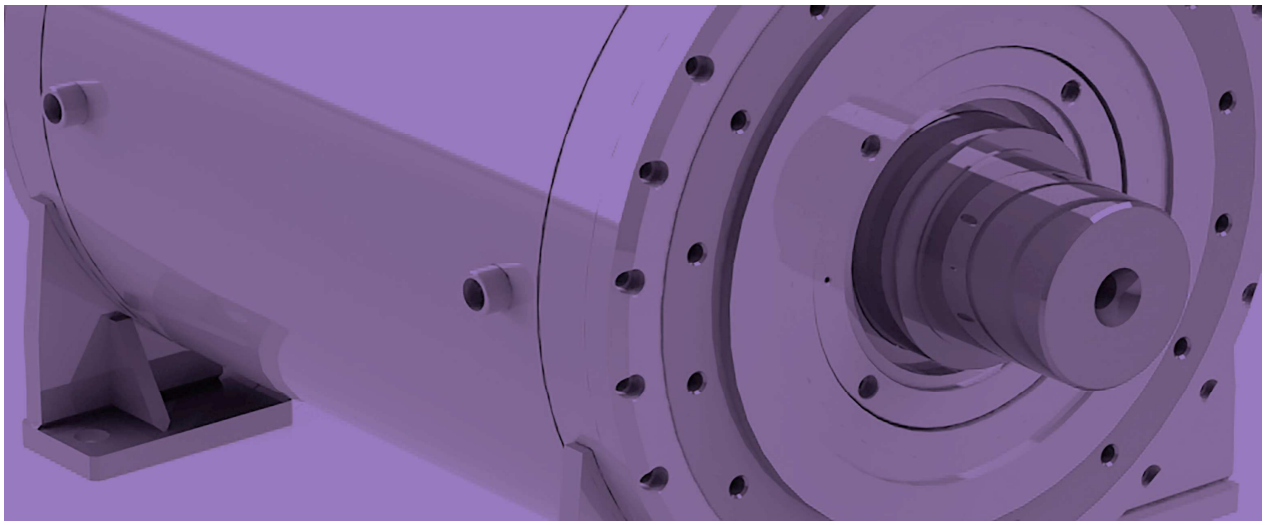
COMER®
Emotion in Motion

SY FLUID SERIES CATALOGUE

PERMANENT MAGNET SYNCHRONOUS TORQUE MOTORS
LIQUID COOLED IP54



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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.

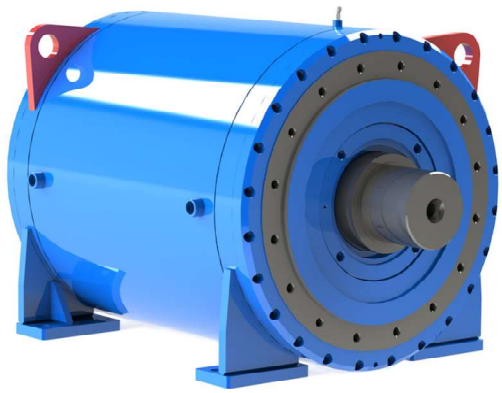
ISO 9001:2015
The whole production process is controlled inside the factory and certified by ISO 9000 Quality System since 1995, now ISO 9001:2015. At the end of manufacturing process, the motors and generators are tested on computerized test benches, equipped with inverters and energy recovery AFE device: 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

