

CATALOGO 4 IIB



Motori Asincroni Trifasi Antideflagranti con Rotore a Gabbia

A prova di esplosione
Costruzione Chiusa
Ventilazione esterna
Serie Ex-d

Motori Asincroni Trifasi Antideflagranti con Rotore a Gabbia

**A PROVA DI ESPLOSIONE - COSTRUZIONE CHIUSA - VENTILAZIONE ESTERNA - SERIE Ex-d
GRANDEZZA 71 - 180**

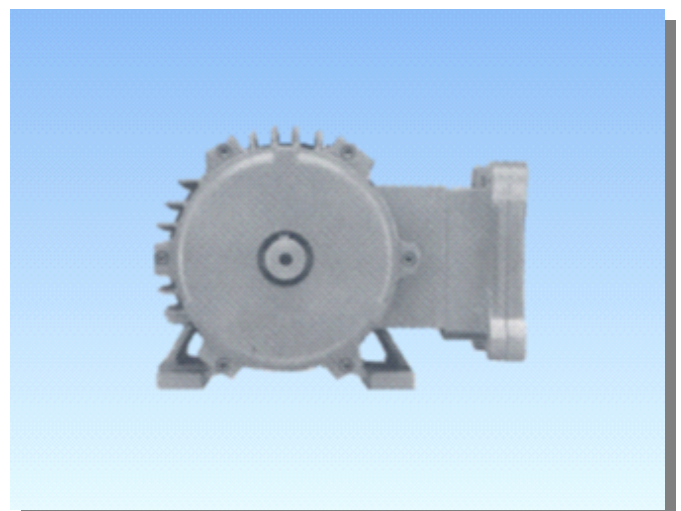
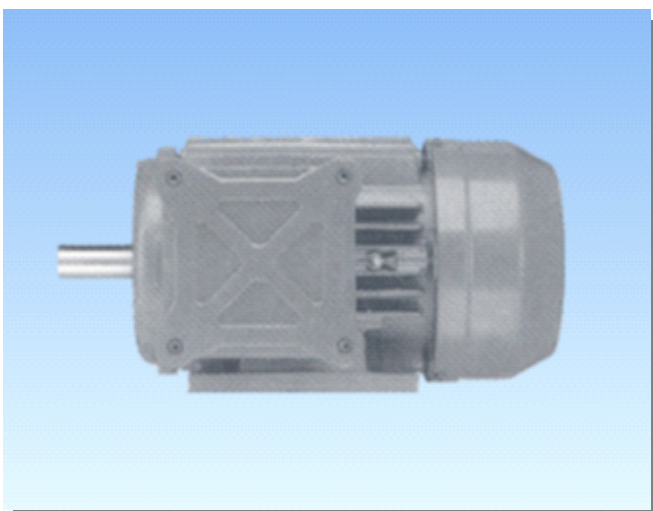
I motori presentati in questo catalogo sono realizzati in accordo alla Direttiva Europea ATEX 94/9/CE e sono stati certificati dal CESI come organismo notificato n° 0722 per l'utilizzo in Zona 1 Gruppo II (IIA-IIB) Categoria 2G T3, T4, T5; gli stessi possono essere utilizzati per Zona 2 Gruppo II (IIA-IIB) Categoria 3G T3, T4, T5.

**ASYNCHRONOUS THREE PHASE EXPLOSION-PROOF MOTORS WITH SQUARREL CAGE ROTOR
ENCLOSED CONSTRUCTION - EXTERNALLY VENTILATED SERIES Ex-d SIZES 71 + 180**

The motors shown in this catalogue are made according to the ATEX 94/9/EC European Directive and are certified by CESI as a notified body no. 0722 to be used in Zone 1 Group II (IIA-IIB) Category 2G T3, T4, T5; they can also be used for Zone 2 Group II (IIA-IIB) Category 3G T3, T4, T5.

**DREHSTROM-ASYNCHRONMOTOREN MIT KÄFIGLÄUFER EXPLOSIONSGESCHÜTZT; ZÜNDSCHTZART
"DRUCKFESTE KAPSELUNG" SERIE EX-D GESCHLOSSENE AUSFÜHRUNG
OBERFLÄCHENKÜHLUNG BAUGRÖSSEN 71 ÷ 180**

Die Motoren dieses Katalogs werden nach der Europäischen Richtlinie ATEX 94/9/EC gebaut und sind von CESI als angemeldete Organisation Nr. 0722 bescheinigt worden, für den Gebrauch in Zone 1 Gruppe II (IIA-IIB) Kategorie 2G T3, T4, T5; sie können auch für Zone 2 Gruppe II (IIA-IIB) Kategorie 3G T3, T4, T5 gebraucht werden.



**MOTORI
ASINCRONI
TRIFASI
ANTIDEFLAGRANTI
A PROVA
D'ESPLOSIONE
SERIE Ex-d
CARATTERISTICHE TECNICHE**

CON ROTORE A GABBIA
COSTRUZIONE CHIUSA
VENTILAZIONE ESTERNA
2 poli - 3000 giri/min - 50 Hz
4 poli - 1500 giri/min - 50 Hz

**ASYNCHRONOUS
THREE-PHASE
EXPLOSION-PROOF
MOTORS
SERIES Ex-d
TECHNICAL FEATURES**

WITH SQUIRREL CAGE ROTOR
ENCLOSED CONSTRUCTION
EXTERNAL VENTILATION
2 poles - 3000 rpm - 50 Hz
4 poles - 1500 rpm - 50 Hz

**DREHSTROM-
ASYNCHRONMOTOREN
EXPLOSIONSGESCHÜTZT
SERIE Ex-d
TECHNISCHE DATEN**

MIT KÄFIGLÄUFER
GESCHLOSSENE AUSFÜHRUNG
OBERFLÄCHENKÜHLUNG
2 polig - 3000 U/min - 50 Hz
4 polig - 1500 U/min - 50 Hz

Tipo	Potenza kW	Velocità giri/ r.p.m.	PD ² Rotore Kgm ²	Rendim %	Fattore di potenza Cos. FI	Corrente In a 380 V. A	Coppia nom. Cn Nm.	Coppia di spunto Ca/Cn	Corrente di spunto Ia/In	Coppia max. Cmax/Cn	B3 Peso kg.
71	0.37	2800	0.0013	71	0.80	1.1	1.26	2.2	4	2.3	14
71	0.55	2810	0.0021	71	0.80	1.5	1.87	2.5	4.6	2.6	15
80	0.75	2820	0.0035	75	0.81	1.8	2.54	2.5	5.6	2.7	20
80	1.1	2820	0.0059	76	0.81	2.7	3.72	2.5	5.6	2.7	22
90S	1.5	2840	0.0088	78	0.83	3.4	5.04	2.5	5.5	2.7	28
90L	2.2	2840	0.0098	81	0.83	4.9	7.39	2.5	5.6	2.8	29
100L	3	2900	0.016	81	0.85	6.5	9.88	2.6	6.9	2.9	42
112M	4	2880	0.034	85	0.86	8.2	13.26	2.8	7	3.2	46
132S	5.5	2900	0.060	86	0.86	11	18.11	2.4	6.6	3	80
132S	7.5	2900	0.072	86	0.86	15	24.69	2.4	6.5	2.9	85
132M	9	2910	0.095	86	0.86	18	29.53	2.3	6.3	2.7	90
160M	11	2930	0.177	87	0.87	22	35.85	2.8	7.1	3.3	124
160M	15	2930	0.25	87	0.87	30	48.88	2.8	7	3.1	132
160L	18.5	2940	0.31	88	0.88	36	60.08	2.8	6.9	3	144
180M	22	2950	0.50	89	0.89	42	71.21	2.4	7	3	185
180L	25	2950	0.69	89	0.89	49	80.92	2.3	7.5	3	202

