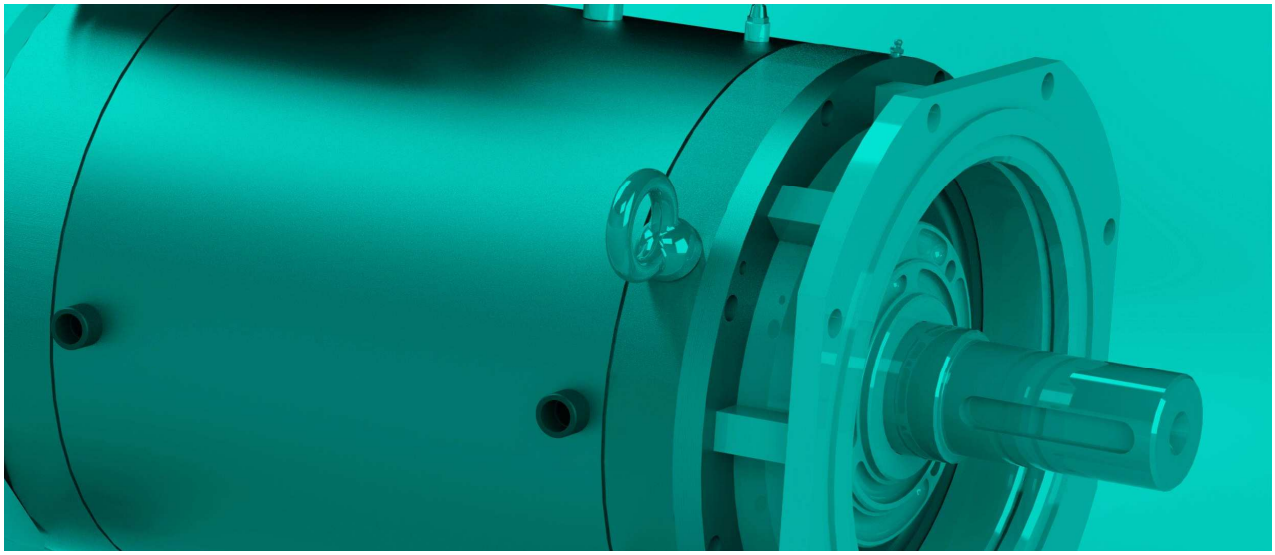
COMER®
Emotion in Motion

FLUID AX SERIES CATALOGUE

LIQUID COOLED IP54 ASYNCHRONOUS MOTORS



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July 2022

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OUR HISTORY

COMER is an industrial project set in motion at the end of the 1950's thanks to the creativity and determination of its three founders. Initially we built standard asynchronous motors, while over the years production has been evolving into the more specialized sector of direct current motors, becoming the core business till the mid-1990's.

POWERTECH
With the advent of modern frequency converters, we've begun a new design season that culminated in the POWERTECH series of high performance asynchronous motors. Starting in 2005, our R&D division has investigated and designed the first series of Permanent Magnet Torque motors with a very high number of poles - and synchronous generators to be used in the wind power sector. Later in 2010 was born the High Speed motors series, specifically conceived for rig test application in the automotive sector.

HERITAGE & INNOVATION
Today, many years after its foundation, we are an established Italian leader in the design and production of special asynchronous motors and permanent magnet synchronous motors and generators.

55

1967-2022

COMER high performance asynchronous motors are built according to the highest quality Standards and can be adopted in a wide range of applications. Our motors are provided with squirrel cage rotors with aluminum slots (or copper in the biggest frames). Available in both air and liquid cooling versions.

COMER high performance synchronous motors line is the result of a persistent research in the electromagnetic sector and use of advanced materials. The rotor is provided with permanent rare-earth magnets with outcome of compact and light motors, having extremely high torque and power values. Available in both air and liquid cooling versions.

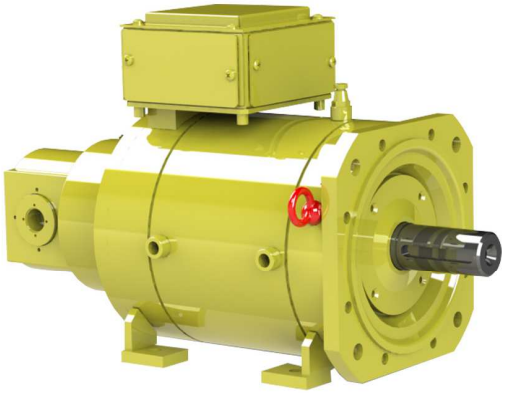
ISO 9001:2015
The whole production process is controlled inside the factory and certified by ISO 9000 Quality System since 1995, now ISO 9001:2015. At the end of manufacturing process, the motors and generators are tested on computerized test benches, equipped with inverters and energy recovery AFE device: in this way we protect the environment from CO_2 emissions and re-use the excess energy into the Factory needs.

THANK YOU FOR TRUSTING US
THESE FIRST 55 YEARS TOGETHER HAVE BEEN FANTASTIC!

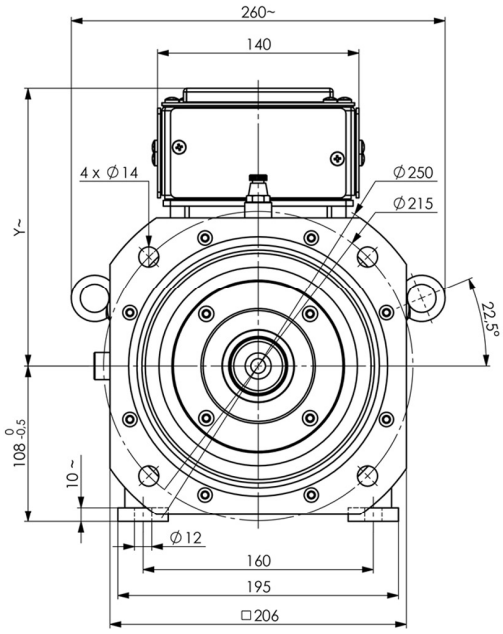
COMER®
Emotion in Motion

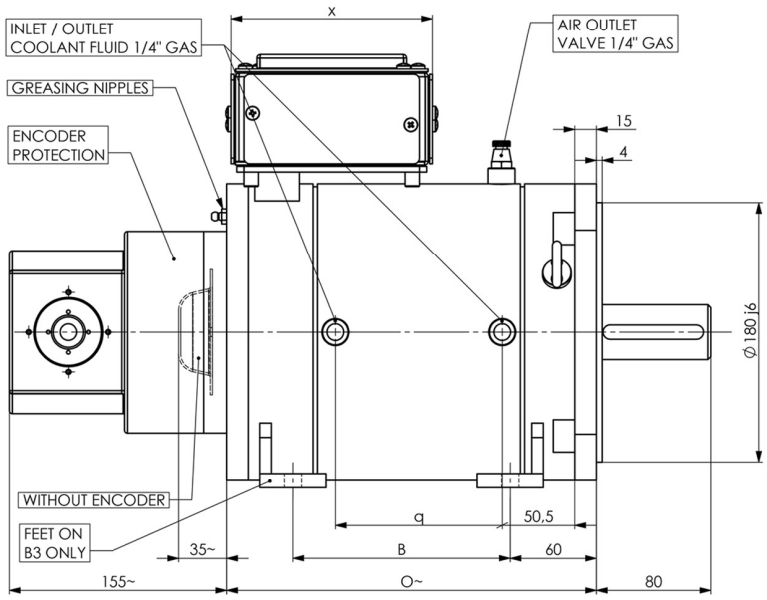
POWERTECH FLUID AX 100C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

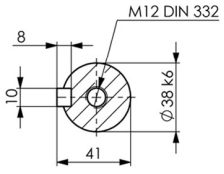
OVERVIEW



IP PROTECTION	IP54 (IP55 on request)
THERMAL PROTECTION TYPE	KLIXON (PT100, PTC on request)
BALANCING, VIBRATION GRADE (EN 60034-14 / VDE 0530 part 14)	A (B on request)
INSULATION CLASS	F
COOLING METHOD	LIQUID (flowrate by size) 20°C (68°F) WATER + MAX 20% ETHYLENE GLYCOL
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B3, B35, or other on request
BRAKE	up to 95 Nm (on request)
DE BEARING	BALL (ROLLER on request)
NDE BEARING	ROLLER
MAX MECHANICAL SPEED	9000 r.p.m. (4500 r.p.m. roller bearing) (S4 version up to 10000 r.p.m.)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request







unit [mm]

VARIABLE DIMENSIONS BY SIZE					
SIZE	B	O	q	X	Y
100C.1	151	260	116	140	195
100C.2	176	285	141	140	195
100C.3	211	320	176	200	210
100C.4	261	370	226	200	210
100C.5	301	410	266	200	210
100C.6	346	455	311	200	210
100C.7	411	520	376	200	210

POWERTECH FLUID AX 100C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 100C.1

