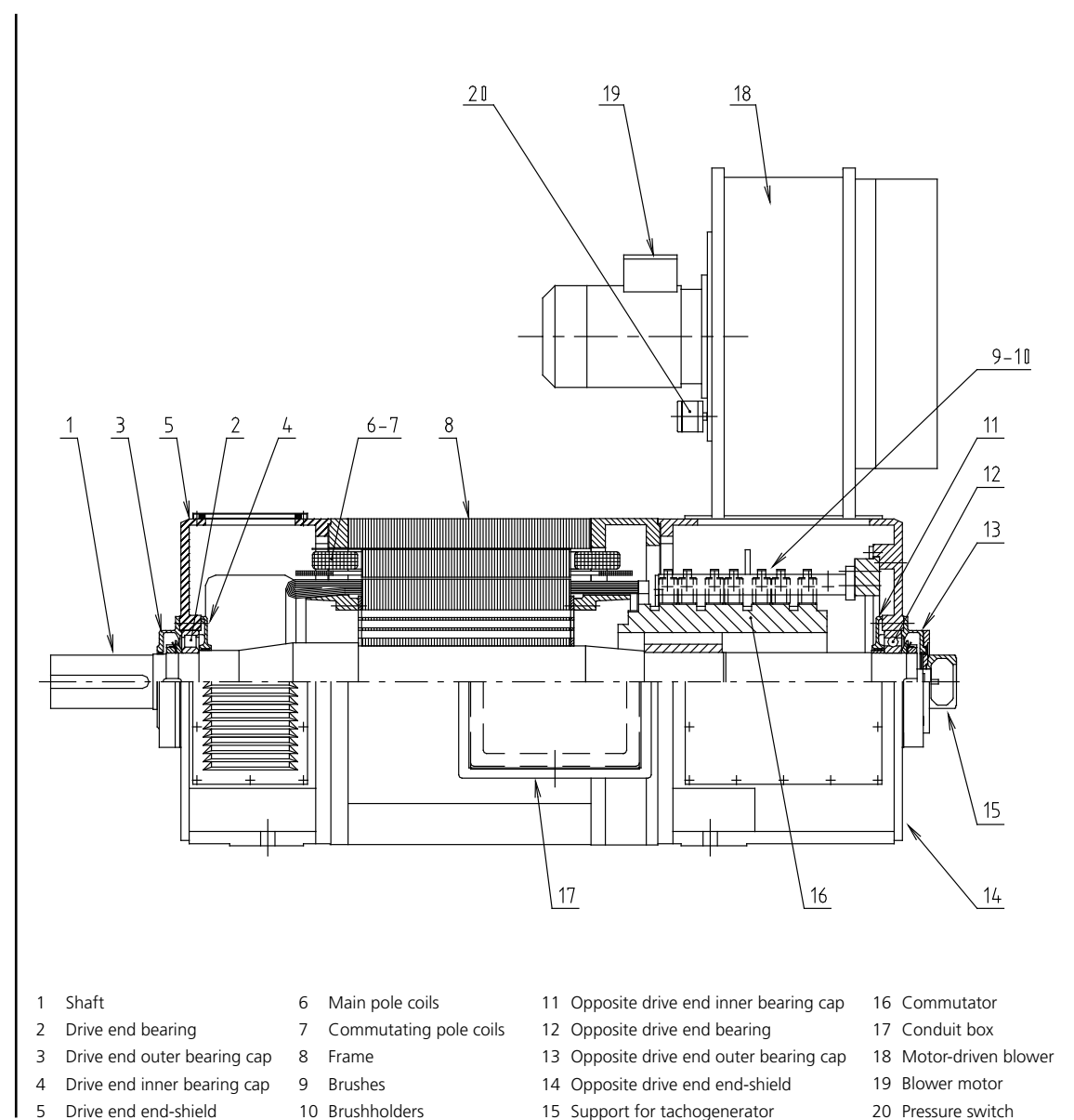
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5.10. CROSS-SECTION DRAWING

A typical sectional assembly drawing for frames GH225-450 is shown in Figure 10.

FIGURE 10

Sectional view of a GH series motor (4 poles)



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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS²

6.1. RATINGS

Maximum ratings, with de-rating curves for field weakening operation, for each GH 4 pole (225-450) motor design are given in the tables of the following section, together with dimensional drawings. These data are valid in the conditions shown hereafter.

- Continuous duty (S1), per EN 60034-1.
- Cooling by forced ventilation (IC06, IC17, IC37, IC86W for EN 60034-5).
- Cooling air temperature not exceeding 40°C, or cooling water temperature not exceeding 30°C.
- Altitude of the installation not exceeding 1000 meters.
- Power supply from a static converter connected in a fully controlled three-phase bridge (identification code for converter connection: B6C per IEC 971).

The maximum current ripple factor is 18%. The manufacturer must be consulted for other power supply conditions to determine if an external series inductor must be added. Current ripple (r) is defined (EN 60034-1) as the ratio between current alternating component RMS value and current average value. A current shape factor (f) can be also used: it is defined as the ratio between current RMS value and current average value. For an ideal direct current it would be $f = 1$, whereas for a real rectified current, with the same rated value, it would be $f < 1$, in general: this causes power loss to increase, but worse commutation too derives from this. Here is the relation between the above parameters: $f^2 = 1 + r^2$.

To prevent commutation capability decrease and power loss increase it is necessary that current dissimetry be lower than 10%. Current dissimetry can be defined as the ratio (in percent) between the two following quantities: the difference between maximum and minimum value of rectified current, in one cycle; and rated current.

- Speed regulation lower than 1:1.5 by means of field weakening control for non-compensated machines, and 1:2.5 for compensated machines. The manufacturer must be consulted for wider speed range regulation by means of field weakening control. Additional information is given in paragraph 6.5.
- Maximum load of 160% for 15 s per EN 60034-1. The duty cycle should be such that RMS current does not exceed rated current. Additional information on overload capability is given in paragraph 6.3.
- Class F temperature rises, according to EN 60034-1; insulating system is Class H. The effects of cooling air temperature and altitude on machine power and speed are shown in Table 15.

The manufacturer must be consulted for other temperature rise requirements (Class H or Class B).

In all cases where required working conditions are different (eg, intermittent services, ventilation and air-to-air heat exchangers or executions without ventilation, field weakening operation, heavy overloads, etc.) please check with the technical department of Nidec ASI.

In the performance tables are described the characteristics of each four-pole GH motor related of armature voltage and normal speed, more precisely:

- power (kW);
- efficiency (%);
- armature current in S1 duty (A);
- resistance of the armature circuit at 115°C (Ω);
- saturated armature inductance (mH);
- armature winding code;
- maximum excitation power (W);
- time constant of excitation circuit (s);
- motor weight, in IC06, including the fan (kg);
- moment of inertia (kg m²).

The performances shown in the tables for the machines GH 225-450 are deducted from the calculation and do not take into account the loss of the excitation circuit (if separate, as usual) and power for forced ventilation.

² All the following tables are related to the performance of four-pole motors. **For the selection of a six-pole machine or higher a check by Nidec ASI technical department is always necessary.**

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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS²

TABLE 15

Derating factors for power and speed based on altitude and ambient temperature

ALTITUDE	K_p	K_n	AMBIENT TEMPERATURE	K_p	K_n
m a.s.l.			°C		
1000	1	1	30	1	1
1500	1.03	0.99	35	1	1
2000	1.07	0.98	40	1	1
2500	1.11	0.96	45	1.04	0.98
3000	1.15	0.94	50	1.09	0.96
3500	1.20	0.92	55	1.13	0.93
4000	1.27	0.90	60	1.17	0.90

6.2. SUPPLY VOLTAGE

Supply voltage values as indicated in rating tables can be obtained from full rectifier bridge converter (B6C), from the following typical AC supplies:

220 V	from	220 V - 50 Hz
420 V	from	400 V - 50 Hz
460 V	from	400 V - 50 Hz
520 V	from	500 V - 50 Hz
600 V	from	500 V - 50 Hz
700 V	from	600 V - 50 Hz

Motors with different supply voltages are in any case available. If voltage is not indicated in catalogue ratings, motor speed n can be obtained from the relation:

$$n = n_c \left(\frac{V - \Delta V}{V_c - \Delta V} \right)$$

where:

$$\Delta V = R \cdot I + 2.5 \text{ (V)}$$

n : required speed (rpm)

n_c : catalogue speed (rpm)

V : armature voltage (V)

V_c : catalogue closest voltage value (V)

ΔV : motor voltage drop (V)

R : armature resistance at 115°C (Ω)

I : armature current (A)

Motor power can be calculated with good accuracy by assuming a linear relation between two group catalogue data:

$$P = P_2 + \frac{(P_1 - P_2)(n - n_2)}{n_1 - n_2}$$

where:

P = new power (kW) at voltage V

P_1 = catalogue power (kW) at the closest (rounded up) catalogue voltage

P_2 = catalogue power (kW) at the closest (rounded down) catalogue voltage

n_1 = catalogue base speed (rpm) at the closest (rounded up) catalogue voltage

n_2 = catalogue base speed (rpm) at the closest (rounded down) catalogue voltage

When V is higher than the maximum catalogue voltage for the armature winding considered, ask the Manufacturer.

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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS²

6.3. MAXIMUM LOADS

As noted in paragraph 6.1, maximum loading is subject to a specific set of conditions. GH type machines are designed to meet and exceed the severe operating demands of industrial applications. Capabilities of uncompensated and compensated wound machines are noted hereafter.

Non-compensated size GH225

The maximum torque is 1.6 times the rated torque for 15 s on the basis of approximately 200% instantaneous current with such cycling that the RMS load value during a 5 minute load cycle does not exceed the rated armature current.

Motors with a stabilizing series field are capable of carrying out a torque 1.8-2.0 times the rated torque with a current twice the rated current.

Compensated sizes GH 225-450

The maximum torque is 1.8 times the rated torque for 15 s on the basis of approximately 200% current with such cycling that the RMS load value during a 5 minute load cycle does not exceed the rated armature current.

6.4. CURRENT RATE-OF-RISE

Reference signal step variations in control loops normally adopted in industrial plants, such as speed and torque control loops, cause current to vary rapidly, with high peak values; current derivative (with respect to time) maximum value, or current temporal rate-of-rise, during transient affects commutation in DC machines.

A current rate-of-rise of 200 In /s at rated current and speed is generally allowed (In being rated current value).

6.5. SPEED REGULATION

Values of maximum allowable speeds are listed in Table 12.

Each motor can operate at full field (with speed control) at constant torque up to one fiftieth (1/50) of the base speed without significant torque pulsation.

Each motor can operate with field weakening speed regulation (with a stabilizing series field or compensating winding) up to the maximum mechanical speed. When the motor speed is controlled by field weakening, it is necessary to reduce the rating given in the tables in accordance with the derating diagram.

In particular: $P = P_n \times K$

Where:

P = allowable output power,

P_n = output power given in the tables,

K = derating coefficient shown in the diagrams versus maximum required speed and winding code.

For each frame size, the derating diagram is indicated for the machine having the maximum frame length. For motors having a shorter frame length, the maximum speed is obtained by multiplying the speed determined from the diagram by the derating coefficients given in the tables.

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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS²

6.6. DUTY WITH LARGE SPEED REGULATION

The use of mixed control systems provides a large increase in the allowable speed range, including overloads. This type of speed regulation reaches maximum speed by a combination of increasing armature voltage (and corresponding decrease in current) and field weakening.

This arrangement provides the advantages of operating with a pre-determined ratio of field weakening, and of reducing armature current approximately by the ratio between the speed at the beginning of field weakening, and base speed.

It is good for commutation since it depends not only on current value (reactance voltage), but also on the saturation of the commutating pole circuit (divergent black commutation bands).

The adoption of a mixed type speed control (or "false characteristic") does not involve changes in either frame size or core length. While the static converter size increases for larger current, the cost is compensated by the improved operation of the complete drive system.

6.7. EXCITATION

All standard motors, with or without compensating windings, are designed for separate excitation without the use of a stabilizing series winding.

Size GH225 can be fitted with a stabilizing series field upon request.

Standard excitation voltages are 220 V and 330 V, with alternate voltages available upon request.

Connection diagrams and terminal markings are shown in Table 16 (for normalized, cf. Table 14).

TABLE 16

Terminal marking

	ROTAZIONE ORARIA VISTA LATO ACCOPPIAMENTO CLOCKWISE ROTATION WHEN FACING DRIVE END RECHTSLAUF DREHSINN VON ANTRIEBSSEITE GESEHEN	ROTAZIONE ANTIORARIA VISTA LATO ACCOPPIAMENTO CON INVERSIONE DI CAMPO COUNTERCLOCKWISE ROTATION WHEN FACING DRIVE END BY FIELD INVERSION LINKSLAUF DREHSINN VON ANTRIEBSSEITE GESEHEN, MIT FELDUMSCHALTUNG	ROTAZIONE ANTIORARIA VISTA LATO ACCOPPIAMENTO CON INVERSIONE DI INDOTTO COUNTERCLOCKWISE ROTATION WHEN FACING DRIVE END BY ARMATURE INVERSION LINKSLAUF DREHSINN VON ANTRIEBSSEITE GESEHEN, MIT ANKERUMSCHALTUNG
MOTORE A ECCITAZIONE INDIPENDENTE SEPARATE EXCITED MOTOR FREIWEREUNGSMOTOR			
MOTORE A ECCITAZIONE INDIPENDENTE CON SERIE STABILIZZATRICE SEPARATE EXCITED MOTOR WITH STABILIZING SERIES FREIWEREUNGSMOTOR MIT HILFSREIHENSCHLUSSWICKLUNG			
MOTORE A ECCITAZIONE INDIPENDENTE CON AVVOLG. DI COMPENSAZIONE SEPARATE EXCITED MOTOR WITH COMPENSATING WINDING FREIWEREUNGSMOTOR MIT KOMPENSATORWICKLUNG			

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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS²

6.8. MAXIMUM CURRENT AT LOCKED ROTOR

Typical maximum permissible values of armature current at locked rotor condition based on time are specified in Table 17. This data are for information use only: the manufacturer must be consulted for data applicable to specific machine ratings and applications.

6.9. ACCESSORIES

Following a summary of the main accessories normally mounted on GH machines.

Stator thermal protective devices

To prevent machine from reaching dangerous temperature values, or at any rate higher temperature values than allowed, it is advisable to adopt one of the following solutions:

- opening an electric circuit by means of bimetallic thermostats (this is Nidec ASI standard solution: a first thermostat protecting excitation winding, a second one protecting interpole winding);
- same action as above, by means of thermistor devices (on request);
- continuous temperature monitoring by means of resistance temperature detectors (PT100, on request).

Temperature detectors' leads are normally wired to the auxiliary board in main terminal box.

Space heaters

Space heaters of armoured type can be provided on request. Typical ratings are given in Table 18 for 220 V, 1-phase, 50 Hz power supply. When automatic control of the space heaters is desired, a dedicated thermostat is available upon request.

Air flow switch

On request, a pressure switch is mounted on motors with separate ventilation blowers or air duct connections to detect the presence, or absence, of cooling air. This device is also part of the standard equipment of the air-water or air-to-air exchangers (see diagrams in Figure 6 and Figure 7).

Please note that the device cannot in any case protect the machine in case of insufficient air flow due to dirty or clogged filter.

Speed monitoring devices

Motors are usually supplied with a pre-arrangement for solid shaft tachogenerator or digital encoder, for axial mounting on opposite drive end side, with standard RE.0444 type connection flange (Euroflange). An elastic coupling to connect the device is always included in standard pre-arrangement (normally the coupling bore diameter is 11 mm).

It is possible, on request, to supply different devices and special pre-arrangements (for instance, pre-arrangement for hollow shaft encoders, for mounting without elastic coupling).

On machines with two shaft ends, intended for tandem front position, a special arrangement is available for B5 mounting of speed control devices on drive end side (transmission by means of pulley and belt).



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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
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- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
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- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS²

TABLE 17

Maximum current at locked rotor

ARMATURE CURRENT	TIME PERIOD
%	S
200	10
150	20
100	30
50	90
20	600
15	Continuous

TABLE 18

Space heaters ratings

SIZE	225	250	280	315	355	400	450	500	560	630
POWER W	120	200	300	300	400	400	720	2X 720	2X 720	2X 720





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- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
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GH355

GH400

GH450

7. TESTS

Each motor is subjected to all tests that are necessary to ensure the product is fully acceptable; in particular, for each DC machine of ours a specific electric set-up is performed, in order to get good commutation at rated load and in overload, in the whole speed range.

We distinguish routine tests, performed on each machine built, and type tests, intended to prototypes or performed at the request of the customer. See also Table 19.

TABLE 19

Main tests

TEST	ROUTINE TEST	TYPE TEST
Winding resistance at room temperature	×	×
Saturation curves		×
No-load losses		×
Speed regulation at base and top speed	×	×
Constant torque characteristics	×	×
Constant power characteristics	×	×
Heat run test		×
Visual commutation check	×	×
Momentary overload tests	×	×
Noise Level		×
Vibrations	×	×
Overspeed	×	×
High-potential test (AC)	×	×
Insulation resistance	×	×
Measurement of moment of inertia		×





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- 5.2 Mounting arrangement
- 5.3 Degree of protection
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- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
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GH400

GH450

GH225

Derating for field weakening operation

GH225 - GH225 K

Performance of uncompensated motors

GH225 S

GH225 M

GH225 L

GH225 P

GH225 X

Performance of compensated motors

GH225 SK

GH225 MK

GH225 LK

GH225 PK

GH225 XK

Overall dimensions

GH225 IM1001-IP23-IC06

GH225 IM1001-IP54-IC86W

GH225 IM1001-IP44-IC37



Performance Tables are displayed on multiple pages, alongside the data tables are repeated alternately overall dimensions (IC06- IC86W-IC37)





DC MOTORS

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- 5.6 Noise level
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- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

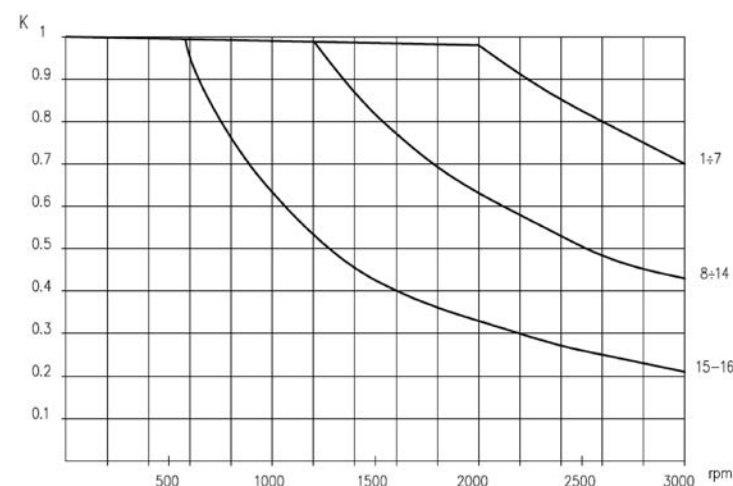
GH400

GH450

GH 225

**RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG**

GH 225 (non compensata - uncompensated - unkompensiert)
[160% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile Allowable power output P = K x P table Verfügbare Leistung P = K x P table

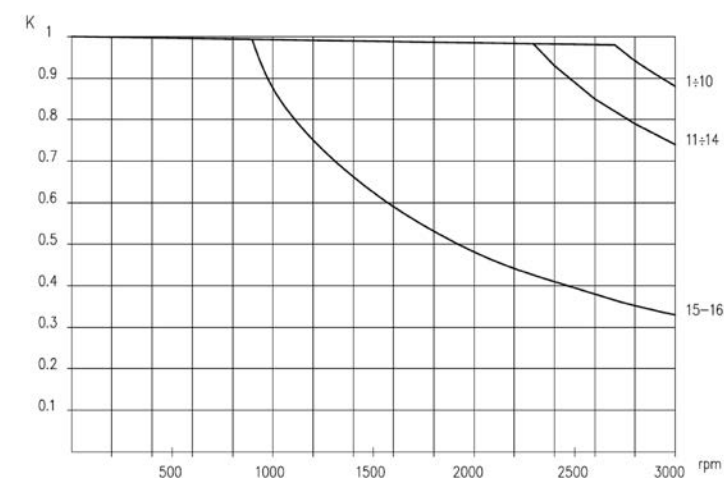
per/for/für	GH 225 S	K = K x 1.5
	GH 225 M	K = K x 1.41
	GH 225 L	K = K x 1.25
	GH 225 P	K = K x 1.11
	GH 225 X	K = K x 1.0

Per K ≥ 1 niente declassamento For K ≥ 1 no derating Für K ≥ 1 keine Leistungsreduzierung

GH 225 K

**RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG**

GH 225 K (compensata - compensated - kompensiert)
[180% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile Allowable power output P = K x P table Verfügbare Leistung P = K x P table

per/for/für	GH 225 SK	K = K x 1.5
	GH 225 MK	K = K x 1.41
	GH 225 LK	K = K x 1.25
	GH 225 PK	K = K x 1.11
	GH 225 XK	K = K x 1.0

Per K ≥ 1 niente declassamento For K ≥ 1 no derating Für K ≥ 1 keine Leistungsreduzierung

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	



GO TO MENU



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HOME

GH225

GH250

GH280

GH315

GH355

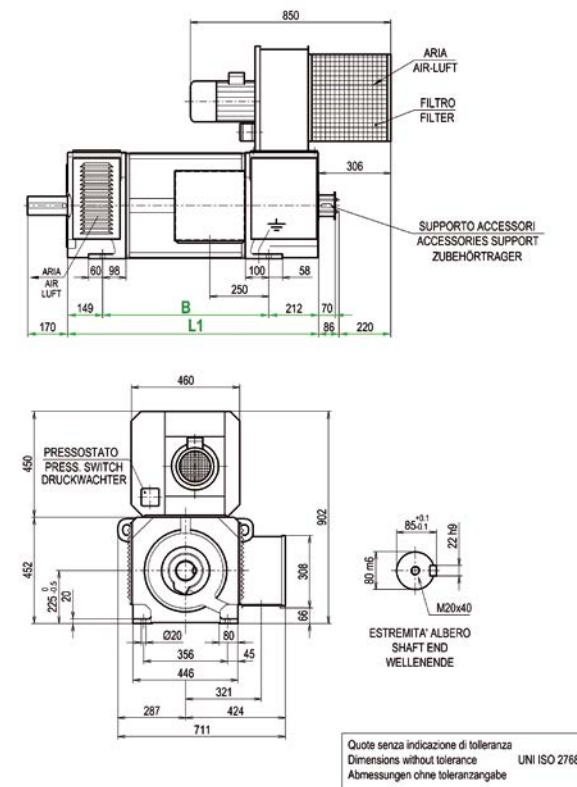
GH400

GH450

GH225 S

Rated speed (rpm) at armature voltage						Excitation power (W): 2400 Field time costant (s): 0.68 Motor mass (kg): 795 (IC06) Moment of inertia (kg m²): 1.75			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
1300						149	750	90.6	0.412	0.019	1
	2470					281	750	93.7			
		2630					292	740			
1190						128	650	89.9	0.509	0.023	2
	2250					239	640	93.2			
		2370					251	640			
		2590				269	625	93.8			
1080						114	585	88.9	0.583	0.028	3
	2070					213	575	92.7			
		2170					225	575			
		2390				247	575	93.4			
950						107	550	88.5	0.746	0.033	4
	1830					204	550	92.7			
		1920					215	550			
		2120				228	530	93.4			
			2410			254	520	93.9			
860						94	490	87.2	0.914	0.043	5
	1650					178	485	91.9			
		1750					188	485			
		1920				207	485	92.6			
			2190			230	475	93.2			
				2540		262	465	93.9			
780						85	450	86.2	1.047	0.052	6
	1520					161	440	91.3			
		1590					169	440			
		1760				186	440	92.2			
			2000			203	420	93.0			
				2320		230	410	93.7			
740						81	430	85.8	1.179	0.056	7
	1450					153	420	91.2			
		1520					161	420			
		1670				177	420	92.0			
			1910			197	410	92.6			
				2210		227	405	93.6			
590						70	380	83.6	1.754	0.075	8
	1160					134	375	90.0			
		1220					140	370			
		1350				154	370	91.0			

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 4.4 Brushholder yoke
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- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
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HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH225 S

Rated speed (rpm) at armature voltage						Excitation power (W): 2400 Field time costant (s): 0.68 Motor mass (kg): 795 (IC06) Moment of inertia (kg m²): 1.75			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
540	1040					60	330	82.7	2.105	0.094	9
						116	325	89.6			
		1110				123	325	89.9			
			1220			135	325	90.7			
				1390		151	320	91.6			
480	950					52	290	81.1	2.454	0.115	10
						102	288	88.7			
		1010				108	288	89.2			
			1120			118	288	89.9			
				1280		135	288	90.8			
420	850					47		80.7	3.080	0.137	11
						94		88.6			
		900				99	265	89.1			
			990			108		89.8			
				1130		125		90.7			
				1310	145		91.8				
370	760					41		77.5	3.704	0.168	12
						83		86.4			
		810				88	240	87.1			
			900			96		88.0			
				1020		112		90.2			
				1200	130		90.6				
340	700					35		73.6	4.362	0.209	13
						73		85.3			
		730				77	216	85.8			
			820			86		86.7			
				930		98		88.5			
				1090	115		89.5				
	650					72		85.3	4.779	0.224	14
						76		85.9			
			760			84	210	86.7			
				890		95		88.5			
					1030	111		89.0			
	540					62		82.9	7.015	0.304	15
						65	185	83.6			
		560				72		84.9			
			630								
	480					54		82.5	8.419	0.382	16
						58	165	83.0			
		520				64		84.5			
			560			73		86.0			
					660						

GH225 IM1001 - IP54 - IC86W

Size	B	L1	V1
GH225 S	655	1016	982
GH225 M	705	1066	1032
GH225 L	750	1111	1077
GH225 P	800	1161	1127
GH225 X	850	1211	1177

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.1 Coupling and shaft extension
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- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

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HOME

GH225

GH250

GH280

GH315

GH355

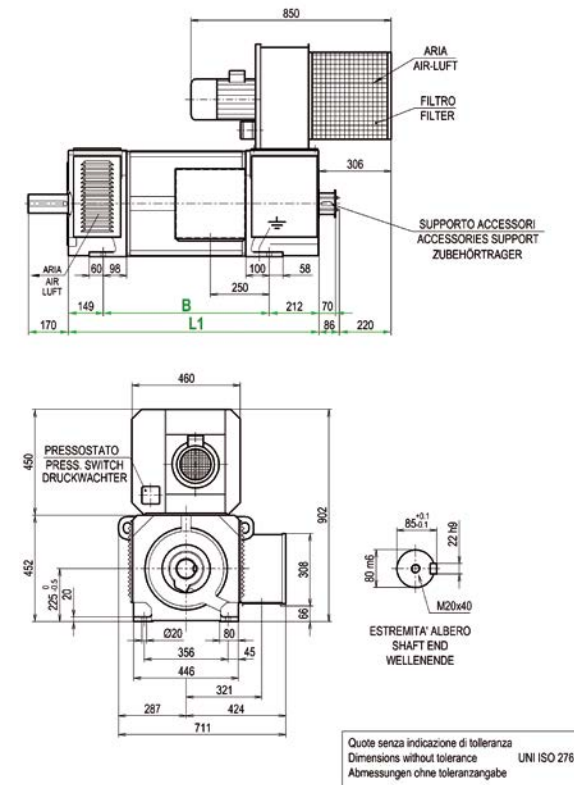
GH400

GH450

GH225 M

Rated speed (rpm) at armature voltage						Excitation power (W): 2600 Field time constant (s): 0.77 Motor mass (kg): 850 (IC06) Moment of inertia (kg m²): 1.95			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
1120	2120	2260	2460			148	750	90.2	0.466	0.020	1
						280	750	93.5			
						291	740	93.7			
						309	715	94.0			
1020	1930	2030	2230	2560		128	650	89.4	0.551	0.025	2
						238	640	93.0			
						250	640	93.2			
						269	625	93.6			
930	1170	1860	2050	2340		300	615	94.0	0.646	0.030	3
						114	585	88.4			
						212	575	92.5			
						224	575	92.8			
820	1570	1650	1820	2070	2420	246	575	93.2	0.817	0.035	4
						272	560	93.8			
						107	550	88.2			
						203	550	92.5			
740	1420	1500	1650	1880	2180	214	550	92.7	0.994	0.045	5
						227	530	93.2			
						253	520	93.7			
						283	500	94.3			
670	1300	1370	1510	1720	2000	93	490	86.4	1.149	0.056	6
						177	485	91.5			
						187	485	91.8			
						205	485	92.3			
640	1240	1300	1440	1640	1900	230	475	93.0	1.286	0.060	7
						261	465	93.7			
						84	450	85.3			
						160	440	90.9			
510	990	1050	1160			168	440	91.2	1.965	0.081	8
						185	440	91.8			
						202	420	92.6			
						230	410	93.3			
						80	430	84.8	1.286	0.060	7
						152	420	90.7			
						160	420	91.0			
						176	420	91.6			
						197	410	92.3	1.965	0.081	8
						226	405	93.2			
						69	380	82.4			
						133	375	89.4			
						140	370	89.8	1.965	0.081	8
						153	370	90.5			

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
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- 5.9 Groud terminals
- 5.10 Cross-section drawing

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- 6.2 Supply voltage
- 6.3 Maximum loads
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- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH225 M

Rated speed (rpm) at armature voltage						Excitation power (W): 2600 Field time constant (s): 0.77 Motor mass (kg): 850 (IC06) Moment of inertia (kg m²): 1.95			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
460	900					59	330	81.6	2.321	0.103	9
						115	325	89.0			
		950				122	325	89.4			
			1050			135	325	90.2			
				1200		151	320	91.1			
410	820					51	290	79.8	2.702	0.127	10
						101	288	88.0			
		870				107	288	88.5			
			960			118	288	89.3			
				1100		135	288	90.3			
360	730					46		79.4	3.314	0.148	11
						93		87.9			
		770				98	265	88.4			
			850			108		89.2			
				970		124		90.2			
320	660				1130	145		91.3	4.038	0.182	12
						40		75.8			
		690				82		85.9			
			770			87	240	86.5			
				880		96		87.5			
290	600					111		88.7	4.747	0.226	13
						130		90.0			
		630				34		72.6			
			700			72		84.2			
				800		76	216	84.8			
	560					85		86.0	5.236	0.242	14
						98		87.4			
					940	115		88.8			
		600				71		84.2			
			660			75		84.9			
	460					83	210	86.0	7.520	0.325	15
						95		87.4			
				760		111		88.9			
					890	60		81.6			
		480				64	185	82.4			
	410					71		83.8	8.960	0.408	16
						53		81.2			
		440				57	165	82.0			
			480			63		83.4			
				565		73		85.1			

GH225 IM1001 - IP54 - IC86W

Size	B	L1	V1
GH225 S	655	1016	982
GH225 M	705	1066	1032
GH225 L	750	1111	1077
GH225 P	800	1161	1127
GH225 X	850	1211	1177

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 4.3 Stator
- 4.4 Brushholder yoke
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- 4.6 Belted and radial thrust application

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- 5.4 Cooling method
- 5.5 Maximum allowable speeds
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- 6.2 Supply voltage
- 6.3 Maximum loads
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- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

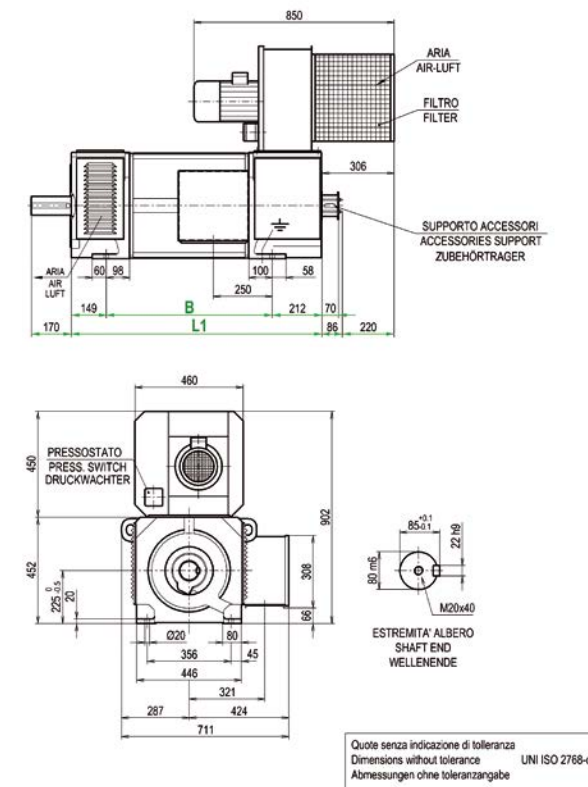
GH400

GH450

GH225 L

Rated speed (rpm) at armature voltage						Excitation power (W): 3000 Field time constant (s): 0.81 Motor mass (kg): 910 (IC06) Moment of inertia (kg m²): 2.2			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
990	1870	1980	2200			148	750	89.8	0.524	0.021	1
						280	750	93.3			
						290	740	93.5			
						310	720	93.8			
900	1710	1800	1970	2260		127	655	88.9	0.620	0.027	2
						238	640	92.8			
						250	640	93.0			
						268	625	93.4			
820	1560	1650	1810	2060		300	615	93.9	0.726	0.033	3
						113	585	87.9			
						212	575	92.3			
						223	575	92.5			
730	1390	1460	1610	1840	2150	245	575	93.0	0.919	0.038	4
						275	565	93.6			
						107	555	87.6			
						202	550	92.2			
650	1260	1330	1460	1660	1950	213	550	92.5	1.118	0.048	5
						229	535	92.9			
						253	520	93.6			
						282	500	94.1			
590	1150	1210	1330	1520	1770	93	495	85.6	1.292	0.060	6
						176	485	91.1			
						186	485	91.4			
						205	485	92.0			
560	1090	1150	1270	1450	1680	230	475	92.8	1.446	0.064	7
						261	465	93.5			
						83	450	84.4			
						159	440	90.5			
440	880	920	1020			167	440	90.8	2.211	0.087	8
						185	440	91.4			
						201	420	92.2			
						231	415	92.9			

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

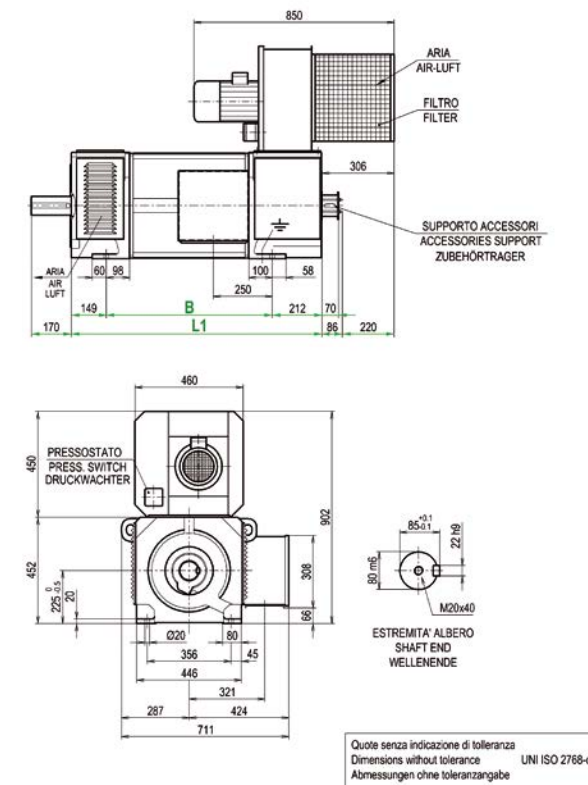
GH400

GH450

GH225 P

Rated speed (rpm) at armature voltage						Excitation power (W): 3300 Field time constant (s): 0.84 Motor mass (kg): 965 (IC06) Moment of inertia (kg m²): 2.4			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
880	1670					147	750	89.3	0.588	0.023	1
						279	750	93.1			
		1750				293	750	93.3			
			1950			310	720	93.6			
790	1510					127	655	88.3	0.696	0.029	2
						237	640	92.6			
		1590				249	640	92.8			
			1750			267	625	93.2			
720	1390			2000		300	615	93.9	0.815	0.036	3
						112	585	87.2			
		1460				222	575	92.2			
			1610			245	575	92.7			
640	1230			1830		275	565	93.5	1.032	0.041	4
						106	555	86.9			
		1300				202	550	91.9			
			1430			212	550	92.2			
580	1110				1900	228	535	92.6	1.256	0.052	5
						252	520	93.2			
		1170				282	500	94.0			
			1290			92	495	84.7			
520	1020					175	485	90.7	1.451	0.065	6
						185	485	91.0			
			1290			204	485	91.6			
				1470		228	475	92.5			
490	970					260	465	93.2	1.624	0.069	7
						82	450	83.5			
		1070				158	440	90.0			
			1180			167	440	90.4			
390	770					184	440	91.0	2.485	0.094	8
						200	420	91.8			
					1570	230	415	92.6			
				1280		78	430	82.8			
390	770					150	420	89.7	2.485	0.094	8
						158	420	90.1			
		1020				175	420	90.8			
			1120			195	410	91.6			
390	770					225	405	92.5	2.485	0.094	8
						67	380	80.0			
						132	375	88.2			
		820				137	370	88.6			
390	770					152	370	89.5	2.485	0.094	8

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 4.3 Stator
- 4.4 Brushholder yoke
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- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