2 poli - 3000 giri/min - 50 Hz
2 poles - 3000 rpm - 50 Hz
2 polig - 3000 U/min - 50 Hz

Tipo	Potenza kW	Velocità giri/ r.p.m.	PD ² Rotore Kgm ²	Rendim %	Fattore di potenza Cos. FI	Corrente In a 380 V. A	Coppia nom. Cn Nm.	Coppia di spunto Ca/Cn	Corrente di spunto Ia/In	Coppia max. Cmax/Cn	B3 Peso kg.
71	0.25	1350	0.00139	68	0.65	0.87	1.76	2	3.5	2	14
71	0.37	1350	0.0021	69	0.67	1.2	2.61	2	3.5	2	14.5
80	0.55	1360	0.005	70	0.75	1.65	3.86	2	4	2.4	20
80	0.75	1380	0.0088	71	0.75	2.15	5.18	2.2	4.4	2.5	21
90S	1.1	1380	0.011	78	0.80	2.8	7.61	2	4.5	2.2	28
90L	1.5	1400	0.014	78	0.80	3.7	10.23	2.1	4.6	2.3	29
100L	2.2	1420	0.025	80	0.80	5.2	14.79	2.4	4.5	2.6	41
100L	3	1420	0.036	80	0.80	6.8	20.17	2.6	6.4	2.8	43
112M	4	1430	0.071	83	0.82	9	26.71	2.1	5.8	2.4	51
132S	5.5	1440	0.105	84	0.83	12	36.47	1.9	5.8	2.4	86
132M	7.5	1440	0.115	84	0.83	16	49.73	2.1	5.8	2.5	93
132M	9	1440	0.130	84	0.83	20	59.68	2.1	5.8	2.5	96
160M	11	1450	0.315	87	0.84	23	72.44	2.8	6.3	3	135
160L	15	1460	0.430	87	0.84	31	98.10	2.8	6.3	3	146
180M	18.5	1460	0.540	90	0.84	37	120.99	2.5	6.2	2.6	184
180L	22	1460	0.670	90	0.85	43	143.88	2.5	7	2.5	200

4 poli - 1500 giri/min - 50 Hz
4 poles - 1500 rpm - 50 Hz
4 polig - 1500 U/min - 50 Hz

Tipo freno
Potenza
Velocità
PD² Rotore
Rendimento
Fattore di potenza
Corrente
Coppia nominale
Coppia di spunto
Corrente di spunto
Coppia massima
Peso

Brake type
Rated power
Speed
Rotor PD²
Efficiency
Power factor
Rated current
Rated torque
Starting torque
Starting current
Maximum torque
Weight

Bremstyp
Leistung
Drehzahl
PD² Läufer
Wirkungsgrad
Leistungsfaktor
Strom
Nennmoment
Anlaufdrehmoment
Anlassstrom
Max. Drehmoment
Gewicht

**MOTORI
ASINCRONI
TRIFASI
ANTIDEFLAGRANTI
A PROVA
D'ESPLOSIONE
SERIE Ex-d
CARATTERISTICHE TECNICHE**

CON ROTORE A GABBIA
COSTRUZIONE CHIUSA
VENTILAZIONE ESTERNA
6 poli - 1000 giri/min - 50 Hz
8 poli - 750 giri/min - 50 Hz

**ASYNCHRONOUS
THREE-PHASE
EXPLOSION-PROOF
MOTORS
SERIES Ex-d
TECHNICAL FEATURES**

WITH SQUIRREL CAGE ROTOR
ENCLOSED CONSTRUCTION
EXTERNAL VENTILATION
6 poles - 1000 rpm - 50 Hz
8 poles - 750 rpm - 50 Hz

**DREHSTROM-
ASYNCHRONMOTOREN
EXPLOSIONSGESCHÜTZT
SERIE Ex-d
TECHNISCHE DATEN**

MIT KÄFIGLÄUFER
GESCHLOSSENE AUSFÜHRUNG
OBERFLÄCHENKÜHLUNG
6 polig - 1000 U/min - 50 Hz
8 polig - 750 U/min - 50 Hz

Tipo	Potenza kW	Velocità giri/ r.p.m.	PD ² Rotore Kgm ²	Rendim %	Fattore di potenza Cos. FI	Corrente In a 380 V. A	Coppia nom. Cn Nm.	Coppia di spunto Ca/Cn	Corrente di spunto Ia/In	Coppia max. Cmax/Cn	B3 Peso kg.
71	0.18	890	0.0042	54	0.61	0.83	1.93	1.7	2.8	1.9	14.5
71	0.22	890	0.0051	55	0.61	1	2.36	1.8	2.8	2	15.5
80	0.37	900	0.0068	68	0.69	1.2	3.92	1.8	3.1	2	19
80	0.55	900	0.0088	68	0.71	1.7	5.83	2.1	3.6	2.3	21
90S	0.75	920	0.014	70	0.71	2.3	7.78	1.9	3.9	2.2	27
90L	1.1	920	0.018	72	0.72	3.2	11.41	2	4	2.2	29
100L	1.5	930	0.028	75	0.73	4.1	15.40	2.1	4.8	2.4	41
112M	2.2	940	0.090	77	0.75	5.8	22.34	2.2	6.1	2.9	53
132S	3	950	0.150	79	0.76	7.5	30.15	2	5.9	2.4	80
132M	4	955	0.170	81	0.77	10	39.99	2.3	6	2.5	86
132M	5.5	955	0.222	82	0.79	13	54.99	2.3	6.2	2.5	93
160M	7.5	965	0.510	84	0.80	17	74.21	2.2	6.1	2.9	129
160L	11	965	0.692	85	0.81	24	108.84	2.3	6.6	3.3	143
180L	15	970	1.35	86	0.82	31.5	147.66	2.4	7.2	3	233

6 poli - 1000 giri/min - 50 Hz
6 poles - 1000 rpm - 50 Hz
6 polig - 1000 U/min - 50 Hz

Tipo	Potenza kW	Velocità giri/ r.p.m.	PD ² Rotore Kgm ²	Rendim %	Fattore di potenza Cos. FI	Corrente In a 380 V. A	Coppia nom. Cn Nm.	Coppia di spunto Ca/Cn	Corrente di spunto Ia/In	Coppia max. Cmax/Cn	B3 Peso kg.
71	0.15	650	0.0051	50	0.57	0.8	2.20	1.6	2.1	1.6	15
80	0.18	670	0.0068	51	0.62	0.9	2.56	1.8	3	1.8	19
80	0.25	670	0.0088	62	0.62	1	3.56	1.8	3	2	21
90S	0.37	680	0.014	65	0.62	1.4	5.19	1.8	3.3	1.9	27
90L	0.55	690	0.018	67	0.62	2	7.61	1.8	3.5	2	29
100L	0.75	690	0.028	67	0.63	2.7	10.37	2	3.4	2.1	41
100L	1.1	700	0.036	70	0.64	3.8	15	2	3.4	2.1	43
112M	1.5	700	0.090	72	0.65	4.9	20.46	1.9	3.5	2.4	51
132S	2.2	705	0.150	80	0.71	5.9	29.79	1.8	4.1	2.2	85
132M	3	705	0.195	81	0.72	7.8	40.63	1.9	4.2	2.3	92
160M	4	710	0.403	83	0.72	10	53.79	2	4.8	2.8	121
160M	5.5	710	0.510	83	0.72	14.5	73.97	2.3	5.4	2.9	129
160L	7.5	720	0.692	86	0.72	18	99.46	2.3	5.5	2.9	143
180L	11	720	1.35	87	0.74	26	145.88	1.9	5.2	2.6	233