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,0096Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1000	35,9	32,5	8,0	3,4	74,0	1600	42,0	11,2	4,4	1200	5	1,7
400	1530	53,7	31,8	10,5	5,1	82,0	2400	41,2	15,0	6,6	1800	5	1,7
400	2000	69,3	31,0	13,5	6,5	83,0	3500	40,6	18,5	8,5	2750	6	1,9
400	3000	102,6	30,6	19,5	9,6	86,5	5300	39,8	25,5	12,5	4000	6	1,9
460	1000	35,8	32,5	6,9	3,4	74,0	1600	42,0	9,7	4,4	1200	5	1,7
460	1520	53,3	31,8	9,1	5,1	82,0	2400	41,2	13,0	6,6	1800	5	1,7
460	2030	70,3	31,0	11,9	6,6	83,0	3550	40,6	16,3	8,6	2800	6	1,9
460	3000	102,6	30,6	17,0	9,6	86,5	5300	39,8	22,2	12,5	4000	6	1,9

FLUID AX 100C.2

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,0120Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1010	36,0	44,4	11,0	4,7	76,0	1700	57,7	16,0	6,1	1300	6	2,0
400	1550	54,1	43,1	15,0	7,0	83,0	3000	55,5	19,0	9,0	2300	6	2,0
400	2030	70,0	42,3	18,5	9,0	85,5	4000	54,6	24,0	11,6	3000	7	2,1
400	3000	102,5	40,4	25,5	12,7	89,0	5500	52,5	32,5	16,5	4000	7	2,1
460	1010	35,9	44,4	9,5	4,7	76,0	1700	57,7	13,9	6,1	1300	6	2,0
460	1560	54,4	43,1	13,1	7,0	83,0	3000	55,5	16,6	9,1	2300	6	2,0
460	2060	70,8	42,3	16,3	9,1	85,5	4050	54,6	21,1	11,8	3050	7	2,1
460	3070	104,8	40,4	22,7	13,0	89,0	5650	52,5	28,9	16,9	4100	7	2,1

FLUID AX 100C.3

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,0160Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1020	36,5	56,2	13,0	6,0	79,0	1800	73,0	19,0	7,8	1350	7	2,3
400	1540	53,7	54,6	18,0	8,8	84,5	3100	70,7	23,5	11,4	2300	7	2,3
400	2040	70,2	52,4	22,5	11,2	87,5	3500	67,9	28,5	14,5	2750	8	2,4
400	3000	102,1	49,7	30,5	15,6	90,5	6500	64,6	38,5	20,3	5000	8	2,4
460	1010	36,1	56,2	11,2	5,9	79,0	1800	73,0	16,4	7,7	1350	7	2,3
460	1560	54,3	54,6	15,8	8,9	84,5	3150	70,7	20,7	11,5	2350	7	2,3
460	1990	68,6	52,4	19,1	10,9	87,5	3400	67,9	24,2	14,1	2700	8	2,4
460	2960	100,6	49,7	26,1	15,4	90,5	6400	64,6	33,0	20,0	4950	8	2,4

POWERTECH FLUID AX 100C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 100C.4

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,0212Kgm²			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1030	36,6	77,0	17,5	8,3	81,0	2000	100	23,5	10,8	1450	8	2,7
400	1530	53,1	75,0	24,5	12,0	86,0	3400	97,4	31,0	15,6	2500	8	2,8
400	2090	71,7	72,2	31,5	15,8	88,5	4800	93,7	39,5	20,5	3600	9	2,8
400	3000	102,0	68,0	41,5	21,4	91,0	7000	88,5	52,0	27,8	5400	9	2,9
460	1050	37,2	77,0	15,5	8,5	81,0	2050	100,1	20,8	11,0	1500	8	2,7
460	1570	54,3	75,0	21,8	12,3	86,0	3500	97,4	27,6	16,0	2550	8	2,8
460	2060	70,7	72,2	27,0	15,6	88,5	4750	93,7	33,9	20,2	3550	9	2,8
460	3050	103,5	68,0	36,6	21,7	91,0	7100	88,5	45,9	28,3	5500	9	2,9

FLUID AX 100C.5

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,0250Kgm²			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1050	37,2	91,0	20,5	10,0	82,5	2250	118,3	27,5	13,0	1500	10	3,0
400	1580	54,7	87,9	29,5	14,5	87,0	3700	113,6	37,0	18,8	2700	10	3,1
400	2120	72,6	84,2	37,5	18,7	89,5	5000	109,5	46,5	24,3	3800	11	3,2
400	2950	100,3	80,0	47,5	24,7	91,5	7100	103,6	59,5	32,0	5400	11	3,3
460	1040	36,9	91,0	17,7	9,9	82,5	2250	118,3	23,8	12,9	1500	10	3,0
460	1570	54,5	87,9	25,6	14,4	87,0	3700	113,6	32,1	18,7	2700	10	3,1
460	2030	69,6	84,2	31,3	17,9	89,5	4800	109,5	38,8	23,3	3650	11	3,2
460	2990	101,8	80,0	41,9	25,0	91,5	7200	103,6	52,5	32,4	5450	11	3,3

FLUID AX 100C.6

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,0310Kgm²			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1090	38,4	110	26,0	12,5	84,0	2500	145	35,0	16,5	1800	12	3,2
400	1530	53,0	107	34,5	17,1	87,0	3500	140	45,0	22,5	2600	12	3,3
400	2200	75,4	105	47,5	24,3	90,0	5000	139	60,0	32,0	3800	14	3,7
400	3160	107,3	100	62,0	33,0	92,0	7600	127	77,0	42,0	5800	14	4,0
460	1110	39,0	110	22,9	12,8	84,0	2550	144,6	30,9	16,8	1850	12	3,2
460	1490	51,6	107	29,2	16,7	87,0	3400	140,5	38,1	21,9	2550	12	3,3
460	2250	77,1	105	42,2	24,9	90,0	5100	138,9	53,3	32,7	3900	14	3,7
460	3030	102,8	99,7	51,7	31,6	92,0	7300	126,9	64,2	40,3	5550	14	4,0

POWERTECH FLUID AX 100C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

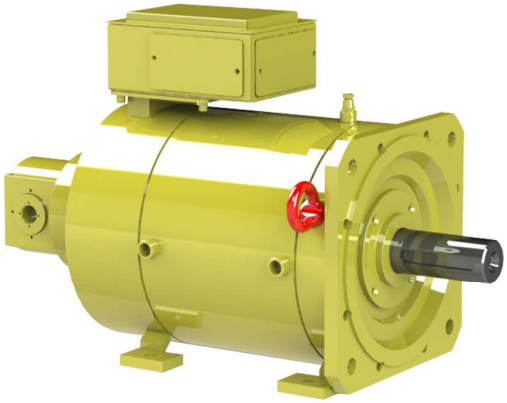
FLUID AX 100C.7

NOT AVAILABLE IN S4 VERSION

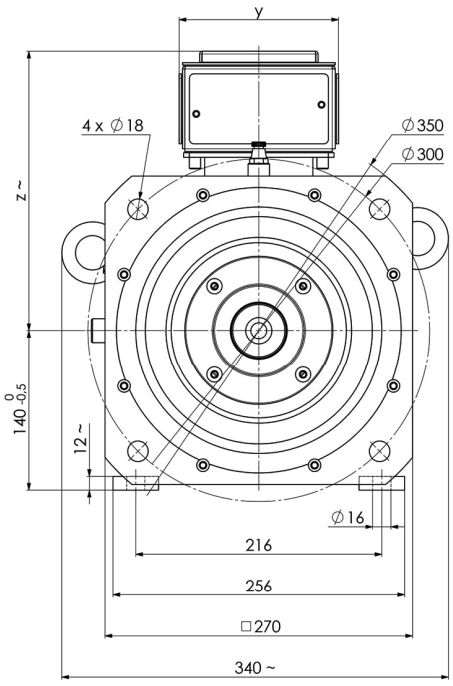
Poles: 2p=4 Tmax=2Tn J=0,0386Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1100	38,6	134	31,5	15,4	85,0	2650	173,7	40,5	20,0	1850	15	3,5
400	1540	53,3	130	41,0	21,0	88,5	3700	169,3	52,5	27,3	2750	15	3,6
400	2020	69,3	128	52,5	27,0	90,5	5000	165,5	66,5	35,0	2750	16	3,8
400	3170	107,5	121	77,0	40,0	92,5	8000	156,7	96,0	52,0	4000	16	4,2
460	1080	38,0	134	27,0	15,1	85,0	2600	173,7	34,7	19,6	1800	15	3,5
460	1600	55,2	130	36,9	21,8	88,5	3850	169,3	47,3	28,4	2850	15	3,6
460	2030	69,7	128	45,9	27,1	90,5	5000	165,5	58,2	35,2	2750	16	3,8
460	3240	109,9	120,5	68,4	40,9	92,5	8200	156,7	85,3	53,1	4100	16	4,2