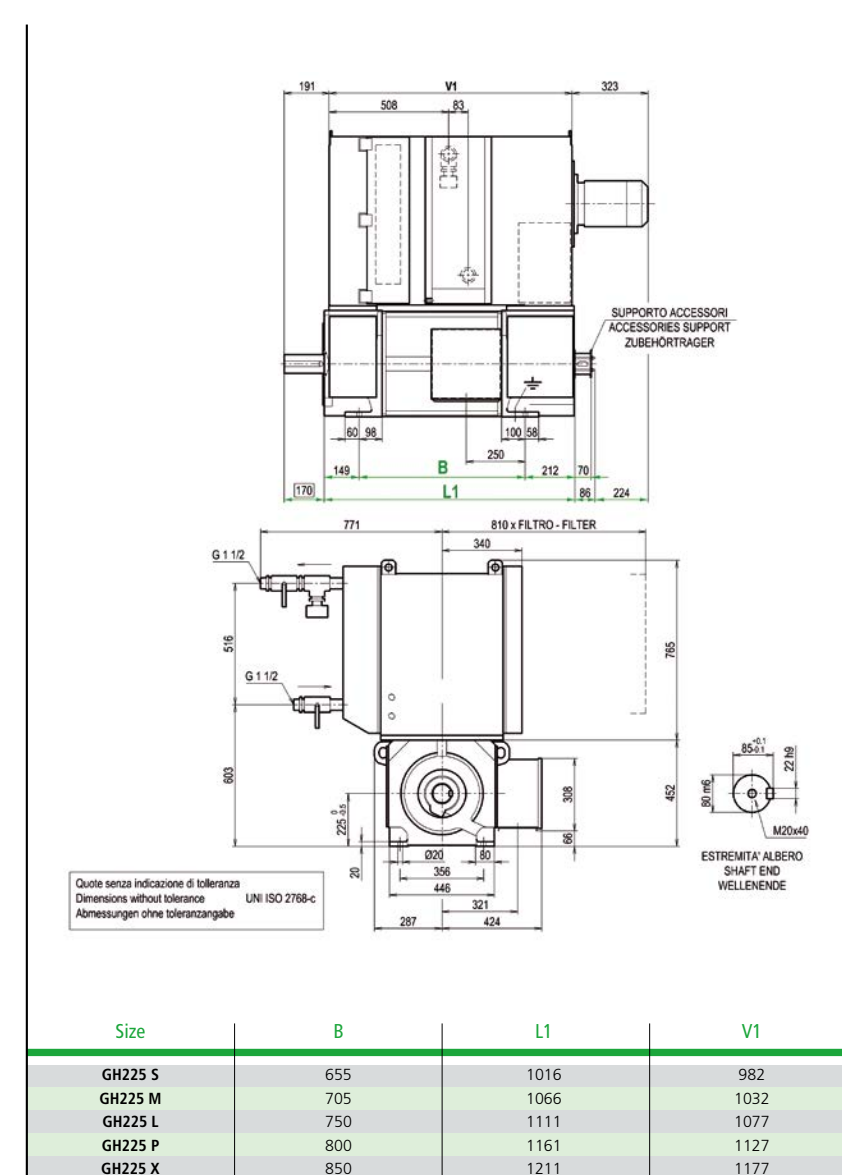
GH400

GH450

GH225 P

Rated speed (rpm) at armature voltage						Excitation power (W): 3300 Field time costant (s): 0.84 Motor mass (kg): 965 (IC06) Moment of inertia (kg m²): 2.4			Armature circuit		Winding code	
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
350						57	330	79.2	2.935	0.118	9	
	700					114	325	87.7				
		740				120	325	88.2				
			820				133	325				89.1
				940				150				320
320						49	290	77.0	3.417	0.144	10	
	640					99	288	86.6				
		680				105	288	87.1				
			750				116	288				88.1
				860				133				288
280						44		76.6	4.190	0.171	11	
	570					91		86.4				
		600				96	265	86.9				
			670				107					87.9
				760				122				
					890		90.3					
						81		84.0	5.106	0.209	12	
	510					85		84.7				
		600				95	240	85.9				
			690				109					87.3
				800				128				
						70		82.0	6.002	0.261	13	
	460					75		82.8				
		490					83	216				84.1
			540				96					85.8
				730				113				
						69		82.1	6.621	0.280	14	
	430					73		82.9				
		460				81	210	84.2				
			510				93					85.8
				590				110				
						58		79.0	9.508	0.375	15	
	350					62	185	79.9				
		370				69		81.5				
			410									
				51				55				165
320					61		81.1					
	340				71		83.1					
		370										
			430									

GH225 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 2.2 CE Marking
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3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

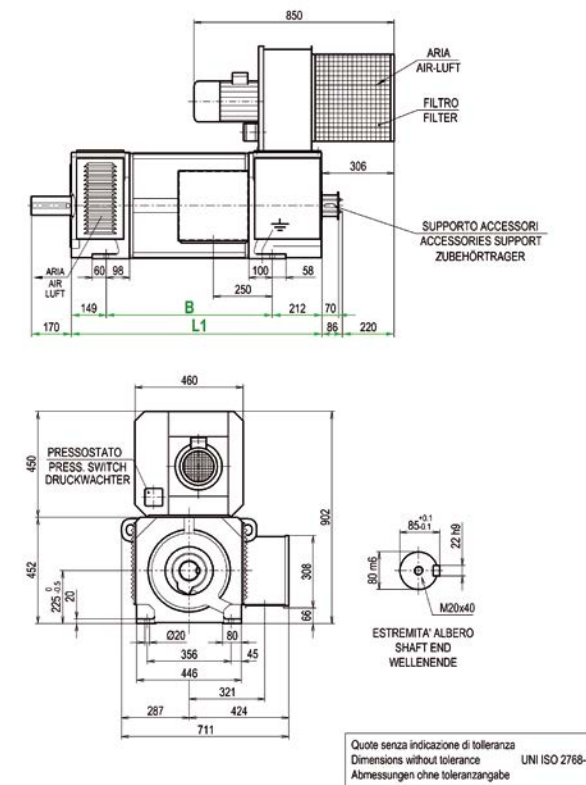
GH400

GH450

GH225 X

Rated speed (rpm) at armature voltage						Excitation power (W): 3500 Field time constant (s): 0.87 Motor mass (kg): 1040 (IC06) Moment of inertia (kg m²): 2.6			Armature circuit		Winding code		
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω			
790	1500					146	750	88.8	0.652	0.025	1		
						278	750	92.8					
		1600				292	750	93.0					
			1750			310	720	93.6					
710	1360					126	655	87.8	0.772	0.031	2		
						235	640	92.3					
		1430				248	640	92.5					
			1580			267	625	93.0					
650	1240			1800		300	615	93.7	0.905	0.037	3		
						111	585	86.6					
						210	575	91.6					
		1310				222	575	91.9					
570	1100					244	575	92.4	1.145	0.044	4		
						274	565	93.2					
						105	555	86.2					
		1160				201	550	91.5					
510	1000					210	550	91.8	1.393	0.055	5		
						227	535	92.3					
				1460		251	520	93.0					
				1720		280	500	93.8					
460	910					91	495	83.9	1.610	0.068	6		
						175	485	90.3					
		1050				184	485	90.6					
				1320		203	485	91.2					
440	870				1540	228	475	92.2	1.802	0.074	7		
						260	465	93.0					
						81	450	82.5					
						157	440	89.5					
350	690	960				166	440	89.9	2.759	0.101	8		
			1060			183	440	90.6					
				1210		200	420	91.7					
				1410		230	415	92.6					
350	690					77	430	81.8	1.802	0.074	7		
						149	420	89.2					
		910				158	420	89.6					
			1010			174	420	90.3					
350	690					198	410	91.2	2.759	0.101	8		
					1150			224				405	92.3
						66	380	78.8					
						131	375	87.5					
350	690	730				136	370	88.0	2.759	0.101	8		
						150	370	88.9					

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

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- 2.2 CE Marking
- 2.3 Quality system

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- 4.3 Stator
- 4.4 Brushholder yoke
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- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

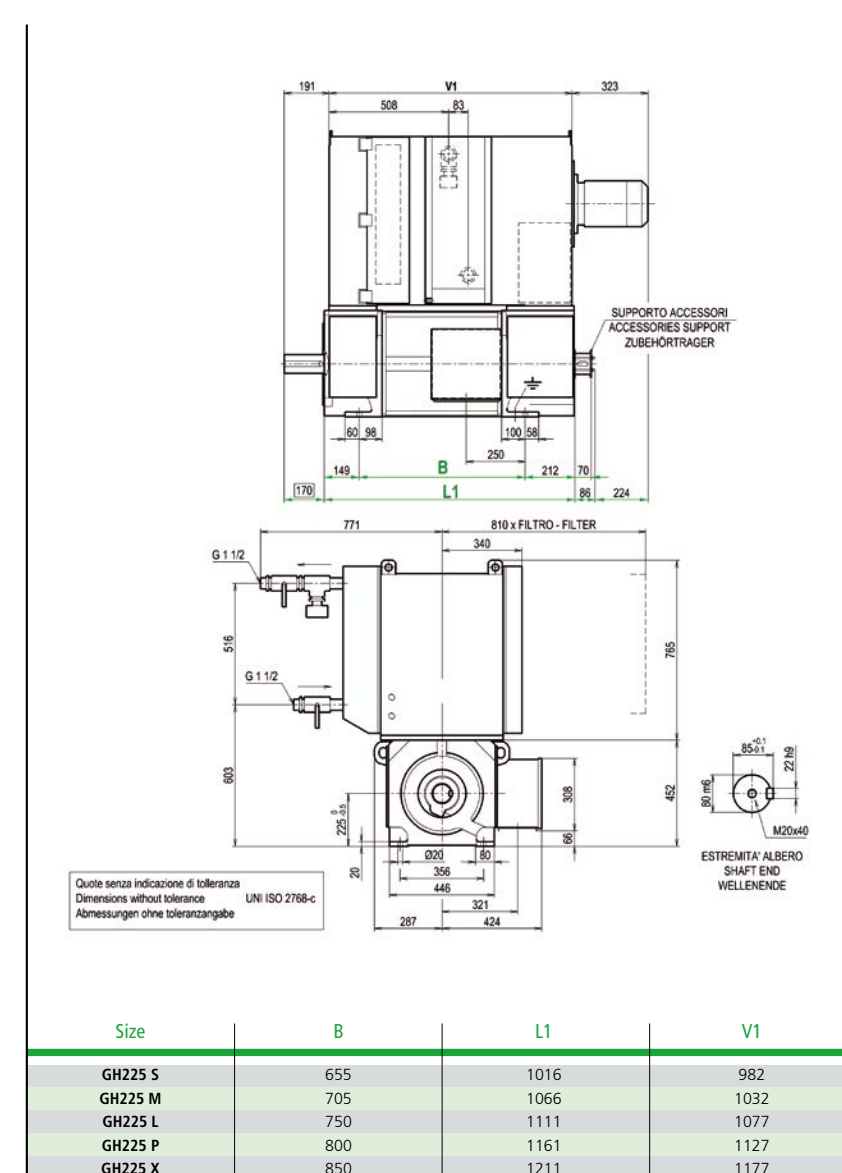
GH400

GH450

GH225 X

Rated speed (rpm) at armature voltage						Excitation power (W): 3500 Field time costant (s): 0.87 Motor mass (kg): 1040 (IC06) Moment of inertia (kg m²): 2.6			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
310	630	660	730	840		56	330	77.9	3.258	0.126	9
						113	325	87.1			
						119	325	87.6			
						132	325	88.5			
						148	320	89.6			
280	570	600	670	770		48	290	75.6	3.793	0.154	10
						98	288	85.8			
						104	288	86.4			
						115	288	87.4			
						132	288	88.6			
250	510	530	590	680	800	43		75.2	4.651	0.184	11
						90		85.6			
						95	265	86.2			
						106		87.2			
						121		88.5			
	450	480	530	610	720	142		89.8	5.668	0.224	12
						80		83.1			
						84		83.8			
						94	240	85.1			
						108		86.6			
	410	430	480	560	650	127		88.1	6.662	0.280	13
						69		80.9			
						74		81.7			
						82	216	83.2			
						95		84.9			
	390	410	450	520	620	112		86.7	7.349	0.300	14
						68		81.0			
						71		81.8			
						79	210	83.3			
						92		85.0			
	310	330	370			109		86.8	10.554	0.402	15
						57		77.6			
						61	185	78.6			
						68		80.3			
						50		77.2			
	280	300	330	390		54	165	78.2	12.575	0.504	16
						60		80.0			
						70		82.1			

GH225 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
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- 4.6 Belted and radial thrust application

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- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
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- 5.8 Conduit box
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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

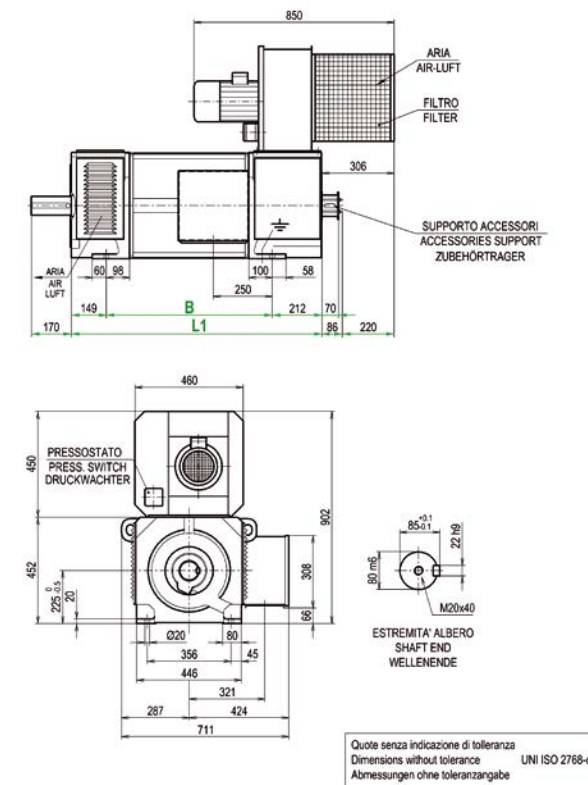
GH400

GH450

GH225 SK

Rated speed (rpm) at armature voltage						Excitation power (W): 2100 Field time costant (s): 0.58 Motor mass (kg): 795 (IC06) Moment of inertia (kg m²): 1.75			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
1290						148	750	89.7	0.141	0.024	1
	2450					280	750	93.4			
1180		2570				293	745	93.5	0.190	0.029	2
	2220					128	650	89.4			
		2340				237	640	93.0			
1060			2580			250	640	93.2	0.204	0.032	3
					268	625	93.6				
	2030					115	585	88.1			
		2140				212	575	92.3			
940		2350				223	575	92.7	0.261	0.036	4
					245	575	92.9				
	1810					107	555	87.6			
		1900				203	550	92.3			
840			2100			214	550	92.7	0.331	0.050	5
				2390		228	535	93.0			
					253	520	93.6				
	1630					94	495	86.3			
		1720				177	485	90.9			
760						205	485	91.8	1.610	0.068	6
			1900			228	475	92.5			
				2150		260	465	93.5			
					4660						
	1500					81	450	82.5			
		1570				157	440	89.5			
730						166	440	89.9	0.393	0.059	7
			1740			183	440	90.6			
				1980		200	420	91.7			
					2300	230	415	92.6			
	1410					80	430	84.7			
		1500				152	420	90.3			
570						159	420	90.5	0.628	0.083	8
			1650			175	420	91.3			
				1890		196	410	91.9			
					2200	225	405	93.0			
	1140					69	380	82.8			
		1200				132	370	89.5			
			1320			139	370	89.8	0.628	0.083	8
				1520		153	370	91.5			
					171	360	91.4				

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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2. STANDARDS AND QUALITY

- 2.1 Reference standards
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- 2.3 Quality system

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4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

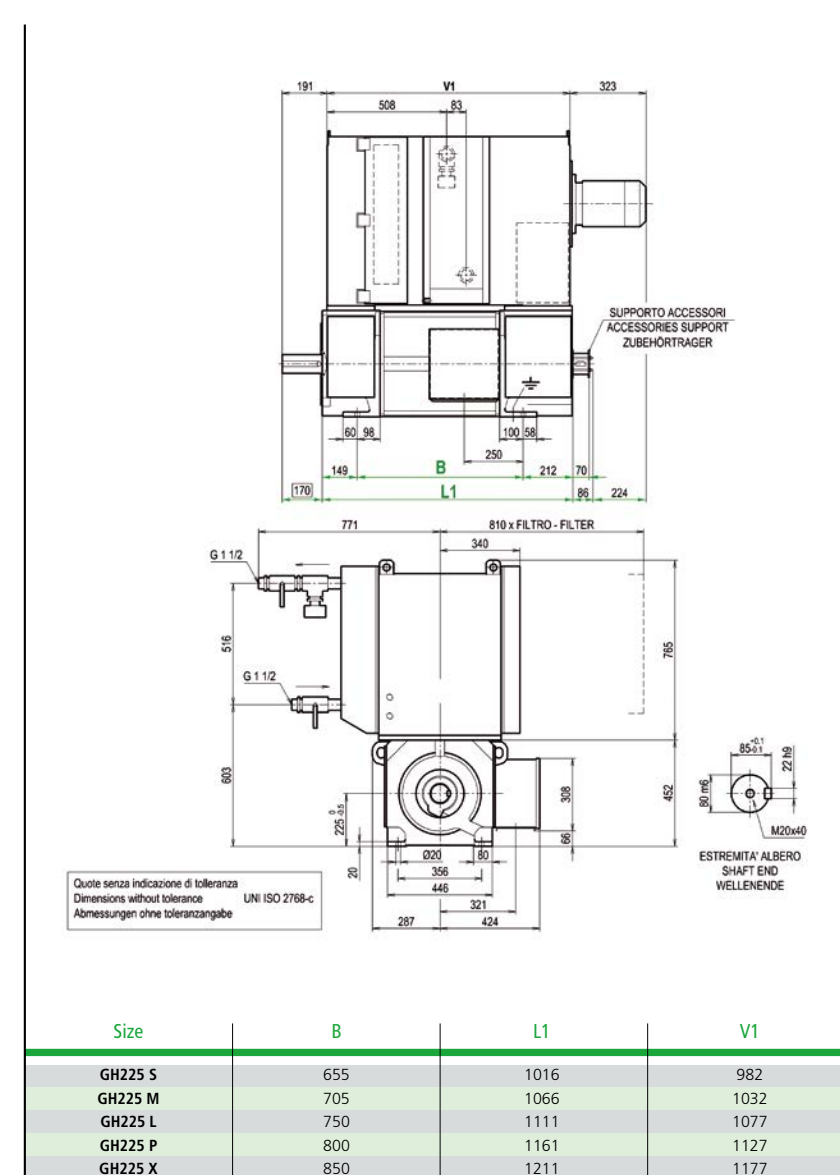
GH400

GH450

GH225 SK

Rated speed (rpm) at armature voltage						Excitation power (W): 2100 Field time costant (s): 0.58 Motor mass (kg): 795 (IC06) Moment of inertia (kg m²): 1.75			Armature circuit		Winding code		
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω			
520						58	330	81.9	0.699	0.105	9		
	1030					114	325	88.7					
		1080					121	325				88.5	
			1200					133				325	90.3
				1370								150	320
460						51	290	80.3	0.801	0.125	10		
	940					101	288	87.8					
		990					106	288				88.7	
			1110					117				288	89.2
				1260								134	288
410					1470	156	288	90.7	1.056	0.146	11		
	840					46		80.0					
		890					93					87.3	
			980					98				265	88.0
				1120								107	
360						123		90.1	1.203	0.197	12		
	740					144		91.0					
		780					39					74.5	
			880					82					85.0
				1000								86	241
330						95		86.6	1.412	0.231	13		
	670					110		88.2					
		720					128					89.5	
			800					34					72.5
				920								72	
640						76	216	85.0	1.461	0.243	14		
	670					85		86.1					
		750					97					88.0	
			870					1070				114	88.9
				900								70	
520						74		84.2	2.359	0.338	15		
	550					82	210	85.0					
		610					94					86.9	
			710					110					88.0
				900								60	
460						64	185	82.5	3.270	0.408	16		
	500					70		83.4					
		550					81					85.2	
			640					53					80.2
				71								56	165

GH225 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
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- 5.8 Conduit box
- 5.9 Groud terminals
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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

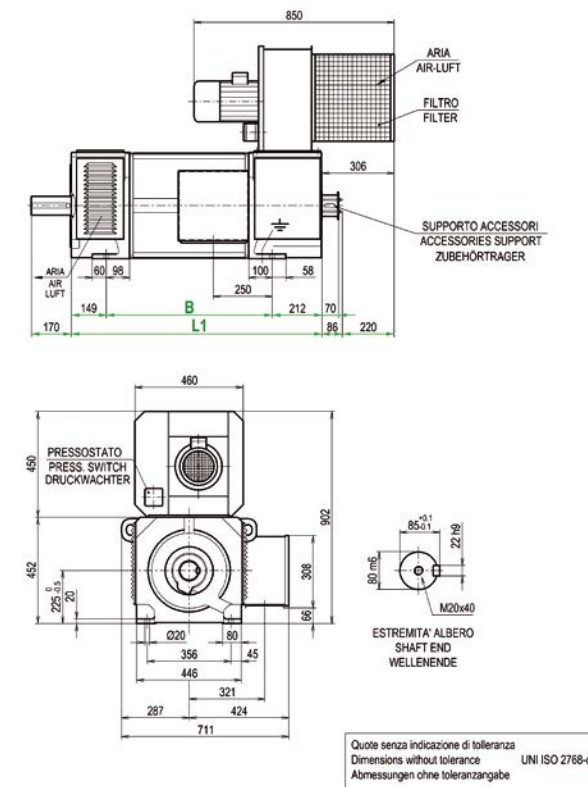
GH400

GH450

GH225 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 2400 Field time costant (s): 0.62 Motor mass (kg): 850 (IC06) Moment of inertia (kg m²): 1.95			Armature circuit		Winding code	
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
1110						147	750	89.3	0.159	0.022	1	
	2100					279	750	93.1				
		2210				292	745	93.3				
			2450				308	715				93.7
1010						127	650	89.0	0.206	0.026	2	
	1910					237	640	92.9				
		2010				250	640	93.1				
			2220			2530	268	625				93.5
910						298	610	94.0	0.226	0.034	3	
	1750					113	585	87.5				
		1840				211	575	92.0				
			2020			2310	222	575				92.3
810						245	575	92.7	0.286	0.038	4	
	1550					275	568	93.1				
		1630				106	555	87.2				
			1800			2050	202	550				92.0
720						213	550	92.3	0.360	0.052	5	
	1400					228	535	92.7				
		1480				252	520	93.4				
			1630			2400	282	500				93.9
660						93	495	85.0	0.370	0.059	6	
	1290					176	485	90.7				
		1350					185	485				91.1
			1490			1850	204	485				91.6
630						228	475	92.3	0.429	0.063	7	
	1220					2160	260	465				93.2
		1290					83	450				84.7
			1420				159	440				90.6
490						168	440	90.9	0.703	0.090	8	
	980					185	440	91.5				
		1030				1700	204	425				92.3
			1140			1300	1980	232				415

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218EC P C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

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4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

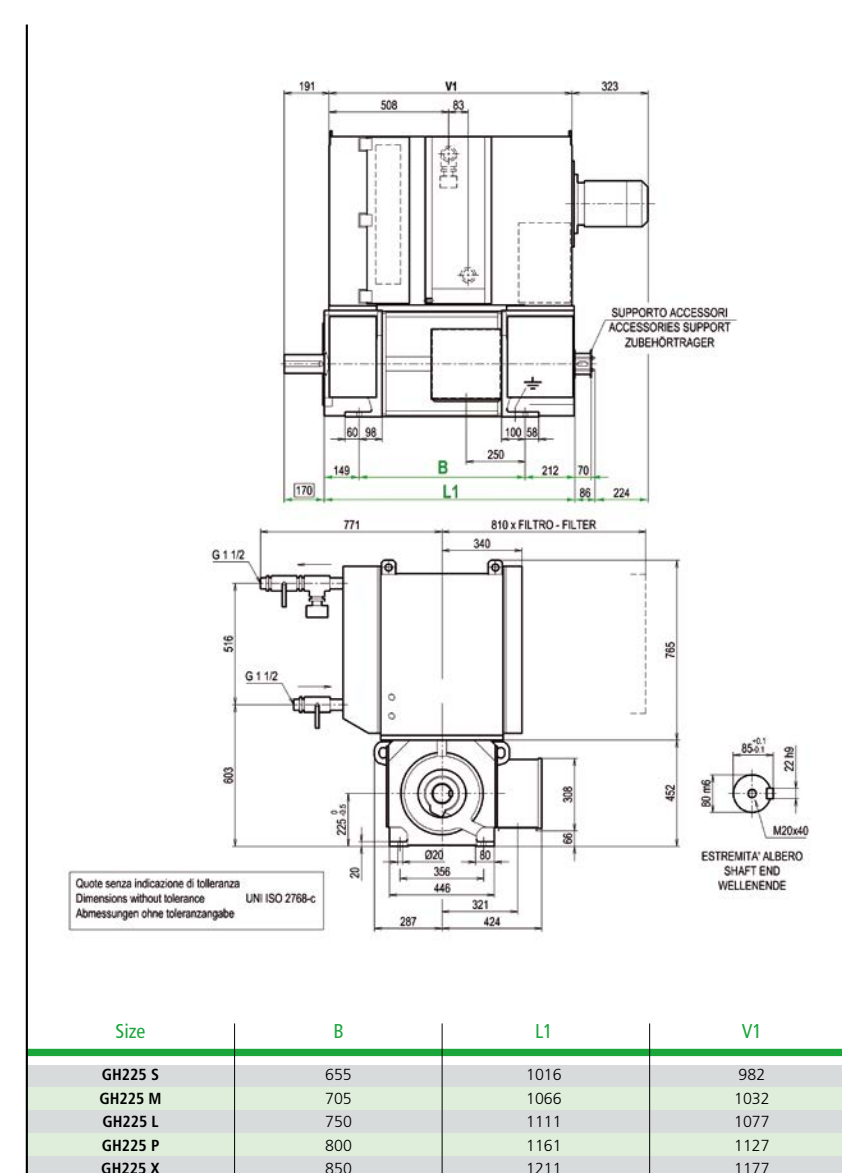
GH400

GH450

GH225 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 2400 Field time costant (s): 0.62 Motor mass (kg): 850 (IC06) Moment of inertia (kg m²): 1.95			Armature circuit		Winding code	
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
440						57	330	79.2	0.771	0.115	9	
	890					114	325	87.7				
		930				120	325	88.2				
			1030				133	325				89.0
				1180				150				320
400						50	290	78.1	0.882	0.138	10	
	810					100	288	87.1				
		850				106	288	87.6				
			950				117	288				88.5
				1080			1260	134				288
350						156	288	90.7	1.136	0.158	11	
	720					45		77.7				
		760				92		86.9				
			840				97	265				87.5
				960			1120	107				
310						123		89.5	1.312	0.213	12	
	640					144		90.6				
		670					38					73.2
			750				81					84.5
				860			1000	86				241
280						95		86.2	1.537	0.250	13	
	580					109		87.6				
		620				128		89.0				
			685				34					71.7
				790			920	72				
550						85	216	84.3	1.601	0.263	14	
	580					87.0		85.5				
		650				114		88.5				
			745				69					82.3
				870				73				
440						81	210	84.3	2.529	0.361	15	
	470					94		85.9				
		520				110		87.6				
			610				59					80.6
				81				63				185
400						70		82.9	3.480	0.436	16	
	425					81		84.7				
		470				52		79.3				
			550				55	165				80.2
								62				
						71		83.7				

GH225 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

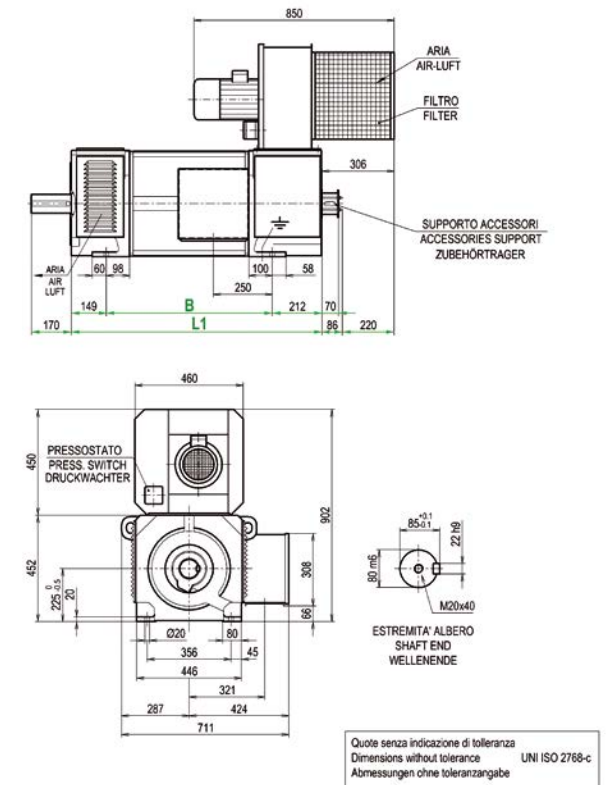
GH400

GH450

GH225 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 2600 Field time constant (s): 0.65 Motor mass (kg): 910 (IC06) Moment of inertia (kg m²): 2.2			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
980	1850	1950	2150	2450		147	750	89.0	0.179	0.024	1
						278	750	92.9			
						293	750	93.1			
						309	720	93.5			
						337	690	93.9			
890	1690	1780	1960	2250		127	655	88.6	0.231	0.028	2
						237	640	92.7			
						250	640	92.9			
						268	625	93.3			
						300	615	93.8			
800	1540	1620	1790	2050	2370	112	585	86.9	0.254	0.037	3
						211	575	91.7			
						222	575	92.0			
						244	575	92.5			
						276	570	93.0			
710	1370	1440	1590	1810	2110	106	560	86.7	0.321	0.042	4
						201	550	91.7			
						212	550	92.0			
						227	535	92.5			
						251	520	93.1			
630	1240	1300	1430	1640	1910	92	495	84.2	0.404	0.056	5
						175	485	90.3			
						184	485	90.7			
						203	485	91.3			
						227	475	92.0			
580	1130	1190	1320	1500	1750	83	450	83.8	0.414	0.065	6
						158	440	90.2			
						167	440	90.5			
						184	440	91.2			
						203	425	92.0			
550	1080	1140	1250	1430	1670	78	430	82.3	0.480	0.068	7
						150	420	89.4			
						158	420	89.8			
						174	420	90.5			
						197	415	91.3			
						231	415	92.8			
						224	405	92.4			

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218EC P C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

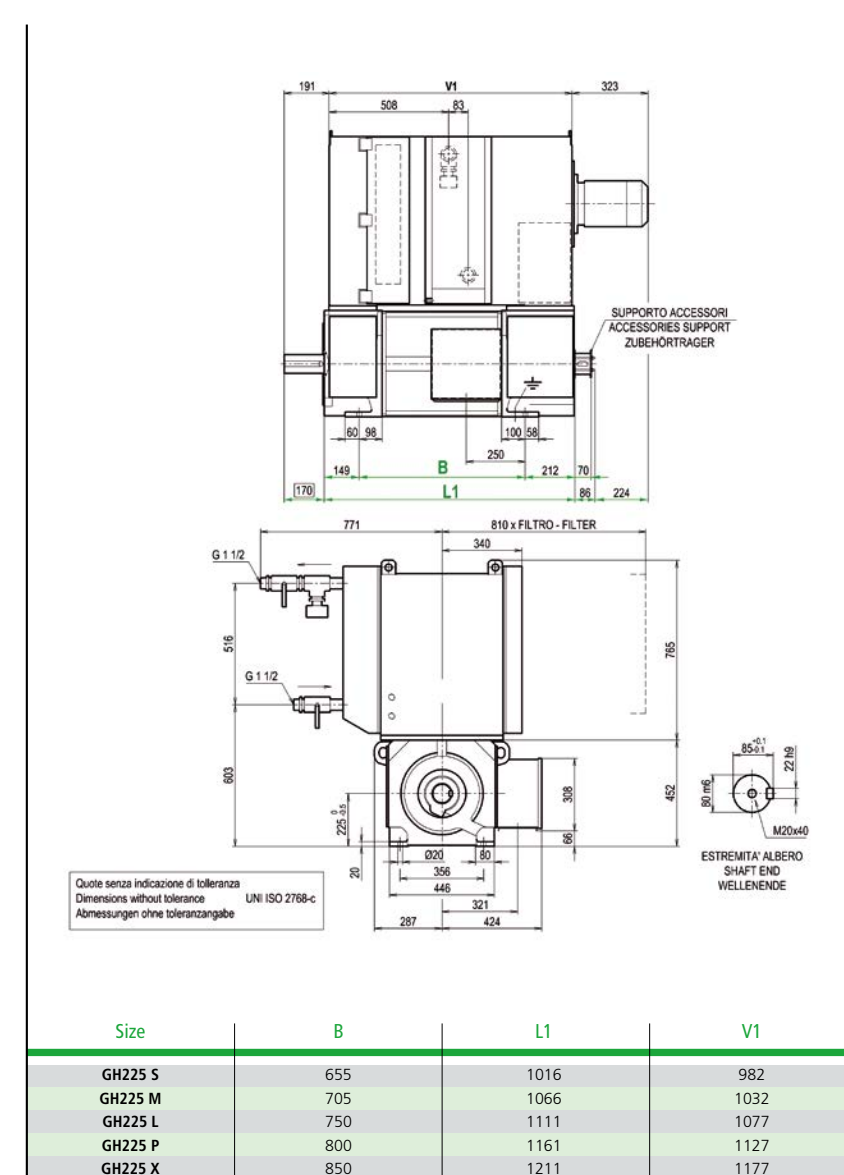
GH400

GH450

GH225 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 2600 Field time constant (s): 0.65 Motor mass (kg): 910 (IC06) Moment of inertia (kg m²): 2.2			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
430	860					67	380	80.6	0.789	0.097	8
						132	375	88.5			
		910				138	370	88.9			
			1000			152	370	89.7			
				1150		169	360	90.7			
390	780					57	330	78.0	0.865	0.124	9
						113	325	87.0			
		820				119	325	87.6			
			910			132	325	88.5			
				1040		148	320	89.6			
350	710					49	290	76.8	0.990	0.150	10
						99	288	86.4			
		750				105	288	87.0			
			830			116	288	87.9			
				950		133	288	89.1			
310	630				1110	156	288	90.3	1.275	0.170	11
						44		76.3			
		660				91		86.2			
			740			96	265	86.8			
				840		106		87.7			
270	560					122		88.9	1.472	0.230	12
						143		90.2			
		590				80		83.6			
			660			85	241	84.2			
				755		94		85.5			
230	460					108		86.9	1.724	0.270	13
						127		88.4			
		510				71		82.6			
			540			75		83.4			
				690		84	216	84.7			
190	380					96		86.2	1.796	0.284	14
						113		87.8			
		480				68		81.2			
			510			72		82.0			
				660		80	210	83.4			
150	300					93		85.1			
					770	109		86.8			

GH225 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

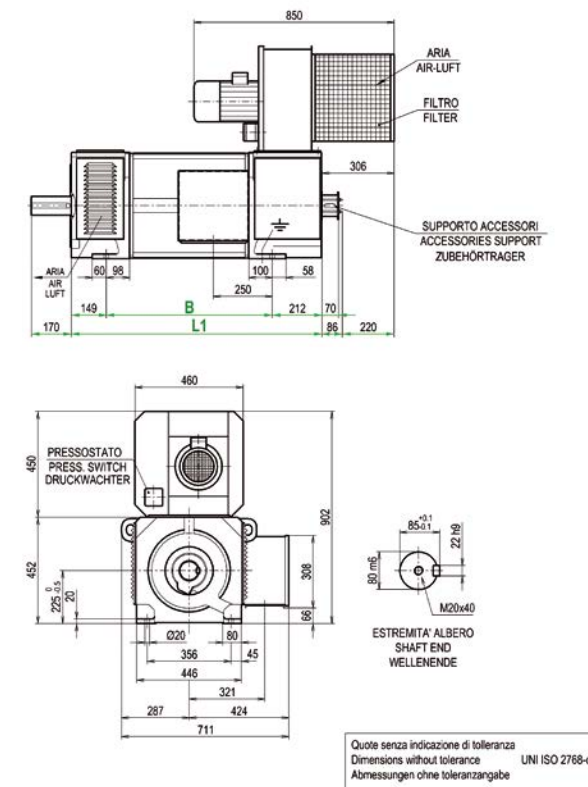
GH400

GH450

GH225 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 2900 Field time costant (s): 0.68 Motor mass (kg): 965 (IC06) Moment of inertia (kg m²): 2.4			Armature circuit		Winding code	
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
860						145	750	88.4	0.200	0.026	1	
	1640					277	750	92.5				
		1730				291	750	92.7				
			1900				308	720				93.3
					2200			336				690
780						127	655	88.2	0.259	0.031	2	
	1490					236	640	92.5				
		1570				249	640	92.7				
			1730				267	625				93.1
					2000			300				615
710						111	585	86.2	0.284	0.040	3	
	1360					210	575	91.4				
		1440				221	575	91.7				
			1580				244	575				92.2
					1800			275				570
630					2100	306	545	93.5	0.359	0.044	4	
	1210					105	560	86.0				
		1280				200	550	91.4				
			1410				211	550				91.7
						1610		226				535
560					1870	251	520	92.8	0.452	0.060	5	
	1100					281	500	93.5				
		1150				91	495	83.3				
			1270				174	485				89.9
					1450			184				485
510					1680	202	485	90.9	0.463	0.070	6	
	1000					226	475	91.7				
		1050				258	465	92.5				
			1160				82	450				82.9
								158				440
490						166	440	90.1	0.538	0.073	7	
	950					184	440	90.8				
		1000				202	425	91.6				
			1110				230	415				92.4
						1270		77				430
					1470	149	420	88.8	0.538	0.073		
						157	420	89.3				
						173	420	90.0				
							196	415				90.9
								223				405