8 poli - 750 giri/min - 50 Hz
8 poles - 750 rpm - 50 Hz
8 polig - 750 U/min - 50 Hz

Tipo freno
Potenza
Velocità
PD² Rotore
Rendimento
Fattore di potenza
Corrente
Coppia nominale
Coppia di spunto
Corrente di spunto
Coppia massima
Peso

Brake type
Rated power
Speed
Rotor PD²
Efficiency
Power factor
Rated current
Rated torque
Starting torque
Starting current
Maximum torque
Weight

Bremstyp
Leistung
Drehzahl
PD² Läufer
Wirkungsgrad
Leistungsfaktor
Strom
Nennmoment
Anlaufdrehmoment
Anlassstrom
Max. Drehmoment
Gewicht

**MOTORI
ASINCRONI
TRIFASI
ANTIDFLAGRANTI
A PROVA
D'ESPLOSIONE
SERIE Ex-d
GRUPPI CUSTODIA
CUSCINETTI**

CON ROTORE A GABBIA
COSTRUZIONE CHIUSA
VENTILAZIONE ESTERNA

**ASYNCHRONOUS
THREE-PHASE
EXPLOSION-PROOF
MOTORS
SERIES Ex-d
HOUSING GROUPS
BEARINGS**

WITH SQUIRREL CAGE ROTOR
ENCLOSED CONSTRUCTION
EXTERNAL VENTILATION

**DREHSTROM-
ASYNCHRONMOTOREN
EXPLOSIONSGESCHÜTZT
SERIE Ex-d
KAPSELUNGSGRUPPE
LAGER**

MIT KÄFIGLÄUFER
GESCHLOSSENE AUSFÜHRUNG
OBERFLÄCHENKÜHLUNG

CARICHI ASSIALI PER CUSCINETTI

Carico assiale massimo in kg
oltre il peso del rotore

AXIAL LOADS ON BEARINGS
Max. axial load in kg.
beyond rotor weight

MAXIMAL ZULÄSSIGE
AXIALBELASTUNG DER LAGER
über dem Läufergewicht (in kg)

Gruppo custodia	Gas o vapore	Housing group	Gas or vapour	Kapselungsgruppe	Gas oder Dampf
I	- Metano (Grisou)	I	- Methane (Firedamp)	I	- Methan (Grubengas)
IIA	- Acetaldeide - Acetato di butile - Acetato di etile - Acetato di metile - Acetato di propile - Acetone - Acido acetico - Alcol amilico - Alcol etilico - Alcol isobutilico - Alcol metilico - Alcol n-butilico - Ammoniaca - Anidride acetica - Benzene - Benzolo - Butanone - Cicloesano - Cicloesano - Cicloesano - Clorometilene - Cloroetilene - Decano - Eptano - Esano - Etano - Etere - Gas liquido - Gas naturale - Gasolio - Kerosene - Metano - Metanolo - Monoamilacetato n-Butano - Monossido di carbonio - Nafta - Naftalene - Pentano - Petrolio* - Propano - Toluene - Xilene	IIA	- Acetaldehyde - Butyl acetate - Ethyl acetate - Methyl acetate - Propyl acetate - Acetone - Acetic acid - Amyl alcohol - Ethyl alcohol - Iso butylic alcohol - Methyl alcohol - n butyl alcohol - Ammonia - Acetic anhydride - Benzene - Benzole - Butanone - Cyclohexane - Cyclohexanol - Cyclohexanon - Methyl chloride - Chloroethylene - Decane - Heptane - Hexane - Ethane - Ether - Liquefied gas - Natural gas - Diesel fuels - Kerosene - Methane - Methanol - 1 amyl acetate n butane - Carbon monoxide - Gasoline - Naphthalene - Pentane - Petroleum - Propane - Toluene - Xylene	IIA	- Acetaldehyd - Butyl-Acetat - Ethyl-Acetat - Methyl-Acetat - Propyl-Acetat - Aceton - Essigsäure - Amylalkohol - Äthylalkohol - Isobutylalkohol - Methylalkohol - N-Butylalkohol - Ammoniak - Essigsäureanhydrid - Benzol - Benzol - Butanon - Cyclohexanon - Cyclohexanol - Cyclohexanon - Chlormethylen - Chloräthylengas - Dekan - Heptan - Hexan - Äthan - Äther - Flüssiggas - Naturgas - Dieselöl - Kerosin - Methan - Methanol - Monoamylazetat n-Butan - Kohlengas - Naphta - Naphtalin - Pentan - Erdöl - Propan - Methylbenzol - Xylol
IIB	- Acido solfidrico - Buta 1:3-diene - Etere etilico - Etilbenzene - Etilene - Gas d'acqua - Gas di coke - Isoprene - Ossido di etilene - Petrolio*	IIB	- Hydrogen sulfide - Buta 1:3-diene - Ethylic ether - Ethylbenzene - Ethylene - Water gas - Coke-oven gas - Isoprene - Ethylene oxide - Petroleum	IIB	- Schwefelsäure - 1:3-Butadien - Ethyläther - Ethylbenzol - Ethylen - Wassergas - Kokereigas - Isopren - Ethylenoxyd - Erdöl
IIC	- Acetilene - Idrogeno - Nitrato di etile - Solfuro di carbonio	IIC	- Acetylene - Hydrogen - Ethyl nitrate - Carbon disulphide	IIC	- Acetylen - Wasserstoff - Ethylnitrat - Schwefelkohlenstoff

*in funzione della composizione chimica *depending on the chemical composition *abhängig von der chemischen Zusammensetzung

I motori di questa serie sono costruiti in conformità alle norme europee: EN 50.014, EN 50.018 per i gruppi IIA e IIB. La rispondenza alle norme è certificata dal CESI.

The motors under this series are manufactured in compliance with the European standards: EN 50.014, EN 50.018 for the groups IIA and IIB. The compliance with the standards is certified by CESI.

Die Motoren dieser Serie werden für die Gruppen IIA und IIB nach den Europäischen Normen

EN 50.014, EN 50.018 gebaut. Die Übereinstimmung der Motoren mit diesen Normen wird vom CESI-Institut bescheinigt.

CUSCINETTI - BEARINGS - LAGER		
MOTORI 2 ÷ 8 Motor type Motortype	Cuscinetto lato accoppiamento Bearing coupling side Lagertype A-seite	Cuscinetto lato opposto accoppiamento Bearing opposite coupling side Lagertype B-seite
71	6203-2RS	6203-2RS
80	6204-2RS	6204-2RS
90S	6205-2RS	6205-2RS
90L	6205-2RS	6205-2RS
100L	6206-2RS	6206-2RS
112M	6207-2RS	6207-2RS
132S	6208-2RS	6208-2RS
132M	6208-2RS	6208-2RS
160M	6309-2RS	6309-2RS
160L	6309-2RS	6309-2RS
180M	6311-2RS	6311-2RS
180L	6311-2RS	6311-2RS