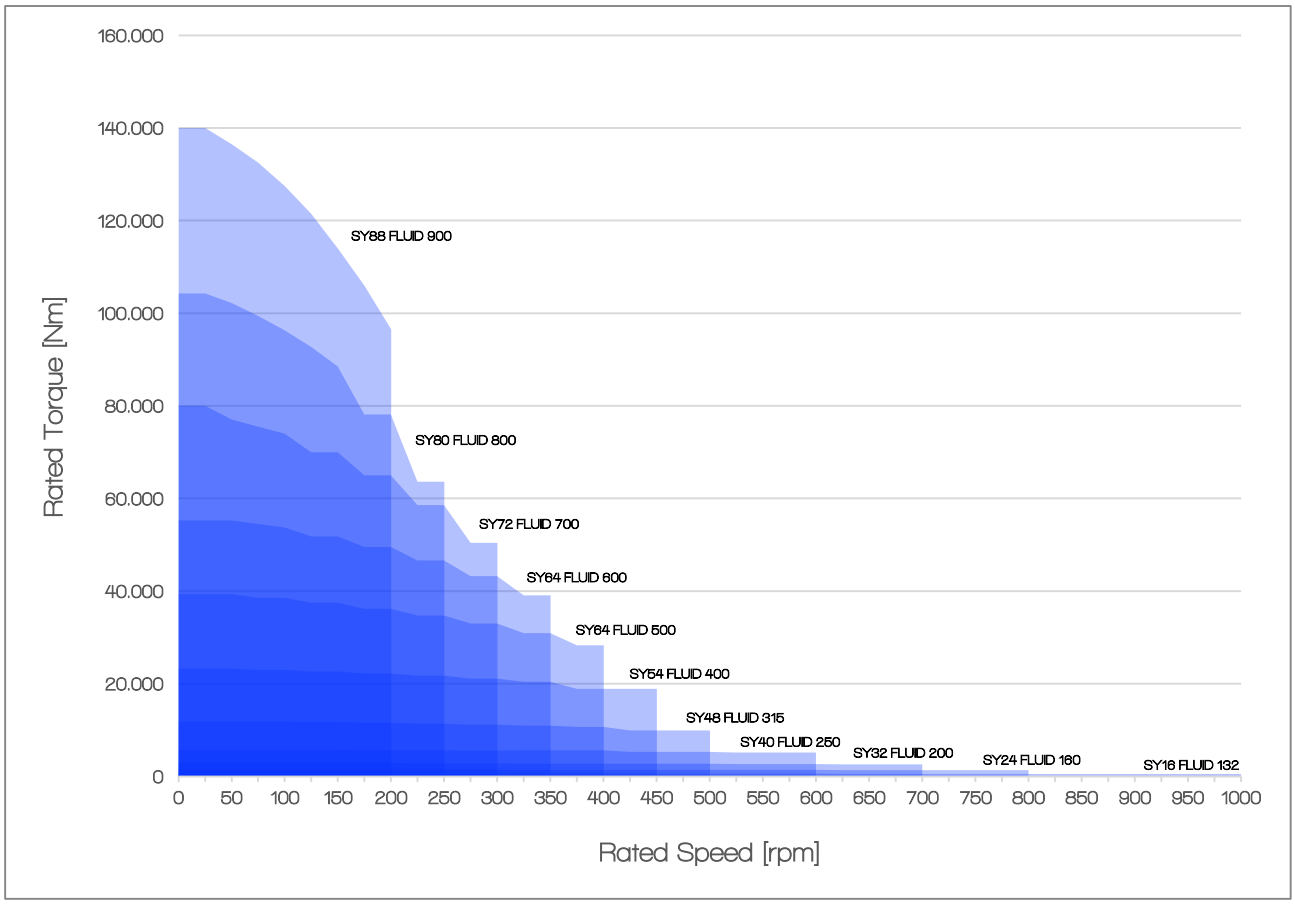
POWERTECH SY FLUID SERIES
HIGH TORQUE PM SYNCHRONOUS MOTORS

OVERVIEW



ROTOR DESIGN	PERMANENT MAGNETS
IP PROTECTION	IP54
COOLING METHOD	LIQUID (flowrate by size) 20°C (68°F) WATER + MAX 20% ETHYLENE GLYCOL
THERMAL PROTECTION TYPE	PT100 (KLIXON, PTC on request)
BALANCING, VIBRATION GRADE (EN 60034-14 / VDE 0530 part 14)	A (B on request)
INSULATION CLASS	F
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B3, B35, or other on request
AVAILABLE SIZES	132, 160, 200, 250, 315, 400, 500, 600, 700, 800, 900
MECHANICAL EXECUTION	SOLID SHAFT, HOLLOW SHAFT, ACTIVE PARTS ONLY (ROTOSTATOR)
AVAILABLE BEARINGS	BALL, ROLLER, INSULATED
PAINTING SYSTEM	NITRO, POLYURETHANIC, on request