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218EC P C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH225 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 2900 Field time costant (s): 0.68 Motor mass (kg): 965 (IC06) Moment of inertia (kg m²): 2.4			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
380	760					66	380	79.4	0.885	0.104	8
						132	375	87.8			
		800				137	370	88.3			
			890			152	370	89.2			
				1020		169	360	90.2			
340	690					55	330	76.6	0.969	0.132	9
						112	325	86.3			
		730				118	325	86.9			
			800			131	325	87.9			
				920		148	320	89.0			
300	625					48	290	75.4	1.110	0.161	10
						98	288	85.6			
		660				104	288	86.2			
			730			115	288	87.3			
				840		132	288	88.5			
			980		155	288	89.8				
270	550					43		74.8	1.429	0.183	11
						90		85.4			
		590				95	265	86.0			
			650			106		87.1			
				740		121		88.3			
				870		89.6					
490	520					79		82.6	1.650	0.246	12
						84		83.3			
			580			93	241	84.6			
				660		108		86.2			
					780		127				
450	475					70		81.6	1.932	0.289	13
						74		82.4			
			530			83	216	83.7			
				610		96		85.4			
					720		113				
420	450					68		80.0	2.012	0.304	14
						72		80.9			
			500			80	210	82.4			
				580		92		84.2			
					680		108				

GH225 IM1001 - IP54 - IC86W

Size	B	L1	V1
GH225 S	655	1016	982
GH225 M	705	1066	1032
GH225 L	750	1111	1077
GH225 P	800	1161	1127
GH225 X	850	1211	1177

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

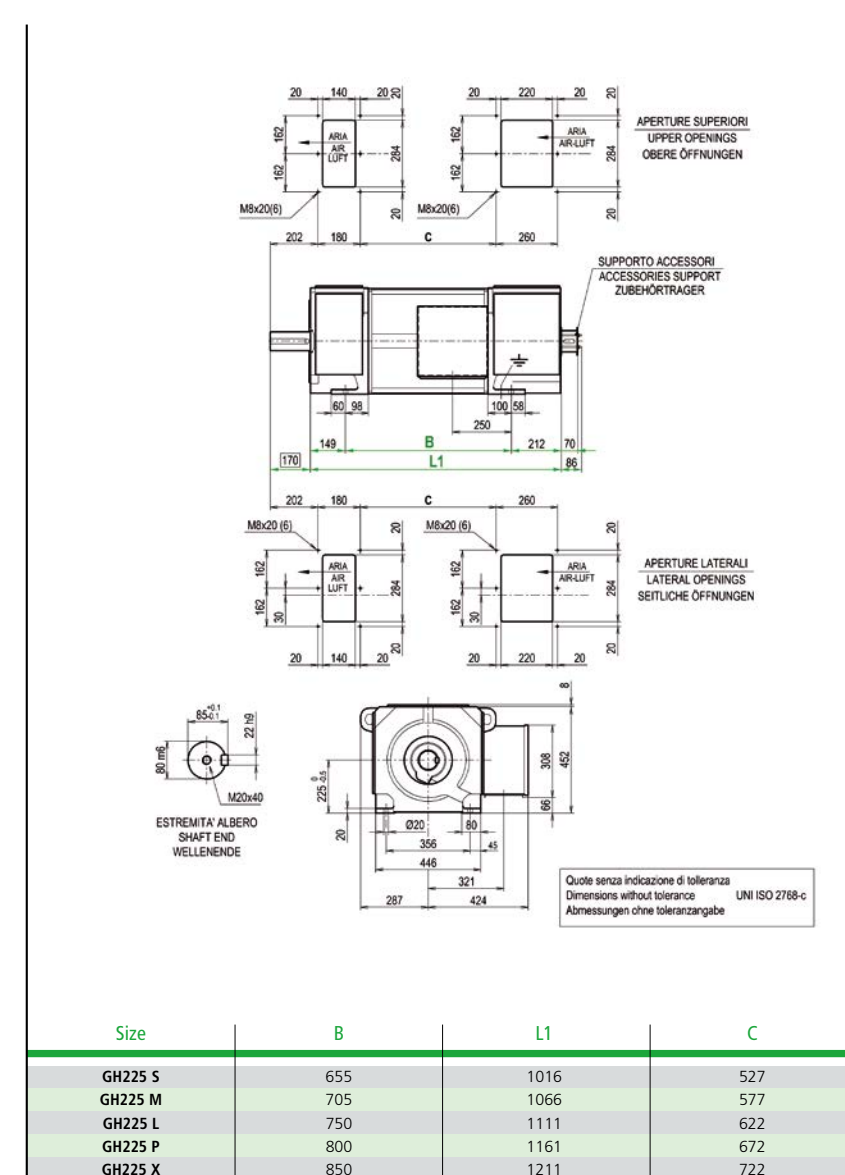
GH400

GH450

GH225 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 2900 Field time constant (s): 0.68 Motor mass (kg): 965 (IC06) Moment of inertia (kg m²): 2.4			Armature circuit	Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω
	340					57		78.0		
		360				61	185	79.0		
			400			68		80.7	3.180	0.418
				465		79		82.7		
	310					50		76.5		
		320				54	165	77.5		
			360			60		79.3	4.381	0.505
				420		70		81.5		

GH225 IM1001 - IP44 - IC37



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

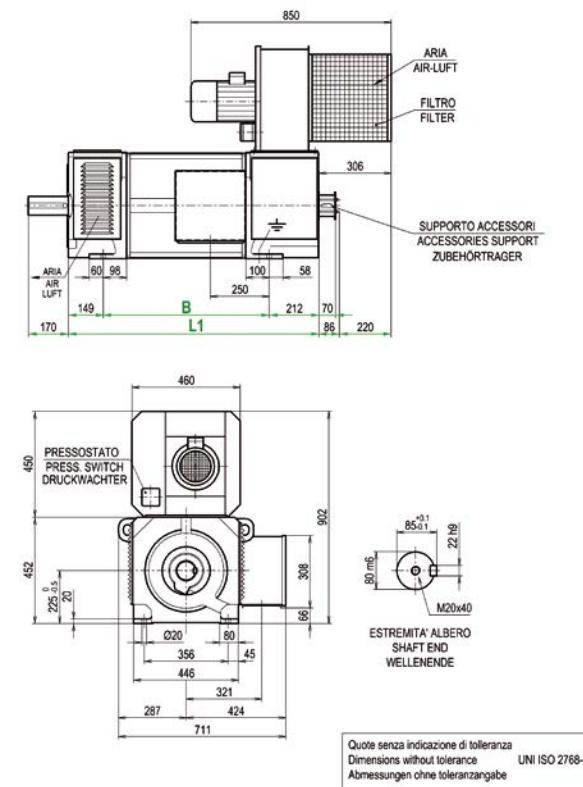
GH400

GH450

GH225 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 3200 Field time costant (s): 0.71 Motor mass (kg): 1040 (IC06) Moment of inertia (kg m²): 2.6			Armature circuit		Winding code	
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
770						144	750	88.0	0.221	0.027	1	
	1470					276	750	92.4				
		1550				290	750	92.7				
			1720			308	720	93.1				
					1970		336	690 93.8				
700						126	655	87.6	0.286	0.033	2	
	1350					235	640	92.2				
		1410				247	640	92.5				
			1580			267	625	92.9				
					1800		300	615				93.5
630						110	585	85.6	0.314	0.042	3	
	1220					210	575	91.1				
		1300				220	575	91.4				
			1420			243	575	92.0				
					1630		273	568				92.5
560					1900	305	545	93.4	0.397	0.048	4	
	1100					105	560	85.3				
		1150				200	550	90.9				
			1260			210	550	91.3				
							225	535				91.9
500					1450	250	520	92.7	0.500	0.064	5	
	980				1690	280	500	93.3				
		1030				90	495	82.4				
			1150			173	485	89.4				
							183	485				89.8
450					1300	202	485	90.5	0.512	0.074	6	
	900				1225	475	91.4					
		950			1520	257	465	92.2				
			1050			80	450	82.0				
							157	440				89.3
430						165	440	89.7	0.538	0.073	7	
	850					183	440	90.4				
		900				200	425	91.2				
			1000			1400	230	415				92.1
								76				430
						148	420	88.3	0.538	0.073		
	850					156	420	88.8				
		900				173	420	89.6				
			1000			195	415	90.5				
							222	405				91.5

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

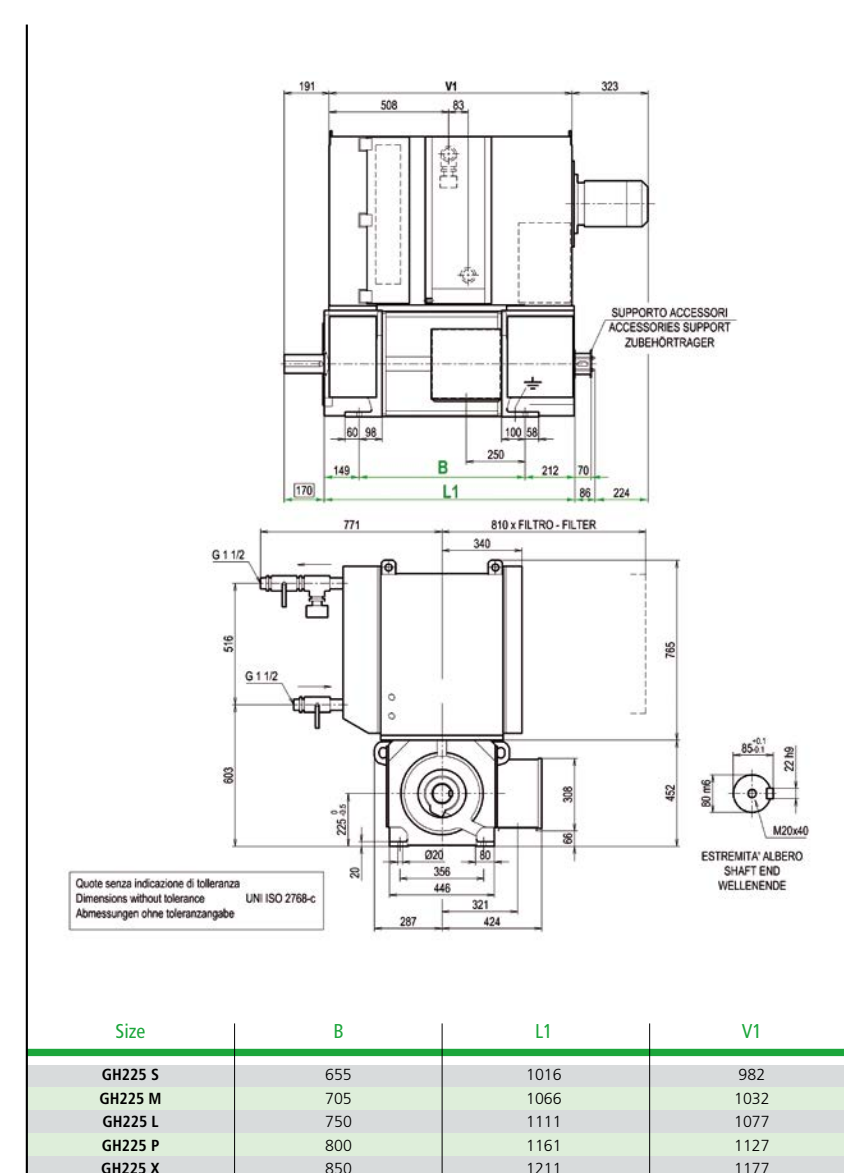
GH400

GH450

GH225 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 3200 Field time constant (s): 0.71 Motor mass (kg): 1040 (IC06) Moment of inertia (kg m²): 2.6			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
340	680					65	380	78.2	0.981	0.111	8
						130	375	87.2			
		720				135	370	87.7			
			800			150	370	88.6			
				910		168	360	89.7			
300	610					55	330	75.3	1.074	0.141	9
						111	325	85.6			
		650				118	325	86.2			
			720			130	325	87.2			
				820		147	320	88.5			
270	560					47	290	74.0	1.229	0.170	10
						97	288	84.9			
		590				103	288	85.5			
			660			114	288	86.6			
				750		131	288	87.9			
				880		154	288	89.3			
	490					89		84.6	1.583	0.195	11
						94		85.2			
						105	265	86.4			
			580			120		87.7			
				790		141		89.1			
440	460					78		81.6	1.828	0.262	12
						83		82.4			
			520			92	241	83.8			
				590		107		85.4			
				700		126		87.1			
400	420					69		80.5	2.140	0.309	13
						73		81.4			
			470			82	216	82.8			
				540		95		84.6			
				640		112		86.4			
380	400					67		78.9	2.228	0.324	14
						71		79.8			
			450			79	210	81.4			
				520		92		83.4			
				610		107		85.3			

GH225 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

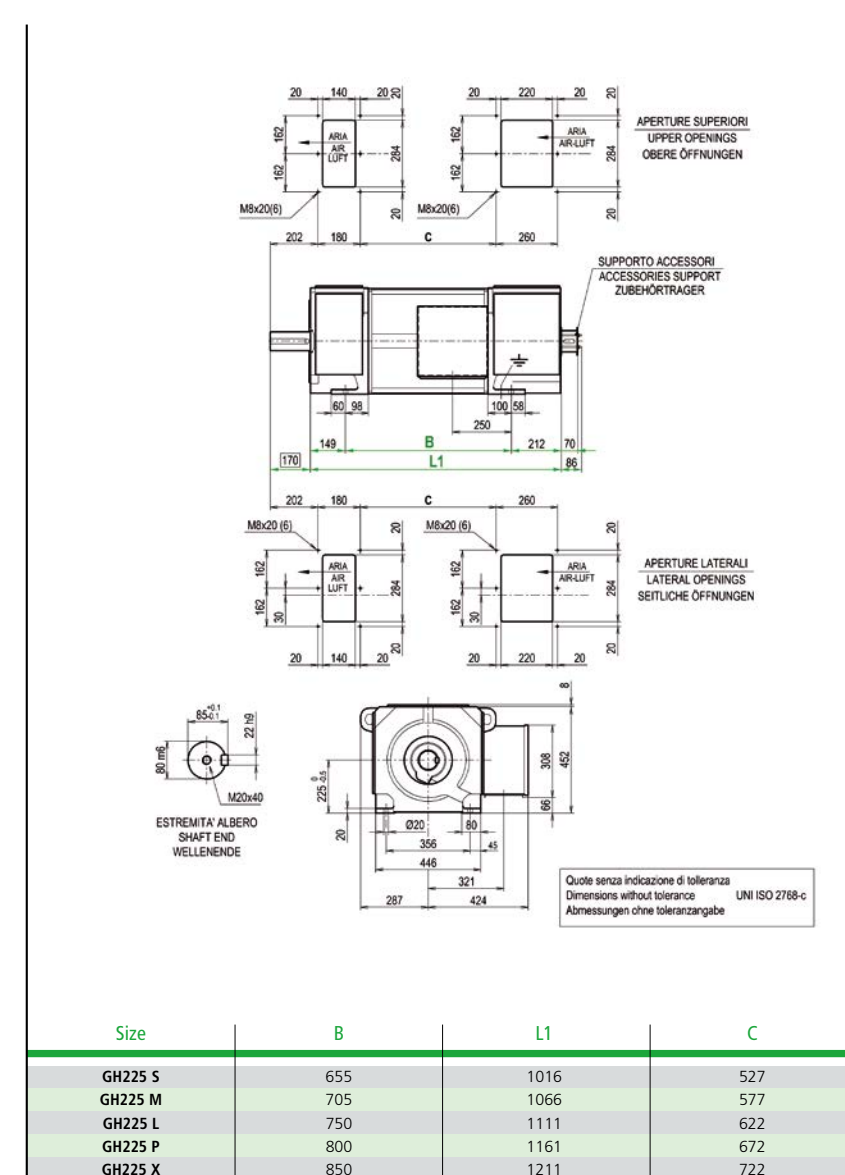
GH400

GH450

GH225 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 3200 Field time costant (s): 0.71 Motor mass (kg): 1040 (IC06) Moment of inertia (kg m²): 2.6			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
	300					56		76.7	3.523	0.446	15
		320				60	185	77.7			
			360			67		79.5			
				410		78		81.7			
	270					49		75.1	4.856	0.539	16
		290				53	165	76.2			
			320			59		78.1			
				370		68		80.4			

GH225 IM1001 - IP44 - IC37



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	

DC MOTORS

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- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

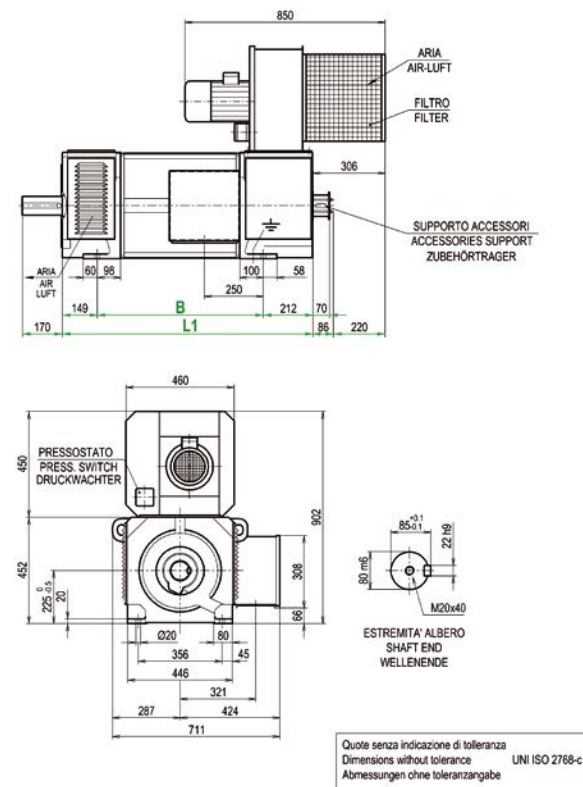
GH315

GH355

GH400

GH450

GH225 IM1001 - IP23 - IC06



Size	B	L1
GH225 S	655	1016
GH225 M	705	1066
GH225 L	750	1111
GH225 P	800	1161
GH225 X	850	1211

TECHNICAL DATA											
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley	
GH225 S	755	1.75	2400	0.68	3000	50	1400	GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3
GH225 M	810	1.95	2600	0.77	3000	50	1400				
GH225 L	870	2.2	3000	0.81	3000	50	1400				
GH225 P	925	2.4	3300	0.84	3000	50	1400				
GH225 X	1000	2.6	3500	0.87	3000	50	1400				
GH225 SK	755	1.75	2100	0.58	3000	50	1400	Electrical blower (IC06)	Weight	Blower motor power	
GH225 MK	810	1.95	2400	0.62	3000	50	1400		40 kg	2.2 kW (50/60 Hz)	
GH225 LK	870	2.2	2600	0.65	3000	50	1400				
GH225 PK	925	2.4	2900	0.68	3000	50	1400				
GH225 XK	1000	2.6	3200	0.71	3000	50	1400				
								Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
									240 kg	3.0 kW (50/60 Hz)	



DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

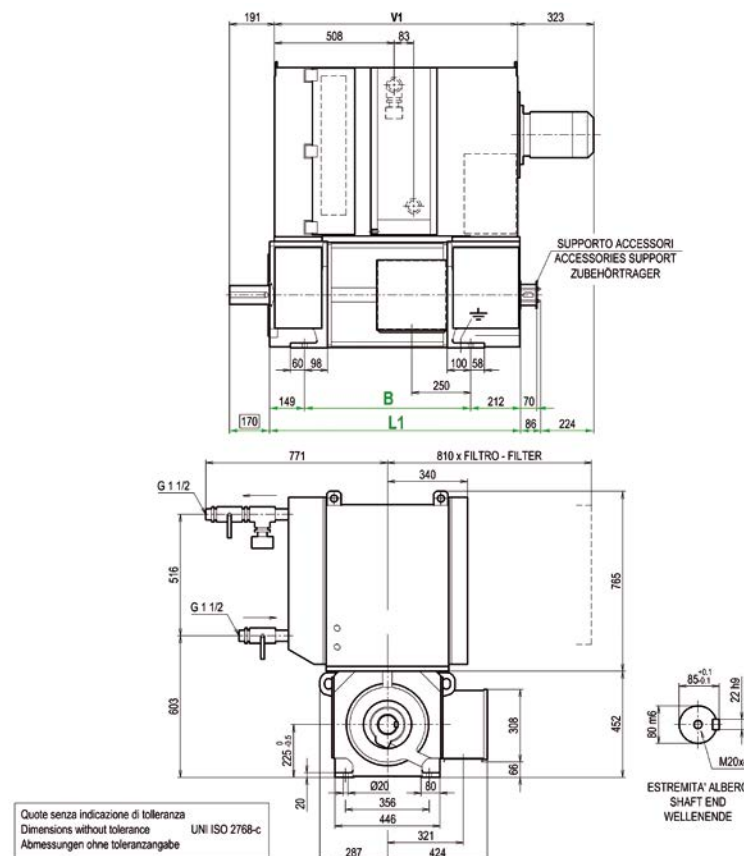
GH315

GH355

GH400

GH450

GH225 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH225 S	655	1016	982
GH225 M	705	1066	1032
GH225 L	750	1111	1077
GH225 P	800	1161	1127
GH225 X	850	1211	1177

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3

Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	

Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	



GO TO MENU





DC MOTORS

1.	GENERAL INFORMATION
2.	STANDARDS AND QUALITY
2.1	Reference standards
2.2	CE Marking
2.3	Quality system
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4.	DESIGN FEATURES
4.1	Rotor
4.2	Commutator
4.3	Stator
4.4	Brushholder yoke
4.5	Bearings
4.6	Belted and radial thrust application
5.	CONSTRUCTION FEATURES
5.1	Coupling and shaft extension
5.2	Mounting arrangement
5.3	Degree of protection
5.4	Cooling method
5.5	Maximum allowable speeds
5.6	Noise level
5.7	Vibrations and balancing
5.8	Conduit box
5.9	Groud terminals
5.10	Cross-section drawing
6.	MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS
6.1	Ratings
6.2	Supply voltage
6.3	Maximum loads
6.4	Current rate-of-rise
6.5	Speed regulation
6.6	Duty with large speed regulation
6.7	Excitation
6.8	Maximum current at locked rotor
6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
HOME	

GH225

GH250

GH280

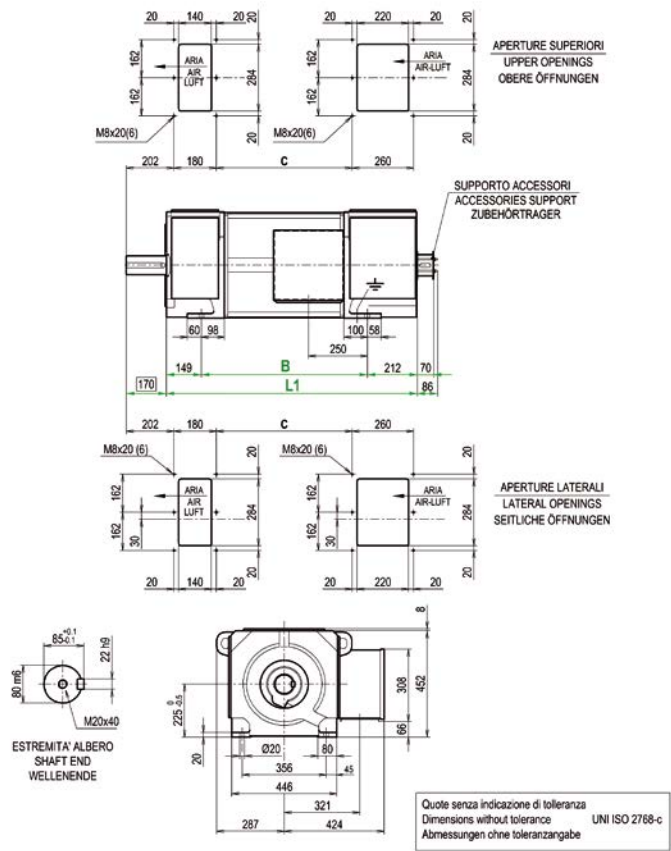
GH315

GH355

GH400

GH450

GH225 IM1001 - IP44 - IC37



Size	B	L1	C
GH225 S	655	1016	527
GH225 M	705	1066	577
GH225 L	750	1111	622
GH225 P	800	1161	672
GH225 X	850	1211	722

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH225 S	755	1.75	2400	0.68	3000	50	1400
GH225 M	810	1.95	2600	0.77	3000	50	1400
GH225 L	870	2.2	3000	0.81	3000	50	1400
GH225 P	925	2.4	3300	0.84	3000	50	1400
GH225 X	1000	2.6	3500	0.87	3000	50	1400
GH225 SK	755	1.75	2100	0.58	3000	50	1400
GH225 MK	810	1.95	2400	0.62	3000	50	1400
GH225 LK	870	2.2	2600	0.65	3000	50	1400
GH225 PK	925	2.4	2900	0.68	3000	50	1400
GH225 XK	1000	2.6	3200	0.71	3000	50	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH225 S-M-L-P-X	6218 2Z C3	NU218ECP C3	6217 2Z C3

Electrical blower (IC06)	Weight	Blower motor power	
	40 kg	2.2 kW (50/60 Hz)	

Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	240 kg	3.0 kW (50/60 Hz)	



DC MOTORS

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- 2.2 CE Marking
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4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
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- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
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7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH250

Derating for field weakening operation

GH250 K

Performance of compensated motors

GH250 MK

GH250 LK

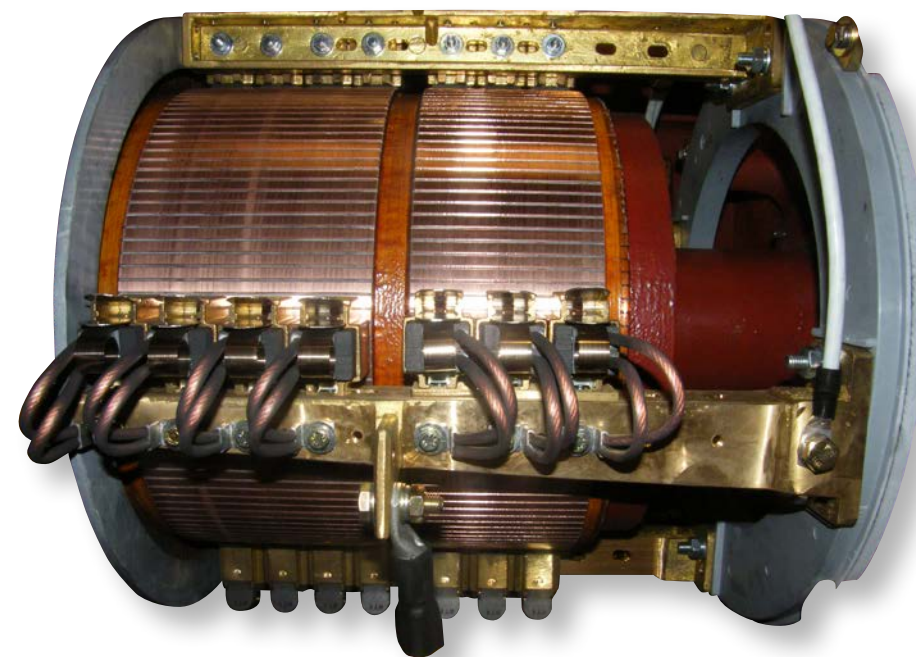
GH250 XK

Dimensioni di ingombro

GH250 IM1001-IP23-IC06

GH250 IM1001-IP54-IC86W

GH250 IM1001-IP44-IC37



Performance Tables are displayed on multiple pages, alongside the data tables are repeated alternately overall dimensions (IC06- IC86W-IC37)



DC MOTORS

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2.1	Reference standards
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2.3	Quality system
3.	IDENTIFICATION CODE
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4.1	Rotor
4.2	Commutator
4.3	Stator
4.4	Brushholder yoke
4.5	Bearings
4.6	Belted and radial thrust application
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5.1	Coupling and shaft extension
5.2	Mounting arrangement
5.3	Degree of protection
5.4	Cooling method
5.5	Maximum allowable speeds
5.6	Noise level
5.7	Vibrations and balancing
5.8	Conduit box
5.9	Groud terminals
5.10	Cross-section drawing
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6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
HOME	

GH225

GH250

GH280

GH315

GH355

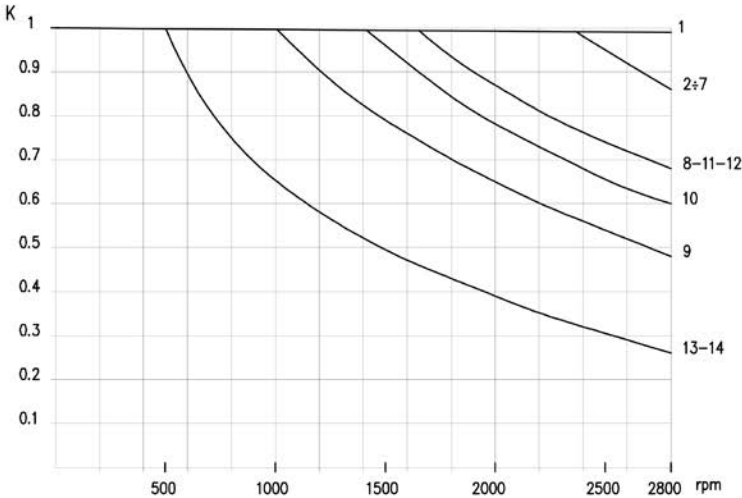
GH400

GH450

GH 250 K

RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG

GH 250 K (compensata - compensated - kompensiert)
[180% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile	Allowable power output P = K x P table	Verfügbare Leistung P = K x P table
per/for/für	GH 250 MK GH 250 LK GH 250 XK	K = K x 1.33 K = K x 1.16 K = K x 1.0
Per K ≥ 1 niente declassamento	For K ≥ 1 no derating	Für K ≥ 1 keine Leistungsreduzierung

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH250 MK	1080	3.37	3200	1.01	2800	70	1400
GH250 LK	1160	3.73	3600	1.05	2800	70	1400
GH250 XK	1260	4.20	4000	1.09	2700	70	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH250 MK-LK-XK	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	90 kg	3.0 kW (50/60 Hz) - 4.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	300 kg	4.0 / 5.5 kW (50/60 Hz)	



DC MOTORS

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4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
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- 5.8 Conduit box
- 5.9 Groud terminals
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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.6 Duty with large speed regulation
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- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

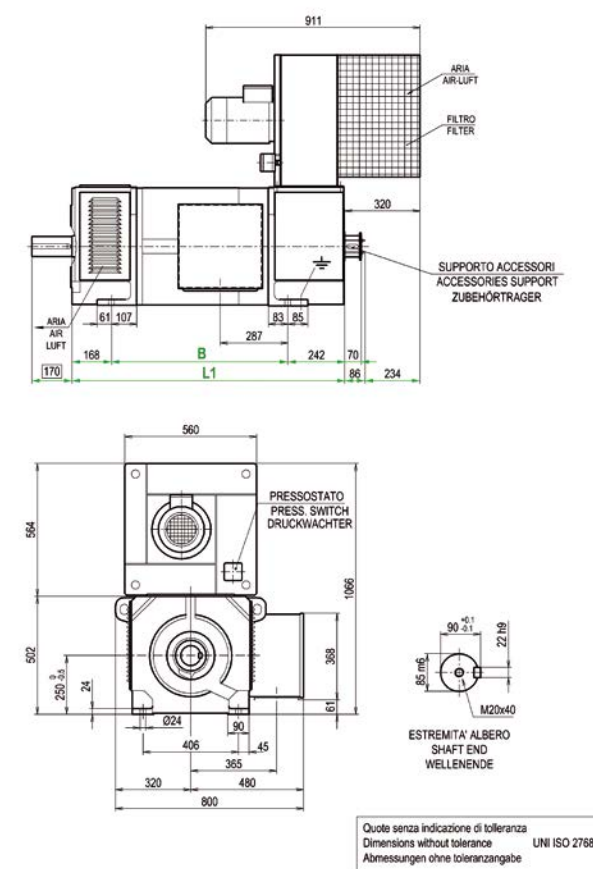
GH450

GH250 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 3200 Field time constant (s): 1.01 Motor mass (kg): 1170 (IC06) Moment of inertia (kg m²): 3.37			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
950	1800					161	822	90.0	0.186	0.017	1
						305	815	93.4			
		1890				320	815	93.6			
			2080			350	810	93.8			
				2360		396	810	94.2			
800	1500					158	806	89.1	0.269	0.022	2
						290	780	93.0			
		1570				305	780	93.2			
			1730			330	765	93.5			
				1970		360	735	94.1			
700	1320					410	725	94.4	0.409	0.027	3
						141	730	88.0			
		1400				260	700	92.5			
			1540			272	700	92.6			
				1760		300	700	93.0			
610	1200					321	660	93.8	0.358	0.037	4
						370	653	94.2			
		1250				117	625	86.3			
			1370			223	610	91.4			
				1560		235	610	91.7			
570	1050					260	610	92.4	0.538	0.046	5
						294	610	92.8			
		1100				342	610	93.4			
			1220			104	555	85.3			
				1390		198	545	91.0			
490	930					208	545	91.2	0.499	0.062	6
						230	545	91.7			
						262	545	92.4			
			1080			304	545	93.1			
				1250		83		83.6			
380	760					163		90.0	0.847	0.080	7
						172	454	90.4			
		800				190		91.0			
			880			216		91.8			
				1000		252		92.5			

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH250 MK	1080	3.37	3200	1.01	2800	70	1400
GH250 LK	1160	3.73	3600	1.05	2800	70	1400
GH250 XK	1260	4.20	4000	1.09	2700	70	1400

GH250 IM1001 - IP23 - IC06



Size	B	L1
GH250 M	810	1220
GH250 L	870	1280
GH250 X	950	1360

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH250 MK-LK-XK	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	90 kg	3.0 kW (50/60 Hz) - 4.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	300 kg	4.0 / 5.5 kW (50/60 Hz)	

DC MOTORS

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
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- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

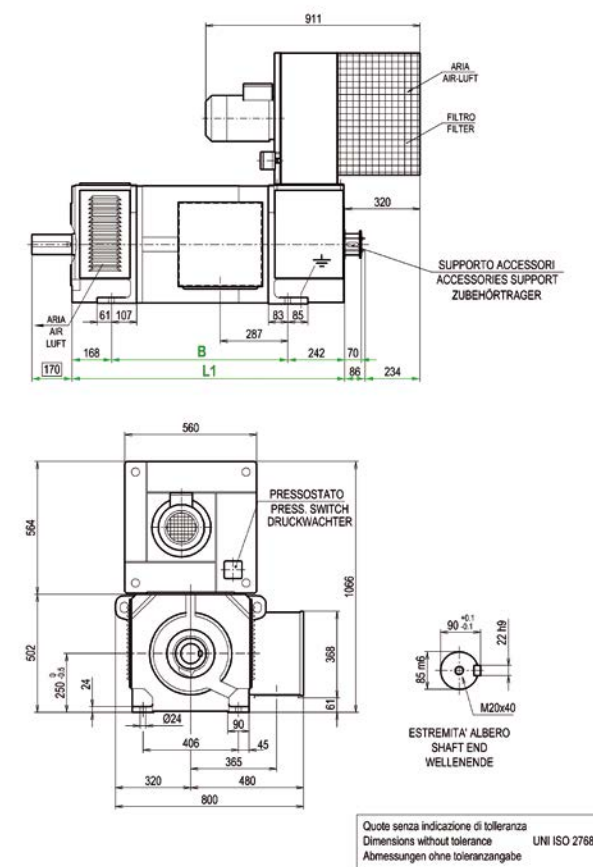
GH450

GH250 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 3600 Field time constant (s): 1.05 Motor mass (kg): 1250 (IC06) Moment of inertia (kg m²): 3.73			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
830	1590					163.8	27	89.5	0.211	0.019	1
						303	815	93.0			
		1650				319	815	93.2			
			1820			350	810	93.8			
				2050		396	810	94.1			
710	1320					156	810	88.0	0.306	0.024	2
						290	780	92.7			
		1380				304	780	92.9			
			1510			328	765	93.3			
				1720		360	735	94.0			
610	1160				2000	410	725	94.3	0.466	0.029	3
						140	730	87.3			
		1220				258	700	92.0			
			1350			272	700	92.3			
				1540		298	700	92.8			
550	1040				1800	321	660	93.6	0.407	0.040	4
						370	655	94.0			
		1080				117	625	85.4			
			1200			222	610	91.0			
				1370		258	610	91.9			
490	920				1600	294	610	92.5	0.612	0.050	5
						341	610	93.2			
		960				103	555	84.2			
			1070			197	545	90.4			
				1210		207	545	90.7			
420	810				1410	229	545	91.3	0.566	0.067	6
						261	545	92.1			
		850				303	545	92.8			
			940			82		82.6			
				1080		162		89.5			
340	660				1250	171	455	89.8	0.964	0.086	7
						189		90.5			
		690				216		91.3			
			770			251		92.2			
				880		71		80.7			

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH250 MK	1080	3.37	3200	1.01	2800	70	1400
GH250 LK	1160	3.73	3600	1.05	2800	70	1400
GH250 XK	1260	4.20	4000	1.09	2700	70	1400

GH250 IM1001 - IP23 - IC06



Size	B	L1
GH250 M	810	1220
GH250 L	870	1280
GH250 X	950	1360

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH250 MK-LK-XK	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	90 kg	3.0 kW (50/60 Hz) - 4.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	300 kg	4.0 / 5.5 kW (50/60 Hz)	

DC MOTORS

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4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.2 Mounting arrangement
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- 5.4 Cooling method
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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