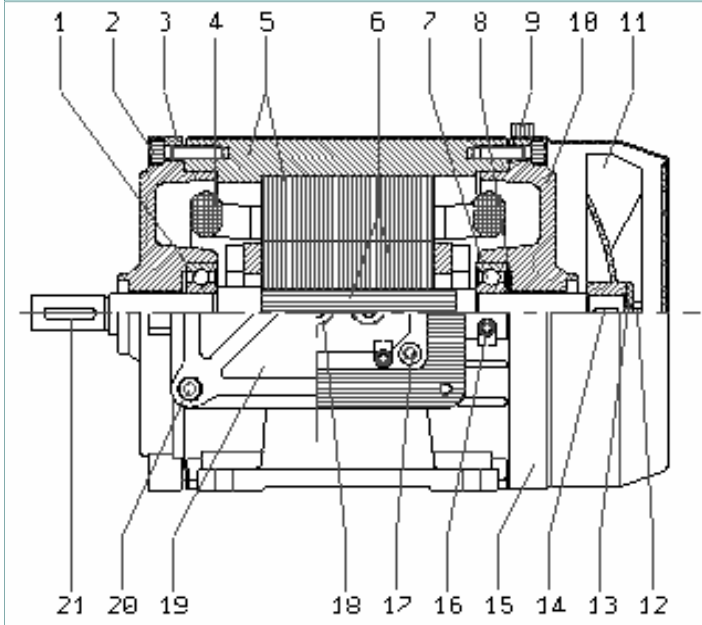
CARICHI ASSIALI IN Kg. AXIAL LOADS ON BEARINGS IN Kg. AXIALBELASTUNG DER LAGER IN Kg.				
MOTORE MOTOR TYPE MOTORTYPE	2 Poli 2 Poles 2 Polig	4 Poli 4 Poles 4 Polig	6 Poli 6 Poles 6 Polig	8 Poli 8 Poles 8 Polig
71	20	25	30	35
80	25	30	35	40
90S	27	35	41	42
90L	26	34	40	42
100L	55	72	80	92
112M	65	75	85	95
132S	80	95	115	125
132M	78	90	112	120
160M	110	140	150	175
160L	100	130	140	160
180M	115	140		
180L	105	130	135	160

I valori indicati si intendono per 20.000 ore di funzionamento a 50 Hz per accoppiamento diretto con direzione del carico fissa, assenza di urti o vibrazioni ai cuscinetti.

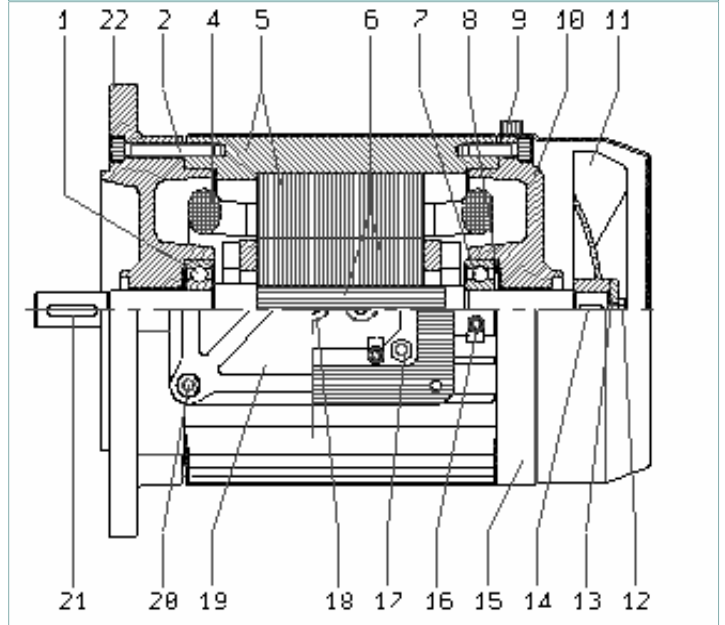
The mentioned values are specified for 20.000 working hours at 50 Hz cycles for direct coupling with fixed direction of load and without any shocks or vibrations on the bearings.

Die angegebenen Werte gelten für 20.000 Betriebsstunden bei 50 Hz bei Direktkupplung, fester Lastausrichtung und stoss- bzw. schwingungsarmer Lagerung.

MOTORI PE Ex-d GRANDEZZE 71 ÷ 180



MOTORI PEF Ex-d GRANDEZZE 71 ÷ 180



MOTORI ASINCRONI TRIFASI con rotore a gabbia antideflagranti
Serie Ex-d - Forma B3 e B5 - Grandezze 71÷180
Costruzione chiusa - Ventilazione esterna

ASYNCHRONOUS THREE-PHASE BRAKE MOTORS with cage rotor, explosion-proof
Series Ex-d - Frame B3 and B5 - Sizes 71÷180
Enclosed construction - Externally ventilated

DREHSTROM-ASYNCHRONMOTOREN Käfigläufer, Explosionsgeschützt
Serie Ex-d - Bauart B3 und B5 - Baugröße 71÷180
Geschlossene Ausführung - Oberflächenkühlung

PARTI DI RICAMBIO

1. Cuscinetto anteriore
2. Vite fissaggio scudo
3. Scudo anteriore
4. Avvolgimento
5. Carcasa con pacco statore
6. Albero con rotore
7. Cuscinetto posteriore
8. Molla di compensazione
9. Vite fissaggio copriventola
10. Scudo posteriore
11. Ventola di raffreddamento
12. Vite fissaggio ventola
13. Rondella
14. Linguetta lato freno
15. Calotta copriventola
16. Morsetto presa terra
17. Vite fissaggio telaio coprimorsettiera
18. Morsettiera con passante isolato
19. Scatola coprimorsettiera
20. Vite fissaggio piattello coprimorsettiera
21. Linguetta lato accoppiamento
22. Scudo flangiato

SPARE PARTS

1. Front bearing
2. Fixing screw for shield
3. Front shield
4. Winding
5. Frame with stator package
6. Shaft with rotor
7. Rear bearing
8. Compensating spring
9. Fixing screw for fan hood
10. Rear shield
11. Cooling fan
12. Fixing screw for fan
13. Washer
14. Fan side key
15. Fan hood
16. Earth plate terminal
17. Fixing screw for terminal-box frame
18. Terminal block with insulated fitting
19. Terminal-box
20. Fixing screw for terminal-box plate
21. Coupling side key
22. Flange shield

ERSATZTEILE

1. A-seitiges Lager
2. Befestigungsschraube für Lagerschild
3. A-seitiges Lagerschild
4. Wicklung
5. Ständergehäuse mit Paket
6. Welle mit Rotor
7. B-seitiges Lager
8. Ausgleichsfeder
9. Befestigungsschraube für Lüfterhaube
10. B-seitiges Lagerschild
11. Lüfterflügel
12. Befestigungsschraube für Lüfterflügel
13. Unterlegscheibe
14. Paßfeder Lüfterseite
15. Lüfterhaube
16. Erdungsklemme/Erdungsschraube
17. Befestigungsschraube für Klemmenkastenunterteil
18. Klemmbrett mit isoliertem Verbindungsstück
19. Klemmenkasten
20. Befestigungsschraube für Klemmenkastendeckel
21. Paßfeder A-Seite
22. Lagerschild mit Flansch

**MOTORI
ASINCRONI
TRIFASI
ANTIDEFAGRANTI
A PROVA
D'ESPLOSIONE
SERIE Ex-d**
DIMENSIONI D'INGOMBRO in mm.

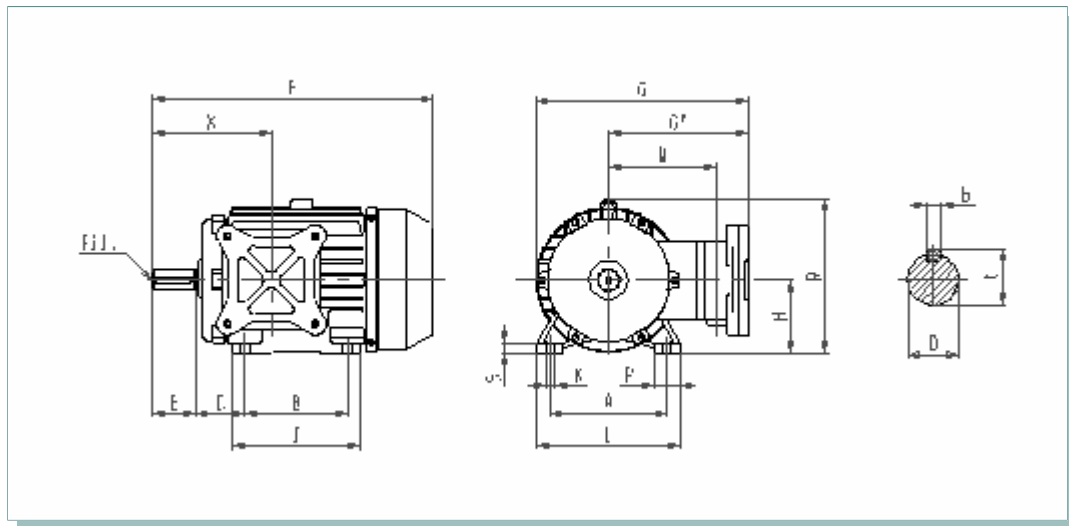
CON ROTORE A GABBIA
COSTRUZIONE CHIUSA
VENTILAZIONE ESTERNA
Tipo PE - Forma B3
Grandezze 71÷180