TORQUE CHART



POWERTECH SY16 FLUID 132
HIGH TORQUE PM SYNCHRONOUS MOTORS

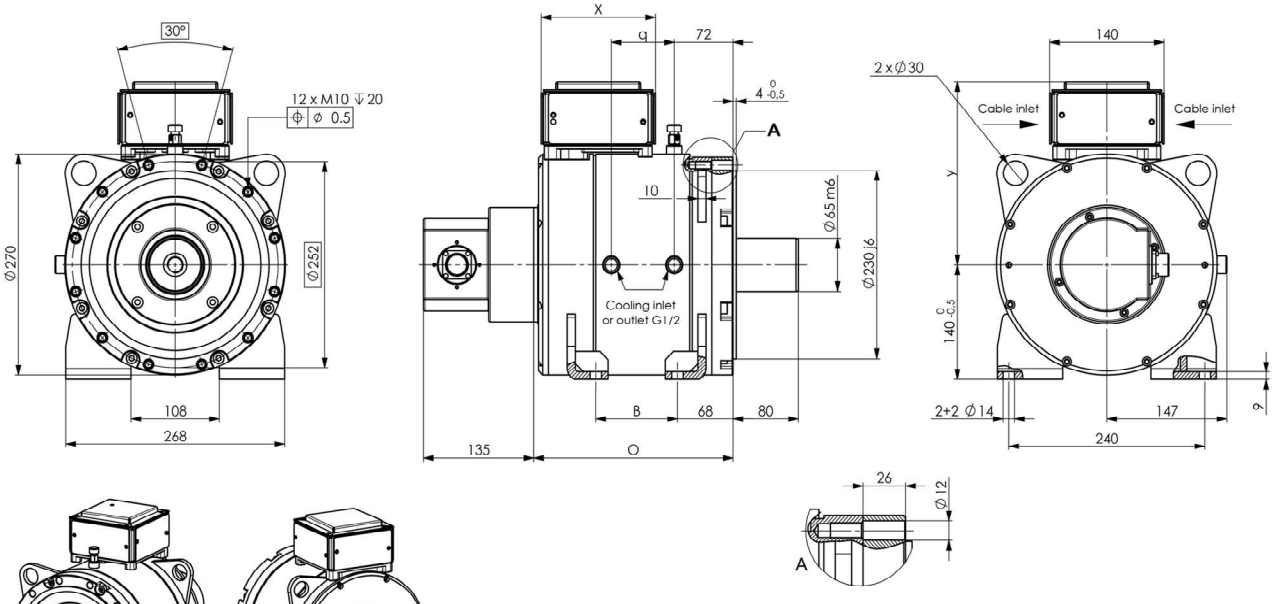
TECHNICAL DATA

POLES 2p=16

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	100	200	300	400	500	600	800	1.000	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	13,3	26,7	40,0	53,3	66,7	80,0	106,7	133,3	L /min	kW
132.05	Tn	Nm	64,5	64	64	64	63,5	63	62	61	11	0,8
	Pn	kW	0,7	1,3	2,0	2,7	3,3	4,0	5,2	6,4		
	Eff.	%	56%	70%	78%	81%	84%	87%	89%	91%		
132.10	Tn	Nm	145	144	143	142	141	140	138	136	13	1,5
	Pn	kW	1,5	3,0	4,5	5,9	7,4	8,8	11,6	14,2		
	Eff.	%	60%	73%	80%	84%	87%	88%	91%	92%		
132.15	Tn	Nm	228	227	226	225	224	223	218	214	14	2,3
	Pn	kW	2,4	4,8	7,1	9,4	11,7	14,0	18,3	22,4		
	Eff.	%	62%	75%	81%	85%	87%	89%	91%	93%		
132.25	Tn	Nm	397	395	392	390	387	385	378	370	16	3,8
	Pn	kW	4,2	8,3	12,3	16,3	20,3	24,2	31,7	38,7		
	Eff.	%	63%	76%	82%	85%	87%	90%	92%	93%		
132.35	Tn	Nm	565	562	560	555	550	545	530	525	18	5,2
	Pn	kW	5,9	11,8	17,6	23,2	28,8	34,2	44,4	55,0		
	Eff.	%	64%	76%	83%	86%	87%	90%	92%	93%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz



TERMINAL BOX DIMENSIONS		
MOTOR CURRENT	X	y
TILL 50 A	140	225
OVER 50 A	200	240

unit [mm]

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
132.05	100	244	77
132.10	150	294	127
132.15	200	344	177
132.25	300	444	277
132.35	400	544	377