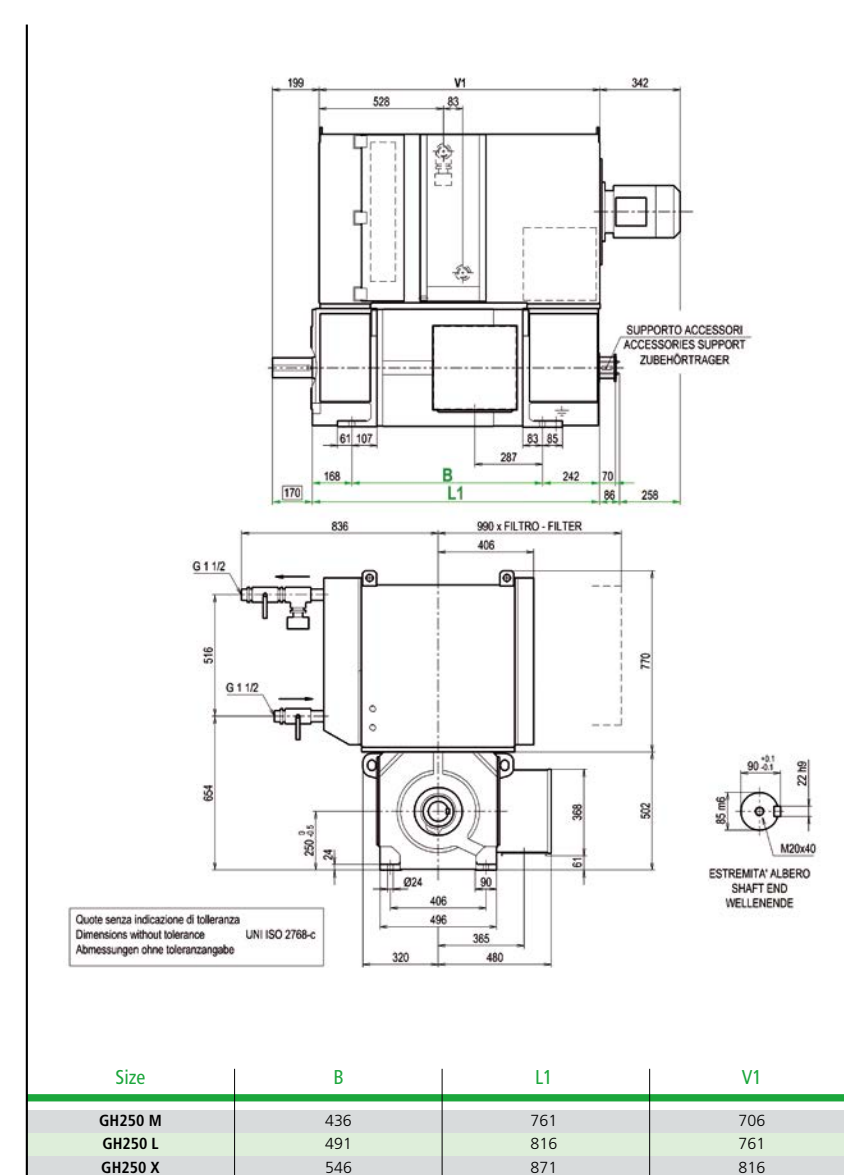
GH400

GH450

GH250 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 3600 Field time costant (s): 1.05 Motor mass (kg): 1250 (IC06) Moment of inertia (kg m²): 3.73			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
300						63		78.1	1.028	0.110	8
	600					127		87.1			
		630				134	364	87.6			
			690			148		88.5			
				800		170		89.6			
					930	198	90.7				
270						56		75.6	1.663	0.141	9
	530					116		85.5			
		560				122	337	86.0			
			600			135		87.0			
				700		156		88.6			
					820	180	89.5				
240						51		74.6	1.602	0.153	10
	480					105		85.2			
		500				111	310	85.8			
			560			123		86.9			
				650		142		88.2			
					750	166	89.5				
200						43		70.5	2.536	0.211	11
	410					92		82.6			
		430				96	276	83.2			
			480			108		84.5			
				550		123		86.1			
					650	145	87.7				
370						75		82.2	2.228	0.256	12
	390					80	230	83.0			
						89		84.3			
			430			102		85.9			
				500		120		87.5			
					590						
290						66		79.0	3.858	0.345	13
	310					70	210	79.7			
						78		81.3			
			350			90		83.3			
				410							
220						49		74.4	6.652	0.564	14
	230					52	163	75.2			
						57		76.9			
				260		68		80.0			
					300						
					360	80	81.9				

GH250 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH250 MK	1080	3.37	3200	1.01	2800	70	1400
GH250 LK	1160	3.73	3600	1.05	2800	70	1400
GH250 XK	1260	4.20	4000	1.09	2700	70	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH250 MK-LK-XK	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	90 kg	3.0 kW (50/60 Hz) - 4.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	300 kg	4.0 / 5.5 kW (50/60 Hz)	

DC MOTORS

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- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
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- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

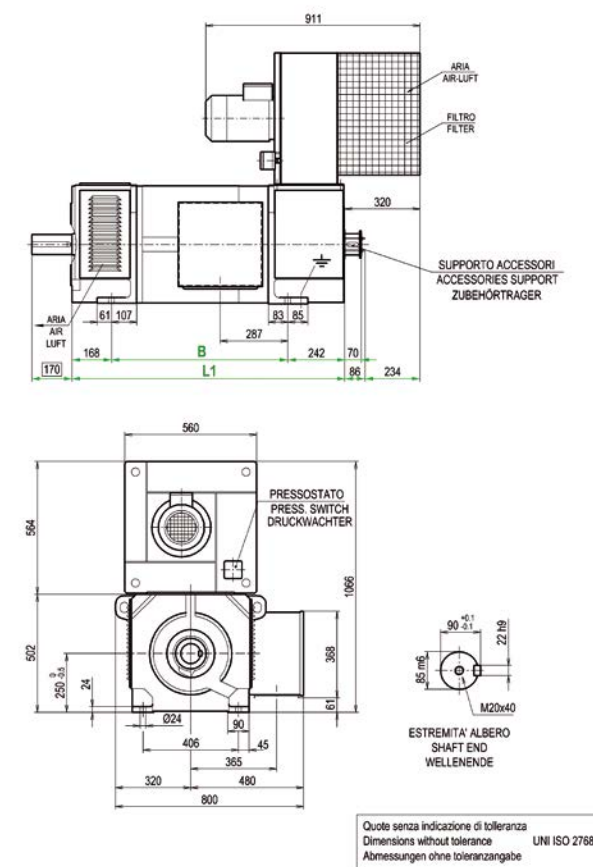
GH400

GH450

GH250 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 4000 Field time constant (s): 1.09 Motor mass (kg): 1350 (IC06) Moment of inertia (kg m²): 4.20			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
710	1350					161	825	88.8	0.245	0.021	1
						302	815	92.7			
		1410				318	815	92.9			
			1560			347	810	93.3			
				1800		395	810	93.7			
580	1120					155	810	87.2	0.356	0.027	2
						288	780	92.2			
		1170				303	780	92.5			
			1300			328	765	93.1			
				1470		358	735	93.5			
520	990				1750	409	725	94.0	0.542	0.032	3
						139	730	86.3			
		1050				257	700	91.6			
			1150			270	700	92.0			
				1310		297	700	92.4			
450	900				1550	320	660	93.2	0.473	0.044	4
						370	655	93.8			
		930				116	625	84.3			
			1030			220	610	90.5			
				1180		232	610	90.8			
400	780				1380	256	610	91.4	0.711	0.055	5
						292	610	92.1			
		820				340	610	92.9			
			910			101	555	83.2			
				1030		195	545	89.7			
340	690				1200	206	545	90.1	0.656	0.074	6
						227	545	90.8			
						259	545	91.6			
						302	545	92.4			
		720				81		81.1			
280	560				1050	161		88.7	1.121	0.095	7
						170	455	89.1			
						188		89.9			
						215		90.8			
						250		91.7			
					750	69		79.0			
						140		87.6			
		590				148	400	88.1			
						163		88.9			
			650			187		90.0			

GH250 IM1001 - IP23 - IC06



Size	B	L1
GH250 M	810	1220
GH250 L	870	1280
GH250 X	950	1360

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH250 MK	1080	3.37	3200	1.01	2800	70	1400
GH250 LK	1160	3.73	3600	1.05	2800	70	1400
GH250 XK	1260	4.20	4000	1.09	2700	70	1400

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH250 MK-LK-XK	6218 2Z C3	NU218ECP C3	6217 2Z C3
Electrical blower (IC06)	Weight	Blower motor power	
	90 kg	3.0 kW (50/60 Hz) - 4.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	300 kg	4.0 / 5.5 kW (50/60 Hz)	

DC MOTORS

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- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

GH225

GH250

GH280

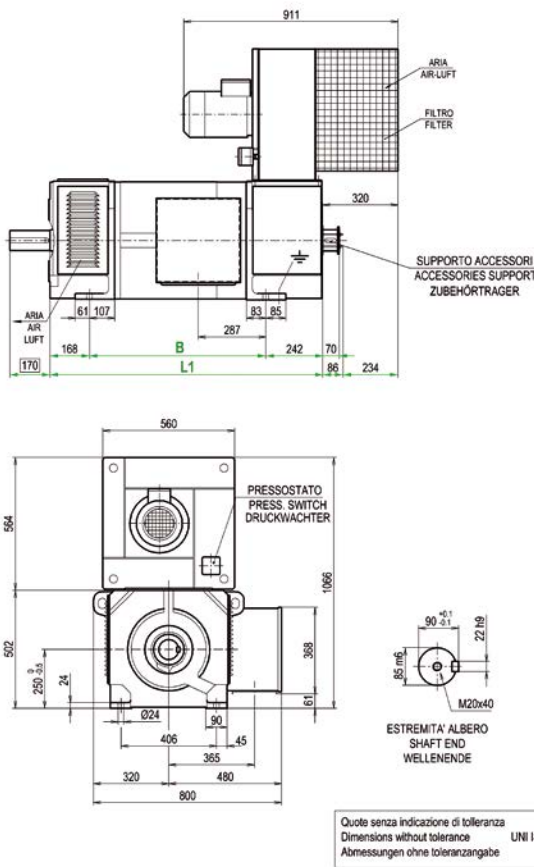
GH315

GH355

GH400

GH450

GH250 IM1001 - IP23 - IC06



Size	B	L1
GH250 M	810	1220
GH250 L	870	1280
GH250 X	950	1360

TECHNICAL DATA												
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end	
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley		
GH250 MK	1080	3.37	3200	1.01	2800	70	1400	GH250 MK-LK-XK	6218 2Z C3	NU218ECP C3	6217 2Z C3	
GH250 LK	1160	3.73	3600	1.05	2800	70	1400					
GH250 XK	1260	4.20	4000	1.09	2700	70	1400					
								Electrical blower (IC06)	Weight	Blower motor power		
									90 kg	3.0 kW (50/60 Hz) - 4.0 kW (60 Hz)		
								Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power		
									300 kg	4.0 / 5.5 kW (50/60 Hz)		



DC MOTORS

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5.2	Mounting arrangement
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5.10	Cross-section drawing
6.	MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS
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6.5	Speed regulation
6.6	Duty with large speed regulation
6.7	Excitation
6.8	Maximum current at locked rotor
6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
	HOME

GH225

GH250

GH280

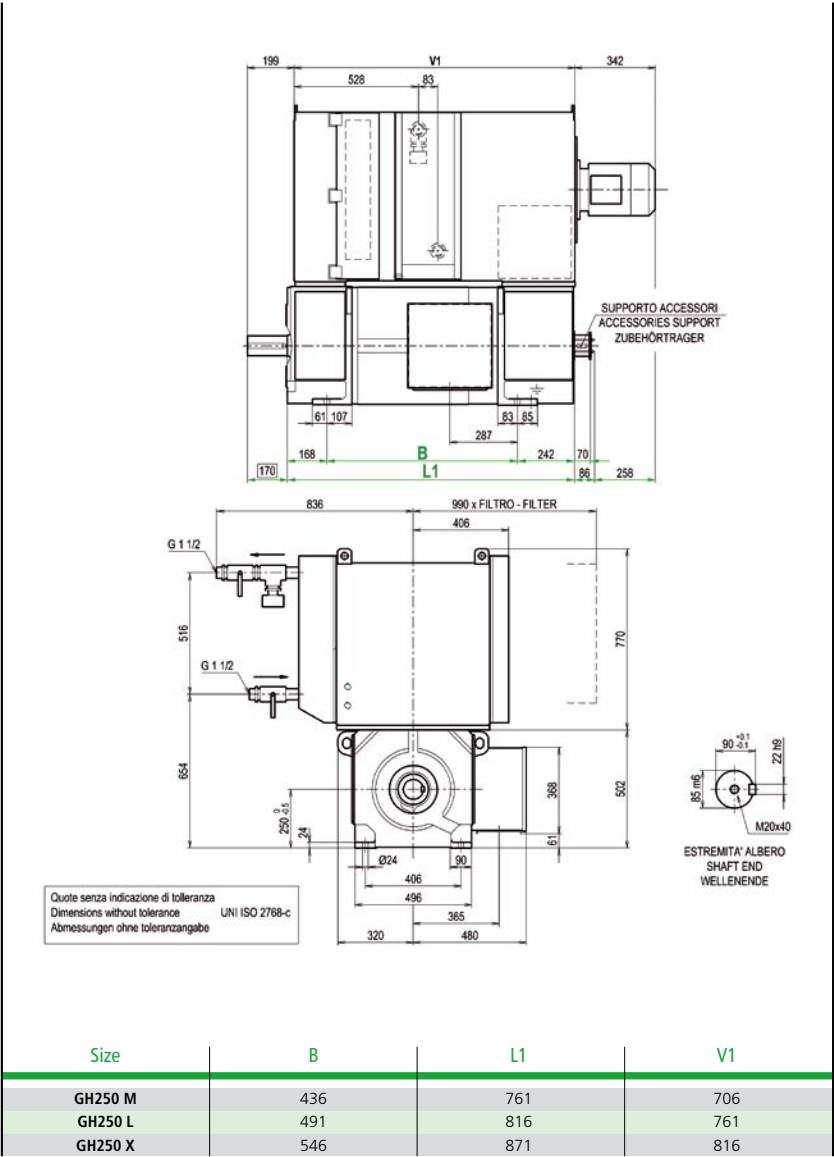
GH315

GH355

GH400

GH450

GH250 IM1001 - IP54 - IC86W



TECHNICAL DATA								Bearings		
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Drive end		Opposite drive end
						Air flow (m³/min)	Pressure drop (Pa)	Coupling	Pulley	
GH250 MK	1080	3.37	3200	1.01	2800	70	1400	GH250 MK-LK-XK		6217 2Z C3
GH250 LK	1160	3.73	3600	1.05	2800	70	1400	Electrical blower (IC06)		Blower motor power
GH250 XK	1260	4.20	4000	1.09	2700	70	1400	90 kg		3.0 kW (50/60 Hz) - 4.0 kW (60 Hz)
Air-To-Water Heat Exchanger (IC 86W)								Weight		Heat exchanger motor power
								300 kg		4.0 / 5.5 kW (50/60 Hz)



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- 6.6 Duty with large speed regulation
- 6.7 Excitation
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GH280

GH315

GH355

GH400

GH450

GH280

Derating for field weakening operation

GH280 K

Performance of compensated motors

GH280 SK

GH280 MK

GH280 LK

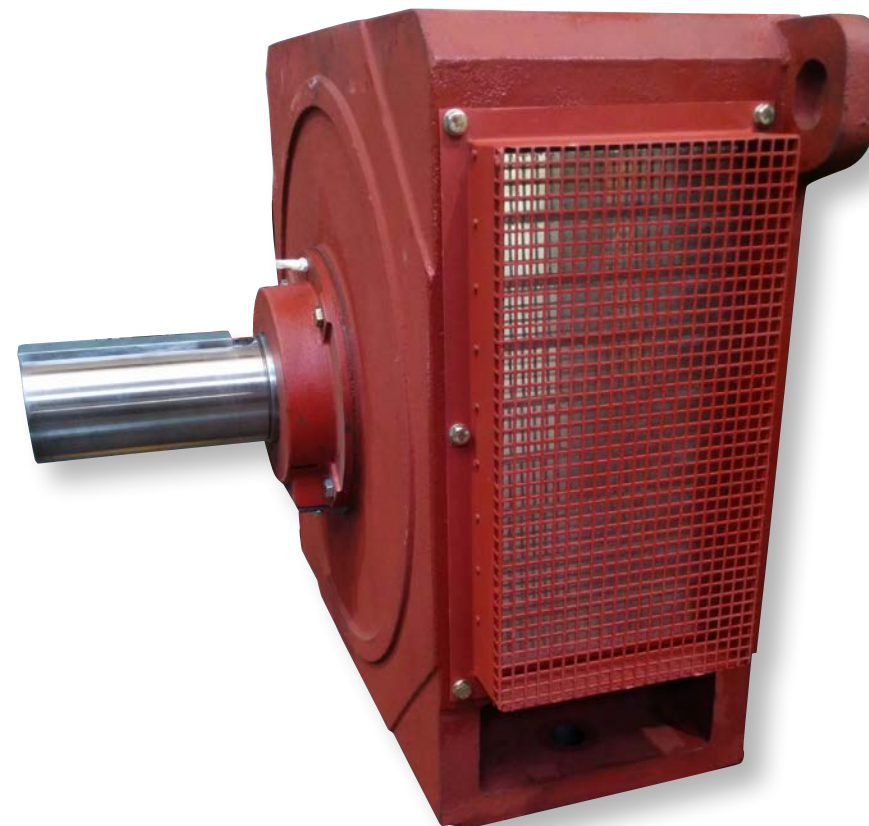
GH280 PK

Overall dimensions

GH280 IM1001-IP23-IC06

GH280 IM1001-IP54-IC86W

GH280 IM1001-IP44-IC37



Performance Tables are displayed on multiple pages, alongside the data tables are repeated alternately overall dimensions (IC06- IC86W-IC37)





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4.2 Commutator

4.3 Stator

4.4 Brushholder yoke

4.5 Bearings

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5.3 Degree of protection

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5.6 Noise level

5.7 Vibrations and balancing

5.8 Conduit box

5.9 Groud terminals

5.10 Cross-section drawing

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6.8 Maximum current at locked rotor

6.9 Accessories

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HOME

GH225

GH250

GH280

GH315

GH355

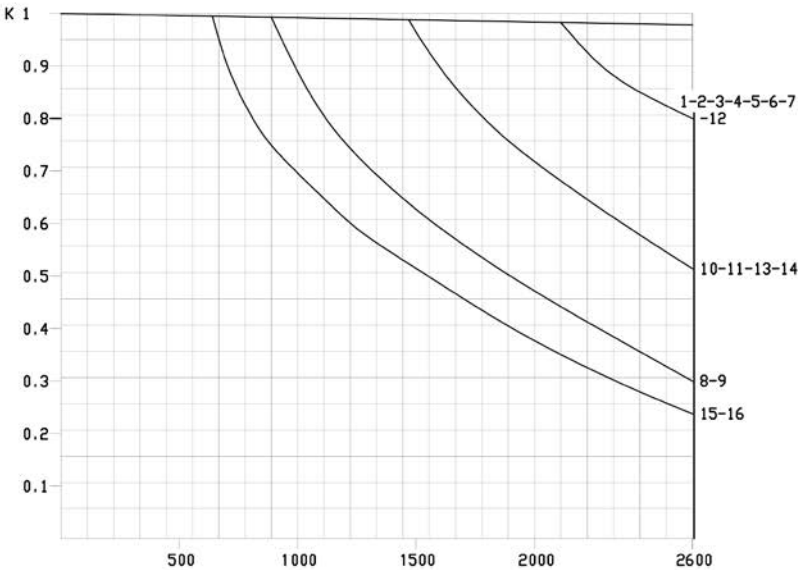
GH400

GH450

GH 280 K

RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG

GH 280 K (compensata - compensated - kompensiert)
[180% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile	Allowable power output P = K x P table	Verfügbare Leistung P = K x P table
per/for/für	GH 280 SK GH 280 MK GH 280 LK GH 280 PK	K = K x 1.30 K = K x 1.20 K = K x 1.12 K = K x 1.0
Per K ≥ 1 niente declassamento	For K ≥ 1 no derating	Für K ≥ 1 keine Leistungsreduzierung

TECHNICAL DATA											
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley	
GH280 SK	1400	4.9	3400	1.07	2600	85	2050	GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
GH280 MK	1500	5.6	3700	1.12	2600	85	2050				
GH280 LK	1600	6.1	4000	1.17	2600	85	2050				
GH280 PK	1720	6.8	4400	1.25	2600	85	2050				
								Electrical blower (IC06)	Weight	Blower motor power	
									105 kg	5.5 kW (50/60 Hz)	
								Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
									370 kg	5.5 / 7.5 kW (50/60 Hz)	



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- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.2 Mounting arrangement
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- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

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HOME

GH225

GH250

GH280

GH315

GH355

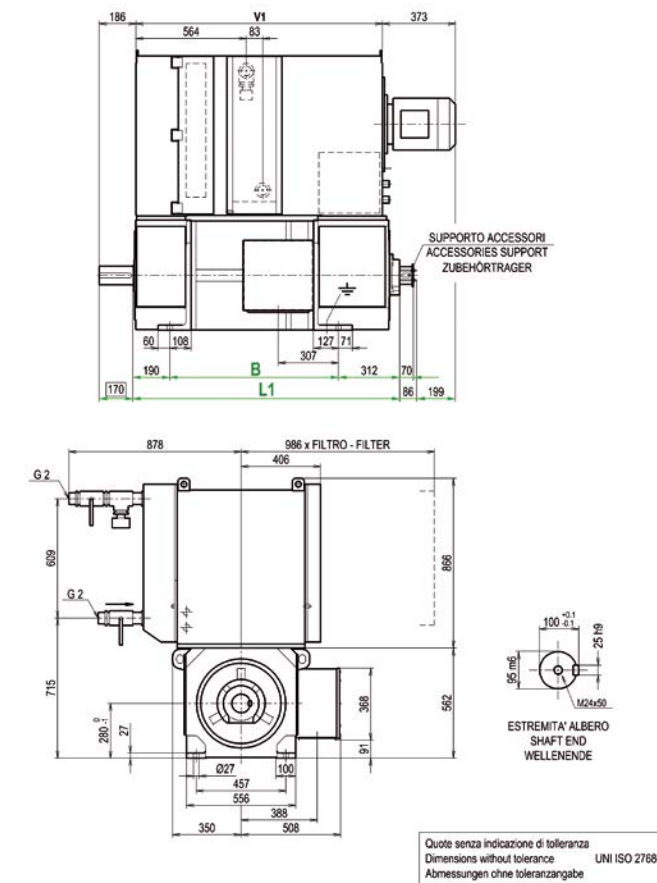
GH400

GH450

GH280 SK

Rated speed (rpm) at armature voltage						Excitation power (W): 3400 Field time costant (s): 1.07 Motor mass (kg): 1505 (IC06) Moment of inertia (kg m²): 4.9			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
330						94		80.0	0.589	0.068	8
	670					189		88.2			
		710				200	537	88.6			
			780			222		89.7			
				890		253		90.5			
300						86		79.4	0.871	0.078	9
	610					172		87.8			
		640				181	490	88.3			
			700			201		89.3			
				810		230		90.3			
				950	268		91.2				
270						75		78.0	0.741	0.097	10
	550					151		86.9			
		580				160	435	87.4			
			650			177		88.5			
				740		202		89.5			
				865	236		90.6				
210						56		72.5	1.546	0.148	11
	440					119		84.2			
		465				127	355	84.7			
			510			140		85.7			
				590		161		87.5			
				690	189		88.9				
	400					106		82.7	1.241	0.181	12
		420				113	323	83.4			
			460			126		85.1			
			540			145		86.3			
					630	170		87.9			
370						103		82.2	1.655	0.191	13
	390					110	316	82.9			
						123		84.6			
			440			141		85.9			
				510		166		87.6			
				590							
340						91		80.9	2.399	0.231	14
	360					98	283	81.8			
			400			110		83.6			
				460		125		85.0			
					540	147		86.7			

GH280 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH280 S	860	1362	1258
GH280 M	910	1412	1308
GH280 L	960	1462	1358
GH280 P	1020	1522	1418

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	



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- 5.4 Cooling method
- 5.5 Maximum allowable speeds
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- 5.9 Groud terminals
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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

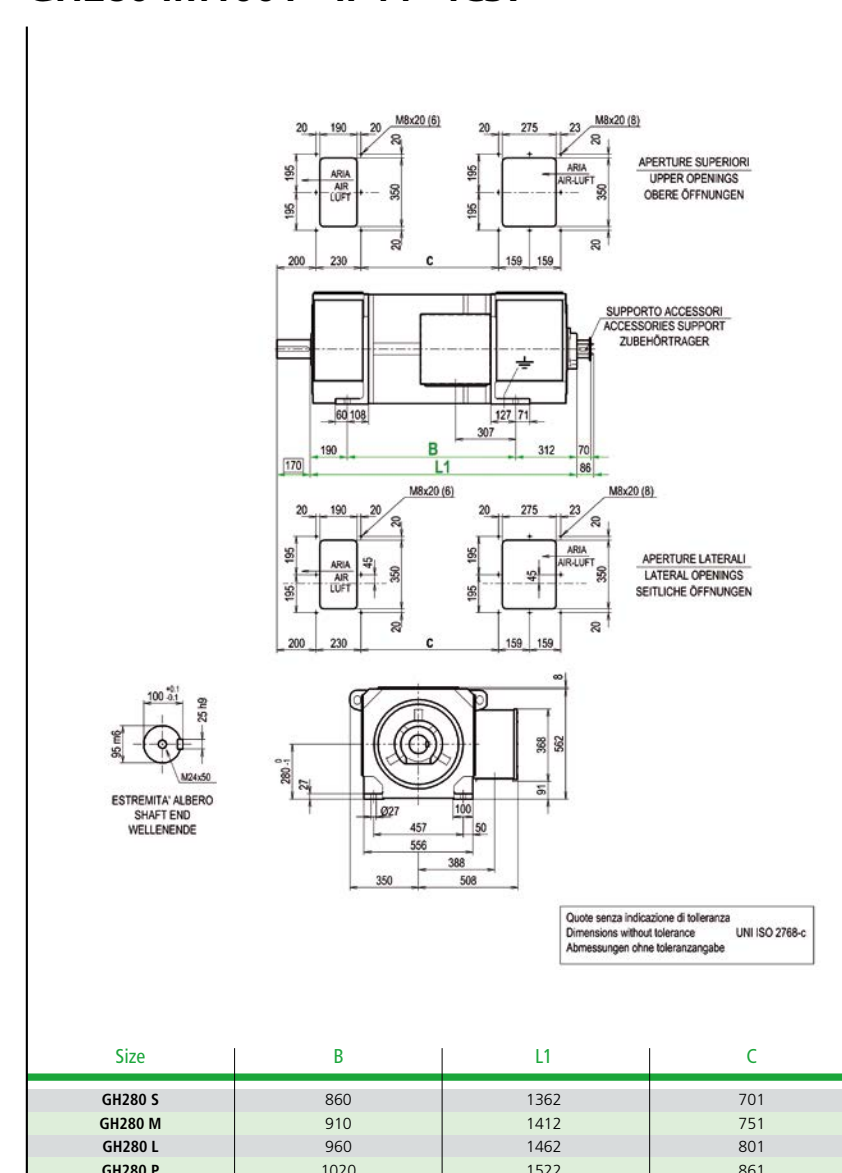
GH400

GH450

GH280 SK

Rated speed (rpm) at armature voltage						Excitation power (W): 3400 Field time constant (s): 1.07 Motor mass (kg): 1505 (IC06) Moment of inertia (kg m²): 4.9			Armature circuit	Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω
	300					85		78.8		
		320				91	270	79.8	2.358	0.273
			360			102		81.9		
				410		118		83.4		
	270					76		78.1		
		290				82	245	79.0	3.485	0.313
			320			91		81.0		
				370		105		82.8		
					440	124		84.9		

GH280 IM1001 - IP44 - IC37



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	



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GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH280 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 3700 Field time constant (s): 1.12 Motor mass (kg): 1605 (IC06) Moment of inertia (kg m²): 5.6			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
290	600					93		78.9	0.659	0.073	8
						188		87.6			
		640				198	537	88.0			
			680			220		89.2			
				780		251		90.1			
270	530					83		78.3	0.976	0.083	9
						170		87.3			
		560				180	490	87.8			
			620			200		88.9			
				710		228		89.8			
240	490					266		90.8	0.829	0.103	10
						72		76.3			
						149		86.2			
		520				158	435	86.9			
			570			176		88.0			
380	400					202		89.0	1.732	0.157	11
						235		90.2			
						118		83.4			
						125	355	84.0			
			450			140		85.4			
350	370					160		86.8	1.387	0.192	12
						188		88.3			
						105		81.8			
						112	323	82.5			
			410			125		84.4			
330	350					143		85.6	1.852	0.203	13
						169		87.3			
						102		81.2			
						109	316	82.0			
			390			122		84.0			
290	310					140		85.2	2.687	0.246	14
						164		86.9			
						90		79.8			
						96	283	80.6			
			350			108		82.7			
						123		84.1			
						146		86.0			
			400								

GH280 IM1001 - IP54 - IC86W

Technical drawing of the GH280 IM1001 motor. The drawing includes a front view and a side view. Key dimensions are labeled: 186, 564, 63, 373, 170, 190, 60, 108, 307, 127, 71, 312, 70, 86, 199, 878, 986 x FILTER - FILTER, 406, 609, 715, 280, 27, 350, 388, 508, 91, 368, 552, 100, 25, 100, 25, 100, 25. The drawing also shows the mounting bracket (SUPPORTO ACCESSORI) and the shaft end (ESTREMITA' ALBERO). A note indicates: 'Quote senza indicazione di tolleranza Dimensions without tolerance UNI ISO 2768-c Abmessungen ohne Toleranzangabe'.

Size	B	L1	V1
GH280 S	860	1362	1258
GH280 M	910	1412	1308
GH280 L	960	1462	1358
GH280 P	1020	1522	1418

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	



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- 4.6 Belted and radial thrust application

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- 5.8 Conduit box
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- 5.10 Cross-section drawing

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- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

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HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH280 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 3700 Field time constant (s): 1.12 Motor mass (kg): 1605 (IC06) Moment of inertia (kg m²): 5.6			Armature circuit	Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω
	260					83		77.6		
		280				89	270	78.6	2.638	0.290
			310			100		80.8		
				360		115		82.4		
	240					75		76.8		
		255				80	245	77.8	3.904	0.333
			290			90		80.0		
				330		104		81.8		
					390	124		84.3		

GH280 IM1001 - IP44 - IC37

Size	B	L1	C
GH280 S	860	1362	701
GH280 M	910	1412	751
GH280 L	960	1462	801
GH280 P	1020	1522	861

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	



DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

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- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH280 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 4000 Field time costant (s): 1.17 Motor mass (kg): 1705 (IC06) Moment of inertia (kg m²): 6.1			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
590						208	1080	87.6	0.174	0.019	1
	1150					405	1100	92.1			
		1210				426	1100	92.3			
			1350			470	1100	92.9			
				1550		512	1060	93.4			
540						191	990	87.6	0.258	0.022	2
	1040					361	980	92.3			
		1100				380	980	92.5			
			1210			420	980	93.0			
				1400		466	960	93.2			
				1630	540	960	93.8				
490						167	885	86.0	0.230	0.027	3
	950					320	875	91.5			
		1000				337	875	91.7			
			1100			372	875	92.4			
				1250		424	875	93.0			
				1480	482	860	93.5				
430						145		84.5	0.315	0.035	4
	840					284		90.6			
		890				300	785	90.8			
			980			331		91.7			
				1110		377		92.2			
				1290	438		92.9				
390						131		83.5	0.463	0.041	5
	760					257		90.0			
		800				271	715	90.3			
			880			300		91.0			
				1010		341		91.8			
				1170	396		92.6				
350						117		81.9	0.375	0.050	6
	700					232		89.1			
		740				245	650	89.5			
			810			270		90.5			
				920		308		91.1			
				1070	360		92.2				
300						100		79.8	0.707	0.065	7
	600					200		88.1			
		635				211	570	88.5			
			700			235		89.5			
				800		267		90.3			
				940	311		91.3				

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

GH280 IM1001 - IP23 - IC06

Size	B	L1
GH280 S	860	1362
GH280 M	910	1412
GH280 L	960	1462
GH280 P	1020	1522

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	

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- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

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- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

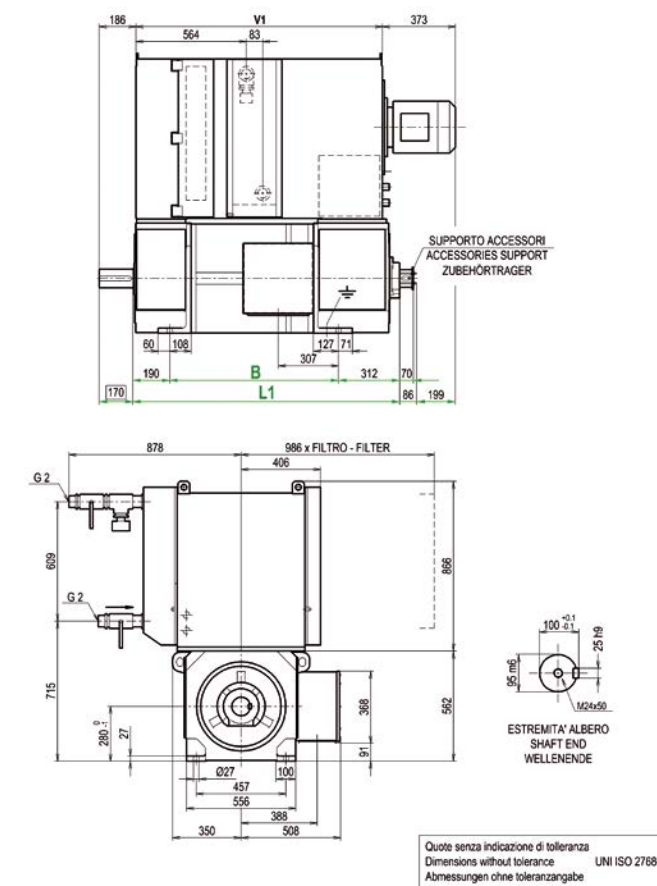
GH400

GH450

GH280 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 4000 Field time costant (s): 1.17 Motor mass (kg): 1705 (IC06) Moment of inertia (kg m²): 6.1			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
260	530	560	610	700		92	537	77.8	0.729	0.077	8
						187		87.0			
						197		87.5			
						219		88.6			
						250		89.5			
240	480	510	560	650	750	83	490	77.0	1.080	0.088	9
						170		86.7			
						180		87.2			
						199		88.3			
						228		89.4			
210	440	470	520	590	690	72	435	75.0	0.916	0.109	10
						149		85.6			
						157		86.1			
						175		87.4			
						200		88.5			
340	360	400	460	550		117	355	82.5	1.917	0.167	11
						124		83.2			
						138		84.8			
						160		86.3			
						186		87.8			
310	330	370	420	500		104	323	80.8	1.5333	0.204	12
						110		81.6			
						124		83.4			
						142		84.9			
						168		86.7			
300	320	350	400	470		101	316	80.2	2.048	0.216	13
						108		81.0			
						120		83.0			
						138		84.4			
						163		86.3			
260	280	320	360	430		89	283	78.8	2.975	0.261	14
						95		79.7			
						106		81.7			
						122		83.3			
						144		85.3			

GH280 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH280 S	860	1362	1258
GH280 M	910	1412	1308
GH280 L	960	1462	1358
GH280 P	1020	1522	1418

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	



DC MOTORS

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2. STANDARDS AND QUALITY

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- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH280 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 4000 Field time constant (s): 1.17 Motor mass (kg): 1705 (IC06) Moment of inertia (kg m²): 6.1			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
	240					83		76.4	2.918	0.308	15
		260				88	270	77.4			
			280			99		79.7			
				320		114		81.5			
			230			80	245	77.7	4.322	0.353	16
				260		89		79.0			
					295	104		80.9			
					350	122		83.2			

GH280 IM1001 - IP44 - IC37

Technical drawing of the GH280 IM1001 motor. The drawing includes three main views: a top view showing the motor's footprint with dimensions 200x230mm and mounting holes; a side view showing the motor's profile with dimensions 195x350mm and mounting holes; and a shaft end view showing the shaft diameter 100mm and keyway. Labels include 'ARIA AIR LUFT' for the air inlet, 'APERTURE SUPERIORI UPPER OPENINGS OBERE ÖFFNUNGEN', 'SUPPORTO ACCESSORI ACCESSORIES SUPPORT ZUBEHÖRTRAGER', and 'APERTURE LATERALI LATERAL OPENINGS SEITLICHE ÖFFNUNGEN'. A note at the bottom right states: 'Quote senza indicazione di tolleranza Dimensions without tolerance UNI ISO 2768-c Abmessungen ohne toleranzangabe'.