**ASYNCHRONOUS
THREE PHASE
EXPLOSION-PROOF
MOTORS
SERIES Ex-d**
OVERALL DIMENSIONS in mm.

WITH SQUIRREL CAGE ROTOR
ENCLOSED CONSTRUCTION
EXTERNAL VENTILATION
Type PE - Frame B3
Sizes 71÷180

**DREHSTROM-
ASYNCHRONMOTOREN
EXPLOSIONSGESCHÜTZT
SERIE Ex-d**
MASSE in mm.

MIT KÄFIGLÄUFER
GESCHLOSSENE AUSFÜHRUNG
OBERFLÄCHENKÜHLUNG
Type PE - Bauart B3
Baugröße 71÷180



Motor	A	B	C	D	E	F	G	H ⁺⁰ _{-0.5}	K	I	L	P	R	S
NORME IEC	A	B	C	D	E	LC	-	H	K	BB	AB	AA	HC	HA
PE 71	112	90	45	14 j6	30	242	230	71	7	110	140	28	146	8
PE 80	125	100	50	19 j6	40	285	235	80	9	130	155	30	180	11
PE 90S	140	100	56	24 j6	50	320	275	90	9	155	175	34	185	12
PE 90L	140	125	56	24 j6	50	320	275	90	9	155	175	34	185	12
PE 100L	160	140	63	28 j6	60	380	295	100	12	175	195	35	205	14
PE 112M	190	140	70	28 j6	60	390	340	112	12	175	225	40	235	15
PE 132S	216	140	89	38 k6	80	510	375	132	12	230	260	45	270	16
PE 132M	216	178	89	38 k6	80	510	375	132	12	230	260	45	270	16
PE 160M	254	210	108	42 k6	110	655	430	160	14	295	315	60	330	18
PE 160L	254	254	108	42 k6	110	655	430	160	14	295	315	60	330	18
PE 180M	279	241	121	48 k6	110	710	510	180	14	340	350	70	370	20
PE 180L	279	279	121	48 k6	110	710	510	180	14	340	350	70	370	20

Motor	G'	X	W	b	t	Pressacavo	Foro filettato
NORME IEC	-	-	-	F	GA		
PE 71	156	112	125	5	16	G 1/2"	M 5x0.8
PE 80	150	130	110	6	21.5	G 1/2"	M 6x1
PE 90S	185	146	140	8	27	G 1/2"	M 8x1.25
PE 90L	185	146	140	8	27	G 1/2"	M 8x1.25
PE 100L	195	162	150	8	31	G 1/2"	M 10x1.5
PE 112M	225	170	180	8	31	G 3/4"	M 10x1.5
PE 132S	240	220	190	10	41	G 1"	M 12x1.75
PE 132M	240	220	190	10	41	G 1"	M 12x1.75
PE 160M	270	280	220	12	45	G 1"	M 16x2
PE 160L	270	280	220	12	45	G 1"	M 16x2
PE 180M	320	285	250	14	51.5	G 1-1/4"	M 16x2
PE 180L	320	285	250	14	51.5	G 1-1/4"	M 16x2

Tipo
Quota
Pressacavo
Foro filettato

Type
Dimension
Cable-holder
Threaded hole

Type
Mass
PG-Verschraubung
Gewindebohrung

**MOTORI
ASINCRONI
TRIFASI
ANTIDEFAGRANTI
A PROVA
D'ESPLOSIONE
SERIE Ex-d**

DIMENSIONI D'INGOMBRO in mm.

CON ROTORE A GABBIA
COSTRUZIONE CHIUSA
VENTILAZIONE ESTERNA
Tipo PEF - Forma B5
Grandezze 71÷180

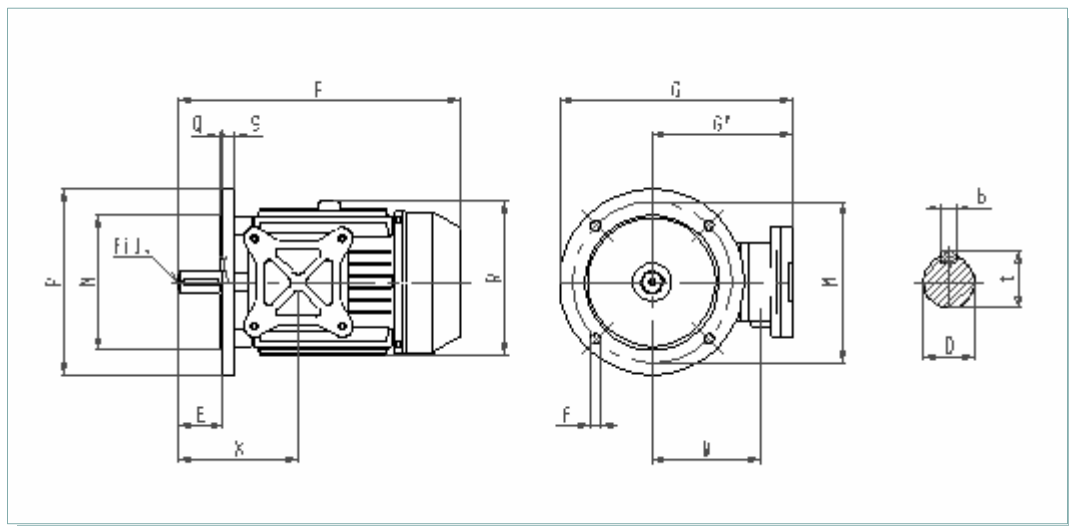
**ASYNCHRONOUS
THREE PHASE
EXPLOSION-PROOF
MOTORS**

**SERIE Ex-d
OVERALL DIMENSIONS in mm.**

WITH SQUIRREL CAGE ROTOR
ENCLOSED CONSTRUCTION
EXTERNAL VENTILATION
Type PEF - Frame B5
Sizes 71÷180

**DREHSTROM-
ASYNCHRONMOTOREN
EXPLOSIONSGESCHÜTZT
SERIE Ex-d
MASSE in mm.**

MIT KÄFIGLÄUFER
GESCHLOSSENE AUSFÜHRUNG
OBERFLÄCHENKÜHLUNG
Type PEF - Bauart B5
Baugröße 71÷180



Motor	D	E	F	f	G	M	N	P	Q	R	S	N.fori flangia
NORME IEC	D	E	LC	S	-	M	N	P	T	HC	LA	
PEF 71	14 j6	30	242	9.5	236	130	110 j6	160	3.5	145	10	4
PEF 80	19 j6	40	285	11.5	250	165	130 j6	200	3.5	180	12	4
PEF 90S	24 j6	50	320	11.5	285	165	130 j6	200	3.5	185	12	4
PEF 90L	24 j6	50	320	11.5	285	165	130 j6	200	3.5	185	12	4
PEF 100L	28 j6	60	380	14	320	215	180 j6	250	4	205	14	4
PEF 112M	28 j6	60	390	14	350	215	180 j6	250	4	235	15	4
PEF 132S	38 k6	80	510	14	390	265	230 j6	300	4	270	15	4
PEF 132M	38 k6	80	510	14	390	265	230 j6	300	4	270	15	4
PEF 160M	42 k6	110	655	18	445	300	250 h6	350	5	330	16	4
PEF 160L	42 k6	110	655	18	445	300	250 h6	350	5	330	16	4
PEF 180M	48 k6	110	735	18	495	300	250 h6	350	5	370	18	4
PEF 180L	48 k6	110	735	18	495	300	250 h6	350	5	370	18	4

Typo
Quota
N° foro flangia

Type
Dimension
Flange holes Nr.