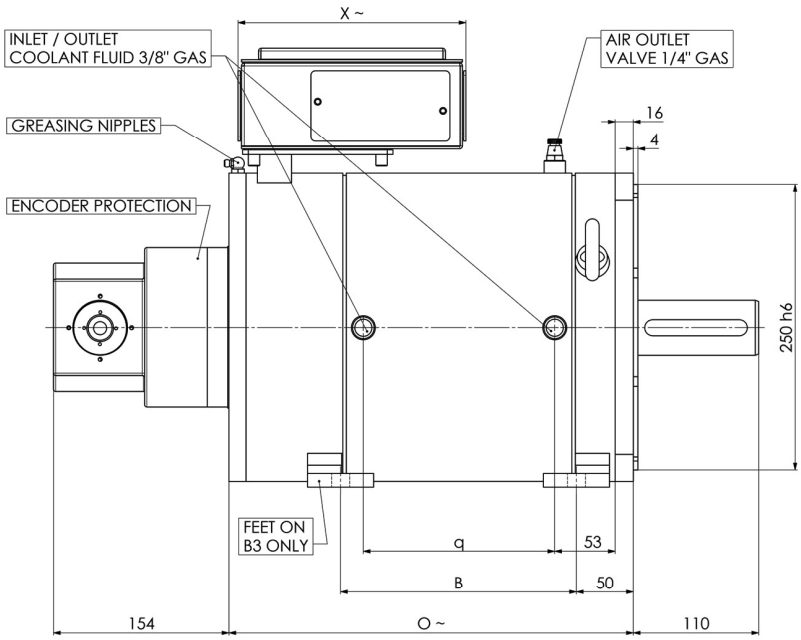
POWERTECH FLUID AX 132C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

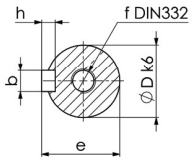
OVERVIEW



IP PROTECTION	IP54 (IP55 on request)
THERMAL PROTECTION TYPE	KLIXON (PT100, PTC on request)
BALANCING, VIBRATION GRADE (EN 60034-14 / VDE 0530 part 14)	A (B on request)
INSULATION CLASS	F
COOLING METHOD	LIQUID (flowrate by size) 20°C (68°F) WATER + MAX 20% ETHYLENE GLYCOL
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B3, B35, or other on request
BRAKE	up to 300 Nm (on request)
DE BEARING	BALL (ROLLER on request)
NDE BEARING	ROLLER
MAX MECHANICAL SPEED	6500 r.p.m. (4000 r.p.m. roller bearing) (S4 version up to 9000 r.p.m.)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request







D	bxh	e	f
42 *	12x8	45	M12 DIN332
48	14x9	51,5	M16 DIN332

unit [mm]

VARIABLE DIMENSIONS BY SIZE						
SIZE	B	O	x	y	z	q
132C.1	207	355	200	140	245	168
132C.2	252	400	200	140	245	213
132C.3	287	435	260	190	275	248
132C.4	357	505	260	190	275	318
132C.5	427	575	260	190	275	388
132C.6	482	630	260	190	275	443

* OPTION

POWERTECH FLUID AX 132C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 132C.1

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2,2Tn J=0,052Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1060	36,8	124	28,5	13,8	84,0	2700	162	36,5	18,0	1800	10	3,5
400	1520	51,7	120	37,5	19,0	87,5	4000	155	48,0	24,7	2800	10	3,7
400	2050	69,0	116	48,0	25,0	90,0	5500	150	60,5	32,2	4100	12	3,8
400	3000	101,8	112	63,0	35,0	92,0	6500	145	81,5	45,5	5500	12	4,2
460	1060	36,9	124	24,8	13,8	84,0	2700	162	31,8	18,0	1800	10	3,5
460	1510	51,3	120	32,3	18,9	87,5	3950	155	41,4	24,5	2800	10	3,7
460	2040	68,5	116	41,5	24,9	90,0	5450	150	52,3	32,0	4100	12	3,8
460	2990	101,5	111,6	54,6	34,9	92,0	6500	145	71	45,3	5500	12	4,2

FLUID AX 132C.2

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2,2Tn J=0,068Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1080	37,5	168	35,5	19,0	85,0	2700	207	46,0	23,4	1800	12	4,3
400	1580	54,3	163	52,0	27,0	89,5	4300	212	65,5	35,1	3150	12	4,4
400	2100	71,7	159	65,5	35,0	91,0	5650	207	83,0	45,5	4200	14	4,8
400	3100	105,1	154	89,0	50,0	92,5	6500	200	114	65,0	6200	14	5,7
460	1070	37,2	168	30,6	18,8	85,0	2700	207	39,7	23,2	1800	12	4,3
460	1560	53,5	163	44,6	26,7	89,5	4250	212	56,1	34,7	3100	12	4,4
460	2110	72,1	159	57,3	35,2	91,0	5700	207	72,6	45,7	4200	14	4,8
460	2970	100,7	154	74,2	47,9	92,5	6500	200	95,0	62,3	5950	14	5,7

FLUID AX 132C.3

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2,2Tn J=0,081Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1080	37,6	200	45,5	22,6	86,5	3100	260	57,0	29,4	2200	16	4,8
400	1580	54,3	193	61,5	32,0	90,0	4800	251	77,0	41,6	3400	16	4,9
400	2090	71,2	190	79,0	41,5	91,5	6100	247	99,0	54,0	4800	18	5,3
400	2940	99,6	185	102	57,0	93,0	6500	240	130	74,0	6250	18	6,0
460	1090	37,8	200	39,8	22,8	91,7	3150	260	49,9	29,7	2200	16	4,8
460	1600	55,1	193	54,3	32,4	90,0	4850	251	67,9	42,1	3450	16	4,9
460	2090	71,2	190	68,7	41,5	91,5	6100	247	86,1	54,0	4800	18	5,3
460	2980	101,1	185	90,0	57,8	93,0	6500	240	115	75,0	6350	18	6,0

POWERTECH FLUID AX 132C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 132C.4

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,11Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1060	36,9	270	59,5	30,0	87,5	3200	351	75,0	39,0	2300	20	5,8
400	1530	52,5	260	80,0	41,6	90,5	4900	337	100	54,0	3500	20	6,0
400	2090	71,2	256	105	56,0	92,0	6400	334	132	73,0	4850	24	6,8
400	3000	101,6	250	140	78,5	93,5	6500	325	176	102	6500	24	7,7
460	1080	37,7	270	52,9	30,6	87,5	3250	351	66,7	39,7	2350	20	5,8
460	1530	52,5	260	69,6	41,6	90,5	4900	337	87,0	54,0	3500	20	6,0
460	2120	72,2	256	92,6	56,8	92,0	6500	334	116,5	74,0	4900	24	6,8
460	2920	98,9	250	118	76,4	93,5	6500	325	149	99,3	6400	24	7,7

FLUID AX 132C.5

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2Tn J=0,14Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1050	36,5	340	73,5	37,4	88,0	3200	442	91,5	48,6	2250	26	6,9
400	1530	52,5	325	100	52,0	91,0	4900	422	124	67,6	3600	26	7,1
400	2090	71,1	320	132	70,0	92,0	6500	416	165	91,0	5000	28	8,5
400	3030	102,5	315	180	100	94,0	6500	410	228	130	6500	28	9,0
460	1050	36,4	340	63,7	37,4	88,0	3200	442	79,3	48,6	2250	26	6,9
460	1560	53,7	325	88,9	53,0	91,0	5000	422	110,2	68,9	3650	26	7,1
460	2060	70,1	320	113,1	69,0	92,0	6500	416	141,4	89,7	4950	28	8,5
460	2900	98,2	315	150	95,7	94,0	6500	410	190	124,4	6400	28	9,0

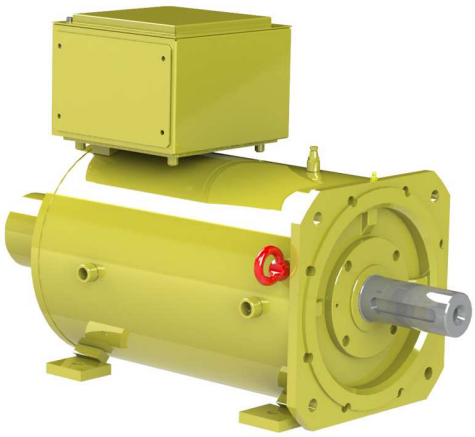
FLUID AX 132C.6

NOT AVAILABLE IN S4 VERSION

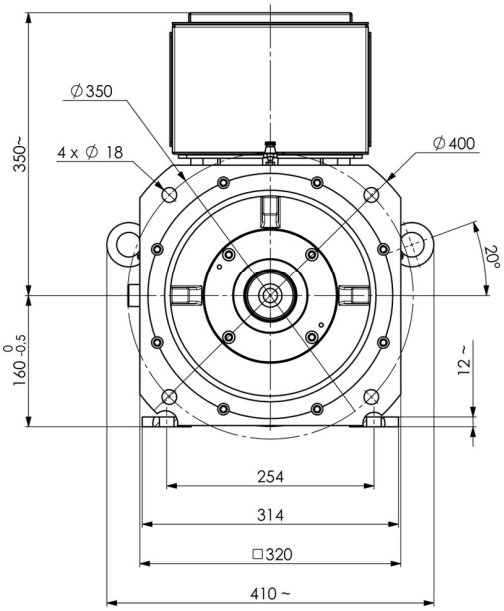
Poles: 2p=4 Tmax=2Tn J=0,16Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1020	35,5	393	83	42,0	88,0	3200	511	105	54,6	2250	30	7,8
400	1510	51,8	376	115	59,5	91,0	4900	489	143	77,3	3600	30	8,1
400	1960	66,8	370	148	76,0	92,5	6400	482	180	99,0	4800	32	8,6
400	2880	97,5	365	195	110	94,0	6500	474	250	143	6500	32	9,8
460	1020	35,5	393	72,2	42,0	88,0	3200	511	91,3	54,6	2250	30	7,8
460	1520	52,1	376	100,6	59,9	91,0	4950	489	125,1	77,8	3600	30	8,1
460	2070	70,4	370	135,7	80,3	92,5	6500	482	165	104,6	5050	32	8,6
460	2900	98,1	365	171	110,8	94,0	6500	474	219	144,0	6500	32	9,8