Size	B	L1	C
GH280 S	860	1362	701
GH280 M	910	1412	751
GH280 L	960	1462	801
GH280 P	1020	1522	861

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	

DC MOTORS

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

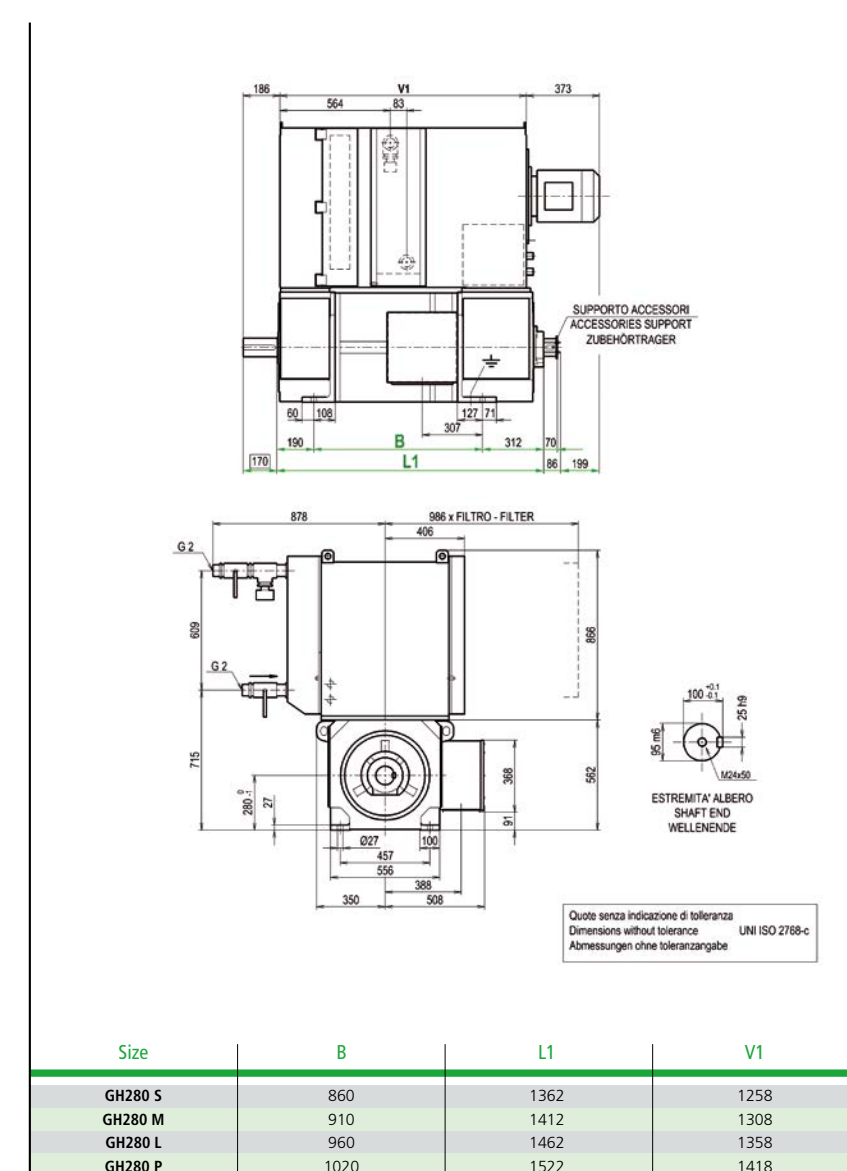
GH400

GH450

GH280 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 4400 Field time constant (s): 1.25 Motor mass (kg): 1825 (IC06) Moment of inertia (kg m²): 6.8			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
230	470	500	550	630		90	537	76.5	0.814	0.082	8
						185		86.3			
						196		86.8			
						217		88.0			
						249		89.1			
210	420	450	500	570	670	81	487	75.7	1.206	0.094	9
						167		86.0			
						177		86.5			
						197		87.8			
						225		88.8			
	390	410	450	520	610	263		90.1	1.021	0.116	10
						147		84.7			
						155		85.3			
						174		86.8			
						198		87.9			
	300	320	360	410	480	232		89.3	2.140	0.178	11
						115		81.5			
						122		82.2			
						137		84.1			
						157		85.4			
	270	290	330	370	440	185		87.1	1.708	0.217	12
						103		79.7			
						110		80.6			
						122		82.5			
						141		84.0			
260	280	310	350	420	166		85.9	2.285	0.230	13	
					99		79.1				
					106		80.0				
					119		82.0				
					137		83.5				
230	250	280	320	380	162		85.5	3.321	0.279	14	
					87		77.5				
					93		78.4				
					105		80.6				
					121		82.3				

GH280 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	



DC MOTORS

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2.2	CE Marking
2.3	Quality system
3.	IDENTIFICATION CODE
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4.2	Commutator
4.3	Stator
4.4	Brushholder yoke
4.5	Bearings
4.6	Belted and radial thrust application
5.	CONSTRUCTION FEATURES
5.1	Coupling and shaft extension
5.2	Mounting arrangement
5.3	Degree of protection
5.4	Cooling method
5.5	Maximum allowable speeds
5.6	Noise level
5.7	Vibrations and balancing
5.8	Conduit box
5.9	Groud terminals
5.10	Cross-section drawing
6.	MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS
6.1	Ratings
6.2	Supply voltage
6.3	Maximum loads
6.4	Current rate-of-rise
6.5	Speed regulation
6.6	Duty with large speed regulation
6.7	Excitation
6.8	Maximum current at locked rotor
6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
HOME	

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH280 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 4400 Field time constant (s): 1.25 Motor mass (kg): 1825 (IC06) Moment of inertia (kg m²): 6.8			Armature circuit		Winding code
220 V	400 V	420 V	460 V	520 V	600 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
	200					81		74.9	3.254	0.329	15
		220				86	270	76.0			
			250			97		78.5			
				280		113		80.3			
		200				78	244	75.7	4.824	0.377	16
			220			88		78.0			
				260		101		79.7			
					310	120		82.2			

GH280 IM1001 - IP44 - IC37

Technical drawings of the GH280 IM1001 motor showing top, side, and shaft end views with dimensions and labels.

Labels in drawings:

- ARIA AIR LUFT
- APERTURE SUPERIORI UPPER OPENINGS OBERE ÖFFNUNGEN
- SUPPORTO ACCESSORI ACCESSORIES SUPPORT ZUBEHÖRTRAGER
- APERTURE LATERALI LATERAL OPENINGS SEITLICHE ÖFFNUNGEN
- ESTREMITÀ ALBERO SHAFT END WELLENENDE

Quote senza indicazione di tolleranza
Dimensions without tolerance
Abmessungen ohne toleranzangabe

Size	B	L1	C
GH280 S	860	1362	701
GH280 M	910	1412	751
GH280 L	960	1462	801
GH280 P	1020	1522	861

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	





DC MOTORS

1. GENERAL INFORMATION

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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

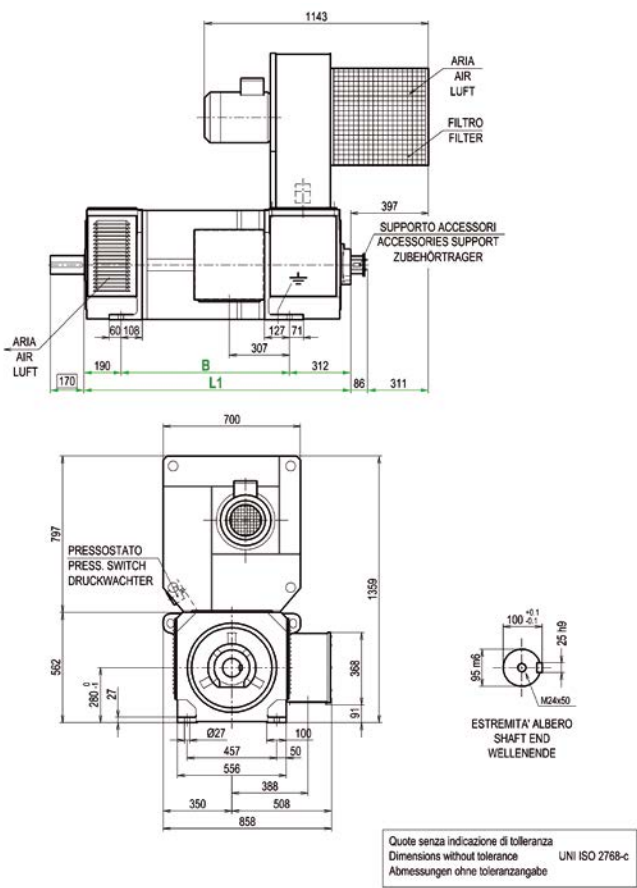
6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

GH280 IM1001 - IP23 - IC06



Size	B	L1
GH280 S	860	1362
GH280 M	910	1412
GH280 L	960	1462
GH280 P	1020	1522

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50/60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	370 kg	5.5 / 7.5 kW (50/60 Hz)	



DC MOTORS

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4.5	Bearings
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5.3	Degree of protection
5.4	Cooling method
5.5	Maximum allowable speeds
5.6	Noise level
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5.8	Conduit box
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6.	MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS
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6.2	Supply voltage
6.3	Maximum loads
6.4	Current rate-of-rise
6.5	Speed regulation
6.6	Duty with large speed regulation
6.7	Excitation
6.8	Maximum current at locked rotor
6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
HOME	

GH225

GH250

GH280

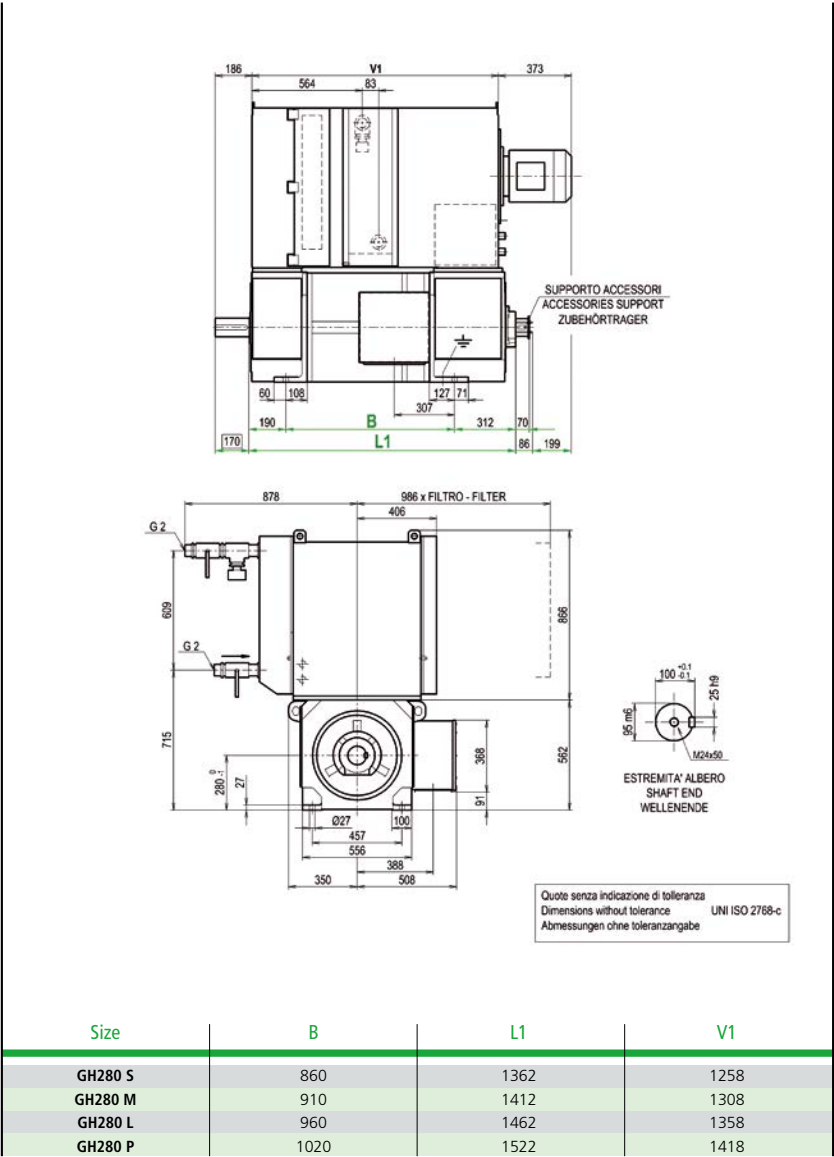
GH315

GH355

GH400

GH450

GH280 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH280 S	860	1362	1258
GH280 M	910	1412	1308
GH280 L	960	1462	1358
GH280 P	1020	1522	1418

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH280 SK	1400	4.9	3400	1.07	2600	85	2050
GH280 MK	1500	5.6	3700	1.12	2600	85	2050
GH280 LK	1600	6.1	4000	1.17	2600	85	2050
GH280 PK	1720	6.8	4400	1.25	2600	85	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
GH280 SK-MK-LK-PK	6221 C3	NU221ECP	6219 C3

Electrical blower (IC06)	Weight	Blower motor power
	105 kg	5.5 kW (50/60 Hz)

Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power
	370 kg	5.5 / 7.5 kW (50/60 Hz)



DC MOTORS

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5. CONSTRUCTION FEATURES

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.3 Maximum loads
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- 6.6 Duty with large speed regulation
- 6.7 Excitation
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GH400

GH450

GH315

Derating for field weakening operation

GH315 K

Performance of compensated motors

GH315 MK

GH315 LK

GH315 PK

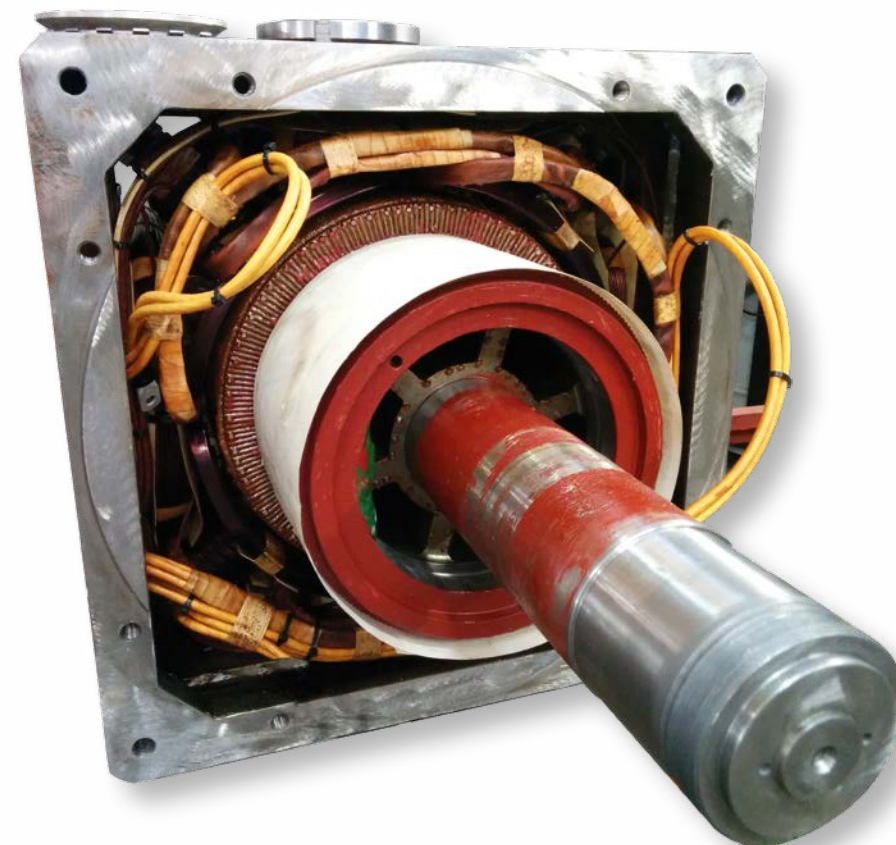
GH315 XK

Overall dimensions

GH315 IM1001-IP23-IC06

GH315 IM1001-IP54-IC86W

GH315 IM1001-IP44-IC37



Performance Tables are displayed on multiple pages, alongside the data tables are repeated alternately overall dimensions (IC06- IC86W-IC37)

DC MOTORS

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- 4.5 Bearings
- 4.6 Belted and radial thrust application

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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.9 Accessories

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HOME

GH225

GH250

GH280

GH315

GH355

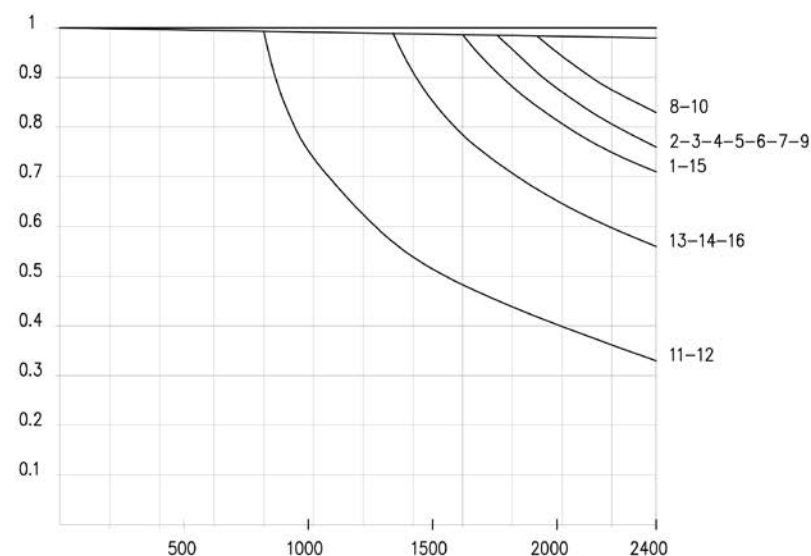
GH400

GH450

GH 315 K

**RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG**

GH 315 K (compensata - compensated - kompensiert)
[180% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile

Allowable power output P = K x P table

Verfügbare Leistung P = K x P table

per/for/für

GH 315 MK K = K x 1.40
GH 315 LK K = K x 1.25
GH 315 PK K = K x 1.12
GH 315 XK K = K x 1.0

Per K ≥ 1 niente declassamento

For K ≥ 1 no derating

Für K ≥ 1 keine Leistungsreduzierung

TECHNICAL DATA

Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings

	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6222 C3	NU222ECJ C3	6221 C3
V1 – V3	6222 C3	NU222ECJ C3	7221 BE

Electrical blower (IC06)

	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	

Air-To-Water Heat Exchanger (IC 86W)

	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	

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- 5.5 Maximum allowable speeds
- 5.6 Noise level
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GH250

GH280

GH315

GH355

GH400

GH450

GH315 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 4200 Field time constant (s): 0.85 Motor mass (kg): 2205 (IC06) Moment of inertia (kg m²): 9.2			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
1380						483		93.3			
	1450					509	1295	93.6	0.077	0.012	1
		1600				559		93.8			
1180						436		93.3			
	1240					460		93.5	0.126	0.014	2
		1360				505	1171	93.8			
			1550			573		94.1			
1070						392		92.6			
	1130					413		92.8			
		1240				455	1060	93.3	0.159	0.018	3
			1410			517		93.8			
				1630		599		94.2			
970						341		91.7			
	1020					360		92.1			
		1130				396	931	92.5	0.145	0.024	4
			1290			450		93.1			
				1490		523		93.7			
					1750	613		94.2			
900						320		91.4			
	950					337		91.6			
		1050				372	876	92.3	0.187	0.027	5
			1190			423		92.9			
				1380		492		93.5			
					1620	577		94.1			
830						289		91.1			
	870					305		91.7			
		960				336	793	92.1	0.234	0.031	6
			1100			382		92.7			
				1280		444		93.3			
					1510	521		94.0			
780						265		90.9			
	820					280		91.2			
		900				309	731	91.9	0.300	0.035	7
			1030			351		92.5			
				1200		409		93.2			
					1410	480		93.8			
660						235		89.4			
	700					248		89.9			
		770				274	657	90.7	0.312	0.049	8
			880			312		91.4			
				1020		364		92.2			
					1200	428		93.0			

GH315 IM1001 - IP23 - IC06

			<p>Quote senza indicazione di tolleranza Dimensions without tolerance Abmessungen ohne Toleranzangabe</p> <p>UNI ISO 2768-c</p>		
Size	B	L1			
GH315 M	960	1640			
GH315 L	1010	1690			
GH315 P	1070	1750			
GH315 X	1140	1820			

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6222 C3	NU222ECJ C3	6221 C3
V1 – V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	

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- 4.2 Commutator
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- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

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8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH315 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 4200 Field time constant (s): 0.85 Motor mass (kg): 2205 (IC06) Moment of inertia (kg m²): 9.2			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
610						210		88.5			
	640					222		89.0			
		700				245	594	89.7	0.382	0.060	9
			810			280		90.7			
				940		327		91.6			
					1110	385		92.5			
560						200		88.2			
	590					211		88.8	0.443	0.065	10
		650				234	568	89.6			
			750			267		90.5			
				870		311		91.5			
					1030	367		92.4			
500						186		88.0			
	530					197		88.5	0.645	0.071	11
		580				218	530	89.4			
			660			249		90.3			
				770		290		91.4			
460						166		87.5			
	480					176		88.2	0.908	0.084	12
		530				194	475	88.8			
			610			222		90.0			
				710		260		91.1			
					840	306		92.1			
410						148		85.5			
	430					157		86.1	0.728	0.109	13
		480				174	434	87.2			
			560			199		88.5			
				650		233		89.8			
					770	276		91.0			
350						116		82.9			
	370					123		83.7	0.854	0.165	14
		410				137	350	85.1			
			470			157		86.5			
				560		185		88.0			
					660	219		89.5			

GH315 IM1001 - IP54 - IC86W

Technical drawing of the GH315 IM1001 motor. The drawing includes a front view and a side view. Key dimensions are labeled: 289, 634, 83, 412, 125, 122, 216, 355, 89, 381, 70, 86, 233, 210, 926, 1174 x FILTRO - FILTER, 454, 657, 785.5, 315.1, 32, 492, 632, 385, 639, 471, 508, 626, 100, 106, 28, 100 mm, M24x50. The drawing also shows the 'SUPPORTO ACCESSORI' (ACCESSORIES SUPPORT) and 'ESTREMITA' ALBERO' (SHAFT END WELLENENDE). A note indicates 'Quote senza indicazione di tolleranza' (Dimensions without tolerance) and 'UNI ISO 2768-c'.

Size	B	L1	V1
GH315 M	960	1640	1468
GH315 L	1010	1690	1518
GH315 P	1070	1750	1578
GH315 X	1140	1820	1648

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6222 C3	NU222ECJ C3	6221 C3
V1 - V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	

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4. DESIGN FEATURES

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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

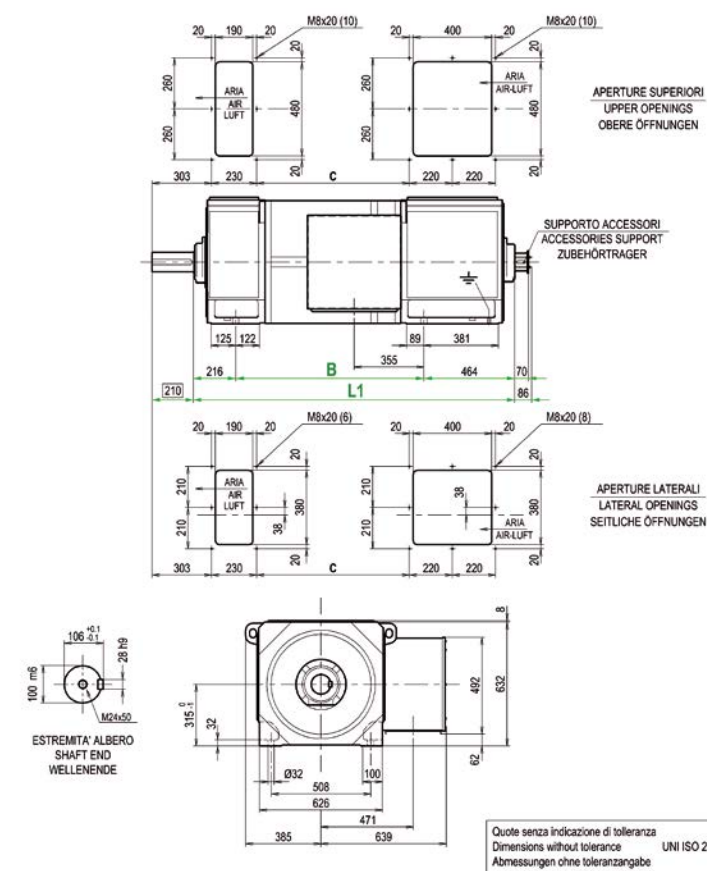
GH400

GH450

GH315 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 4200 Field time constant (s): 0.85 Motor mass (kg): 2205 (IC06) Moment of inertia (kg m²): 9.2			Armature circuit	Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω
300	320	350	400	470	560	105	325	81.3	1.231	0.196
						112		82.1		
						125		83.6		
						144		85.3		
						169		87.0		
270	280	330	370	440	520	201	288	88.6	1.605	0.224
						93		81.1		
						99		81.8		
						111		83.8		
						127		85.1		
						150		86.9		
						178		88.5		

GH315 IM1001 - IP44 - IC37



Size	B	L1	C
GH315 M	960	1640	779
GH315 L	1010	1690	829
GH315 P	1070	1750	889
GH315 X	1140	1820	959

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6222 C3	NU222ECJ C3	6221 C3
V1 – V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	



DC MOTORS

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- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
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- 6.4 Current rate-of-rise
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- 6.6 Duty with large speed regulation
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HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH315 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 4900 Field time constant (s): 1.01 Motor mass (kg): 2445 (IC06) Moment of inertia (kg m²): 11.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
1120						481	1295	92.9			
	1180					506	1295	93.2	0.094	0.013	1
		1330				546	1270	93.5			
950						433	1171	92.6			
	1000					457	1171	92.9	0.154	0.016	2
		1130				503	1171	93.4			
			1280			561	1150	93.8			
850						390	1060	92.1			
	900					411	1060	92.3	0.195	0.020	3
		990				453	1060	92.9			
			1150			510	1050	93.4			
				1360		585	1040	94.0			
770						338	931	91.0			
	810					357	931	91.3	0.176	0.027	4
		890				394	931	92.0			
			1020			448	931	92.6			
				1230		515	920	93.3			
					1450	598	910	93.9			
710						318	876	90.7			
	750					335	876	91.1	0.228	0.031	5
		830				370	876	91.8			
			940			421	876	92.4			
				1100		480	860	93.1			
					1300	551	840	93.8			
660						286	793	90.4			
	700					302	793	90.7	0.286	0.033	6
		770				333	793	91.3			
			870			379	793	92.1			
				1020		442	793	92.9			
					1200	513	785	93.6			
620						263		90.1			
	650					278		90.5	0.368	0.040	7
		710				306	731	91.0			
			820			349		91.9			
				950		406		92.7			
					1120	478		93.4			
520						232		88.3			
	550					245		88.8	0.381	0.055	8
		610				271	657	89.7			
			690			309		90.6			
				810		361		91.6			
					950	425		92.5			

GH315 IM1001 - IP23 - IC06

			<p>Quote senza indicazione di tolleranza Dimensions without tolerance Abmessungen ohne toleranzangabe</p> <p>UNI ISO 2768-c</p>		
Size	B	L1			
GH315 M	960	1640			
GH315 L	1010	1690			
GH315 P	1070	1750			
GH315 X	1140	1820			

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6222 C3	NU222ECJ C3	6221 C3
V1 – V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	



DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

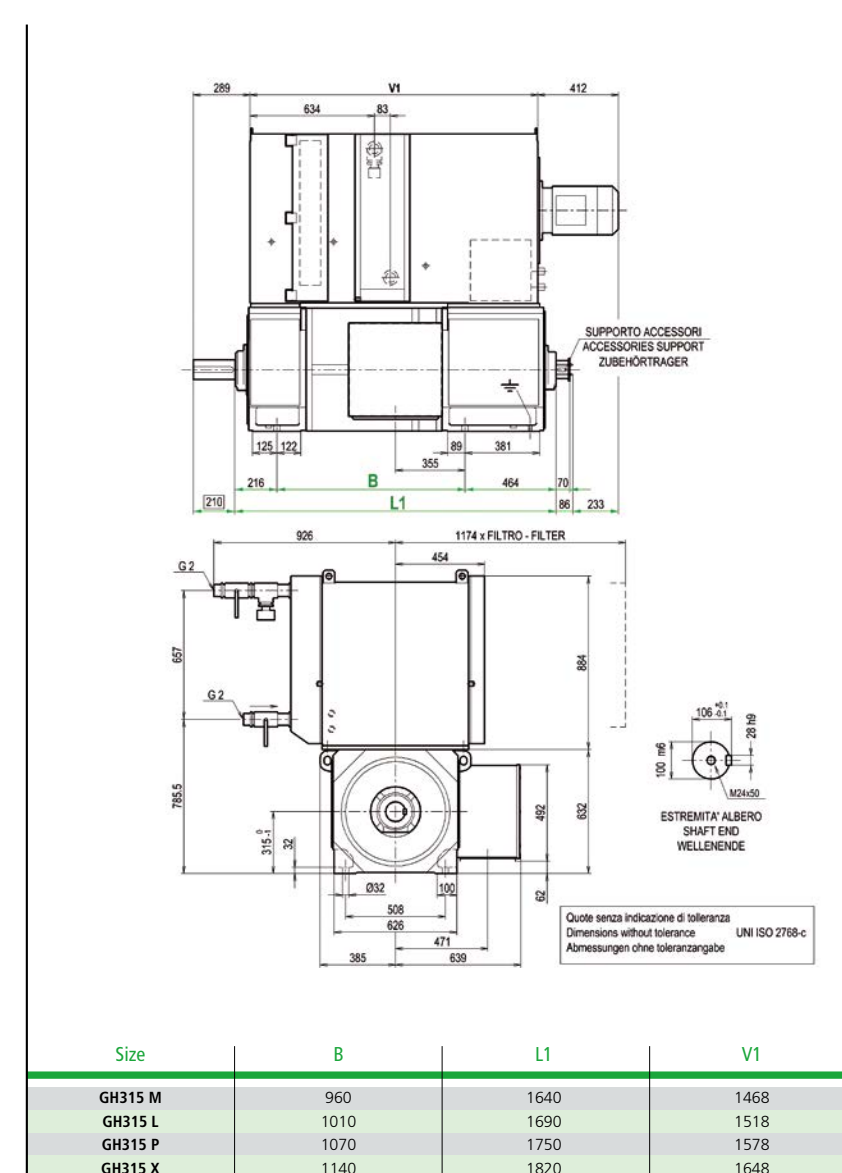
GH400

GH450

GH315 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 4900 Field time constant (s): 1.01 Motor mass (kg): 2445 (IC06) Moment of inertia (kg m²): 11.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
480	510	560	640	750	880	207		87.3	0.466	0.068	9
						220		88.2			
						242	594	88.6			
						277		89.8			
						324		90.9			
440	460	510	590	690	820	382		91.9	0.541	0.073	10
						197		87.0			
						209		87.6			
						231	568	88.4			
						264		89.6			
390	410	460	520	610		309		90.7	0.793	0.081	11
						365		91.8			
						183		86.8			
						194		87.3			
						215	529	88.4			
360	380	420	480	560	660	246		89.4	1.119	0.095	12
						287		90.6			
						164		86.1			
						173		86.7			
						192	475	87.9			
320	340	380	440	510	610	220		89.0	0.893	0.123	13
						257		90.2			
						304		91.3			
						145		84.0			
						154		84.5			
280	300	330	370	440	520	171	434	85.7	1.046	0.181	14
						197		87.3			
						231		88.8			
						273		90.1			
						114		80.9			
						121		82.1			
						134	351	83.0			
						155		85.0			
						182		86.7			
						217		88.4			

GH315 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6222 C3	NU222ECJ C3	6221 C3
V1 - V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	

DC MOTORS

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- 2.1 Reference standards
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- 2.3 Quality system

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- 4.1 Rotor
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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

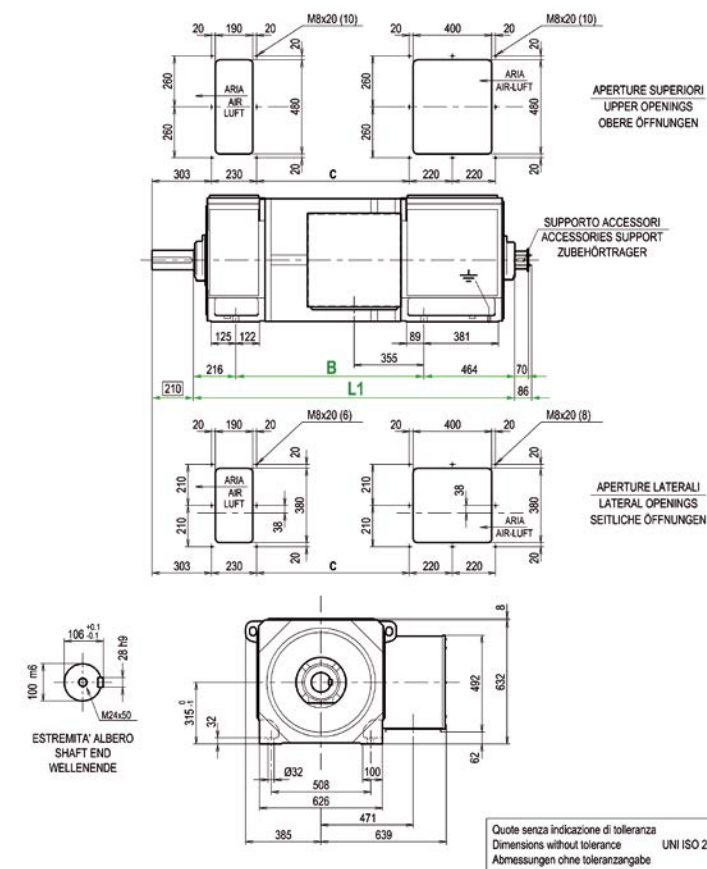
GH400

GH450

GH315 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 4900 Field time constant (s): 1.01 Motor mass (kg): 2445 (IC06) Moment of inertia (kg m²): 11.5			Armature circuit	Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω
230						103		79.1		
	240					110		80.6		
		270				122	325	81.6	1.509	0.223
			310			141		83.6		
				370		167		85.6		
					440	199		87.4		
210						92		78.6		
	220					98		79.6		
		250				110	293	81.6	1.971	0.254
			290			126		83.2		
				340		150		85.2		
					410	178		87.1		

GH315 IM1001 - IP44 - IC37



Size	B	L1	C
GH315 M	960	1640	779
GH315 L	1010	1690	829
GH315 P	1070	1750	889
GH315 X	1140	1820	959

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6222 C3	NU222ECJ C3	6221 C3
V1 – V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	

DC MOTORS

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- 2.3 Quality system

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH315 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 5300 Field time constant (s): 1.10 Motor mass (kg): 2605 (IC06) Moment of inertia (kg m²): 12.7			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
1000						475		92.7	0.104	0.015	1
	1050					500	1280	93.0			
		1150				550		93.3			
850						430	1160	92.5	0.171	0.017	2
	890					451	1160	92.6			
		980				497	1160	93.1			
			1130			555	1140	93.6			
770						385	1050	91.8	0.218	0.021	3
	800					407	1050	92.2			
		890				449	1050	92.7			
			1020			500	1030	93.2			
				1200		574	1020	93.8			
690						333	920	90.6	0.196	0.029	4
	730					351	920	91.0			
		800				388	920	91.7			
			920			441	920	92.3			
				1070		507	910	93.1			
					1280	590	900	93.7			
640						316	875	90.3	0.254	0.033	5
	670					333	875	90.6			
		750				368	875	91.4			
			850			419	875	92.0			
				1000		474	850	92.8			
					1170	544	830	93.5			
590						285	790	90.0	0.319	0.038	6
	620					300	790	90.4			
		690				331	790	91.0			
			780			377	790	91.7			
				910		439	790	92.6			
					1080	510	780	93.3			
550						262		89.5	0.411	0.043	7
	580					276		90.0			
		640				305	730	90.6			
			730			348		91.5			
				850		405		92.4			
					1000	477		93.2			
470						231		87.8	0.424	0.060	8
	490					244		88.3			
		540				270	657	89.1			
			630			308		90.1			
				730		359		91.2			
					860	424		92.2			

GH315 IM1001 - IP23 - IC06

Size	B	L1	<p>Quote senza indicazione di tolleranza Dimensions without tolerance Abmessungen ohne Toleranzangabe</p>		
GH315 M	960	1640			
GH315 L	1010	1690			
GH315 P	1070	1750			
GH315 X	1140	1820			

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6222 C3	NU222ECJ C3	6221 C3
V1 – V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	

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3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

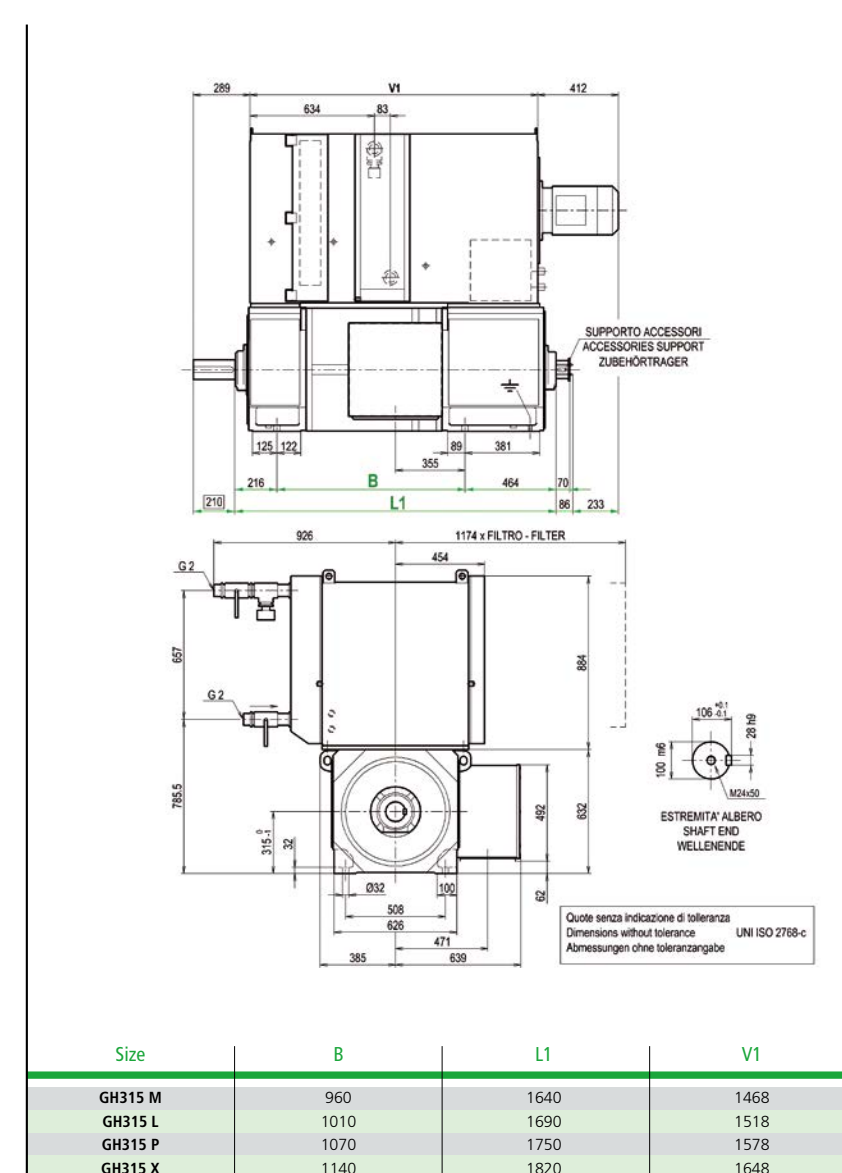
GH400

GH450

GH315 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 5300 Field time constant (s): 1.10 Motor mass (kg): 2605 (IC06) Moment of inertia (kg m²): 12.7			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
430						206		86.5			
	450					218		87.2			
		500				242	594	88.5	0.519	0.073	9
			570			276		89.2			
				670		322		90.4			
					800	381		91.5			
400						196		86.2			
	420					207		86.8	0.603	0.079	10
		470				230	568	87.8			
			530			262		89.0			
				620		307		90.2			
					740	363		91.3			
355						183		85.9			
	370					192		86.5			
		410				215	530	87.7	0.888	0.087	11
			475			244		88.8			
				550		286		90.1			
320						162		85.3			
	330					172		86.0			
		375				190	475	87.0	1.254	0.102	12
			430			218		88.3			
				500		255		89.6			
					590	302		90.9			
290						145		83.0			
	310					152		83.7			
		350				170	434	85.1	1.001	0.132	13
			400			195		86.5			
				460		230		88.1			
					550	272		89.6			
245						112		79.8			
	260					120		81.6			
		290				133	350	82.3	1.168	0.200	14
			330			155		84.0			
				400		180		86.0			
					470	215		87.7			