Type
Mass
Anzahl der Flanschlöcher

Typo
Quota
Pressacavo
Foro filettato

Type
Dimension
Cable-holder
Threaded hole

Type
Mass
PG-Verschraubung
Gewindebohrung

Motor	G'	X	W	b	t	Pressacavo	Foro filettato
NORME IEC	-	-	-	F	GA		
PEF 71	156	112	125	5	16	G 1/2"	M 5x0.8
PEF 80	150	130	110	6	21.5	G 1/2"	M 6x1
PEF 90S	185	146	140	8	27	G 1/2"	M 8x1.25
PEF 90L	185	146	140	8	27	G 1/2"	M 8x1.25
PEF 100L	195	162	150	8	31	G 1/2"	M 10x1.5
PEF 112M	225	170	180	8	31	G 3/4"	M 10x1.5
PEF 132S	240	220	190	10	41	G 1"	M 12x1.75
PEF 132M	240	220	190	10	41	G 1"	M 12x1.75
PEF 160M	270	280	220	12	45	G 1"	M 16x2
PEF 160L	270	280	220	12	45	G 1"	M 16x2
PEF 180M	320	285	250	14	51.5	G 1-1/4"	M 16x2
PEF 180L	320	285	250	14	51.5	G 1-1/4"	M 16x2

**MOTORI
ASINCRONI
TRIFASI
ANTIDEFAGRANTI
A PROVA
D'ESPLOSIONE
SERIE Ex-d
FORME COSTRUTTIVE**

CON ROTORE A GABBIA
COSTRUZIONE CHIUSA
VENTILAZIONE ESTERNA

**ASYNCHRONOUS
THREE-PHASE
EXPLOSION-PROOF
MOTORS
SERIES Ex-d
MOUNTINGS**

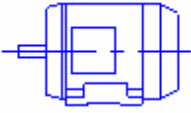
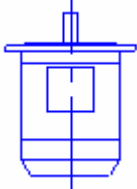
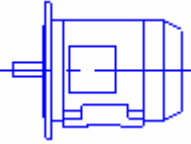
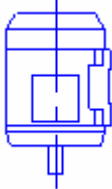
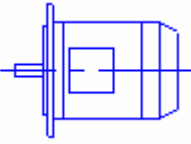
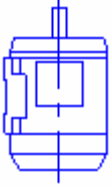
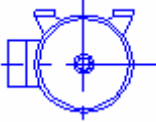

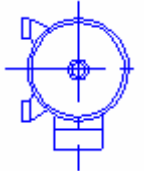


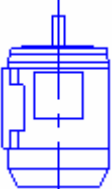
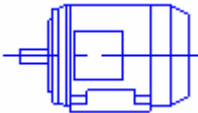
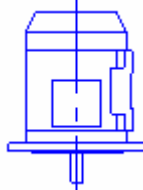
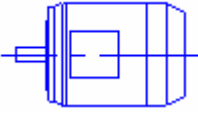
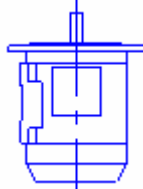
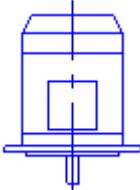
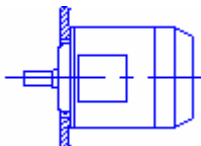
WITH SQUIRREL CAGE ROTOR
ENCLOSED CONSTRUCTION
EXTERNAL VENTILATION

**DREHSTROM-
ASYNCHRONMOTOREN
EXPLOSIONSGESCHÜTZT
SERIE Ex-d
BAUFORM**

MIT KÄFIGLÄUFER
GESCHLOSSENE AUSFÜHRUNG
OBERFLÄCHENKÜHLUNG

Figura
Picture
Bild

Norme di riferimento
Reference standards
Bezugsnorm

FIGURA	Norme di riferimento		FIGURA	Norme di riferimento		
	CEI 2-14	IEC 34-7		CEI 2-14	IEC 34-7	
		Code I	Code II		Code I	Code II
	B3	IM B3	IM 1001		V3	IM V3 IM 3031
	B3/B5	IM B35	IM 2001		V5	IM V5 IM 1011
	B5	IM B5	IM 3001		V6	IM V6 IM 1031
	B8	IM B8	IM 1071		V18	IM V18 IM 3611
	B6	IM B6	IM 1051		V19	IM V19 IM 3631
	B7	IM B7	IM 1061		V3/V14	IM 2131
	B3/B14	IM B34	IM 2101		V1/V5	IM V15 IM 2011
	B14	IM B14	IM 3601		V3/V6	IM V36 IM 2031
	V1	IM V1	IM 3011		B9	IM B9 IM 9101



www.imaq.it

CERTIFICATO N.
CERTIFICATE N. 9101.ADDA

SI CERTIFICA CHE IL SISTEMA QUALITA' DI
WE HEREBY CERTIFY THAT THE QUALITY SYSTEM OPERATED BY

ELECTRO ADDA SPA
COSTRUZIONI ELETTROMECCANICHE
VIA NAZIONALE 8 - 23883 BEVERATE (LC)

UNITA OPERATIVE
OPERATIVE UNITS

VIA NAZIONALE 8 - 23883 BEVERATE (LC)
VIA S. ANNA 640 - 41100 MODENA (MO)

E' CONFORME ALLA NORMA
IS IN COMPLIANCE WITH THE STANDARD
ISO 9001:2000

PER LE SEGUENTI ATTIVITA'
FOR THE FOLLOWING ACTIVITIES

Progettazione, produzione ed assistenza di macchine elettriche rotanti di bassa tensione per il settore industriale, navale e civile, in particolare: motori asincroni trifasi con rotore a gabbia, autofrenanti con rotore a gabbia, monofasi con rotore a gabbia, antidiffrangenti con rotore a gabbia certificati ATEX, a rotore avvolto, convertitori di frequenza, motori ad alta frequenza, motori per seghe circolari, motori per inverter.
Design, manufacturing and service of low voltage electric rotary machines for industrial, naval and civil field, in particular: asynchronous three-phase motors with squirrel cage rotor, brake motors with squirrel cage rotor, single-phase motors with squirrel cage rotor, explosion-proof motors with squirrel cage rotor with ATEX certificate, slip-ring motors, frequency converters, high frequency motors, motors for circular saws, motors for inverter duty

Riferirsi al manuale della qualità per l'applicabilità dei requisiti della norma ISO 9001:2000
Refer to quality manual for details of applications to ISO 9001:2000 requirements

IL PRESENTE CERTIFICATO E' SOGGETTO AL RISPETTO DEL REGOLAMENTO
PER LA CERTIFICAZIONE DEI SISTEMI QUALITA' E DI GESTIONE DELLE AZIENDE
THE USE AND THE VALIDITY OF THE CERTIFICATE SHALL SATISFY THE REQUIREMENTS
OF THE RULES FOR THE CERTIFICATION OF COMPANY QUALITY AND MANAGEMENT SYSTEMS

PRIMA EMISSIONE FIRST ISSUE	EMISSIONE CORRENTE CURRENT ISSUE	DATA SCADENZA EXPIRY DATE
1997-08-04	2007-02-27	2009-11-28

IMQ S.p.A. - VIA QUINTILIANO, 43 - 20138 MILANO

CSQ is a member of



www.ignet-certification.com

IQNet, the association of the world's first class certification bodies, is the largest provider of management system certification in the world.
IQNet is composed of more than 20 bodies and more than 100 subsidiaries all over the globe.