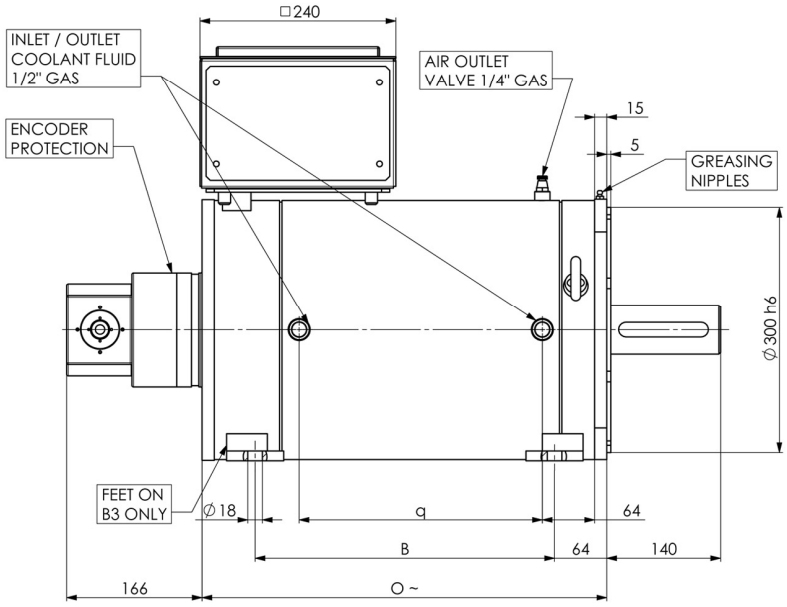
POWERTECH FLUID AX 160K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

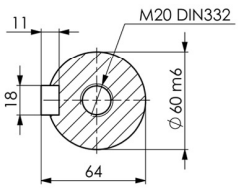
OVERVIEW



IP PROTECTION	IP54 (IP55 on request)
THERMAL PROTECTION TYPE	KLIXON (PT100, PTC on request)
BALANCING, VIBRATION GRADE (EN 60034-14 / VDE 0530 part 14)	A (B on request)
INSULATION CLASS	F
COOLING METHOD	LIQUID (flowrate by size) 20°C (68°F) WATER + MAX 20% ETHYLENE GLYCOL
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B3, B35, or other on request
BRAKE	up to 400 Nm (on request)
DE BEARING	BALL, ROLLER, INSULATED on request
NDE BEARING	ROLLER (insulated on request)
MAX MECHANICAL SPEED	5000 r.p.m. (3500 r.p.m. roller bearing) (S4 version up to 7000 r.p.m.)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request







unit [mm]

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
160K.1	367	500	298
160K.2	417	550	348
160K.3	477	610	408
160K.4	537	670	468
160K.5	587	720	518

POWERTECH FLUID AX 160K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 160K.1

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2,2Tn J=0,17Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	990	34,4	310	61	32,0	87,5	2100	401	82	41,6	1550	18	6,2
400	1520	52,0	280	84	44,6	90,5	3500	363	108	57,8	2600	18	6,4
400	2060	70,0	274	108	59,0	92,5	4500	356	142	76,7	3450	20	6,7
400	3100	104,7	250	147	81,0	93,5	5000	324	190	105	5000	20	7,9
460	980	34,2	310	52,7	31,7	87,5	2100	401	70,8	41,2	1550	18	6,2
460	1510	51,8	280	73	44,3	90,5	3500	363	137	88,2	2600	18	6,4
460	1970	67,1	274	90	56,4	92,5	4300	356	118	73,3	3300	20	6,7
460	3120	105,4	250	129	81,5	93,5	5000	324	166	106	5000	20	7,9

FLUID AX 160K.2

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2,2Tn J=0,21Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1050	36,4	370	79	40,7	88,5	2300	482	102	53,0	1700	20	7,2
400	1540	52,7	335	98	54,0	91,5	3400	435	131	70,2	2600	20	7,4
400	2180	74,0	329	134	75,0	93,0	5000	427	178	97,5	4200	22	7,9
400	3060	103,2	300	175	96,0	93,5	5000	384	220	123	5000	22	9,4
460	1070	37,2	370	70,2	41,5	88,5	2350	482	90,7	54,0	1750	20	7,2
460	1500	51,3	335	83	52,6	91,5	3300	435	161	100,3	2550	20	7,4
460	2230	75,6	329	119	76,7	93,0	5000	427	158	99,7	4300	22	7,9
460	2930	98,9	300	146	91,9	93,5	5000	384	183	118	5000	22	9,4

FLUID AX 160K.3

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2,2Tn J=0,25Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1010	34,9	438	86	46,3	90,0	2300	569	114	60,2	1700	23	7,1
400	1540	52,5	397	118	64,0	92,0	3700	516	153	83,2	2800	23	7,7
400	2060	69,9	390	153	84,0	93,0	5000	505	197	109	3750	25	9,0
400	3160	106,5	357	213	118	94,0	5000	462	274	153	5000	25	10,7
460	1010	34,8	438	74,5	46,3	90,0	2300	569	98,8	60,2	1700	23	7,1
460	1600	54,3	397	106	66,5	92,0	3850	516	199	131,8	2900	23	7,7
460	2030	68,9	389	131	82,8	93,0	4950	505	169	107,4	3700	25	9,0
460	3230	108,9	357	189	121	94,0	5000	462	244	156	5000	25	10,7

POWERTECH FLUID AX 160K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 160K.4

S4 VERSION POWER DERATING: -5%

Poles: 2p=4 Tmax=2,2Tn J=0,29Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1030	35,5	500	102	54,0	90,0	2450	651	132	70,2	1800	25	8,2
400	1480	50,4	452	128	70,0	92,0	3750	587	167	91,0	2850	25	8,5
400	2100	71,1	446	176	98,0	93,5	5000	578	232	127	4000	28	9,6
400	3080	103,8	409	240	132	94,0	5000	533	305	172	5000	28	12,0
460	1000	34,5	500	86,3	52,4	90,0	2400	651	111,7	68,2	1750	25	8,2
460	1510	51,5	452	114	71,4	92,0	3850	587	204	133,4	2900	25	8,5
460	2010	68,1	446	147	93,8	93,5	5000	578	193	121,6	3850	28	9,6
460	3100	104,4	409	210	133	94,0	5000	533	267	173	5000	28	12,0

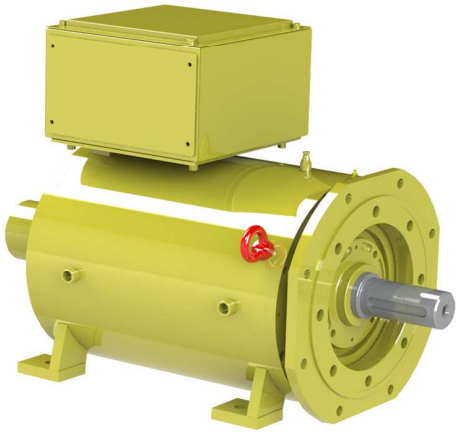
FLUID AX 160K.5

NOT AVAILABLE IN S4 VERSION

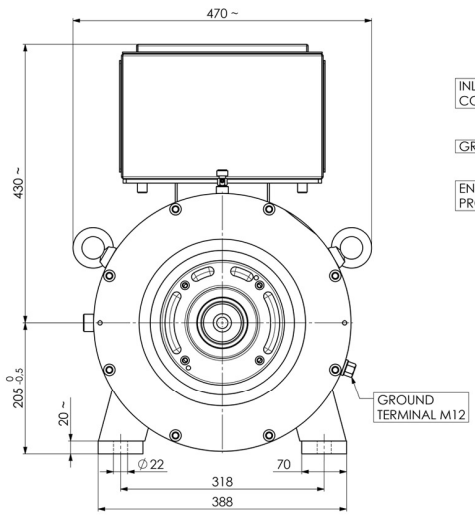
Poles: 2p=4 Tmax=2,2Tn J=0,33Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1010	34,8	548	110	58,0	90,0	2500	709	142	75	1850	28	8,8
400	1500	51,1	500	143	78,5	92,5	4000	649	185	102	3000	28	9,0
400	2080	70,4	492	193	107	93,5	5000	638	250	139	4150	30	10,5
400	3170	106,7	452	273	150	94,0	5000	588	348	195	5000	30	13,6
460	970	33,4	548	91,7	55,7	90,0	2400	709	118,3	72,0	1800	28	8,8
460	1510	51,4	500	125	79,0	92,5	4050	649	231	152,5	3000	28	9,0
460	2150	72,9	492	174	111	93,5	5000	638	225	143,7	4300	30	10,5
460	3190	107,4	452	239	151	94,0	5000	588	305	196	5000	30	13,6