GH315 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6222 C3	NU222ECJ C3	6221 C3
V1 - V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	



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4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

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- 5.2 Mounting arrangement
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- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

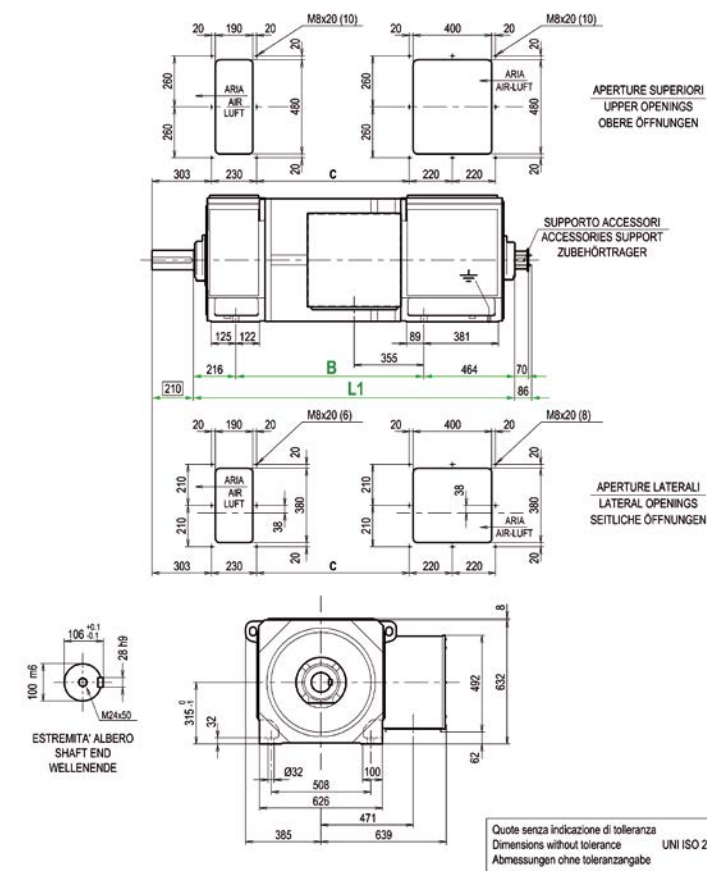
GH400

GH450

GH315 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 5300 Field time constant (s): 1.10 Motor mass (kg): 2605 (IC06) Moment of inertia (kg m²): 12.7			Armature circuit	Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω
205	215	250	280	330	400	102	108	77.8	1.1687	0.240
						120	325	80.5		
						140		82.5		
						166		84.6		
						198		86.6		
		220	260	310	370	108	293	80.0	2.204	0.273
						125		82.1		
						149		84.3		
						177		86.3		

GH315 IM1001 - IP44 - IC37



Size	B	L1	C
GH315 M	960	1640	779
GH315 L	1010	1690	829
GH315 P	1070	1750	889
GH315 X	1140	1820	959

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH315 MK	2100	9.2	4200	0.85	2400	120	1800
GH315 LK	2200	10.4	4500	0.92	2400	120	1800
GH315 PK	2340	11.5	4900	1.01	2400	120	1800
GH315 XK	2500	12.7	5300	1.10	2300	120	1800

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6222 C3	NU222ECJ C3	6221 C3
V1 – V3	6222 C3	NU222ECJ C3	7221 BE
Electrical blower (IC06)	Weight	Blower motor power	
	105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	450 kg	7.5 kW (50/60 Hz)	





DC MOTORS

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4.4	Brushholder yoke
4.5	Bearings
4.6	Belted and radial thrust application
5.	CONSTRUCTION FEATURES
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5.2	Mounting arrangement
5.3	Degree of protection
5.4	Cooling method
5.5	Maximum allowable speeds
5.6	Noise level
5.7	Vibrations and balancing
5.8	Conduit box
5.9	Groud terminals
5.10	Cross-section drawing
6.	MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS
6.1	Ratings
6.2	Supply voltage
6.3	Maximum loads
6.4	Current rate-of-rise
6.5	Speed regulation
6.6	Duty with large speed regulation
6.7	Excitation
6.8	Maximum current at locked rotor
6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
HOME	

GH225

GH250

GH280

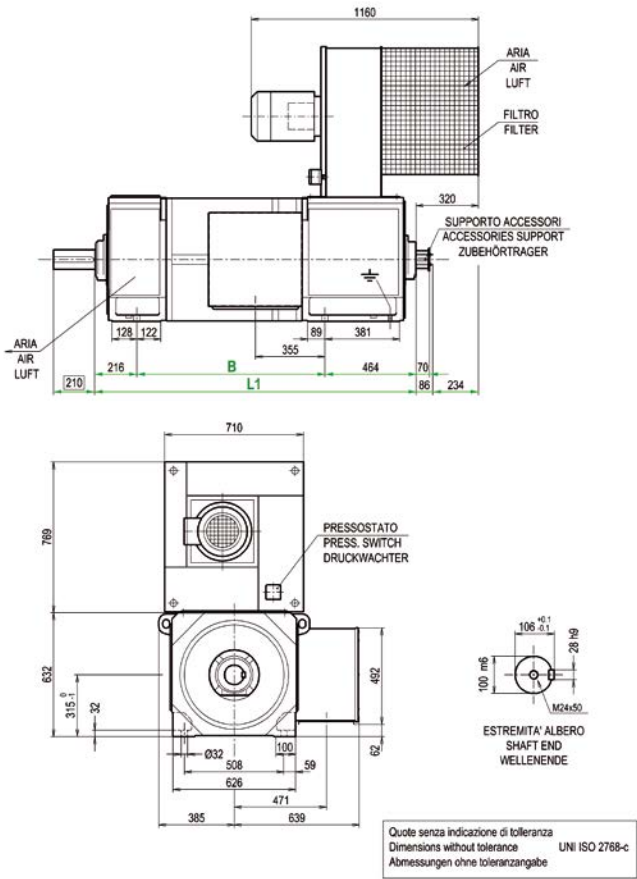
GH315

GH355

GH400

GH450

GH315 IM1001 - IP23 - IC06



Size	B	L1
GH315 M	960	1640
GH315 L	1010	1690
GH315 P	1070	1750
GH315 X	1140	1820

TECHNICAL DATA								Bearings		
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Drive end		Opposite drive end
						Air flow (m³/min)	Pressure drop (Pa)	Coupling	Pulley	
GH315 MK	2100	9.2	4200	0.85	2400	120	1800	B3 – B5	6222 C3	6221 C3
GH315 LK	2200	10.4	4500	0.92	2400	120	1800	V1 – V3	6222 C3	7221 BE
GH315 PK	2340	11.5	4900	1.01	2400	120	1800	Electrical blower (IC06)		
GH315 XK	2500	12.7	5300	1.10	2300	120	1800	Weight	Blower motor power	
								105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
								Air-To-Water Heat Exchanger (IC 86W)		
								Weight	Heat exchanger motor power	
								450 kg	7.5 kW (50/60 Hz)	





DC MOTORS

1.	GENERAL INFORMATION
2.	STANDARDS AND QUALITY
2.1	Reference standards
2.2	CE Marking
2.3	Quality system
3.	IDENTIFICATION CODE
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4.1	Rotor
4.2	Commutator
4.3	Stator
4.4	Brushholder yoke
4.5	Bearings
4.6	Belted and radial thrust application
5.	CONSTRUCTION FEATURES
5.1	Coupling and shaft extension
5.2	Mounting arrangement
5.3	Degree of protection
5.4	Cooling method
5.5	Maximum allowable speeds
5.6	Noise level
5.7	Vibrations and balancing
5.8	Conduit box
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6.	MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS
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6.2	Supply voltage
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6.6	Duty with large speed regulation
6.7	Excitation
6.8	Maximum current at locked rotor
6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
HOME	

GH225

GH250

GH280

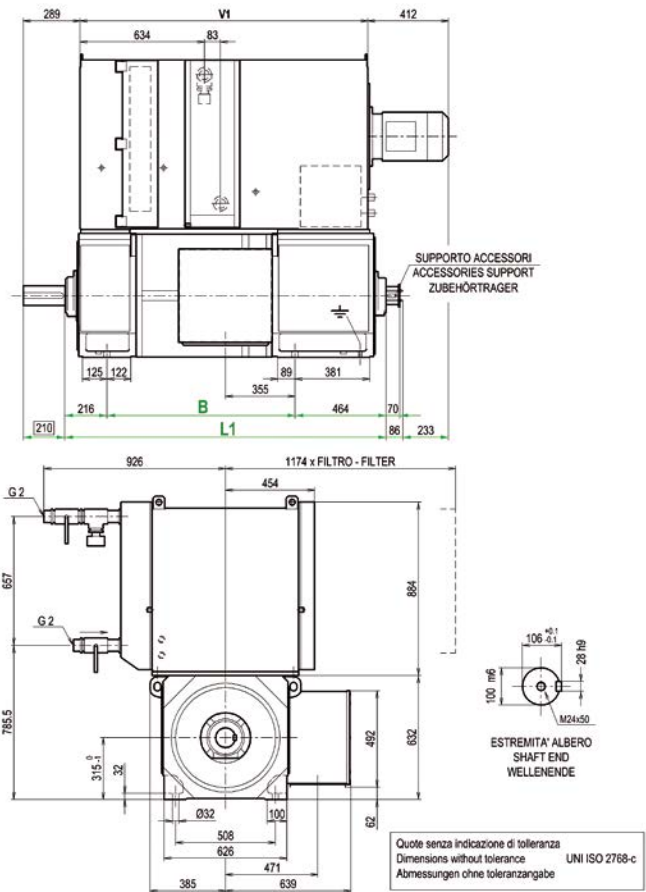
GH315

GH355

GH400

GH450

GH315 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH315 M	960	1640	1468
GH315 L	1010	1690	1518
GH315 P	1070	1750	1578
GH315 X	1140	1820	1648

TECHNICAL DATA												
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end	
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley		
GH315 MK	2100	9.2	4200	0.85	2400	120	1800	B3 – B5 V1 – V3	6222 C3	NU222ECJ C3	6221 C3	
GH315 LK	2200	10.4	4500	0.92	2400	120	1800		6222 C3	NU222ECJ C3	7221 BE	
GH315 PK	2340	11.5	4900	1.01	2400	120	1800		Electrical blower (IC06)	Weight	Blower motor power	
GH315 XK	2500	12.7	5300	1.10	2300	120	1800			105 kg	5.5 kW (50 Hz) - 7.5 kW (60 Hz)	
								Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power		
									450 kg	7.5 kW (50/60 Hz)		



DC MOTORS

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- 4.3 Stator
- 4.4 Brushholder yoke
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- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

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GH280

GH315

GH355

GH400

GH450

GH355

Derating for field weakening operation

GH355 K

Performance of compensated motors

GH355 SK

GH355 MK

GH355 LK

GH355 PK

Overall dimensions

GH355 IM1001-IP23-IC06

GH355 IM1001-IP54-IC86W

GH355 IM1001-IP44-IC37



Performance Tables are displayed on multiple pages, alongside the data tables are repeated alternately overall dimensions (IC06- IC86W-IC37)

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

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GH225

GH250

GH280

GH315

GH355

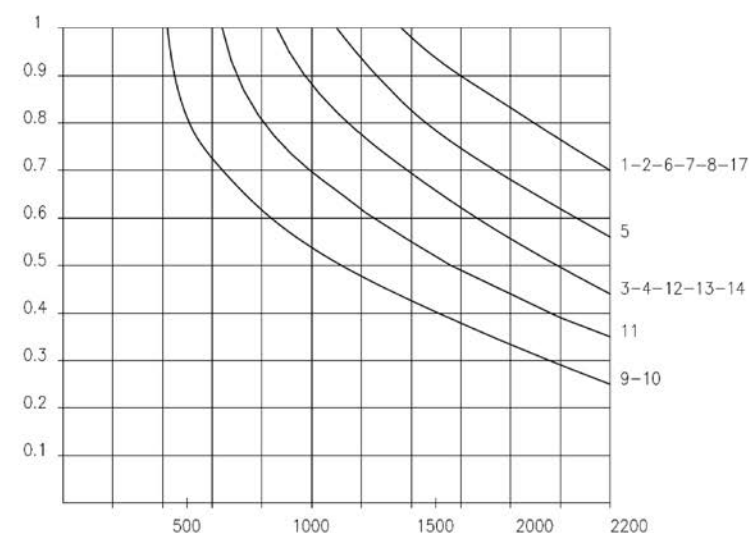
GH400

GH450

GH 355 K

**RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG**

GH 355 K (compensata - compensated - kompensiert)
[180% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile Allowable power output P = K x P table Werfügbare Leistung P = K x P table

per/for/für
GH 355 SK K = K x 1.40
GH 355 MK K = K x 1.26
GH 355 LK K = K x 1.12
GH 355 PK K = K x 1.0

Per K ≥ 1 niente declassamento For K ≥ 1 no derating Für K ≥ 1 keine Leistungsreduzierung

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	6224 C3	NU224ECJ C3	6224 C3
V1 – V3	6224 C3	NU224ECJ C3	7224 B

Electrical blower (IC06)	Weight	Blower motor power
	110 kg	7.5 kW (50 / 60 Hz)

Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power
	440 kg	9.2 kW (50 / 60 Hz)

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- 4.1 Rotor
- 4.2 Commutator
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- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
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- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
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- 6.4 Current rate-of-rise
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- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

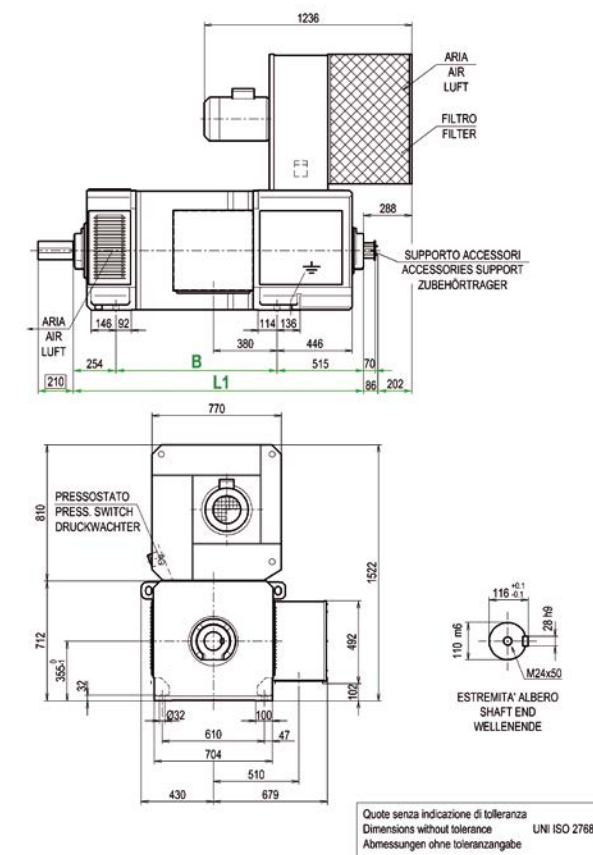
GH400

GH450

GH355 SK

Rated speed (rpm) at armature voltage						Excitation power (W): 5000 Field time costant (s): 1.33 Motor mass (kg): 2810 (IC06) Moment of inertia (kg m²): 15.0			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
1010						556	1500	92.7	0.211	0.012	1
	1080					585	1500	93.0			
		1200				645	1500	93.4			
			1370			725	1485	93.9			
920						510	1380	92.2	0.253	0.015	2
	970					535	1380	92.5			
		1060				589	1380	92.9			
			1250			665	1370	93.5			
				1450	760	1350	94.1				
840						465	1260	91.9	0.307	0.017	3
	900					487	1260	92.2			
		980				537	1260	92.7			
			1140			611	1260	93.3			
				1340		698	1240	93.9			
					1570	800	1210	94.4			
750						410	1115	91.8	0.375	0.020	4
	790					431	1115	92.1			
		870				474	1115	92.6			
			1010			540	1115	93.2			
				1170		624	1110	93.8			
					1370	720	1090	94.4			
680						371	1019	91.0	0.450	0.025	5
	720					391	1019	91.4			
		790				431	1019	91.9			
			910			491	1019	92.6			
				1060		565	1010	93.4			
					1250	660	1005	94.0			
590						312		89.6	0.587	0.036	6
	620					329		90.0			
		680				364	872	90.7			
			780			415		91.6			
				910		483		92.5			
					1090	570		93.3			
540						285		89.4	0.704	0.040	7
	570					300		89.8			
		620				331	796	90.5			
			710			378		91.4			
				830		440		92.3			
					970	519		93.1			

GH355 IM1001 - IP23 - IC06



Size	B	L1
GH355 S	960	1729
GH355 M	1010	1779
GH355 L	1070	1839
GH355 P	1140	1909

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	



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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

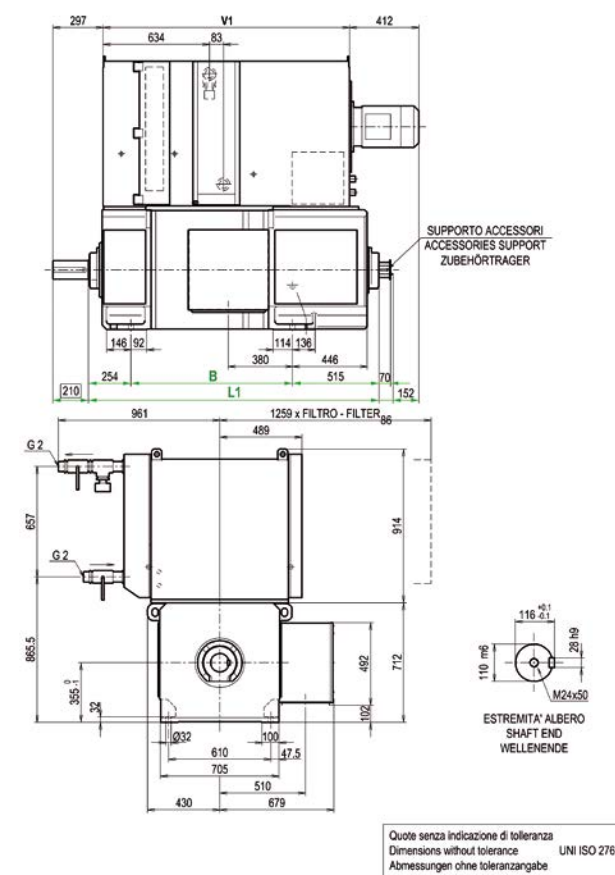
GH400

GH450

GH355 SK

Rated speed (rpm) at armature voltage						Excitation power (W): 5000 Field time costant (s): 1.33 Motor mass (kg): 2810 (IC06) Moment of inertia (kg m²): 15.0			Armature circuit		Winding code	
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
450	480					240		87.8	0.970	0.056	8	
		530				251		88.3				
						278	678	89.2				
			600			318		90.2				
					700		371					91.3
						820		438				
400	420					216	628	86.2	1.295	0.071	9	
		460				230	628	86.8				
						250	621	87.8				
			530			287	621	89.0				
					620		336	621				90.3
350	370					189		85.9	1.574	0.083	10	
		410				200		86.5				
						222	552	87.5				
			480			255		88.8				
					540		298					90.0
						660		352				
320	330					171		84.2	1.880	0.102	11	
		370				181		84.9				
						202	510	86.1				
			420			232		87.5				
					490		272					89.0
						580		322				
270	280					139		81.3	2.459	0.147	12	
		310				148		82.1				
						165	429	83.5				
			360			190		85.3				
					420		224					87.0
						500		266				
250	260					128		81.0	2.938	0.163	13	
		290				135		81.8				
						151	395	83.3				
			330			174		85.0				
					390		206					86.8
						460		245				
200	220					105		77.6	4.023	0.227	14	
		240				112		78.6				
						125	340	80.4				
			280			146		82.5				
					320		172					84.6
						380		206				

GH355 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH355 S	960	1729	1468
GH355 M	1010	1779	1518
GH355 L	1070	1839	1578
GH355 P	1140	1909	1648

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	





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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

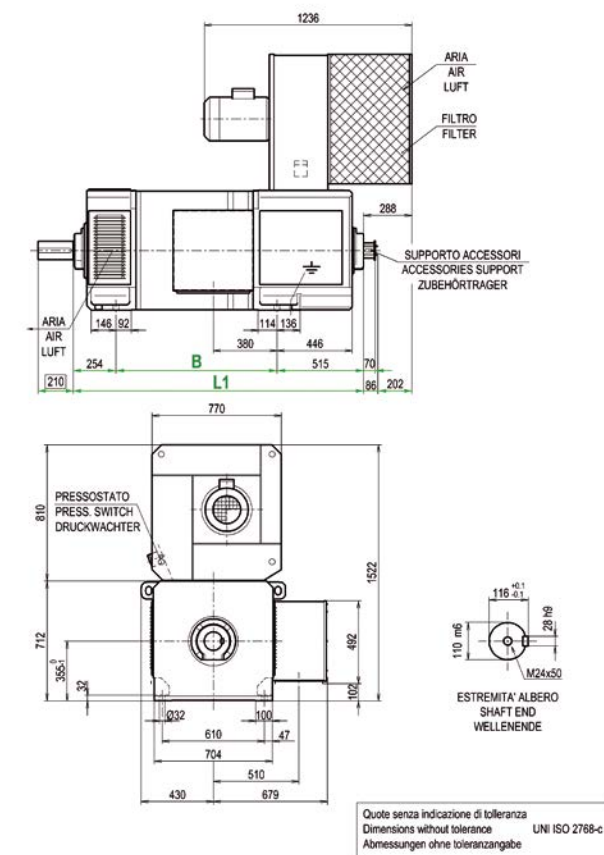
GH400

GH450

GH355 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5200 Field time constant (s): 1.40 Motor mass (kg): 3060 (IC06) Moment of inertia (kg m²): 16.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
910	980	1080	1240			558	1508	92.5	0.222	0.013	1
						587	1508	92.7			
						646	1508	93.2			
						725	1485	93.7			
830	870	960	1110	1300		507	1380	91.9	0.267	0.016	2
						534	1380	92.2			
						588	1380	92.7			
						664	1370	93.3			
760	800	880	1010	1170	1400	763	1355	93.9	0.323	0.018	3
						462	1260	91.6			
						486	1260	91.9			
						536	1260	92.5			
680	710	780	890	1050		610	1260	93.1	0.395	0.021	4
						697	1240	93.7			
						800	1215	94.4			
						408	1115	91.5			
610	650	710	810	960	1120	430	1115	91.8	0.474	0.026	5
						473	1115	92.4			
						539	1115	93.0			
						623	1110	93.7			
530	560	620	700	820	980	720	1090	94.3	0.617	0.038	6
						370	1020	90.7			
						390	1020	91.0			
						430	1020	91.7			
480	510	560	640	750	880	490	1020	92.4	0.741	0.043	7
						565	1010	93.2			
						663	1010	93.8			
						311		89.2			

GH355 IM1001 - IP23 - IC06



Size	B	L1
GH355 S	960	1729
GH355 M	1010	1779
GH355 L	1070	1839
GH355 P	1140	1909

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	



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- 2.3 Quality system

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4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.2 Supply voltage
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- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

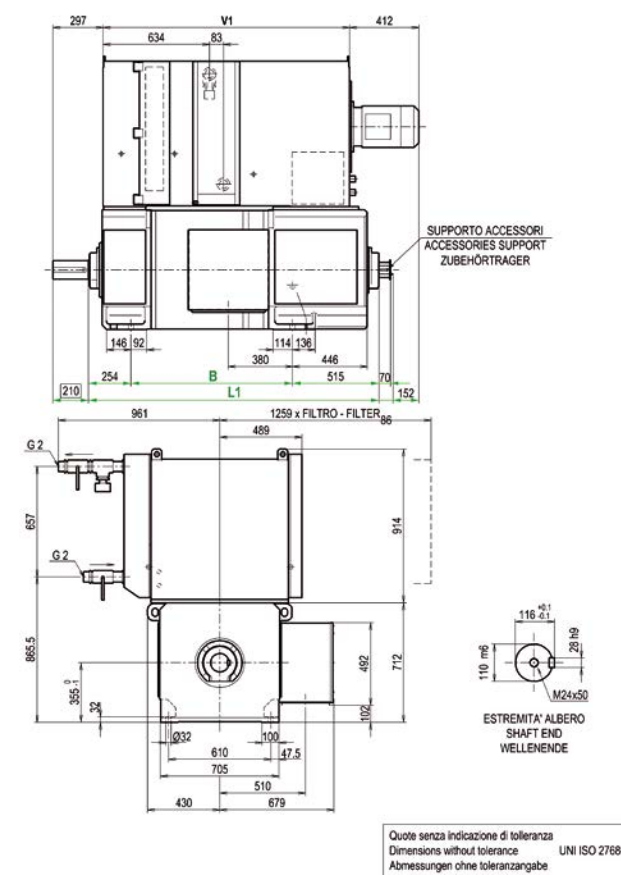
GH400

GH450

GH355 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5200 Field time constant (s): 1.40 Motor mass (kg): 3060 (IC06) Moment of inertia (kg m²): 16.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
410	430	470	540	630	740	236	250	87.3	1.021	0.060	8
						276	678	88.7			
						316		89.8			
						370		90.9			
						436		92.0			
360	380	410	480	560		216	628	85.6	1.363	0.075	9
						228	628	86.2			
						250	620	87.3			
						285	620	88.6			
						334	620	89.9			
310	330	370	440	510	610	188	552	85.2	1.657	0.087	10
						199		85.9			
						221		86.9			
						253		88.3			
						297		89.6			
280	300	330	380	440	520	170	510	83.5	1.979	0.108	11
						180		84.2			
						200		85.4			
						230		86.9			
						270		88.5			
235	250	280	320	380	450	138	429	80.4	2.589	0.155	12
						146		81.3			
						163		82.8			
						189		84.6			
						222		86.4			
220	230	260	300	350	410	126	395	80.1	3.093	0.172	13
						134		81.0			
						150		82.5			
						173		84.3			
						204		86.2			
						243		88.0			
						124		79.4	4.235	0.240	14
						144	340	81.6			
						171		83.9			
						204		85.9			

GH355 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH355 S	960	1729	1468
GH355 M	1010	1779	1518
GH355 L	1070	1839	1578
GH355 P	1140	1909	1648

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

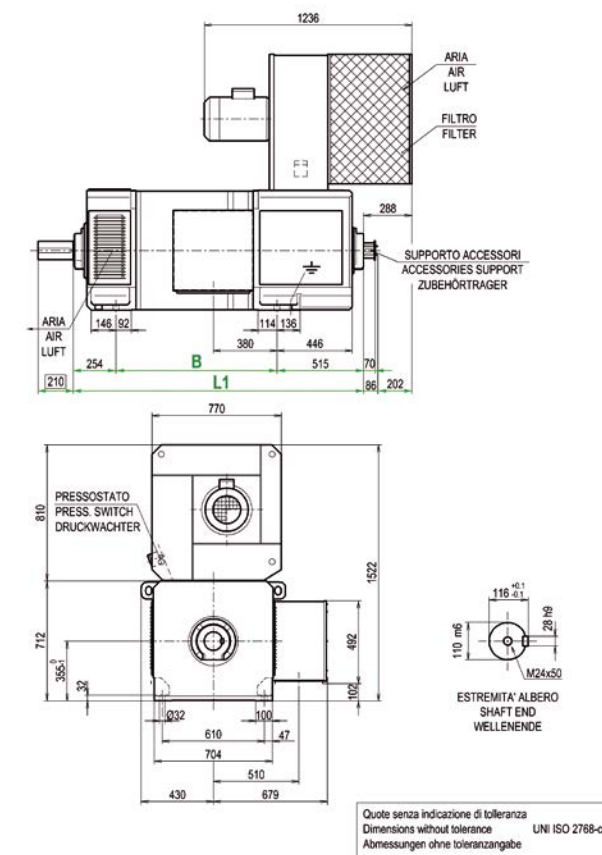
GH400

GH450

GH355 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 5600 Field time constant (s): 1.48 Motor mass (kg): 3210 (IC06) Moment of inertia (kg m²): 18.8			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
810	860	960	1080			556	1508	92.2	0.236	0.014	1
						586	1508	92.5			
						645	1508	93.0			
730	770	850	1010	1150		723	1485	93.5	0.283	0.017	2
						505	1380	91.6			
						532	1380	91.9			
670	710	780	910	1060	1250	586	1380	92.5	0.343	0.019	3
						663	1370	93.1			
						761	1355	93.8			
600	630	700	790	940	1110	461	1260	91.3	0.419	0.023	4
						485	1260	91.6			
						535	1260	92.2			
540	570	630	720	830	1010	610	1260	92.9	0.502	0.028	5
						695	1240	93.5			
						800	1215	94.2			
470	500	550	620	720	860	406	1115	91.1	0.654	0.040	6
						428	1115	91.5			
						472	1115	92.1			
430	450	500	570	660	780	537	1115	92.8	0.785	0.045	7
						622	1110	93.5			
						720	1090	94.1			
						370	1021	90.3	0.785	0.045	7
						388	1021	90.6			
						428	1021	91.3			
						489	1021	92.1	0.785	0.045	7
						563	1010	92.9			
						662	1010	93.6			
						309		88.7	0.785	0.045	7
						326		89.2			
						360	872	90.0			
						412		90.9	0.785	0.045	7
						480		91.9			
						566		92.8			
						281		88.4	0.785	0.045	7
						297		88.9			
						328	796	89.7			
						375		90.7	0.785	0.045	7
						438		91.7			
						516		92.6			

GH355 IM1001 - IP23 - IC06



Size	B	L1
GH355 S	960	1729
GH355 M	1010	1779
GH355 L	1070	1839
GH355 P	1140	1909

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	

DC MOTORS

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- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

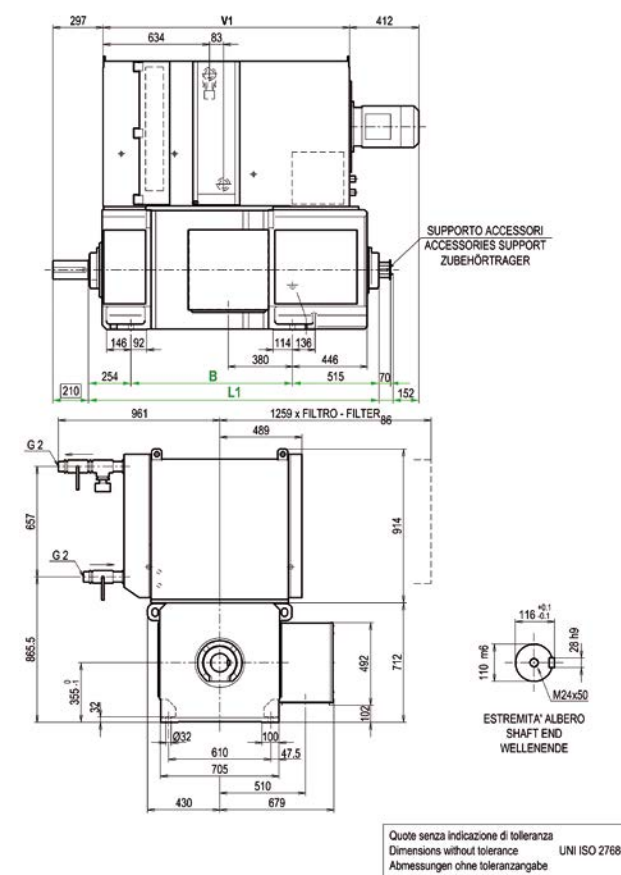
GH400

GH450

GH355 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 5600 Field time constant (s): 1.48 Motor mass (kg): 3210 (IC06) Moment of inertia (kg m²): 18.8			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
360	380	420	480	560	660	234	248	86.6	1.082	0.063	8
						275	678	88.1			
						315		89.3			
						368		90.5			
						435		91.6			
315	330	370	430	520		215	628	84.9	1.445	0.080	9
						226	628	85.5			
						250	620	86.6			
						285	620	88.0			
						332	620	89.4			
275	290	320	390	450	530	186		84.4	1.756	0.093	10
						197		85.1			
						219	552	86.3			
						251		87.7			
						295		89.1			
245	260	290	340	390	465	168		82.6	2.098	0.115	11
						178		83.3			
						198	510	84.7			
						228		86.3			
						268		87.9			
210	220	250	290	340	400	136		79.3	2.744	0.165	12
						144		80.2			
						161	429	81.8			
						187		83.7			
						221		85.7			
190	210	230	260	310	360	124		79.0	3.278	0.183	13
						132		79.9			
						148	395	81.5			
						171		83.5			
						202		85.5			
						241		87.4			
						123		79.0	4.489	0.255	14
						143	340	80.6			
						170		83.0			
						203		85.2			

GH355 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH355 S	960	1729	1468
GH355 M	1010	1779	1518
GH355 L	1070	1839	1578
GH355 P	1140	1909	1648

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

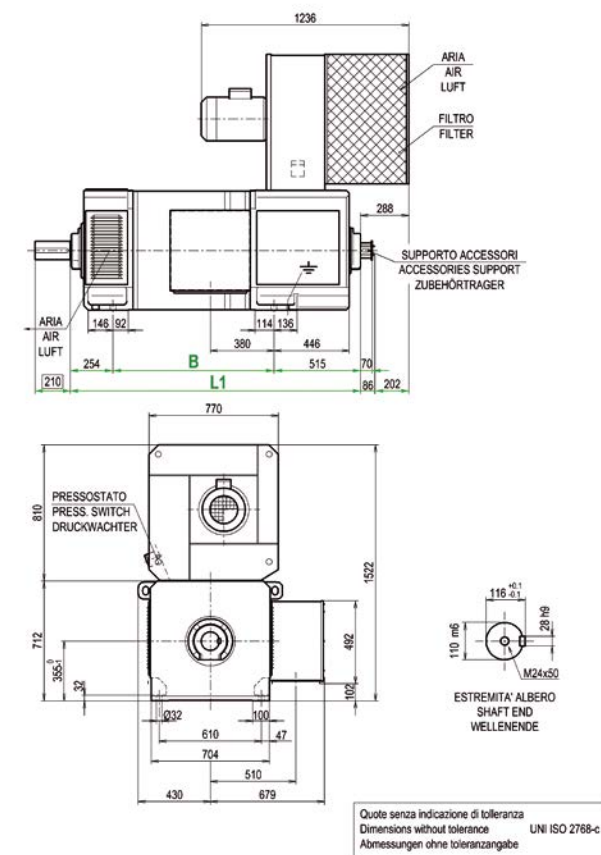
GH400

GH450

GH355 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 6000 Field time costant (s): 1.55 Motor mass (kg): 3430 (IC06) Moment of inertia (kg m²): 21.0			Armature circuit		Winding code		
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω			
720						555	1508	91.9	0.251	0.015	1		
	760					585	1508	92.2					
		830					643	1508				92.7	
			960					720				1485	93.3
655						503	1380	91.3	0.301	0.018	2		
	685					530	1380	91.6					
		760					584	1380				92.2	
			860					660				1370	92.8
600						760	1355	93.5	0.366	0.021	3		
	630						460	1260				90.9	
							482	1260				91.2	
		690					532	1260				91.8	
			790					606				1260	92.6
				920								695	1240
530						800	1210	94.1	0.447	0.025	4		
	560						405	1115				90.7	
							426	1115				91.1	
		620					470	1115				91.7	
			700					536				1115	92.5
				820								620	1110
485						980	722	1100	93.9	0.536	0.031	5	
	510						366	1020	89.8				
							386	1020	90.2				
		560					426	1020	90.9				
			650					486	1020				91.7
				750					560				1010
420						890	660	1010	93.4	0.698	0.043	6	
	440						307		88.1				
							324		88.6				
		490					358	872	89.4				
			560					410					90.5
				650					478				
380						770	564		92.5	0.837	0.049	7	
	400						277		87.9				
							293		88.4				
		440					324	790	89.2				
			500					370					90.3
				590					433				
					690		510		92.3				