CSQ è la Federazione Italiana di Organismi di Certificazione dei sistemi di gestione aziendale

CSQ is the Italian Federation of management system Certification Bodies

SINCERT

EA : 19

IMQ S.p.A. - VIA QUINTILIANO, 43 - 20138 MILANO
SINCERT - VIA S. ANNA, 640 - 41100 MODENA
Qualità di un'azienda di eccellenza

La validità del presente certificato è subordinata a sorveglianza annuale e al rinnovo completo del Sistema di Qualità non perentoriamente superiore la produzione dell'IMQ
The validity of the certificate is subordinated to annual audit and to re-assessment of the entire Quality System within three years according to IMQ rules



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THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNet and its partner
CSQ/IMQ-CSQ
hereby certify that the organization

ELECTRO ADDA SPA
COSTRUZIONI ELETTROMECCANICHE

VIA NAZIONALE 8 - 23883 BEVERATE (LC) Italy
VIA S. ANNA 640 - 41100 MODENA (MO) Italy

for the following field of activities

Design, manufacturing and service of low voltage electric rotary machines for industrial, naval and civil field, in particular: asynchronous three-phase motors with squirrel cage rotor, brake motors with squirrel cage rotor, single-phase motors with squirrel cage rotor, explosion-proof motors with squirrel cage rotor with ATEX certificate, slip-ring motors, frequency converters, high frequency motors, motors for circular saws, motors for inverter duty

Refer to quality manual for details of applications to ISO 9001:2000 requirements

has implemented and maintains a

Quality Management System

which fulfills the requirements of the following standard

ISO 9001:2000

Issued on: 2007-02-27

Registration Number:

IT - 34914



René Wasmer
President of IQNET



Gianrenzo Prati
President of CSQ

IQNet partners*:

AENOR Spain AFAQ AFNOR France AIB-Viñçotte International Belgium ANCE Mexico APCER Portugal CSQ Italy CQC China CQM China CQS Czech Republic Cro Cert Croatia DQS Germany DS Denmark ELOT Greece FCAV Brazil FONDONORMA Venezuela HKQAA Hong Kong China ICONTEC Colombia IMNC Mexico Inspecta Certification Finland IRAM Argentina JQA Japan KFG Korea MSZT Hungary Nemko AS Norway NSAI Ireland PCBC Poland QMI Canada Quality Austria Austria RR Russia SAI Global Australia SII Israel SIQ Slovenia SIRIM QAS International Malaysia SQS Switzerland SRAC Romania TEST St Petersburg Russia YUQS Serbia

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*The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.ignet-certification.com



DICHIARAZIONE DI CONFORMITA'

IL Produttore :

Electro Adda S.p.A
Costruzioni Elettromeccaniche
Via Nazionale 8 23883 Beverate di Brivio

dichiara che i motori asincroni monofasi e trifasi altezze d'asse 56 + 500
sono realizzati in conformità alle seguenti normative internazionali :

IEC 34 (CEI EN 60034)

ed alle seguenti Direttive Europee :

- **Direttiva Bassa Tensione (LVD) 2006/95/CE**
- **Direttiva Compatibilità Elettromagnetica (EMC) 2004/108/CE**
- **Direttiva sulla limitazione dell'impiego di alcune sostanze pericolose nelle apparecchiature elettriche ed elettroniche (RoHS) 2002/95/CE**

I motori in oggetto sono inoltre conformi alla Direttiva "Macchine" 2006/42/CE, assumendo per questa che il componente motore non può essere messo in servizio prima che la macchina, in cui sarà incorporato, sia stata dichiarata conforme alle disposizioni della Direttiva. Nell'impiego del motore è necessario garantire il rispetto della norma EN 60204-1 e delle istruzioni di sicurezza e di installazione riportate nel manuale d'uso del produttore.

Beverate di Brivio
25/04/2007

Electro Adda S.p.A.
Il C.legg. / Legale
Lecco - Brivio



COMPLIANCE DECLARATION

The Manufacturer :

Electro Adda S.p.A
Costruzioni Elettromeccaniche
Via Nazionale 8 23883 Beverate di Brivio - Italy

Hereby declares that the asynchronous single-phase and three-phase motors sizes 56 + 500
are carried out in compliance with the following international standards :

IEC 34 (CEI EN 60034)

and to the following European Directives :

- **Low Voltage Directive (LVD) 2006/95/CE**
- **Electromagnetic Compatibility Directive (EMC) 2004/108/EC**
- **Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) 2002/95/EC**

The captioned motors are also in compliance with the "Machinery Directive" 2006/42/EC, assuming for this, that the motor component may not be put into service before the machine in which it will be assembled, has been declared to be in compliance with the Directive provisions. When operating the motor, it is necessary to assure that the Standard EN 60204-1 and the installation and safety instructions of the manufacturer's operating handbook are observed.

Beverate di Brivio
25/04/2007

Electro Adda S.p.A.
Il C.legg. / Legale
Lecco - Brivio



KONFORMITÄTSERKLÄRUNG

Der Hersteller :

Electro Adda S.p.A
Costruzioni Elettromeccaniche
Via Nazionale 8 23883 Beverate di Brivio - Italien

erklärt dass die Einphasen- und Drehstromasynchronmotoren Achsenhöhe 56 + 500

nach den folgenden internationalen Normen :

IEC 34 (CEI EN 60034)

und den folgenden Europäischen Richtlinien :

- **Niederspannungsrichtlinie (LVD) 2006/95/CE**
- **Richtlinie Elektromagnetische Verträglichkeit (EMV) 2004/108/EG**
- **Richtlinie zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in elektrischen und elektronischen Geräten (RoHS) 2002/95/EG** verwickelt sind.

Außerdem entsprechen die oben angegebenen Motoren der "Maschinenrichtlinie" 2006/42/EG, wobei wir annehmen dass die Inbetriebnahme vom Bestandteil Motor solange untersagt ist, bis erklärt wird dass die Maschine in die dieser Bestandteil eingebaut wird, den Vorgaben der Maschinenrichtlinie entspricht. Beim Gebrauch vom Motor ist es erforderlich zu gewährleisten dass die Norm EN 60204-1 und die Sicherheits- und Aufstellungsanweisungen beachtet werden, welche in den Betriebsanweisungen vom Hersteller beschrieben sind.

Beverate di Brivio
25/04/2007

Electro Adda S.p.A.
Il C.legg. / Legale
Lecco - Brivio

ELECTRO ADDA S.P.A.