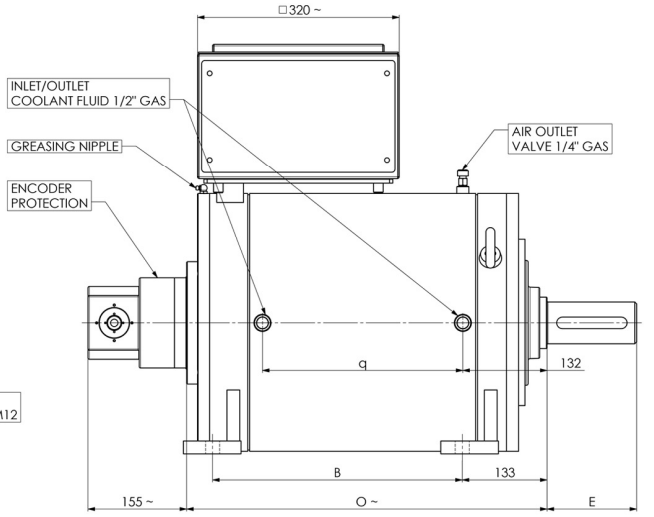
POWERTECH FLUID AX 200K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

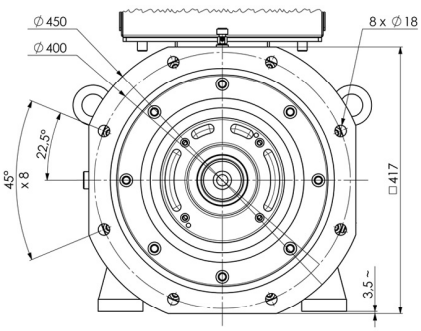
OVERVIEW

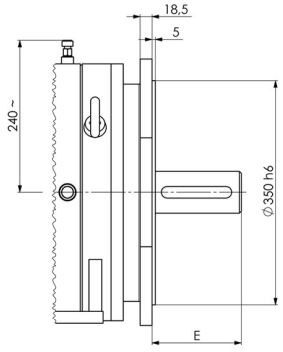


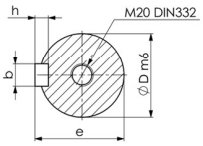
IP PROTECTION	IP54 (IP55 on request)
THERMAL PROTECTION TYPE	KLIXON (PT100, PTC on request)
BALANCING, VIBRATION GRADE (EN 60034-14 / VDE 0530 part 14)	A (B on request)
INSULATION CLASS	F
COOLING METHOD	LIQUID (flowrate by size) 20°C (68°F) WATER + MAX 20% ETHYLENE GLYCOL
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B3, B35, or other on request
BRAKE	up to 600 Nm (on request)
DE BEARING	BALL, ROLLER, INSULATED on request
NDE BEARING	ROLLER (insulated on request)
MAX MECHANICAL SPEED	4000 r.p.m. (3200 r.p.m. roller bearing) (S6 version up to 5500 r.p.m.)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request











VARIABLE DIMENSIONS BY SIZE						
SIZE	B	O	q	DxE	bxh	e
200K.1	390	565	313	65x140	18x11	69
200K.2	430	605	353	65x140	18x11	69
200K.3	480	655	403	65x140	18x11	69
200K.4	550	725	473	75x140	20x12	79,5
200K.5	650	825	573	75x140	20x12	79,5

unit [mm]

POWERTECH FLUID AX 200K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 200K.1

S6 VERSION POWER DERATING: -5% (Tmax=1,8Tn)

Poles: 2p=6 Tmax=2,4Tn J=0,60Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1070	54,3	570	120	64,0	91,5	2500	745	154	83,2	1950	22	8,0
400	1600	80,8	550	172	92,0	93,0	3800	715	220	120	3000	22	9,0
400	2000	100,7	487	190	102	93,5	4000	630	240	132	4000	24	9,5
400	2700	135,7	450	236	127	94,0	4000	585	298	165	4000	24	11,0
460	1090	55,5	570	107	65,2	91,5	2550	745	137	85	2000	22	8,0
460	1560	78,6	550	146	89,7	93,0	3700	715	186	117	2950	22	9,0
460	2070	104,2	487	171	106	93,5	4000	630	216	137	4000	24	9,5
460	2720	136,5	450	207	128	94,0	4000	585	261	166	4000	24	11,0

FLUID AX 200K.2

S6 VERSION POWER DERATING: -5% (Tmax=1,8Tn)

Poles: 2p=6 Tmax=2,5Tn J=0,70Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1020	51,8	675	138	72,0	92,0	2600	875	175	93,6	2000	24	8,5
400	1480	74,8	645	190	100	93,0	3750	840	238	130	2900	24	10,0
400	1940	97,7	560	215	114	93,5	4000	730	270	148	4000	26	10,5
400	2720	136,7	520	275	148	94,0	4000	675	345	192	4000	26	12,5
460	1030	52,1	675	121	72,7	92,0	2650	875	153	95	2000	24	8,5
460	1550	78,2	645	173	104,7	93,0	3950	840	216	136	3050	24	10,0
460	1980	99,9	560	191	116	93,5	4000	730	240	151	4000	26	10,5
460	2680	134,7	520	236	146	94,0	4000	675	296	189	4000	26	12,5

FLUID AX 200K.3

S6 VERSION POWER DERATING: -5% (Tmax=1,8Tn)

Poles: 2p=6 Tmax=2,5Tn J=0,80Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1010	51,3	795	162	84,0	92,0	2650	1040	206	110	2050	26	10,0
400	1570	79,3	755	232	124	93,5	4000	975	290	160	3200	26	11,5
400	1900	95,7	660	242	131	94,0	4000	855	310	170	4000	28	11,5
400	2660	133,7	610	318	170	94,0	4000	790	395	220	4000	28	14,5
460	1000	50,6	795	139	83,2	92,0	2600	1040	177	109	2050	26	10,0
460	1610	81,1	755	206	127,3	93,5	4000	975	258	164	3300	26	11,5
460	1870	94,3	660	207	129	94,0	4000	855	266	167	4000	28	11,5
460	2750	138,4	610	286	176	94,0	4000	790	356	227	4000	28	14,5

POWERTECH FLUID AX 200K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 200K.4

S6 VERSION POWER DERATING: -5% (Tmax=1,7Tn)

Poles: 2p=6 Tmax=2,5Tn J=0,95Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1030	52,2	930	188	100	92,5	2700	1205	242	130	2100	30	11,0
400	1530	77,2	880	260	141	93,5	4000	1140	330	183	3150	30	12,7
400	1970	99,2	765	290	158	94,0	4000	995	370	205	4000	32	13,5
400	2860	143,7	700	395	210	94,0	4000	910	495	273	4000	32	17,5
460	990	50,0	930	157	96,4	92,5	2600	1205	202	125	2000	30	11,0
460	1540	77,7	880	228	141,9	93,5	4000	1140	289	184	3150	30	12,7
460	2060	103,7	765	264	165	94,0	4000	995	336	214	4000	32	13,5
460	2880	144,6	700	346	211	94,0	4000	910	433	275	4000	32	17,5