GH355 IM1001 - IP23 - IC06



Size	B	L1
GH355 S	960	1729
GH355 M	1010	1779
GH355 L	1070	1839
GH355 P	1140	1909

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

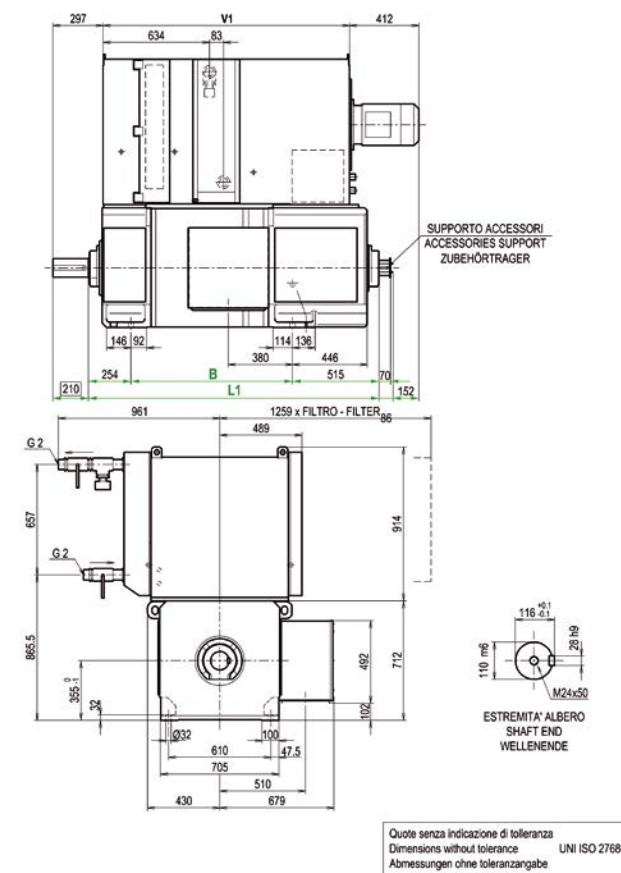
GH400

GH450

GH355 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 6000 Field time constant (s): 1.55 Motor mass (kg): 3430 (IC06) Moment of inertia (kg m²): 21.0			Armature circuit		Winding code			
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω				
315						232		85.8	1.153	0.069	8			
	335					246		86.4						
		370					272	678				87.5		
			425					313					88.7	
				495								366		90.0
					585								433	
275						212	628	83.8	1.540	0.087	9			
	290					224	628	84.5						
		320					245	620				85.7		
			370					280				620	87.2	
				440								330	620	88.7
				240									184	
255						195		84.2						
	285						217	553	85.5					
		330						250		87.0				
			390						293		88.5			
			460						348		89.9			
215						166		81.5	2.237	0.125	11			
	230					176		82.3						
		255					196	510				83.7		
			295					226					85.5	
				350								266		87.2
				410								317		88.8
180						134		78.0	2.925	0.179	12			
	190					142		79.0						
		215					159	430				80.7		
			250					185					82.7	
				295								219		84.8
					345								261	
	200						146		80.4	3.495	0.198	13		
		230					169	395	82.5					
			270					200					84.6	
				320					239					86.6
		160						120		76.8	4.786	0.277	14	
			190					140	340	79.3				
				225					167					81.9
					270					200				

GH355 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH355 S	960	1729	1468
GH355 M	1010	1779	1518
GH355 L	1070	1839	1578
GH355 P	1140	1909	1648

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH355 SK	2700	15.0	5000	1.33	2200	140	2050
GH355 MK	2950	16.5	5200	1.40	2200	140	2050
GH355 LK	3100	18.8	5600	1.48	2200	140	2050
GH355 PK	3320	21.0	6000	1.55	2100	140	2050

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	6224 C3	NU224ECJ C3	6224 C3
V1 - V3	6224 C3	NU224ECJ C3	7224 B
Electrical blower (IC06)	Weight	Blower motor power	
	110 kg	7.5 kW (50 / 60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	440 kg	9.2 kW (50 / 60 Hz)	



DC MOTORS

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3. IDENTIFICATION CODE

4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

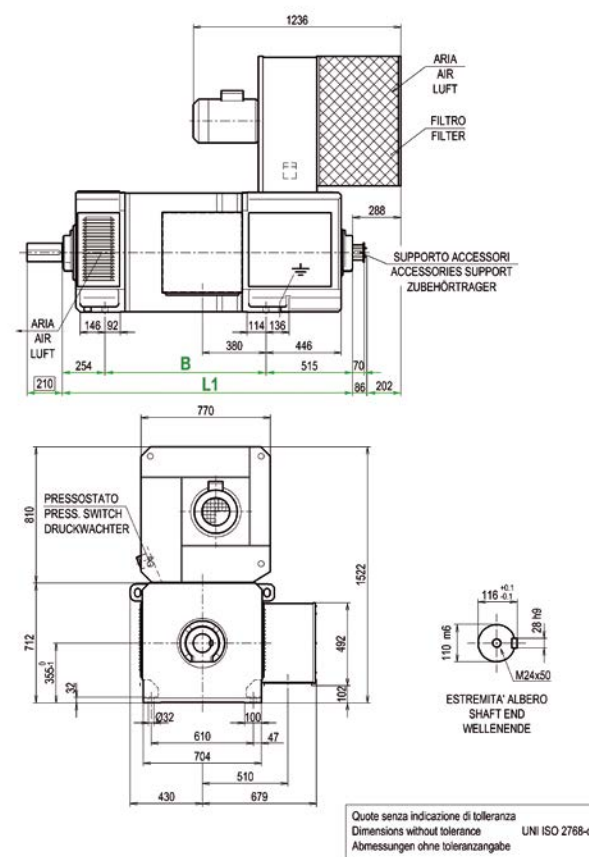
GH315

GH355

GH400

GH450

GH355 IM1001 - IP23 - IC06



Size	B	L1
GH355 S	960	1729
GH355 M	1010	1779
GH355 L	1070	1839
GH355 P	1140	1909

TECHNICAL DATA												
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end	
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley		
GH355 SK	2700	15.0	5000	1.33	2200	140	2050	B3 – B5 V1 – V3	6224 C3	NU224ECJ C3	6224 C3	
GH355 MK	2950	16.5	5200	1.40	2200	140	2050		6224 C3	NU224ECJ C3	7224 B	
GH355 LK	3100	18.8	5600	1.48	2200	140	2050		Electrical blower (IC06)	Weight	Blower motor power	
GH355 PK	3320	21.0	6000	1.55	2100	140	2050			110 kg	7.5 kW (50 / 60 Hz)	
								Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power		
									440 kg	9.2 kW (50 / 60 Hz)		



GO TO MENU





DC MOTORS

1.	GENERAL INFORMATION
2.	STANDARDS AND QUALITY
2.1	Reference standards
2.2	CE Marking
2.3	Quality system
3.	IDENTIFICATION CODE
4.	DESIGN FEATURES
4.1	Rotor
4.2	Commutator
4.3	Stator
4.4	Brushholder yoke
4.5	Bearings
4.6	Belted and radial thrust application
5.	CONSTRUCTION FEATURES
5.1	Coupling and shaft extension
5.2	Mounting arrangement
5.3	Degree of protection
5.4	Cooling method
5.5	Maximum allowable speeds
5.6	Noise level
5.7	Vibrations and balancing
5.8	Conduit box
5.9	Groud terminals
5.10	Cross-section drawing
6.	MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS
6.1	Ratings
6.2	Supply voltage
6.3	Maximum loads
6.4	Current rate-of-rise
6.5	Speed regulation
6.6	Duty with large speed regulation
6.7	Excitation
6.8	Maximum current at locked rotor
6.9	Accessories
7.	TESTS
8.	OUTPUT POWER DIAGRAMS
HOME	

GH225

GH250

GH280

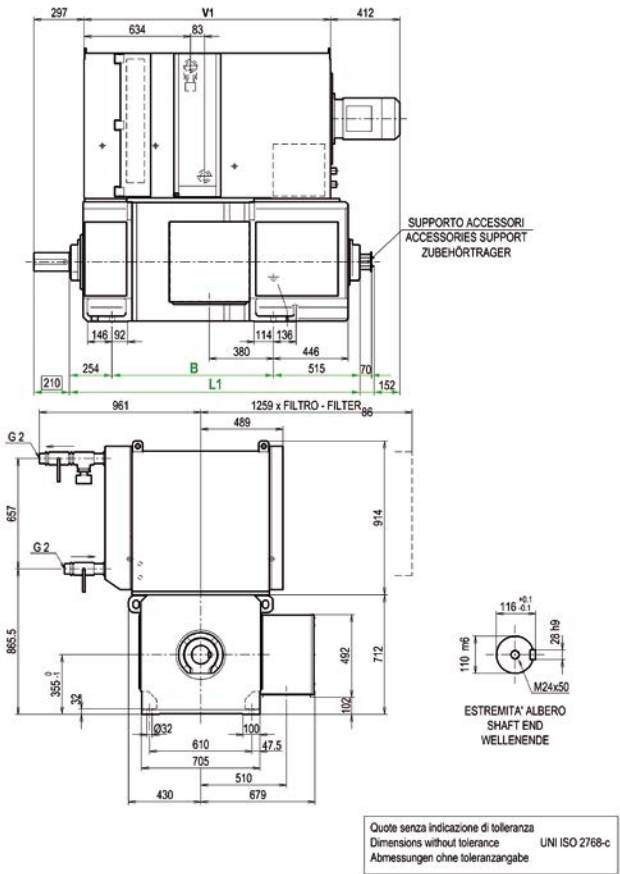
GH315

GH355

GH400

GH450

GH355 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH355 S	960	1729	1468
GH355 M	1010	1779	1518
GH355 L	1070	1839	1578
GH355 P	1140	1909	1648

TECHNICAL DATA											
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley	
GH355 SK	2700	15.0	5000	1.33	2200	140	2050	B3 – B5 V1 – V3	6224 C3	NU224ECJ C3	6224 C3
GH355 MK	2950	16.5	5200	1.40	2200	140	2050		6224 C3	NU224ECJ C3	7224 B
GH355 LK	3100	18.8	5600	1.48	2200	140	2050				
GH355 PK	3320	21.0	6000	1.55	2100	140	2050				
								Electrical blower (IC06)	Weight	Blower motor power	
									110 kg	7.5 kW (50 / 60 Hz)	
								Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
									440 kg	9.2 kW (50 / 60 Hz)	



DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

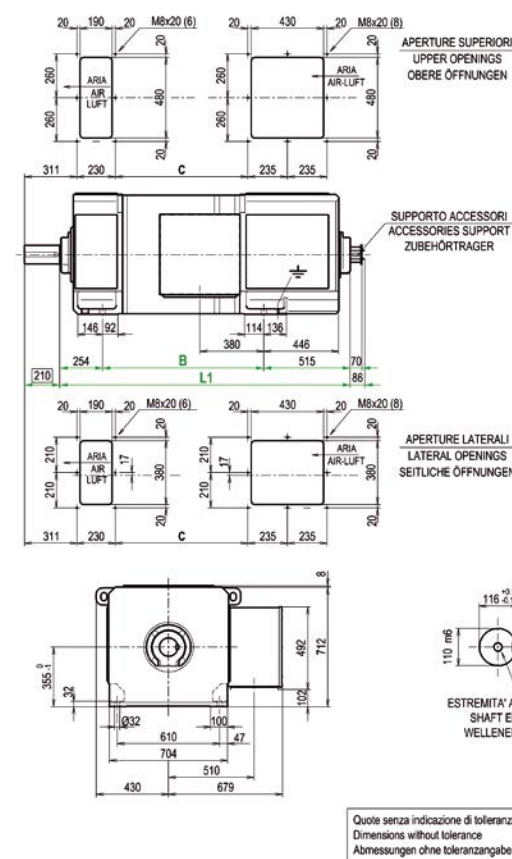
GH315

GH355

GH400

GH450

GH355 IM1001 - IP44 - IC37



Size	B	L1	C
GH355 S	960	1729	789
GH355 M	1010	1779	839
GH355 L	1070	1839	899
GH355 P	1140	1909	969

TECHNICAL DATA											
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley	
GH355 SK	2700	15.0	5000	1.33	2200	140	2050	B3 – B5 V1 – V3	6224 C3	NU224ECJ C3	6224 C3
GH355 MK	2950	16.5	5200	1.40	2200	140	2050		6224 C3	NU224ECJ C3	7224 B
GH355 LK	3100	18.8	5600	1.48	2200	140	2050				
GH355 PK	3320	21.0	6000	1.55	2100	140	2050				
Electrical blower (IC06)								Weight	Blower motor power		
								110 kg	7.5 kW (50 / 60 Hz)		
Air-To-Water Heat Exchanger (IC 86W)								Weight	Heat exchanger motor power		
								440 kg	9.2 kW (50 / 60 Hz)		

DC MOTORS

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2. STANDARDS AND QUALITY

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4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

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GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH400

Derating for field weakening operation

GH400 K

Performance of compensated motors

GH400 MK

GH400 LK

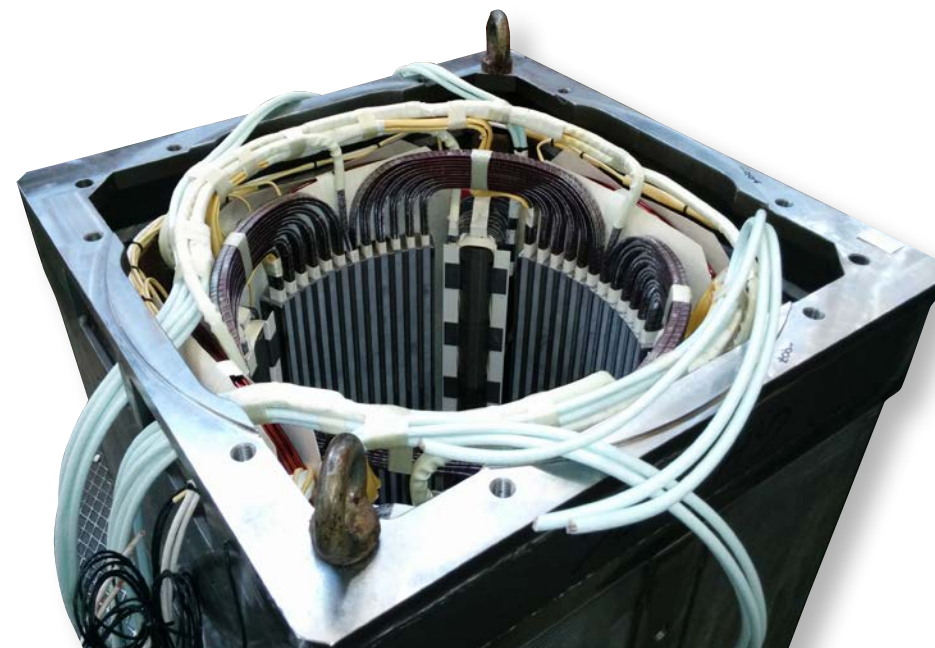
GH400 PK

Overall dimensions

GH400 IM1001-IP23-IC06

GH400 IM1001-IP54-IC86W

GH400 IM1001-IP44-IC37



Performance Tables are displayed on multiple pages, alongside the data tables are repeated alternately overall dimensions (IC06- IC86W-IC37)

DC MOTORS

1. GENERAL INFORMATION

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4. DESIGN FEATURES

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

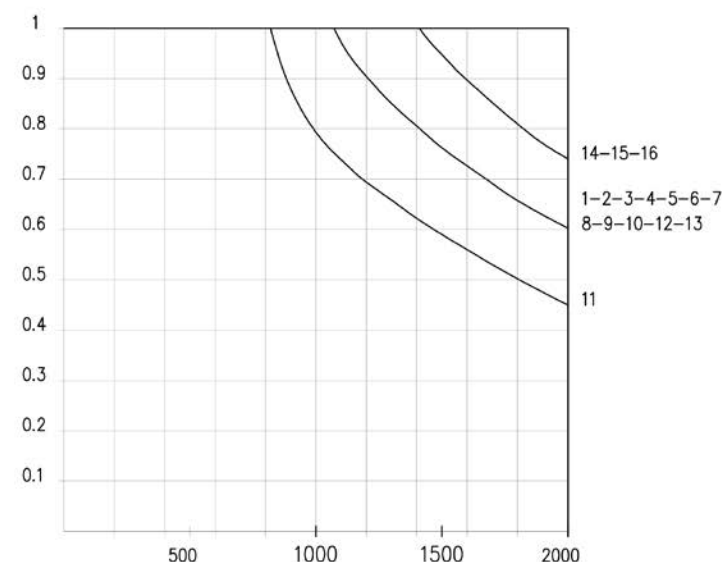
GH400

GH450

GH 400 K

**RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG**

GH 400 K (compensata - compensated - kompensiert)
[180% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile Allowable power output P = K x P table Werfügbare Leistung P = K x P table

per/for/für GH 400 MK K = K x 1.57
GH 400 LK K = K x 1.35
GH 400 PK K = K x 1.17

Per K ≥ 1 niente declassamento For K ≥ 1 no derating Für K ≥ 1 keine Leistungsreduzierung

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m ²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m ³ /min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 – V3	6228 C3	NU228ECM C3	7228 B

Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	

Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	



GO TO MENU





DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
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- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

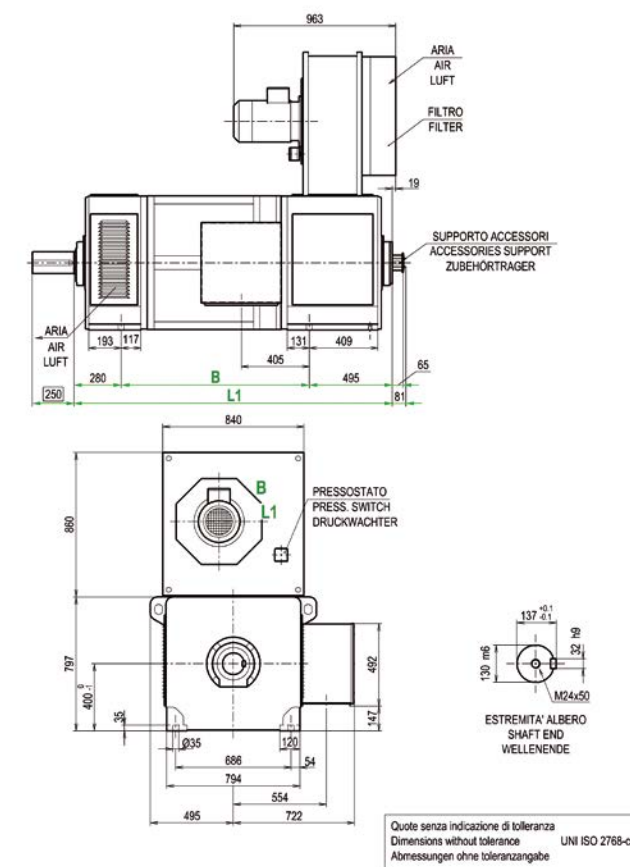
GH400

GH450

GH400 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5700 Field time constant (s): 1.2 Motor mass (kg): 3860 (IC06) Moment of inertia (kg m²): 31.5			Armature circuit		Winding code		
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE MH	RESISTANCE AT 115 °C Ω			
780						612	1650	92.7	0.23	0.0135	1		
	810					646	1650	93.2					
		900					710	1650				93.5	
			1030					806				1650	93.9
					1190							916	1620
700						590	1600	92.2	0.26	0.016	2		
	740					622	1600	92.6					
		810					685	1600				93.1	
			920					769				1580	93.6
					1080							885	1565
640						538	1470	91.5	0.31	0.019	3		
	670					568	1470	92.0					
		740					625	1470				92.4	
			850					703				1450	93.2
					980			1150				812	1440
520						450	1250	90.0	0.44	0.028	4		
	540					472	1240	90.6					
		600					519	1240				91.0	
			680					593				1240	92.0
					790							685	1230
470						788	1200	93.8	0.55	0.032	5		
	500					394	1100	89.5					
		550					416	1100				90.0	
			620					458				1100	90.5
					730							520	1095
430						604	1090	92.4	0.66	0.040	6		
	450					700	1070	93.5					
		500					355	1000				88.8	
			570					375				1000	89.3
					670							413	1000
400						467	990	90.7	0.78	0.044	7		
	420					544	990	91.6					
		470					630	970				92.8	
			530					328				930	88.2
					620							346	930
						382	930	89.2					
						436	930	90.2					
							498	910				91.2	
								582				900	92.4
					730								

GH400 IM1001 - IP23 - IC06



Size	B	L1
GH400 M	1120	1895
GH400 L	1200	1975
GH400 P	1290	2065

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	



DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

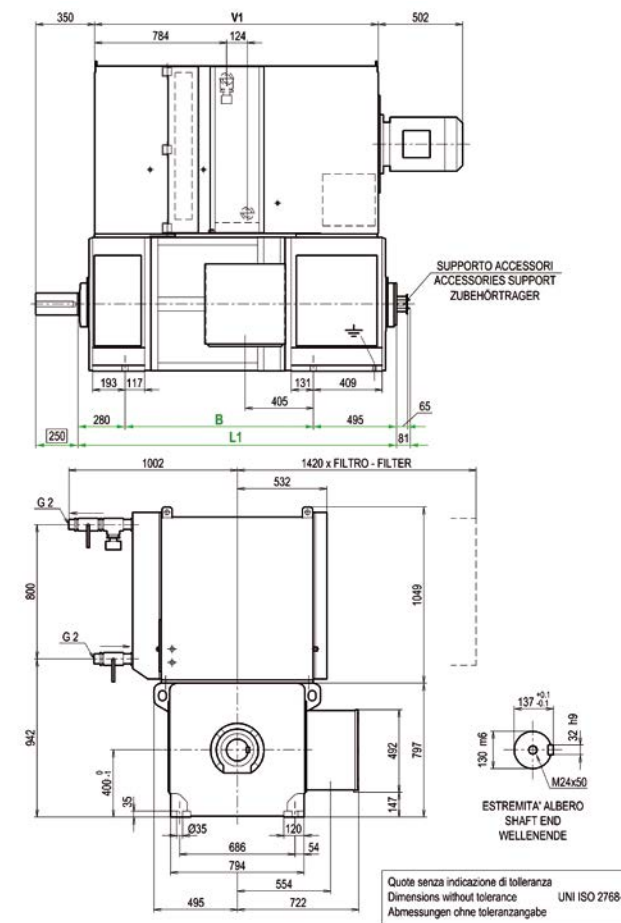
GH400

GH450

GH400 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5700 Field time constant (s): 1.2 Motor mass (kg): 3860 (IC06) Moment of inertia (kg m²): 31.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
370	390	430	490	580	680	298	855	87.1	0.92	0.056	8
						316	855	88.0			
						348	855	88.5			
						398	855	89.5			
						462	850	90.6			
320	340	380	430	510	600	528	820	92.0	1.17	0.063	9
						264	770	85.7			
						281	770	86.9			
						310	770	87.5			
						354	770	88.4			
310	320	350	400	470	560	414	760	90.8	1.25	0.073	10
						484	760	91.0			
						247		85.2			
						262		86.0			
						289	725	86.7			
270	290	320	350	430	500	332		88.1	1.46	0.081	11
						389		89.4			
						460		90.6			
						226		84.6			
						241		85.9			
250	260	290	330	390	460	265	668	86.2	1.74	0.100	12
						306		88.1			
						357		89.1			
						423		90.5			
						206		83.1			
230	240	270	310	370	440	220		84.5	1.90	0.110	13
						242	620	84.9			
						279		86.5			
						327		87.9			
						389		89.6			
						189		82.2			
						202		83.6			
						223	575	84.3			
						257		86.0			
						302		87.5			
						359		89.2			

GH400 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH400 M	1120	1895	1685
GH400 L	1200	1975	1765
GH400 P	1290	2065	1855

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	

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2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

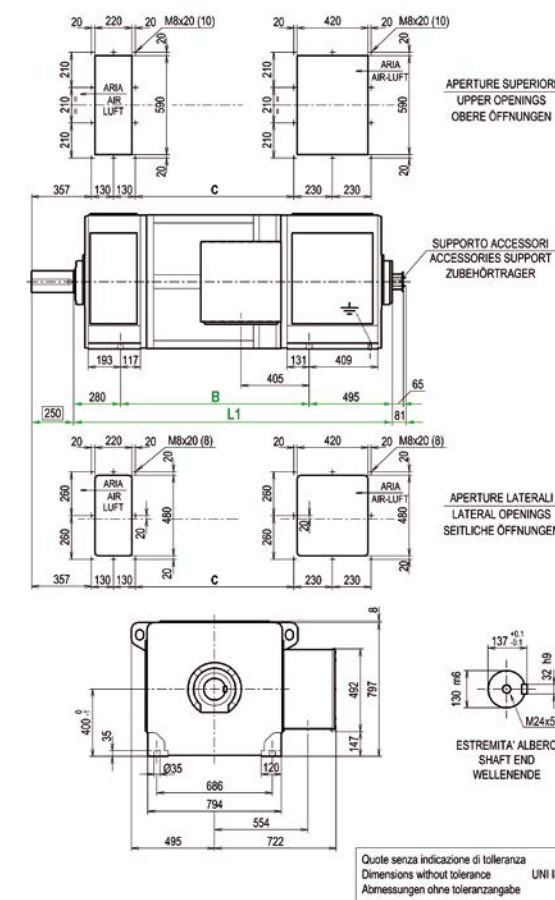
GH400

GH450

GH400 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5700 Field time constant (s): 1.2 Motor mass (kg): 3860 (IC06) Moment of inertia (kg m²): 31.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE MH	RESISTANCE AT 115 °C Ω	
210	220					171		79.2	2.30	0.150	14
						183		80.7			
		250				202	540	81.3			
			280			235		83.7			
				330		277		85.5			
				400	330		87.3				
190	200					156		78.8	2.70	0.157	15
						167		80.3			
		220				185	495	81.2			
			260			216		83.9			
				310		253		85.2			
				370	302		87.2				
190	210					154		78.9	3.00	0.170	16
						173	465	80.9			
						202		83.5			
				290		237		84.9			
					340	283		86.9			

GH400 IM1001 - IP44 - IC37



Size	B	L1	C
GH400 M	1120	1895	942
GH400 L	1200	1975	1022
GH400 P	1290	2065	1112

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	

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- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

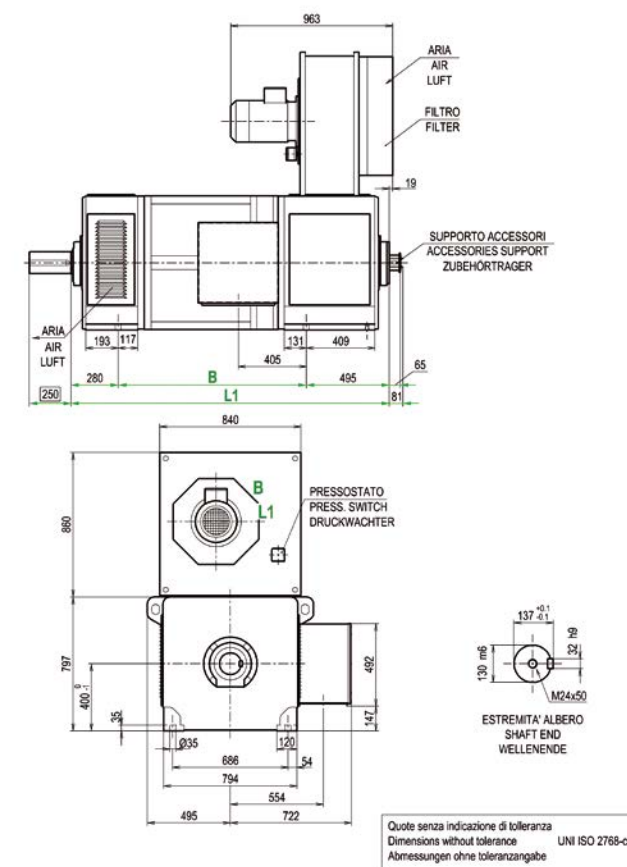
GH400

GH450

GH400 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 6200 Field time constant (s): 1.3 Motor mass (kg): 4360 (IC06) Moment of inertia (kg m²): 34.5			Armature circuit		Winding code	
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
660	700	780	890	1030		608	1650	92.1	0.26	0.014	1	
						644	1650	92.9				
						708	1650	93.3				
						805	1650	93.8				
						927	1640	94.2				
600	630	690	790	920		584	1600	91.3	0.30	0.016	2	
						620	1600	92.3				
						684	1600	92.9				
						766	1580	93.2				
						880	1560	94.0				
550	580	640	730	840	990		535	1470	91.0	0.36	0.020	3
							564	1470	91.4			
							622	1470	92.1			
							701	1450	93.0			
							810	1440	93.8			
430	460	510	580	680	800		936	1420	94.2	0.52	0.030	4
							443	1240	89.3			
							467	1240	89.7			
							516	1240	90.5			
							587	1235	91.4			
400	430	470	540	630	740		682	1230	92.4	0.64	0.034	5
							790	1210	93.3			
							390	1095	89.0			
							411	1095	89.4			
							453	1095	89.9			
360	390	430	490	570	680		516	1090	91.0	0.77	0.044	6
							599	1085	92.0			
							697	1070	93.1			
							352	1000	88.0			
							372	1000	88.6			
340	360	400	460	530	630		410	1000	89.1	0.90	0.048	7
							465	990	90.3			
							542	990	91.2			
							633	980	92.3			
							324	930	87.1			
							343	930	87.8			
							379	930	88.6			
							435	930	90.0			
							501	920	90.8			
							586	910	92.0			

GH400 IM1001 - IP23 - IC06



Size	B	L1
GH400 M	1120	1895
GH400 L	1200	1975
GH400 P	1290	2065

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	



DC MOTORS

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- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

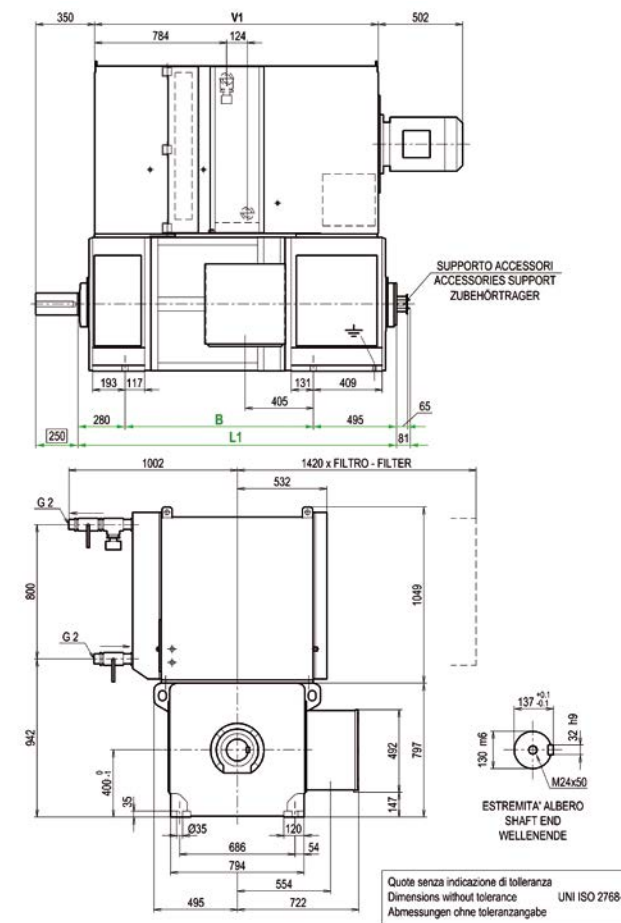
GH400

GH450

GH400 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 6200 Field time constant (s): 1.3 Motor mass (kg): 4360 (IC06) Moment of inertia (kg m²): 34.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE MH	RESISTANCE AT 115 °C Ω	
310						297	855	86.8	1.08	0.058	8
	330					314	855	87.4			
		370				346	855	88.0			
			420			393	850	88.9			
				500		453	840	89.9			
				590	528	825	91.4				
280						262		85.1	1.36	0.068	9
	300					277		85.7			
		320				305	770	86.1			
			370			352		87.9			
				440		412		89.2			
				520	489		90.7				
260						244		84.1	1.70	0.078	10
	280					259		85.1			
		310				286	725	85.8			
			350			329		87.3			
				410		387		89.0			
				490	457		90.0				
230						224		83.8	2.00	0.087	11
	240					238		84.8			
		270				262	668	85.3			
			310			303		87.2			
				360		354		88.3			
				440	420		89.8				
210						202		81.5	2.32	0.107	12
	220					216		82.9			
		250				239	620	83.8			
			290			276		85.6			
				340		324		87.1			
				400	385		88.7				
200						186		80.9	2.62	0.118	13
	210					200		82.8			
		230				220	575	83.2			
			270			255		85.3			
				320		299		86.7			
					380	356		88.4			

GH400 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH400 M	1120	1895	1685
GH400 L	1200	1975	1765
GH400 P	1290	2065	1855

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	



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- 2.3 Quality system

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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
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- 5.9 Groud terminals
- 5.10 Cross-section drawing

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- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

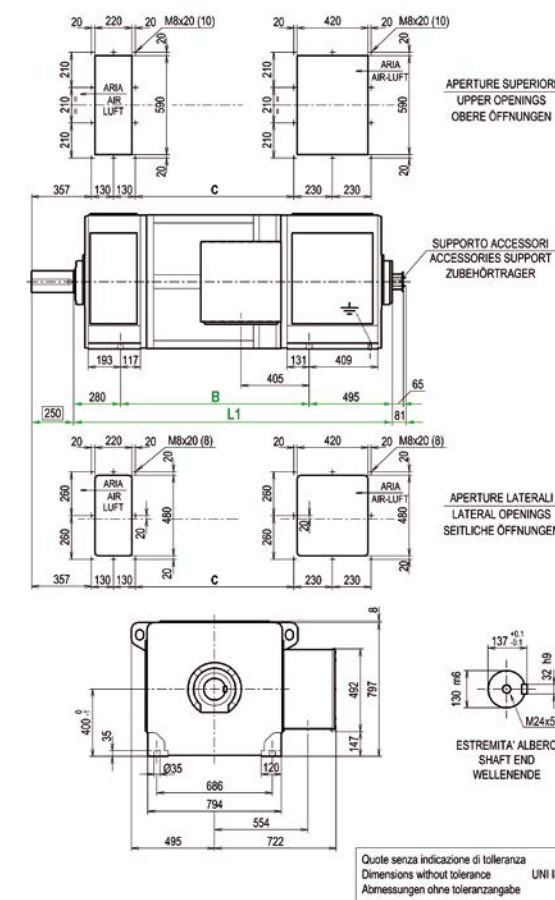
GH400

GH450

GH400 LK

Rated speed (rpm) at armature voltage						Excitation power (W): 6200 Field time constant (s): 1.3 Motor mass (kg): 4360 (IC06) Moment of inertia (kg m²): 34.5			Armature circuit		Winding code	
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω		
		210				198	540	79.7	2.80	0.163	14	
		240				231		82.3				
			290				272					84.0
				350				326				
		200				181	495	79.5	3.60	0.168	15	
			230				213					82.8
		270					250					84.2
				320				300				
		210				198	465	81.9	4.03	0.185	16	
			250				234					83.9
				300				280				

GH400 IM1001 - IP44 - IC37



Size	B	L1	C
GH400 M	1120	1895	942
GH400 L	1200	1975	1022
GH400 P	1290	2065	1112

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	



DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
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- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH400 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 6600 Field time constant (s): 1.4 Motor mass (kg): 4760 (IC06) Moment of inertia (kg m²): 38.5			Armature circuit		Winding code
400 V	420 V	460 V	520 V	600 V	700 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
570	600	660	760	870		607	1650	92.0	0.30	0.016	1
						640	1650	92.4			
						704	1650	92.8			
						803	1650	93.6			
						916	1620	94.2			
510	540	590	680	790		585	1600	91.4	0.35	0.018	2
						616	1600	91.7			
						677	1600	92.0			
						764	1580	93.0			
						878	1560	93.8			
470	500	550	630	730	860	532	1470	90.5	0.41	0.021	3
						557	1460	90.8			
						614	1460	91.4			
						697	1450	92.4			
						800	1430	93.2			
						923	1400	94.2			
380	400	440	500	580	690	442	1240	89.1	0.60	0.032	4
						465	1240	89.3			
						512	1240	89.8			
						584	1235	90.8			
						679	1230	92.0			
						788	1210	93.0			
350	370	400	460	530	640	386	1095	88.1	0.74	0.037	5
						407	1095	88.5			
						448	1095	88.9			
						512	1090	90.4			
						592	1080	91.4			
						692	1068	92.6			
310	330	370	420	490	580	349	1000	87.3	0.90	0.047	6
						368	1000	87.6			
						406	1000	88.3			
						462	990	89.7			
						539	990	90.7			
						631	980	92.0			
290	310	340	390	460	540	321	930	86.3	1.05	0.052	7
						339	930	86.9			
						375	930	87.7			
						426	920	89.0			
						491	910	89.9			
						577	900	91.6			

GH400 IM1001 - IP23 - IC06

Size	B	L1
GH400 M	1120	1895
GH400 L	1200	1975
GH400 P	1290	2065

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	7.5 kW (50 Hz) - 9.2 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	620 kg	15.0 / 15.0 kW (50/60 Hz)	



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- 4.2 Commutator
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5. CONSTRUCTION FEATURES

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- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
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- 5.9 Groud terminals
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6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

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- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

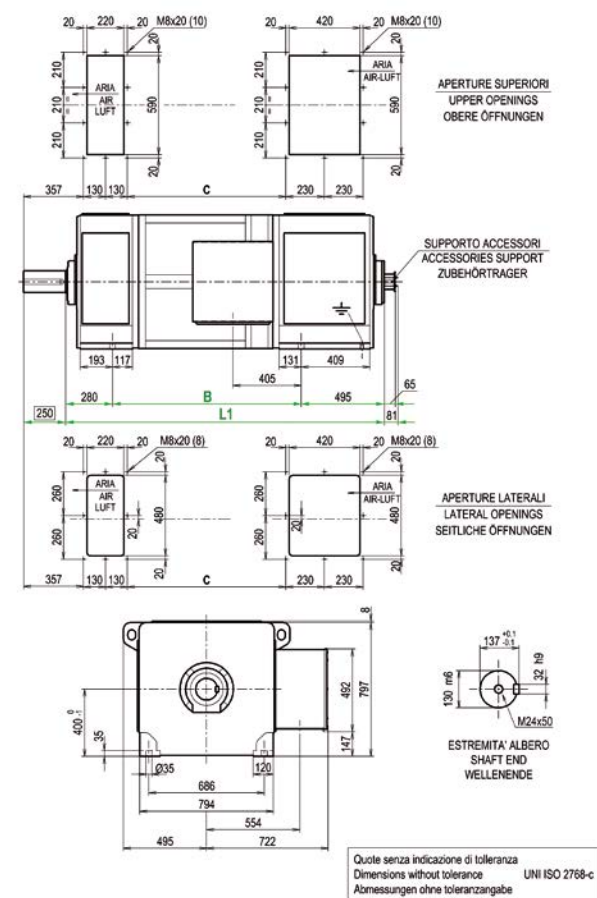
GH315

GH355

GH400

GH450

GH400 IM1001 - IP44 - IC37



Size	B	L1	C
GH400 M	1120	1895	942
GH400 L	1200	1975	1022
GH400 P	1290	2065	1112

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH400 MK	3700	31.5	5700	1.20	2000	180	1300
GH400 LK	4200	34.5	6200	1.30	2000	180	1300
GH400 PK	4600	38.5	6600	1.40	1900	180	1300