POWERTECH SY24 FLUID 160
HIGH TORQUE PM SYNCHRONOUS MOTORS

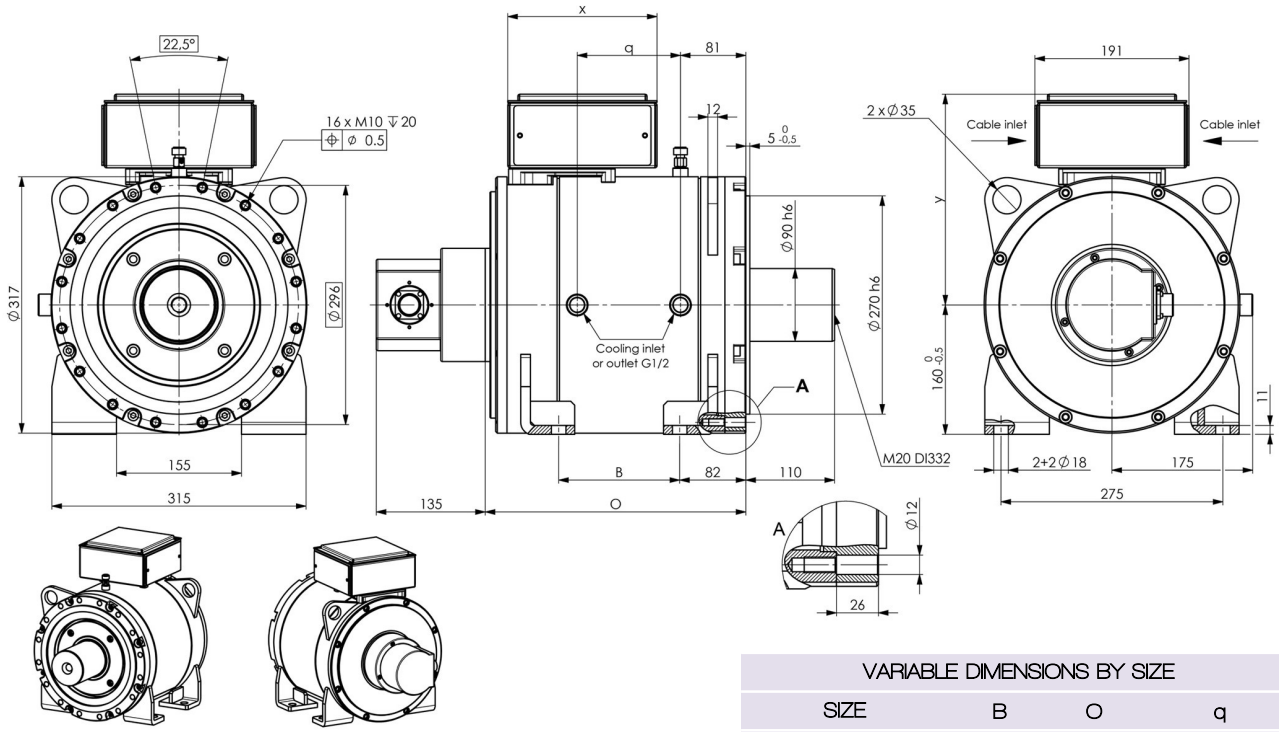
TECHNICAL DATA

POLES 2p=24

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	100	200	300	400	500	600	700	800	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	20,0	40,0	60,0	80,0	100,0	120,0	140,0	160,0	L /min	kW
160.10	Tn	Nm	280	278	275	272	270	266	262	260	15	2
	Pn	kW	2,9	5,8	8,6	11,4	14,1	16,7	19,2	21,8		
	Eff.	%	68%	82%	84%	87%	89%	91%	92%	93%		
160.20	Tn	Nm	590	585	580	575	565	560	550	540	18	4
	Pn	kW	6,2	12,2	18,2	24,1	29,6	35,2	40,3	45,2		
	Eff.	%	69%	82%	86%	89%	90%	91%	92%	93%		
160.30	Tn	Nm	960	950	940	930	915	900	885	865	20	5,5
	Pn	kW	10,1	19,9	29,5	38,9	47,9	56,5	64,9	72,5		
	Eff.	%	70%	83%	88%	90%	92%	92%	93%	94%		
160.40	Tn	Nm	1.185	1.175	1.160	1.145	1.125	1.110	1.085	1.065	22	7
	Pn	kW	12,4	24,6	36,4	48,0	58,9	69,7	79,5	89,2		
	Eff.	%	72%	84%	90%	91%	92%	92%	93%	94%		
160.50	Tn	Nm	1.480	1.470	1.455	1.435	1.410	1.385	1.360	1.330	24	8,5
	Pn	kW	15,5	30,8	45,7	60,1	73,8	87,0	99,7	111,4		
	Eff.	%	74%	84%	91%	91%	92%	92%	93%	94%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz



TERMINAL BOX DIMENSIONS		
MOTOR CURRENT	x	y
TILL 170 A	185	265
OVER 170 A	260	290

unit [mm]

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
160.10	150	323	128
160.20	250	423	228
160.30	350	523	328
160.40	450	623	428
160.50	550	723	528