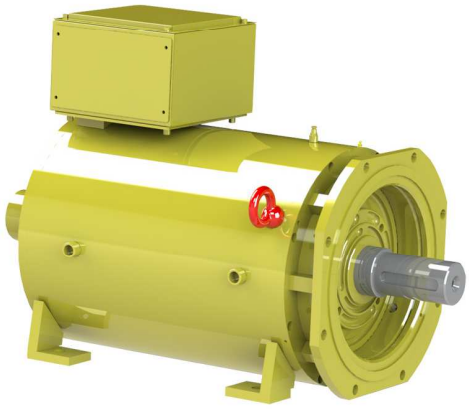
FLUID AX 200K.5

NOT AVAILABLE IN S6 VERSION

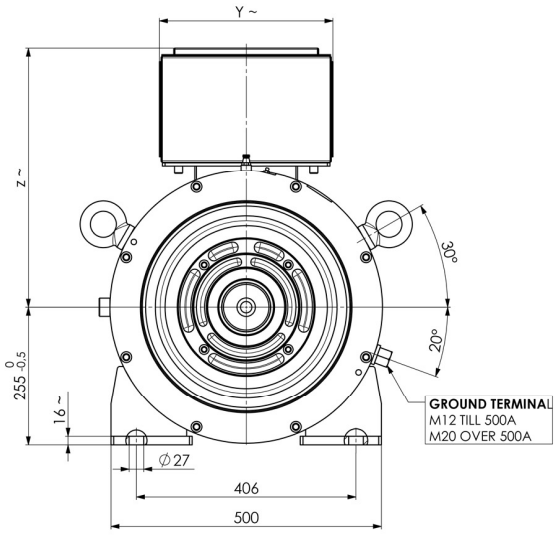
Poles: 2p=6 Tmax=2,6Tn J=1,2Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1040	52,7	1102	228	120	93,0	2850	1435	288	156	2200	36	12,0
400	1500	75,7	1040	302	163	93,5	4000	1350	385	212	3250	36	15,0
400	2000	100,7	930	358	195	94,0	4000	1210	452	253	4000	38	16,5
400	2700	135,7	850	450	240	94,0	4000	1105	560	312	4000	38	20,0
460	1060	53,9	1102	203	122,3	93,0	2900	1435	256	159	2250	36	12,0
460	1570	79,1	1040	275	171	93,5	4000	1350	350	222	3400	36	15,0
460	2040	102,9	930	318	199	94,0	4000	1210	402	258	4000	38	16,5
460	2660	133,8	850	386	237	94,0	4000	1105	480	307	4000	38	20,0

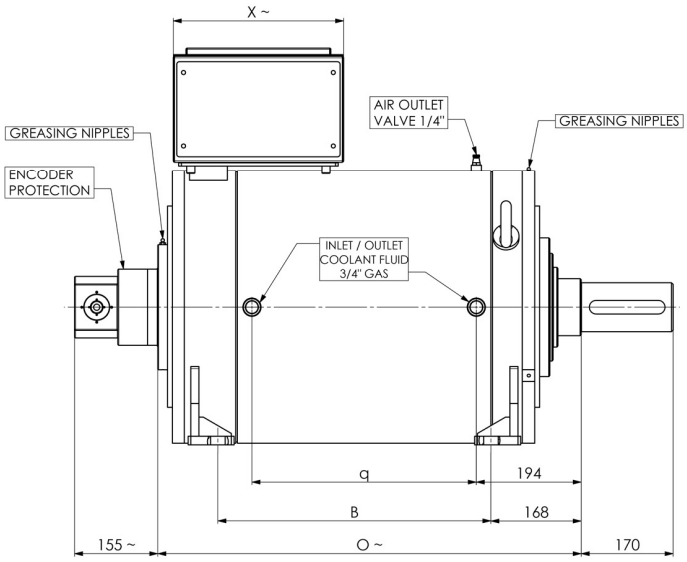
POWERTECH FLUID AX 250K/KC
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

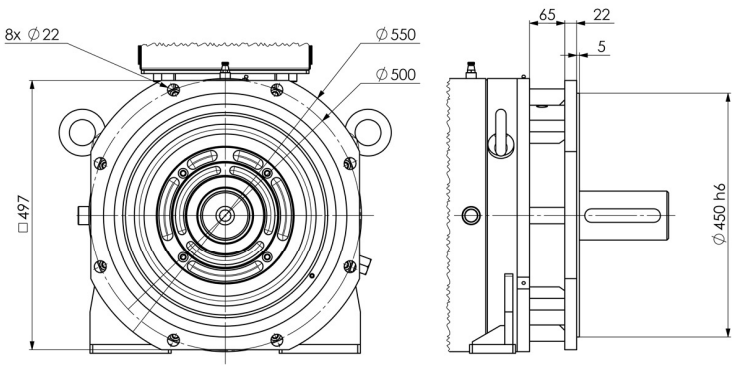
OVERVIEW

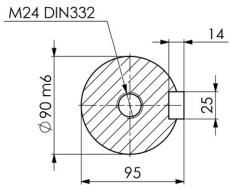


IP PROTECTION	IP54 (IP55 on request)
THERMAL PROTECTION TYPE	KLIXON (PT100, PTC on request)
BALANCING, VIBRATION GRADE (EN 60034-14 / VDE 0530 part 14)	A (B on request)
INSULATION CLASS	F
COOLING METHOD	LIQUID (flowrate by size) 20°C (68°F) WATER + MAX 20% ETHYLENE GLYCOL
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B3, B35, or other on request
BRAKE	up to 2400 Nm (on request)
DE BEARING	BALL (ROLLER request)
NDE BEARING	ROLLER (insulated on request)
MAX MECHANICAL SPEED	3500 r.p.m. (3000 r.p.m. roller bearing) (S6 version up to 5000 r.p.m.)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request









TERMINAL BOX DIMENSIONS			
SIZE	X	Y	Z
250K/KC.1	315	320	480
OTHERS	585	395	535

unit [mm]

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
250K/KC.1	505	785	415
250K/KC.2	575	855	485
250K/KC.3	665	945	575
250K/KC.4	785	1065	695
250K/KC.5	925	1205	835

POWERTECH FLUID AX 250K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 250K.1

S6 VERSION POWER DERATING: -5% (Tmax=1,9Tn)

Poles: 2p=6 Tmax=2,6Tn J=2,0Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1040	52,7	1200	245	130	92,5	2550	1560	310	170	1950	26	13,5
400	1490	75,2	1130	320	176	93,5	3500	1470	415	230	2850	26	15,5
400	1910	96,2	1040	385	207	94,0	3500	1430	515	286	3500	32	16,5
400	2600	130,7	960	490	262	94,0	3500	1320	645	360	3500	32	21,0
460	1060	53,9	1200	218	133	92,5	2600	1560	276	173	2000	26	13,5
460	1490	75,2	1130	278	176	93,5	3500	1470	361	230	2850	26	15,5
460	1950	98,3	1040	342	211	94,0	3500	1430	458	292	3500	32	16,5
460	2560	128,8	960	420	258	94,0	3500	1320	553	354	3500	32	21,0

FLUID AX 250K.2

S6 VERSION POWER DERATING: -5% (Tmax=1,9Tn)

Poles: 2p=6 Tmax=2,6Tn J=2,5Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1120	56,7	1480	325	173	93,0	2850	1930	410	226	2230	32	16,5
400	1500	75,7	1390	405	219	94,0	3500	1800	510	283	3000	32	17,5
400	2050	103,2	1300	510	278	94,0	3500	1690	695	363	3500	40	22,5
400	2800	140,7	1190	640	350	94,0	3500	1550	810	455	3500	40	28,0
460	1100	55,9	1480	279	170	93,0	2800	1930	351	222	2200	32	16,5
460	1530	77,4	1390	360	223	94,0	3500	1800	453	289	3050	32	17,5
460	2020	101,7	1300	437	274	94,0	3500	1690	596	358	3500	40	22,5
460	2900	145,6	1190	576	363	94,0	3500	1550	729	471	3500	40	28,0

FLUID AX 250K.3

S6 VERSION POWER DERATING: -5% (Tmax=1,9Tn)

Poles: 2p=6 Tmax=2,6Tn J=3,1Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1060	53,7	1840	380	204	94,0	2920	2380	480	264	2250	40	18,0
400	1590	80,2	1750	535	292	94,5	3500	2260	680	377	3350	40	21,0
400	1970	99,2	1610	610	332	94,5	3500	2100	770	433	3500	48	24,0
400	2870	144,1	1490	825	447	94,5	3500	1940	1050	584	3500	48	32,5
460	1020	51,5	1840	317	196	94,0	2800	2380	400	254	2150	40	18,0
460	1570	79,1	1750	459	288	94,5	3500	2260	583	372	3300	40	21,0
460	2060	103,7	1610	555	347	94,5	3500	2100	700	453	3500	48	24,0
460	2890	145,0	1490	722	450	94,5	3500	1940	919	588	3500	48	32,5

POWERTECH FLUID AX 250K
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 250K.4

S6 VERSION POWER DERATING: -5% (Tmax=1,5Tn)

Poles: 2p=6 Tmax=2,6Tn J=3,9Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1050	53,2	2330	470	256	94,0	2850	3040	605	334	2150	50	22,5
400	1500	75,6	2210	635	347	94,5	3500	2880	810	452	3300	50	25,0
400	1940	97,6	2030	755	412	94,5	3500	2640	955	537	3500	58	30,0
400	2650	133,1	1870	950	518	95,0	3500	2560	1190	710	3500	58	37,5
460	1060	53,5	2330	411	258	94,0	2900	3040	529	337	2150	50	22,5
460	1440	72,5	2210	529	333	94,5	3500	2880	675	434	3150	50	25,0
460	1980	99,8	2030	671	420	94,5	3500	2640	849	548	3500	58	30,0
460	2610	131,2	1870	814	510	95,0	3500	2560	1020	699	3500	58	37,5