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU228ECM C3	NU228ECM C3	6228 C3
V1 - V3	6228 C3	NU228ECM C3	7228 B

Electrical blower (IC06)		Blower motor power	
Weight		Blower motor power	
160 kg		7.5 kW (50 Hz) - 9.2 kW (60 Hz)	

Air-To-Water Heat Exchanger (IC 86W)		Heat exchanger motor power	
Weight		Heat exchanger motor power	
620 kg		15.0 / 15.0 kW (50/60 Hz)	



GO TO MENU



DC MOTORS

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HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH450

Derating for field weakening operation

GH450 K

Performance of compensated motors

GH450 MK

GH450 LK

GH450 PK

GH450 XK

GH450 YK

Overall dimensions

GH450 IM1001-IP23-IC06

GH450 IM1001-IP54-IC86W

GH450 IM1001-IP44-IC37



Performance Tables are displayed on multiple pages, alongside the data tables are repeated alternately overall dimensions (IC06- IC86W-IC37)



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4.5	Bearings
4.6	Belted and radial thrust application
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5.2	Mounting arrangement
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	HOME

GH225

GH250

GH280

GH315

GH355

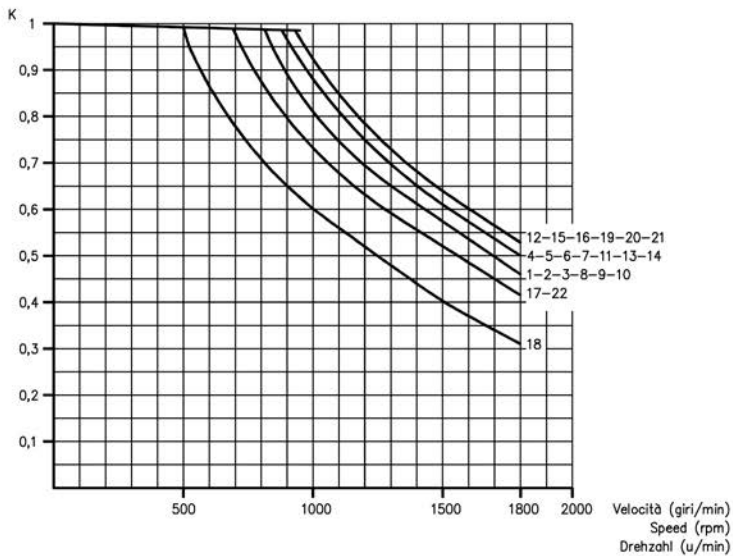
GH400

GH450

GH 450 K

RIDUZIONE DELLA POTENZA IN DISECCITAZIONE
DERATING FOR FIELD WEAKENING OPERATION
LEISTUNGSREDUZIERUNG BEI FELDSWÄCHUNG

GH 450 K (compensata - compensated - kompensiert)
[180% sovraccarico - overload - überlast]



P = K x P tabella potenza disponibile Allowable power output P = K x P table Verfügbare Leistung P = K x P table

per/for/für
GH 450 M K = K x 1.55
GH 450 L K = K x 1.40
GH 450 P K = K x 1.25
GH 450 X K = K x 1.10
GH 450 Y K = K x 1

Per K ≥ 1 niente declassamento For K ≥ 1 no derating Für K ≥ 1 keine Leistungsreduzierung

TECHNICAL DATA												
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end	
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley		
GH450 M	4900	38.0	5300	1.50	1800	220	1250	B3 – B5 V1 – V3	NU232ECM C3	NU232ECM C3	6232 MC3	
GH450 L	5200	43.0	6000	1.95	1800	220	1250		6232 C3	NU232ECM C3	7232 BCB	
GH450 P	5500	49.0	6500	2.00	1800	220	1250					
GH450 X	5900	55.0	7000	2.05	1700	220	1250					
GH450 Y	6350	62.0	7500	2.10	1600	220	1250					
								Electrical blower (IC06)	Weight	Blower motor power		
									160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)		
								Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power		
									650 kg	15.0 kW (50 / 60 Hz)		



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- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH450 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5300 Field time constant (s): 1.5 Motor mass (kg): 5060 (IC06) Moment of inertia (kg m²): 38.0			Armature circuit		Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
730	800	910	1070			751		92.2	0.22	0.011	1
						829		92.9			
						942	1940	93.4			
						1090		94.0			
690	760	860	1000			724	1870	92.2	0.25	0.012	2
						799	1870	92.9			
						908	1870	93.4			
						1045	1855	93.9			
600	670	760	880	1050		654	1700	91.6	0.32	0.015	3
						721	1700	92.2			
						820	1700	92.7			
						953	1700	93.4			
570	630	720	840			1110	1685	94.2	0.35	0.016	4
						626		91.4			
						692		92.2			
						786	1630	92.7			
550	610	690	810	950		914		93.4	0.38	0.017	5
						1073		94.2			
						606		91.4			
						668		92.0			
510	570	640	750	880		760	1578	92.6	0.44	0.019	6
						883		93.3			
						1038		94.0			
						563		91.2			
470	520	590	690	810	940	620		91.7	0.50	0.024	7
						706	1470	92.4			
						822		93.2			
						964		93.7			
440	490	560	650	760	880	516		89.7	0.57	0.026	8
						571		90.6			
						650	1370	91.3			
						759		92.3			

GH450 IM1001 - IP23 - IC06

			<p>Quote senza indicazione di tolleranza Dimensions without tolerance Abmessungen ohne toleranzangabe</p> <p>UNI ISO 2768-c</p>		
Size	B	L1			
GH450 M	1360	1991			
GH450 L	1420	2051			
GH450 P	1490	2121			
GH450 X	1570	2201			
GH450 Y	1660	2291			

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 – V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH450 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5300 Field time constant (s): 1.5 Motor mass (kg): 5060 (IC06) Moment of inertia (kg m²): 38.0			Armature circuit		Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
420	460	520	610	720	830	441	1176	89.3	0.64	0.029	9
						489		90.4			
						557		91.1			
						648		91.9			
						764		92.8			
390	430	490	580	680	780	880	1140	93.5	0.71	0.032	10
						426		89.0			
						471		89.8			
						537		90.6			
						628		91.8			
370	410	470	550	650	750	739	1094	92.6	0.78	0.034	11
						851		93.3			
						407		88.6			
						451		89.6			
						515		90.6			
340	380	430	510	600	690	602	1016	91.7	0.91	0.040	12
						709		92.6			
						817		93.3			
						374		87.6			
						414		88.6			
320	360	410	480	560	650	473	940	89.5	1.01	0.047	13
						554		90.9			
						654		91.9			
						754		92.8			
						343		86.9			
300	340	380	450	530	610	384	878	88.8	1.14	0.052	14
						435		89.1			
						509		90.2			
						602		91.5			
						696		92.5			
						319		86.5			
						353		87.4			
						405		88.7			
						474		90.0			
						561		91.3			
						649		92.2			

GH450 IM1001 - IP54 - IC86W

Size	B	L1	V1
GH450 M	1360	1991	1751
GH450 L	1420	2051	1811
GH450 P	1490	2121	1881
GH450 X	1570	2201	1961
GH450 Y	1660	2291	2051

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 – V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

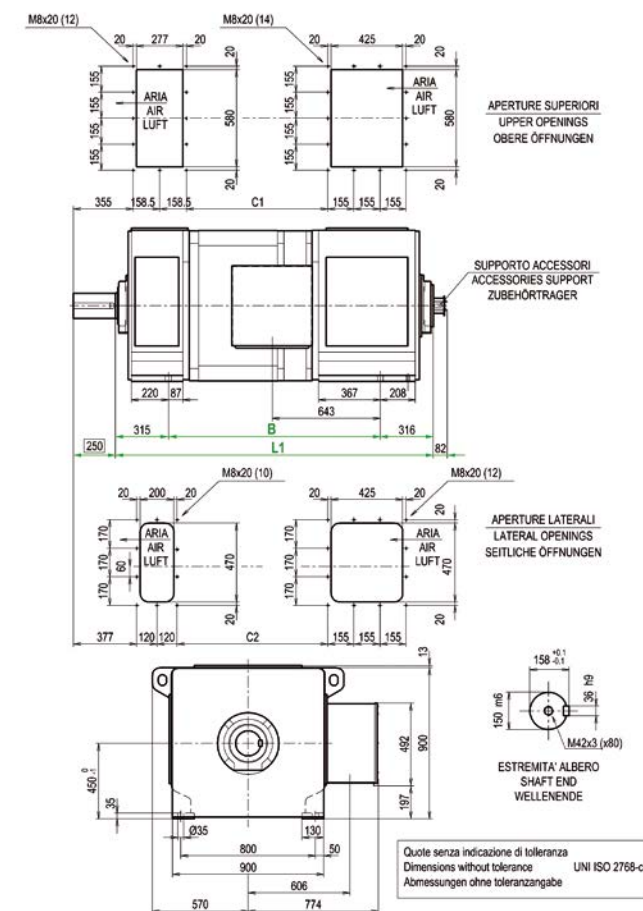
GH400

GH450

GH450 MK

Rated speed (rpm) at armature voltage						Excitation power (W): 5300 Field time constant (s): 1.5 Motor mass (kg): 5060 (IC06) Moment of inertia (kg m²): 38.0			Armature circuit		Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
290	320	370	430	510	590	309	862	85.3	1.22	0.059	15
						343		86.5			
						393		87.7			
						461		89.1			
						546		90.5			
270	300	340	400	470	550	630	792	91.3	1.39	0.067	16
						282		84.7			
						313		85.9			
						360		87.4			
						422		88.8			
						500					
						577					

GH450 IM1001 - IP44 - IC37



Size	B	L1	C1	C2
GH450 M	1360	1991	941	996
GH450 L	1420	2051	1001	1056
GH450 P	1490	2121	1071	1126
GH450 X	1570	2201	1151	1206
GH450 Y	1660	2291	1241	1296

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 - V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

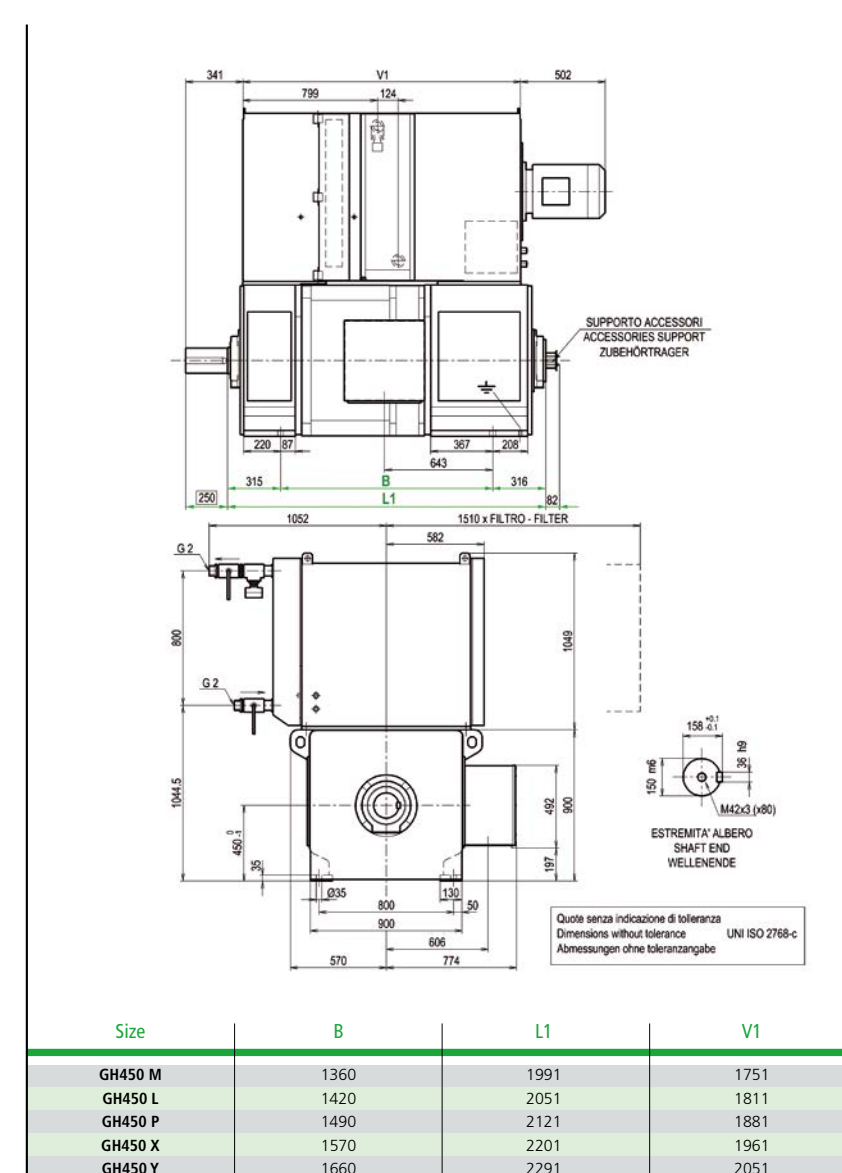
GH400

GH450

GH450 PK

Rated speed (rpm) at armature voltage						Excitation power (W): 6500 Field time constant (s): 2.0 Motor mass (kg): 5660 (IC06) Moment of inertia (kg m²): 49.0			Armature circuit		Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
320	360	410	480	570	660	438	1176	88.7	0.71	0.033	9
						482		89.1			
						552		90.3			
						644		91.3			
						760		92.3			
310	340	390	460	540	620	876	1140	93.1	0.80	0.036	10
						423		88.3			
						465		88.7			
						533		89.9			
						623		91.1			
300	330	370	440	510	590	736	1094	92.2	0.87	0.039	11
						847		92.9			
						405		88.1			
						445		88.5			
						511		89.8			
270	300	340	400	470	550	598	1016	91.1	1.01	0.047	12
						705		92.1			
						813		92.9			
						371		86.9			
						410		87.7			
250	280	320	380	450	520	470	941	89.0	1.13	0.052	13
						549		90.0			
						650		91.4			
						750		92.3			
						342		86.5			
240	270	300	360	420	490	376	878	86.9	1.27	0.058	14
						433		88.5			
						506		89.7			
						598		90.8			
						692		91.9			
						318		86.2			
						350		86.7			
						402		88.0			
						471		89.4			
						557		90.6			
						644		91.7			

GH450 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 – V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

GH400

GH450

GH450 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 7000 Field time constant (s): 2.05 Motor mass (kg): 6060 (IC06) Moment of inertia (kg m²): 55.0			Armature circuit		Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
510	560	640	750			740	1920	91.6	0.27	0.013	1
						816	1920	91.4			
						928	1920	92.9			
						1072	1910	93.8			
480	530					709		91.2	0.30	0.014	2
						783		92.0			
						892	1850	92.7			
						1037		93.4			
420	460					646	1700	90.5	0.39	0.018	3
						715	1700	91.4			
						815	1700	92.2			
						950	1700	93.1			
						1100	1680	93.8	0.44	0.019	4
400						610		90.2			
						676		91.3			
						769	1610	91.9			
						895		92.7	0.45	0.021	5
						1053		93.4			
380	420					596		89.9			
						659		90.8			
						752	1578	91.6	0.52	0.023	6
						876		92.5			
						1032		93.4			
350						551		89.9			
						610		90.8	0.60	0.030	7
						695	1460	91.5			
						810		92.5			
						952		93.2			
330						505		88.4	0.68	0.032	8
						558		89.2			
						637	1360	90.1			
						745		91.3			
						877		92.1	0.68	0.032	8
						1012		93.0			
310						462		88.0			
						513		89.2			
						585	1250	90.0	0.68	0.032	8
						683		91.1			
						806		92.1			
						928		92.8			

GH450 IM1001 - IP23 - IC06

			<p>Quote senza indicazione di tolleranza Dimensions without tolerance Abmessungen ohne Toleranzangabe</p> <p>UNI ISO 2768-c</p>		
Size	B	L1			
GH450 M	1360	1991			
GH450 L	1420	2051			
GH450 P	1490	2121			
GH450 X	1570	2201			
GH450 Y	1660	2291			

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 – B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 – V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	

DC MOTORS

1. GENERAL INFORMATION

2. STANDARDS AND QUALITY

- 2.1 Reference standards
- 2.2 CE Marking
- 2.3 Quality system

3. IDENTIFICATION CODE

4. DESIGN FEATURES

- 4.1 Rotor
- 4.2 Commutator
- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

5. CONSTRUCTION FEATURES

- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
- 5.7 Vibrations and balancing
- 5.8 Conduit box
- 5.9 Groud terminals
- 5.10 Cross-section drawing

6. MOTOR SELECTION BASED ON RATING AND OPERATING CONDITIONS

- 6.1 Ratings
- 6.2 Supply voltage
- 6.3 Maximum loads
- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

7. TESTS

8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

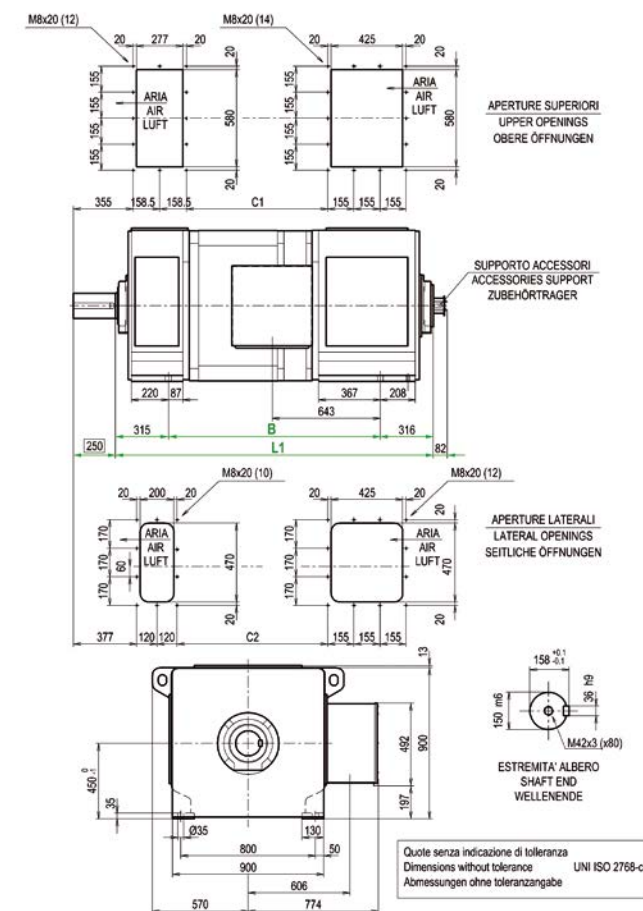
GH400

GH450

GH450 XK

Rated speed (rpm) at armature voltage						Excitation power (W): 7000 Field time constant (s): 2.05 Motor mass (kg): 6060 (IC06) Moment of inertia (kg m²): 55.0			Armature circuit		Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
200	220	250	300	350	410	297	850	83.2	1.45	0.070	15
						329		84.1			
						380		86.0			
						447		87.6			
						530		89.1			
180	200	240	280	330	380	614	780	90.3	1.66	0.081	16
						272		83.0			
						301		83.9			
						347		85.6			
						408		87.2			
						485		88.8			
						562		90.1			

GH450 IM1001 - IP44 - IC37



Size	B	L1	C1	C2
GH450 M	1360	1991	941	996
GH450 L	1420	2051	1001	1056
GH450 P	1490	2121	1071	1126
GH450 X	1570	2201	1151	1206
GH450 Y	1660	2291	1241	1296

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 - V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	

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- 5.8 Conduit box
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8. OUTPUT POWER DIAGRAMS

HOME

GH225

GH250

GH280

GH315

GH355

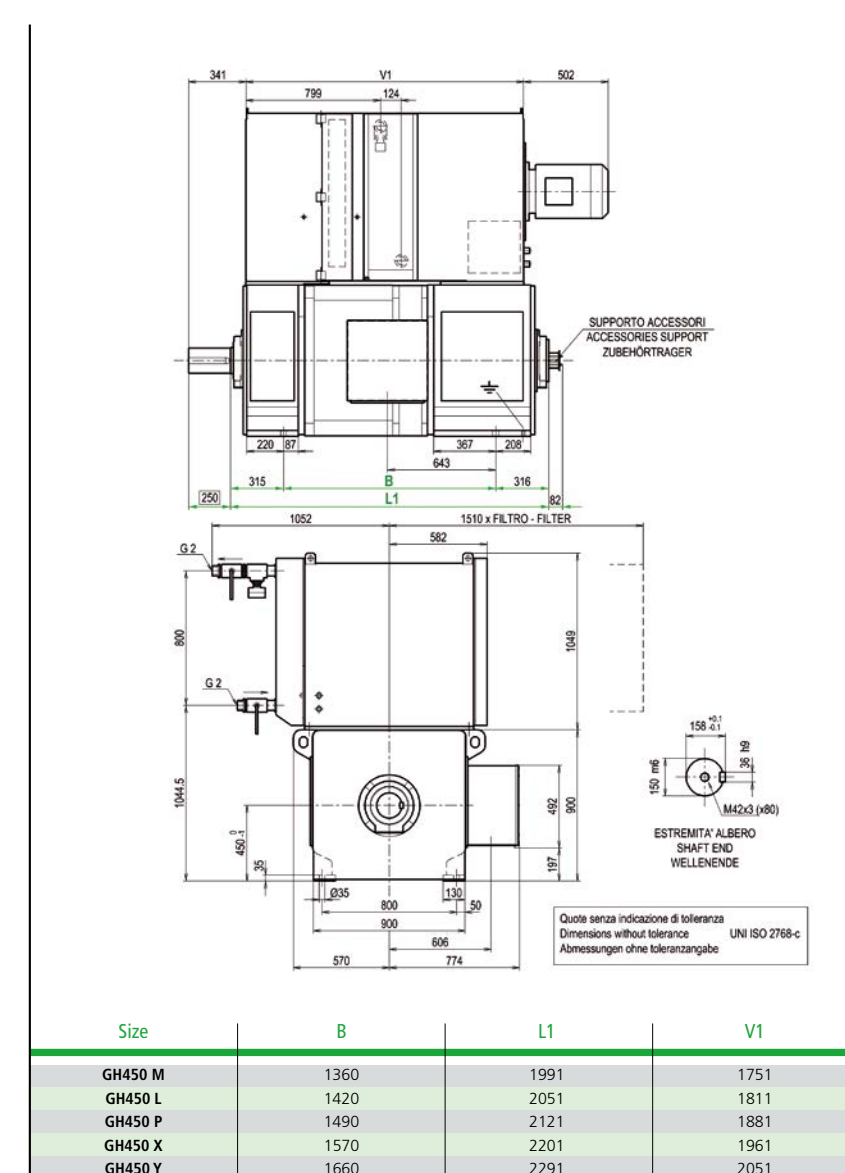
GH400

GH450

GH450 YK

Rated speed (rpm) at armature voltage						Excitation power (W): 7500 Field time costant (s): 2.10 Motor mass (kg): 6510 (IC06) Moment of inertia (kg m²): 62.0			Armature circuit		Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω	
250	280	320	380	440	510	420	1150	87.0	0.81	0.039	9
						467		88.3			
						534		89.3			
						624		90.4			
						737		91.6			
240	270	300	360	420	480	408	1120	86.7	0.91	0.042	10
						453		87.9			
						517		88.8			
						605		90.0			
						715		91.2			
230	250	290	340	400	460	388	1070	86.3	0.99	0.045	11
						432		87.8			
						494		88.8			
						578		90.0			
						684		91.3			
210	230	270	310	370	430	354	990	85.1	1.15	0.054	12
						394		86.5			
						451		87.6			
						529		89.1			
						626		90.3			
200	220	250	290	350	400	326	920	84.4	1.28	0.062	13
						360		85.1			
						416		87.0			
						488		88.4			
						580		90.0			
180	200	230	280	330	380	304	860	84.2	1.44	0.068	14
						336		84.9			
						388		86.8			
						455		88.2			
						540		89.7			
						624		90.7			

GH450 IM1001 - IP54 - IC86W



TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 - V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	

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GH250

GH280

GH315

GH355

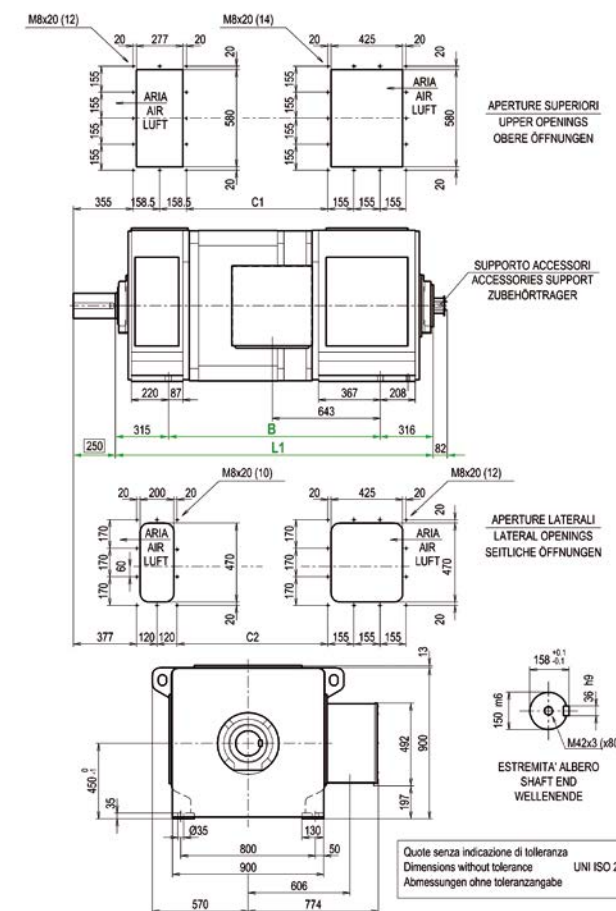
GH400

GH450

GH450 YK

Rated speed (rpm) at armature voltage						Excitation power (W): 7500 Field time constant (s): 2.10 Motor mass (kg): 6510 (IC06) Moment of inertia (kg m²): 62.0			Armature circuit	Winding code
420 V	460 V	520 V	600 V	700 V	800 V	RATED OUTPUT kW	ARMATURE CURRENT A	EFFICIENCY %	SATURATED INDUCTANCE mH	RESISTANCE AT 115 °C Ω
	190					322		83.3		
		220				372	840	85.2		
			260			438		86.9	1.55	0.077
				310		521		88.6		
					360	603		89.7		
	180					295		83.3		
		210				339	770	84.7		
			240			400		86.6	1.77	0.088
				290		475		88.1		
					340	551		89.4		

GH450 IM1001 - IP44 - IC37



Size	B	L1	C1	C2
GH450 M	1360	1991	941	996
GH450 L	1420	2051	1001	1056
GH450 P	1490	2121	1071	1126
GH450 X	1570	2201	1151	1206
GH450 Y	1660	2291	1241	1296

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 - V3	6232 C3	NU232ECM C3	7232 BCB
Electrical blower (IC06)	Weight	Blower motor power	
	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)	
Air-To-Water Heat Exchanger (IC 86W)	Weight	Heat exchanger motor power	
	650 kg	15.0 kW (50 / 60 Hz)	



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6.8	Maximum current at locked rotor
6.9	Accessories
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GH225

GH250

GH280

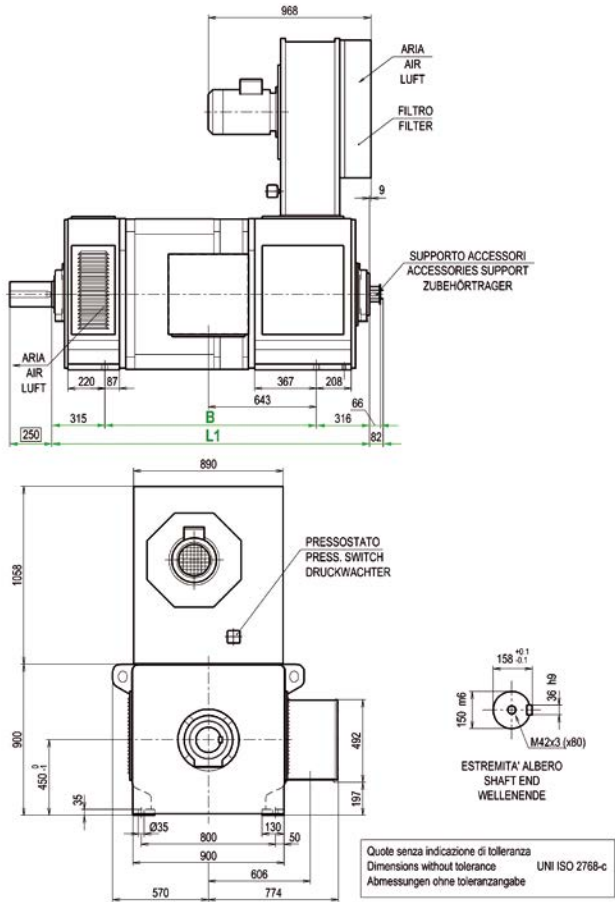
GH315

GH355

GH400

GH450

GH450 IM1001 - IP23 - IC06



Size	B	L1
GH450 M	1360	1991
GH450 L	1420	2051
GH450 P	1490	2121
GH450 X	1570	2201
GH450 Y	1660	2291

TECHNICAL DATA								Bearings			Drive end		Opposite drive end	
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Coupling	Pulley		Weight	Blower motor power		
						Air flow (m³/min)	Pressure drop (Pa)							
GH450 M	4900	38.0	5300	1.50	1800	220	1250	B3 – B5	NU232ECM C3	6232 MC3	160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)		
GH450 L	5200	43.0	6000	1.95	1800	220	1250	V1 – V3	6232 C3	7232 BCB				
GH450 P	5500	49.0	6500	2.00	1800	220	1250	Electrical blower (IC06)			Weight		Blower motor power	
GH450 X	5900	55.0	7000	2.05	1700	220	1250	Air-To-Water Heat Exchanger (IC 86W)			Weight		Heat exchanger motor power	
GH450 Y	6350	62.0	7500	2.10	1600	220	1250				650 kg		15.0 kW (50 / 60 Hz)	



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GH225

GH250

GH280

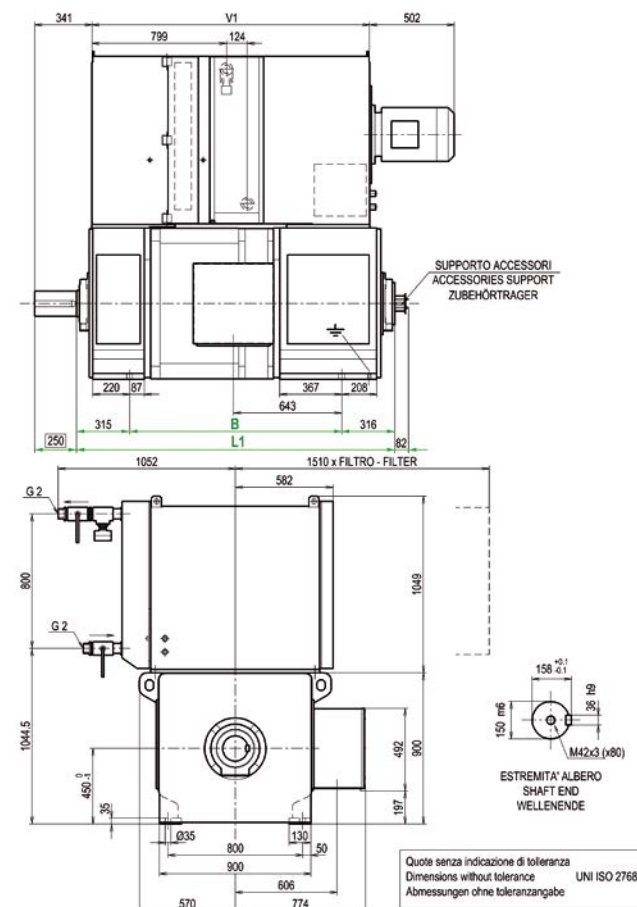
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GH355

GH400

GH450

GH450 IM1001 - IP54 - IC86W



Size	B	L1	V1
GH450 M	1360	1991	1751
GH450 L	1420	2051	1811
GH450 P	1490	2121	1881
GH450 X	1570	2201	1961
GH450 Y	1660	2291	2051

TECHNICAL DATA												
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data		Bearings	Drive end		Opposite drive end	
						Air flow (m³/min)	Pressure drop (Pa)		Coupling	Pulley		
GH450 M	4900	38.0	5300	1.50	1800	220	1250	B3 – B5 V1 – V3	NU232ECM C3	NU232ECM C3	6232 MC3	
GH450 L	5200	43.0	6000	1.95	1800	220	1250		6232 C3	NU232ECM C3	7232 BCB	
GH450 P	5500	49.0	6500	2.00	1800	220	1250					
GH450 X	5900	55.0	7000	2.05	1700	220	1250					
GH450 Y	6350	62.0	7500	2.10	1600	220	1250					
Electrical blower (IC06)									Weight	Blower motor power		
									160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)		
Air-To-Water Heat Exchanger (IC 86W)									Weight	Heat exchanger motor power		
									650 kg	15.0 kW (50 / 60 Hz)		



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- 4.3 Stator
- 4.4 Brushholder yoke
- 4.5 Bearings
- 4.6 Belted and radial thrust application

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- 5.1 Coupling and shaft extension
- 5.2 Mounting arrangement
- 5.3 Degree of protection
- 5.4 Cooling method
- 5.5 Maximum allowable speeds
- 5.6 Noise level
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- 5.10 Cross-section drawing

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- 6.2 Supply voltage
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- 6.4 Current rate-of-rise
- 6.5 Speed regulation
- 6.6 Duty with large speed regulation
- 6.7 Excitation
- 6.8 Maximum current at locked rotor
- 6.9 Accessories

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GH225

GH250

GH280

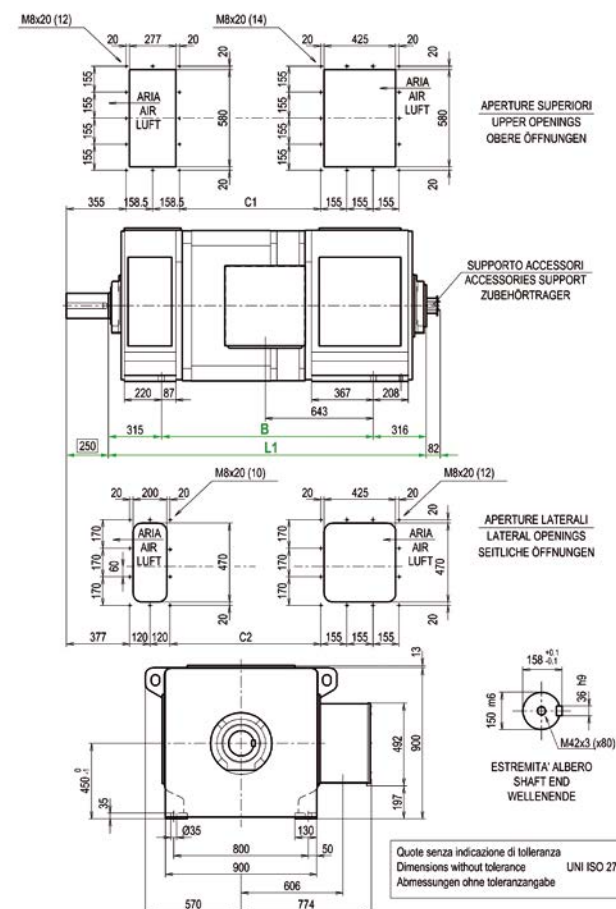
GH315

GH355

GH400

GH450

GH450 IM1001 - IP44 - IC37



Size	B	L1	C1	C2
GH450 M	1360	1991	941	996
GH450 L	1420	2051	1001	1056
GH450 P	1490	2121	1071	1126
GH450 X	1570	2201	1151	1206
GH450 Y	1660	2291	1241	1296

TECHNICAL DATA							
Size	Motor mass (kg)	Moment of inertia (kg m²)	Excitation power (W)	Field time constant (s)	Max. mech. speed (rpm)	Ventilation data	
						Air flow (m³/min)	Pressure drop (Pa)
GH450 M	4900	38.0	5300	1.50	1800	220	1250
GH450 L	5200	43.0	6000	1.95	1800	220	1250
GH450 P	5500	49.0	6500	2.00	1800	220	1250
GH450 X	5900	55.0	7000	2.05	1700	220	1250
GH450 Y	6350	62.0	7500	2.10	1600	220	1250

Bearings	Drive end		Opposite drive end
	Coupling	Pulley	
B3 - B5	NU232ECM C3	NU232ECM C3	6232 MC3
V1 - V3	6232 C3	NU232ECM C3	7232 BCB

Electrical blower (IC06)		Blower motor power	
		Weight	Blower motor power
		160 kg	9.2 kW (50 Hz) - 11.0 kW (60 Hz)

Air-To-Water Heat Exchanger (IC 86W)		Heat exchanger motor power	
		Weight	Heat exchanger motor power
		650 kg	15.0 kW (50 / 60 Hz)



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