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Tel +39 039 53.20.621
Fax +39 039 53.21.335
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info@cinematicriduttori.it

ADDA ANTRIEBSTECHNIK GMBH

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Rödermark
Tel 0049 6074 91.050
Fax 0049 6074 91.0520
info@adda-motoren.de

MACCHINE ELETTRICHE ROTANTI	ELECTRIC ROTARY MACHINES	ROTIERENDE ELEKTRISCHE DREHMASCHINEN
1A Motori asincroni trifasi con rotore a gabbia Costruzione chiusa - Ventilazione esterna Grandezze 63÷315 - Potenze 0.06-200 kW	1A Asynchronous three-phase motors with squirrel cage rotor - Enclosed construction - Externally ventilated Sizes 63 to 315 - Power 0.06 to 200 kW	1A Drehstrom-Asynchronmotoren mit Käfigläufer Geschlossene Ausführung - Oberflächenkühlung Baugröße 63 bis 315 - Leistung 0.06 bis 200 kW
1B Motori asincroni trifasi con rotore a gabbia Costruzione chiusa - Ventilazione esterna Grandezze 355÷500 - Potenze 160-1200 kW	1B Asynchronous three-phase motors with squirrel cage rotor - Enclosed construction - Externally ventilated Sizes 355 to 500 - Power 160 to 1200 kW	1A Drehstrom-Asynchronmotoren mit Käfigläufer Geschlossene Ausführung - Oberflächenkühlung Baugröße 355 bis 500 - Leistung 160 bis 1200 kW
2 CA Motori asincroni trifasi autofrenanti Costruzione chiusa - Ventilazione esterna Con freno elettromagnetico in corrente alternata Grandezze 71÷280 - Potenze 0.18-75 kW	2 CA Asynchronous three-phase brake motors Enclosed construction - Externally ventilated With alternate current electromagnetic brake Sizes 71 to 280 - Power 0.18 to 75 kW	2 CA Drehstrom-Asynchronmotoren mit angebauter Bremsen - Geschlossene Ausführung Oberflächenkühlung - Mit elektromagnetischer Drehstrom - Federdruck - Scheibenbremse Baugröße 71 bis 280 - Leistung 0.18 bis 75 kW
2 CC Motori asincroni trifasi autofrenanti Costruzione chiusa - Ventilazione esterna Con freno elettromagnetico in corrente continua Grandezze 63÷180 - Potenze 0.18-25 kW	2 CC Asynchronous three-phase brake motors Enclosed construction - Externally ventilated With direct current electromagnetic brake Sizes 63 to 180 - Power 0.18 to 25 kW	2 CC Drehstrom-Asynchronmotoren mit angebauter Bremsen - Geschlossene Ausführung - Oberflächenkühlung - Mit elektromagnetischer Gleichstrom - Einflächens - Scheibenbremse Baugröße 63 bis 180 - Leistung 0.18 bis 25 kW
2 CCH Motori asincroni trifasi autofrenanti Costruzione chiusa - Ventilazione esterna Con freno elettromagnetico in corrente continua ad alta coppia Grandezze 63÷112 - Potenze 0.18-5.5 kW	2 CCH Asynchronous three-phase brake motors Enclosed construction - Externally ventilated With direct current electromagnetic brake with high torque Sizes 63 to 112 - Power 0.18 to 5.5 kW	2 CCH Drehstrom-Asynchronmotoren mit angebauter Bremsen - Geschlossene Ausführung - Oberflächenkühlung - Mit elektromagnetischer Gleichstrom - Einflächens - Scheibenbrems mit höherem Bremsmoment Baugröße 63 bis 112 - Leistung 0.18 bis 5.5 kW
2 CCL Motori asincroni trifasi autofrenanti Costruzione chiusa - Ventilazione esterna Con freno elettromagnetico in corrente continua ad alta coppia e bassa rumorosità Grandezze 63÷280 - Potenze 0.18-75 kW	2 CCL Asynchronous three-phase brake motors Enclosed construction - Externally ventilated With direct current electromagnetic brake with high torque and low noise execution Sizes 63 to 280 - Power 0.18 to 75kW	2 CCL Drehstrom-Asynchronmotoren mit angebauter Bremsen - Geschlossene Ausführung - Oberflächenkühlung - Mit elektromagnetischer Gleichstrom - Einflächens - Scheibenbremse mit höherem Bremsmoment und geräuscharmer Ausführung Baugröße 63 bis 280 - Leistung 0.18 bis 75 kW
3 Motori asincroni monofasi con rotore a gabbia Costruzione chiusa - Ventilazione esterna Grandezze 56÷112 - Potenze 0.06-4 kW	3 Asynchronous single-phase motors with squirrel cage rotor Enclosed construction - Externally ventilated Sizes 56 to 112 - Power 0.06 to 4 kW	3 Einphasen-Wechselstrommotoren mit Käfigläufer Geschlossene Ausführung - Oberflächenkühlung Baugröße 56 bis 112 - Leistung 0.06 bis 4 kW
4IIB Motori asincroni trifasi con rotore a gabbia antideflagranti - Serie PE-Ex d Costruzione chiusa - Ventilazione esterna Grandezze 71÷180 - Potenze 0.37-37 kW	4IIB Explosion-proof asynchronous three-phase motors with squirrel cage rotor—Series PE-Ex d Enclosed construction - Externally ventilated Sizes 71 to 180 - Power 0.37 to 37 kW	4IIB Drehstrom-Asynchronmotoren mit Käfigläufer Explosionsschutz, druckfeste Kapselung Typenreihe PE-Ex d Geschlossene Ausführung - Oberflächenkühlung Baugröße 71 bis 180 - Leistung 0.37 bis 37 kW
4IIC Motori asincroni trifasi con rotore a gabbia antideflagranti - Serie PE-Ex d Ex de Costruzione chiusa - Ventilazione esterna Grandezze 63÷315 - Potenze 0.09-132 kW	4IIC Explosion-proof asynchronous three-phase motors with squirrel cage rotor - Series PE-Ex d Ex de - Enclosed construction Externally ventilated Sizes 63 to 315 - Power 0.09 to 132 kW	4IIC Drehstrom-Asynchronmotoren mit Käfigläufer Explosionsschutz, druckfeste Kapselung Typenreihe PE-Ex d Ex de Geschlossene Ausführung - Oberflächenkühlung Baugröße 63 bis 315 - Leistung 0.09 bis 132 kW
5 Motori asincroni trifasi con rotore avvolto Costruzione chiusa - Ventilazione esterna Grandezze 100÷560 - Potenze 0.75-560 kW	5 Asynchronous three-phase motors with wound rotor Enclosed construction - Externally ventilated Sizes 100 to 560 - Power 0.75 to 560 kW	5 Drehstrom-Asynchronmotoren mit Schleifringläufer Geschlossene Ausführung - Oberflächenkühlung Baugröße 100 bis 560 - Leistung 0.75 bis 560 kW
6 Motori asincroni trifasi con rotore a gabbia Serie MR azionati da inverter per vie a rulli Grandezze 132÷400 - Potenze 0.83-230 kW	6 Asynchronous three-phase motors with squirrel cage rotor - Series MR supplied by inverter for roller table Sizes 132 to 400 - Power 0.83 to 230 kW	6 Drehstrom-Asynchronmotoren mit Käfigläufer Typenreihe MR - Rollgangmotoren - für Umrichterbetrieb Baugröße 132 bis 400 - Leistung 0.83 bis 230 kW
7 Motori asincroni trifasi - Serie Q Grandezze 280÷560 - Potenze 160-2000 kW	7 Asynchronous three-phase motors - Series Q Sizes 280 to 560 - Power 160 to 2000 kW	7 Drehstrom-Asynchronmotoren - Typenreihe Q Baugröße 280 bis 560 - Leistung 160 bis 2000 kW
8 Motori ad alta efficienza	8 High Efficiency Motors	8 Motoren Mit Höherem Wirkungsgrad
9 Motori asincroni trifasi - Serie MAR Grandezze 63÷355 - Potenze 0.13-365 kW	9 Asynchronous three-phase motors - Series MAR Sizes 63 to 355 - Power 0.13 to 365 kW	9 Drehstrom-Asynchronmotoren - Typenreihe MAR Baugröße 63 bis 355 - Leistung 0.13 bis 365 kW