FLUID AX 250K.5

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,6Tn J=4,8Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1000	50,6	2840	540	297	93,5	2750	3690	695	386	2100	60	26,0
400	1510	76,1	2690	780	426	94,5	3500	3520	990	556	3400	60	31,0
400	1780	89,6	2480	850	463	94,5	3500	3240	1075	603	3500	70	33,5
400	2550	128,1	2290	1120	611	95,0	3500	2960	1405	790	3500	70	44,5
460	990	49,9	2840	463	294	93,5	2700	3690	596	382	2100	60	26,0
460	1540	77,8	2690	693	434	94,5	3500	3520	880	567	3450	60	31,0
460	1790	90,2	2480	744	466	94,5	3500	3240	941	606	3500	70	33,5
460	2440	122,8	2290	933	585	95,0	3500	2960	1171	756	3500	70	44,5

POWERTECH FLUID AX 250KC
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 250KC.1

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,6Tn J=2,6Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1040	52,5	1270	260	138	93,0	2400	1655	330	180	1850	26	13,5
400	1490	75,0	1200	340	187	94,0	3500	1560	440	243	2700	26	15,5
400	1910	96,0	1100	410	220	94,5	3500	1430	515	286	3500	32	16,5
400	2600	130,5	1020	520	278	94,5	3500	1320	645	360	3500	32	21,0
460	1060	53,7	1270	231	141	93,0	2450	1655	293	183	1900	26	13,5
460	1490	75,0	1200	296	187	94,0	3500	1560	383	243	2700	26	15,5
460	1950	98,1	1100	364	225	94,5	3500	1430	458	292	3500	32	16,5
460	2560	128,6	1020	446	274	94,5	3500	1320	553	354	3500	32	21,0

FLUID AX 250KC.2

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,6Tn J=3,1Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1120	56,5	1570	345	184	93,5	2700	2045	435	240	2100	32	16,5
400	1500	75,5	1480	430	232	94,5	3500	1910	540	300	2850	32	17,5
400	2050	103,0	1375	540	295	94,5	3500	1795	695	385	3500	40	22,5
400	2800	140,5	1270	680	372	94,5	3500	1650	860	483	3500	40	28,0
460	1100	55,7	1570	296	181	93,5	2650	2045	373	236	2050	32	16,5
460	1530	77,2	1480	382	237	94,5	3500	1910	480	306	2900	32	17,5
460	2020	101,5	1375	463	291	94,5	3500	1795	596	379	3500	40	22,5
460	2900	145,4	1270	612	385	94,5	3500	1650	774	500	3500	40	28,0

FLUID AX 250KC.3

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,6Tn J=3,8Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1060	53,5	1950	405	216	94,0	2750	2525	510	280	2100	40	18,0
400	1590	80,0	1860	570	310	95,0	3500	2405	720	400	3150	40	21,0
400	1970	99,0	1710	645	352	95,0	3500	2230	820	460	3500	48	24,0
400	2870	143,9	1580	875	475	95,0	3500	2065	1110	620	3500	48	32,5
460	1020	51,3	1950	338	208	94,0	2650	2525	425	269	2000	40	18,0
460	1570	78,9	1860	489	306	95,0	3500	2405	617	395	3100	40	21,0
460	2060	103,5	1710	586	368	95,0	3500	2230	745	481	3500	48	24,0
460	2890	144,8	1580	766	478	95,0	3500	2065	971	624	3500	48	32,5

POWERTECH FLUID AX 250KC
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 250KC.4

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,6Tn J=4,7Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1050	53,0	2470	500	272	94,0	2700	3230	640	355	2050	50	22,5
400	1500	75,4	2340	675	368	95,0	3500	3055	860	480	3100	50	25,0
400	1940	97,4	2150	800	437	95,0	3500	2805	1015	570	3500	58	30,0
400	2650	132,9	1980	1010	550	95,0	3500	2560	1265	710	3500	58	37,5
460	1060	53,3	2470	438	274	94,0	2750	3230	560	358	2050	50	22,5
460	1440	72,3	2340	563	353	95,0	3500	3055	717	461	3000	50	25,0
460	1980	99,6	2150	711	446	95,0	3500	2805	902	582	3500	58	30,0
460	2610	131,0	1980	866	542	95,0	3500	2560	1084	699	3500	58	37,5

FLUID AX 250KC.5

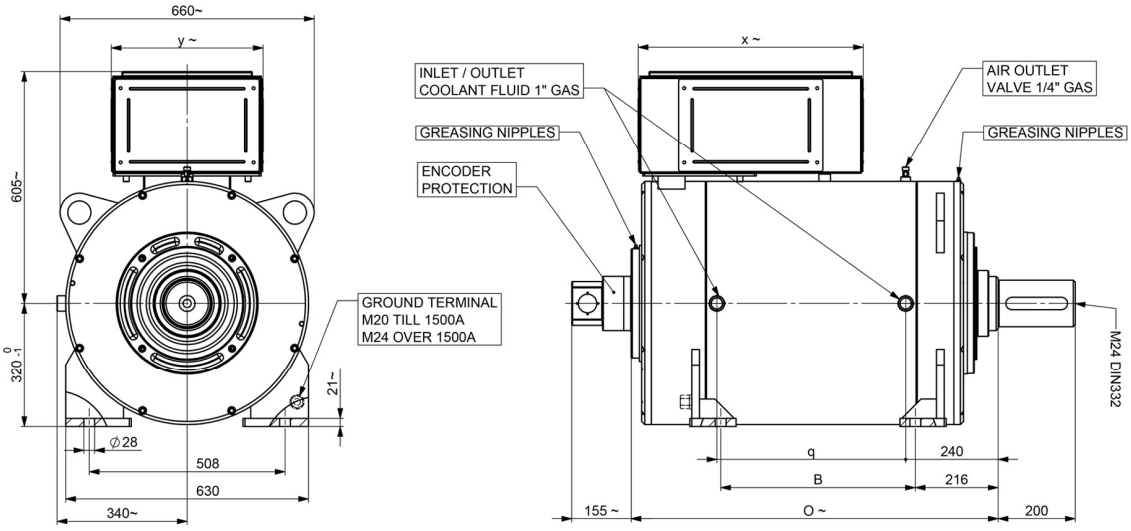
NOT AVAILABLE IN S6 VERSION

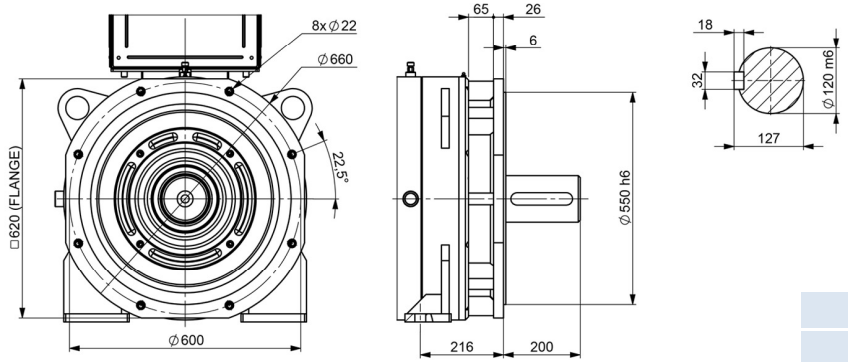
Poles: 2p=6 Tmax=2,6Tn J=5,8Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	1000	50,4	3010	575	315	94,0	2600	3915	740	410	2000	60	26,0
400	1510	75,9	2860	830	452	95,0	3500	3730	1050	590	3200	60	31,0
400	1780	89,4	2640	900	492	95,0	3500	3435	1140	640	3500	70	33,5
400	2550	127,9	2430	1190	648	95,0	3500	3145	1490	840	3500	70	44,5
460	990	49,7	3010	493	312	94,0	2550	3915	634	406	2000	60	26,0
460	1540	77,6	2860	738	461	95,0	3500	3730	933	602	3250	60	31,0
460	1790	90,0	2640	788	495	95,0	3500	3435	998	644	3500	70	33,5
460	2440	122,6	2430	992	620	95,0	3500	3145	1242	804	3500	70	44,5

POWERTECH FLUID AX 315CA/C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

OVERVIEW

IP PROTECTION	IP54 (IP55 on request)
THERMAL PROTECTION TYPE	KLIXON (PT100, PTC on request)
BALANCING, VIBRATION GRADE (EN 60034-14 / VDE 0530 part 14)	A (B on request)
INSULATION CLASS	F
COOLING METHOD	LIQUID (flowrate by size) 20°C (68°F) WATER + MAX 20% ETHYLENE GLYCOL
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B3, B35, or other on request
BRAKE	up to 2500 Nm (on request)
DE BEARING	BALL (ROLLER request)
NDE BEARING	ROLLER (INSULATED)
MAX MECHANICAL SPEED	3200 r.p.m. (2400 r.p.m. roller bearing) (S6 version up to 4500 r.p.m.)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request





TERMINAL BOX DIMENSIONS		
MOTOR CURRENT	x	y
TILL 1500 A	585	395
OVER 1500 A	645	534

unit [mm]

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
315CA/C.1	505	955	490
315CA/C.2	615	1065	600
315CA/C.3	735	1185	720
315CA/C.4	865	1315	850
315C.5	1025	1475	1010

315CA.5 NOT AVAILABLE

POWERTECH FLUID AX 315CA
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 315CA.1

S6 VERSION POWER DERATING: -5% (Tmax=1,5Tn)

Poles: 2p=6 Tmax=2,3Tn J=7,0Kgm²			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	550	27,9	2170	235	125	92,0	1200	2870	305	165	950	34	14,0
400	1150	57,9	2030	450	245	93,5	2450	2660	575	320	1950	34	22,0
400	1580	79,4	1990	590	330	94,0	3200	2600	765	430	2650	40	27,0
400	2100	105,4	1800	720	395	94,0	3200	2320	915	510	3200	40	32,0
460	530	26,7	2170	196	120	92,0	1150	2870	254	159	900	34	14,0
460	1100	55,5	2030	375	234	93,5	2350	2660	479	306	1850	34	22,0
460	1570	79,1	1990	511	328	94,0	3200	2600	663	427	2650	40	27,0
460	2010	101,0	1800	600	378	94,0	3200	2320	763	488	3200	40	32,0

FLUID AX 315CA.2

S6 VERSION POWER DERATING: -5% (Tmax=1,5Tn)

Poles: 2p=6 Tmax=2,4Tn J=9,2Kgm²			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	600	30,4	2790	325	175	93,0	1350	3580	420	225	1050	42	17,0
400	1080	54,4	2700	560	305	94,0	2450	3540	730	400	1900	42	25,0
400	1550	77,9	2620	765	425	94,5	3200	3420	990	555	2700	48	31,0
400	2000	100,4	2320	885	485	94,5	3200	3010	1125	630	3200	48	36,0
460	600	30,6	2790	284	175	93,0	1350	3580	368	225	1050	42	17,0
460	1100	55,6	2700	498	311	94,0	2500	3540	649	407	1950	42	25,0
460	1490	74,7	2620	638	409	94,5	3200	3420	825	534	2600	48	31,0
460	2040	102,6	2320	787	495	94,5	3200	3010	1000	643	3200	48	36,0

POWERTECH FLUID AX 315CA
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 315CA.3

S6 VERSION POWER DERATING: -5% (Tmax=1,5Tn)

Poles: 2p=6 Tmax=2,5Tn J=12Kgm²			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	560	28,4	3580	385	210	93,5	1250	4600	490	270	1000	50	18,5
400	1080	54,4	3450	700	390	94,5	2500	4470	910	505	1950	50	29,0
400	1540	77,4	3350	960	540	94,5	3200	4340	1240	700	2700	58	40,0
400	2100	105,4	2960	1175	650	95,0	3200	3840	1505	845	3200	58	45,0
460	550	28,0	3580	330	206	93,5	1250	4600	420	265	1000	50	18,5
460	1050	52,9	3450	592	379	94,5	2450	4470	770	491	1900	50	29,0
460	1570	79,1	3350	853	551	94,5	3200	4340	1102	714	2750	58	40,0
460	2070	103,9	2960	1007	641	95,0	3200	3840	1290	833	3200	58	45,0

FLUID AX 315CA.4

S6 VERSION POWER DERATING: -5% (Tmax=1,5Tn)

Poles: 2p=6 Tmax=2,5Tn J=14Kgm²			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	550	27,9	4340	460	250	93,5	1300	5640	590	325	1000	60	22,5
400	970	48,9	4230	780	430	94,5	2450	5510	1010	560	1850	60	32,0
400	1430	71,9	4110	1110	615	94,5	3200	5340	1425	800	2550	70	45,0
400	2060	103,4	3620	1410	780	95,0	3200	4710	1800	1015	3200	70	52,0
460	530	26,7	4340	383	241	93,5	1250	5640	492	313	950	60	22,5
460	1010	51,1	4230	709	448	94,5	2550	5510	918	583	1950	60	32,0
460	1440	72,3	4110	971	619	94,5	3200	5340	1247	806	2550	70	45,0
460	1970	99,1	3620	1175	746	95,0	3200	4710	1500	971	3200	70	52,0

POWERTECH FLUID AX 315C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 315C.1

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,3Tn J=8,0Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	550	27,8	2340	255	135	92,5	1150	3040	325	175	900	34	14,0
400	1150	57,8	2200	485	265	94,0	2300	2870	620	345	1850	34	22,0
400	1580	79,3	2150	640	355	94,5	3150	2780	820	460	2500	40	27,0
400	2100	105,3	1930	775	425	94,5	3200	2500	985	550	3200	40	32,0
460	530	26,6	2340	213	130	92,5	1100	3040	271	169	850	34	14,0
460	1100	55,4	2200	404	253	94,0	2200	2870	517	330	1750	34	22,0
460	1570	79,0	2150	555	353	94,5	3150	2780	711	457	2500	40	27,0
460	2010	100,9	1930	646	407	94,5	3200	2500	821	526	3200	40	32,0

FLUID AX 315C.2

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,4Tn J=10Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	600	30,3	3020	350	190	93,5	1300	3900	450	245	1000	42	17,0
400	1080	54,3	2920	600	330	94,5	2300	3800	785	430	1800	42	25,0
400	1550	77,8	2830	825	460	95,0	3200	3700	1070	600	2550	48	31,0
400	2000	100,3	2510	950	525	95,0	3200	3250	1210	680	3200	48	36,0
460	600	30,5	3020	306	190	93,5	1300	3900	394	245	1000	42	17,0
460	1100	55,5	2920	533	336	94,5	2350	3800	698	438	1850	42	25,0
460	1490	74,6	2830	688	442	95,0	3100	3700	892	577	2450	48	31,0
460	2040	102,5	2510	844	536	95,0	3200	3250	1076	694	3200	48	36,0

FLUID AX 315C.3

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,5Tn J=13Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	560	28,3	3840	415	225	94,0	1200	4950	530	290	950	50	18,5
400	1080	54,3	3720	755	420	95,0	2350	4820	980	545	1850	50	29,0
400	1540	77,3	3600	1030	580	95,0	3200	4650	1335	750	2550	58	40,0
400	2100	105,3	3180	1265	700	95,5	3200	4140	1620	910	3200	58	45,0
460	550	27,9	3840	356	221	94,0	1200	4950	454	285	950	50	18,5
460	1050	52,8	3720	639	408	95,0	2300	4820	829	530	1800	50	29,0
460	1570	79,0	3600	916	591	95,0	3200	4650	1187	765	2600	58	40,0
460	2070	103,8	3180	1084	690	95,5	3200	4140	1389	897	3200	58	45,0

POWERTECH FLUID AX 315C
LIQUID COOLED IP54 ASYNCHRONOUS MOTORS

WINDINGS

Speed values must be technically compatible with bearings type and applied accessories

FLUID AX 315C.4

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,5Tn J=16Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	550	27,8	4690	495	270	94,0	1200	6080	635	350	950	60	22,5
400	970	48,8	4580	840	465	95,0	2300	5960	1085	605	1750	60	32,0
400	1430	71,8	4410	1190	660	95,0	3100	5740	1530	860	2400	70	45,0
400	2060	103,3	3900	1515	840	95,5	3200	5050	1935	1090	3200	70	52,0
460	530	26,6	4690	413	260	94,0	1150	6080	529	337	900	60	22,5
460	1010	51,0	4580	764	484	95,0	2400	5960	986	630	1800	60	32,0
460	1440	72,2	4410	1041	665	95,0	3100	5740	1339	866	2400	70	45,0
460	1970	99,0	3900	1263	804	95,5	3200	5050	1613	1042	3200	70	52,0

FLUID AX 315C.5

NOT AVAILABLE IN S6 VERSION

Poles: 2p=6 Tmax=2,5Tn J=19Kgm^2			DUTY S1					DUTY S6/40%				Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	constant power max speed	Tol	Iol	Pol	constant power max speed	Flow Rate	Suggested Chiller min. Diss. Power
V	RPM	HZ	Nm	A	kW	%	RPM	Nm	A	kW	RPM	L /min	kW
400	570	28,8	5700	620	340	94,0	1250	7370	800	440	950	70	28,0
400	1000	50,3	5450	1020	570	95,0	2250	7070	1320	740	1750	70	39,0
400	1370	68,8	5230	1330	750	95,5	3100	6800	1715	975	2400	85	46,0
400	2100	105,3	4620	1820	1015	95,5	3200	6000	2320	1320	3200	85	62,0
460	580	29,4	5700	551	346	94,0	1250	7370	711	448	950	70	28,0
460	1020	51,4	5450	907	582	95,0	2300	7070	1173	755	1800	70	39,0
460	1350	67,8	5230	1140	739	95,5	3050	6800	1470	961	2350	85	46,0
460	1930	96,9	4620	1456	933	95,5	3200	6000	1856	1213	3200	85	62,0

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