POWERTECH SY32 FLUID 200
HIGH TORQUE PM SYNCHRONOUS MOTORS

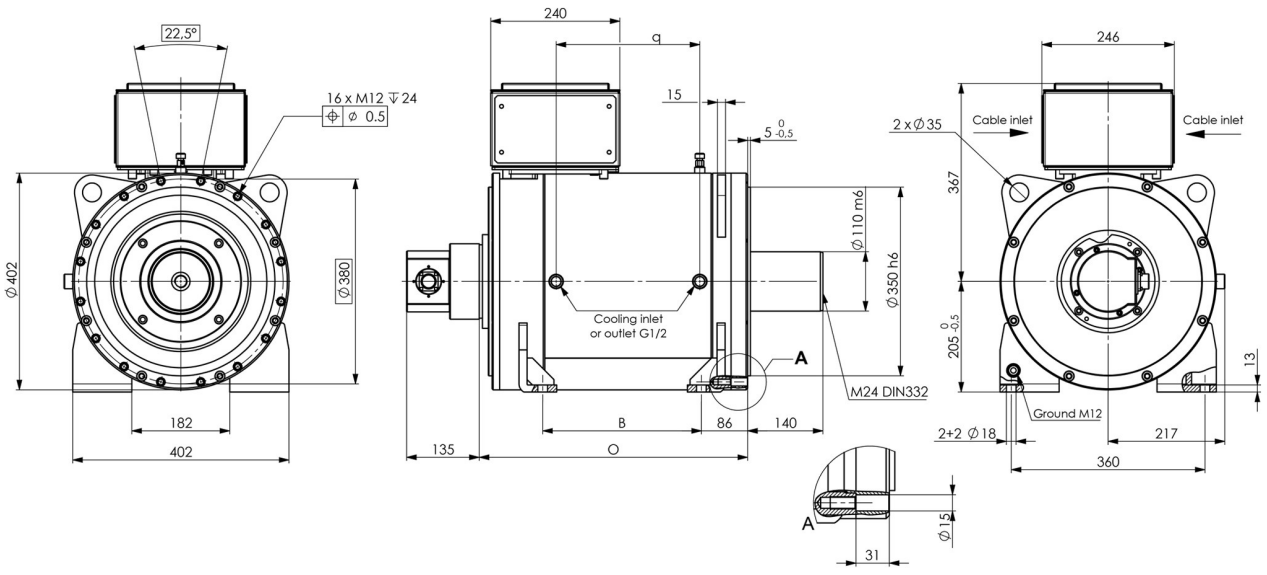
TECHNICAL DATA

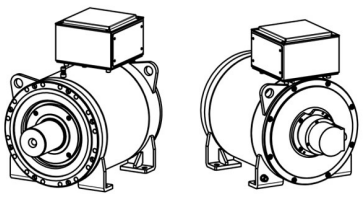
POLES 2p=32

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	100	150	200	300	400	500	600	700	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	26,7	40,0	53,3	80,0	106,7	133,3	160,0	186,7	L /min	kW
	Tn	Nm	1.105	1.100	1.095	1.070	1.055	1.040	1.015	990		
200.20	Pn	kW	11,6	17,3	22,9	33,6	44,2	54,4	63,8	72,6	22	5,5
	Eff.	%	75%	83%	86%	90%	92%	93%	94%	94%		
	Tn	Nm	1.400	1.395	1.380	1.365	1.340	1.315	1.290	1.250		
200.25	Pn	kW	14,7	21,9	28,9	42,9	56,1	68,8	81,0	91,6	25	6,5
	Eff.	%	75%	84%	86%	90%	92%	94%	94%	94%		
	Tn	Nm	1.700	1.690	1.680	1.655	1.630	1.600	1.560	1.520		
200.30	Pn	kW	17,8	26,5	35,2	52,0	68,3	83,8	98,0	111,4	28	8,5
	Eff.	%	76%	84%	86%	91%	92%	94%	94%	94%		
	Tn	Nm	2.290	2.275	2.260	2.225	2.190	2.145	2.100	2.040		
200.40	Pn	kW	24,0	35,7	47,3	69,9	91,7	112,3	131,9	149,5	32	11
	Eff.	%	76%	84%	87%	91%	92%	94%	94%	94%		
	Tn	Nm	2.875	2.860	2.840	2.800	2.750	2.690	2.630	2.560		
200.50	Pn	kW	30,1	44,9	59,5	87,9	115,2	140,8	165,2	187,6	36	14
	Eff.	%	76%	84%	87%	91%	92%	94%	94%	94%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz





VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
200.20	295	499	267
200.25	345	549	317
200.30	395	599	367
200.40	495	699	467
200.50	595	799	567

unit [mm]

POWERTECH SY40 FLUID 250
HIGH TORQUE PM SYNCHRONOUS MOTORS

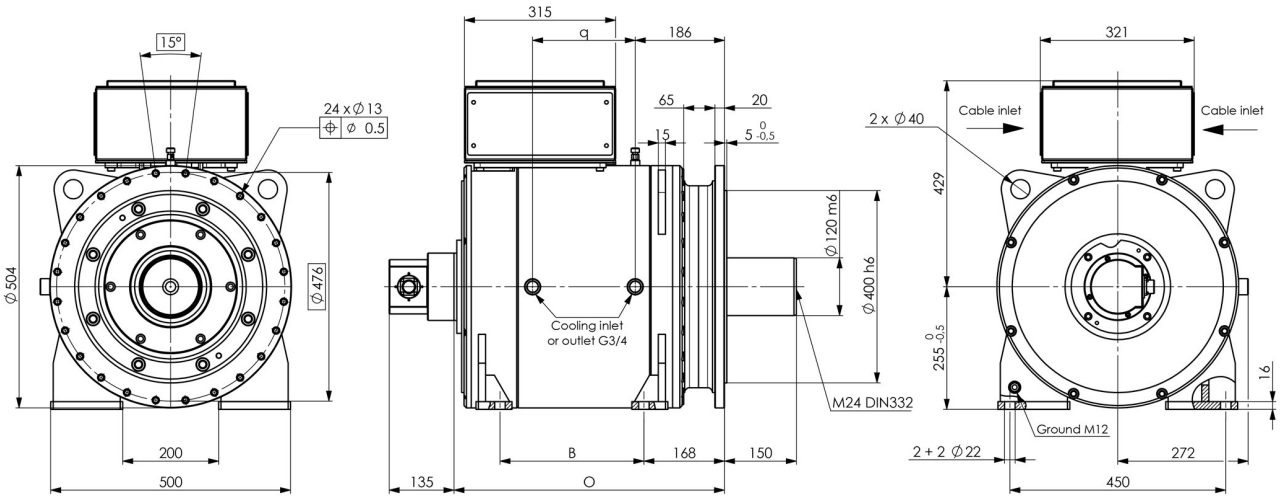
TECHNICAL DATA

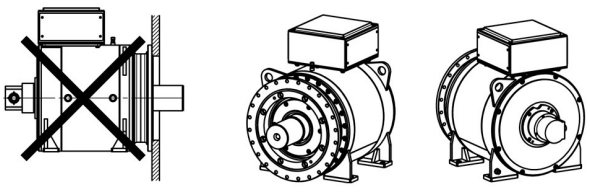
POLES 2p=40

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	100	150	200	250	300	400	500	600	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	33,3	50,0	66,7	83,3	100,0	133,3	166,7	200,0	L /min	kW
250.20	Tn	Nm	1.870	1.860	1.850	1.835	1.820	1.785	1.740	1.690	32	7,5
	Pn	kW	19,6	29,2	38,7	48,0	57,2	74,8	91,1	106,2		
	Eff.	%	80%	85%	88%	90%	92%	93%	94%	95%		
250.30	Tn	Nm	2.845	2.830	2.800	2.785	2.755	2.700	2.630	2.555	35	10
	Pn	kW	29,8	44,4	58,6	72,9	86,5	113,1	137,7	160,5		
	Eff.	%	81%	86%	89%	90%	92%	93%	95%	95%		
250.40	Tn	Nm	3.840	3.775	3.745	3.725	3.705	3.620	3.500	3.390	38	13
	Pn	kW	40	59	78	98	116	152	183	213		
	Eff.	%	81%	86%	89%	91%	92%	94%	95%	95%		
250.50	Tn	Nm	4.780	4.740	4.705	4.655	4.610	4.540	4.390	4.245	42	16
	Pn	kW	50,0	74,4	98,5	121,8	144,8	190,1	229,8	266,7		
	Eff.	%	81%	86%	89%	91%	92%	94%	95%	95%		
250.60	Tn	Nm	5.740	5.695	5.650	5.600	5.585	5.650	5.275	5.110	45	19
	Pn	kW	60	89	118	147	175	237	276	321		
	Eff.	%	82%	86%	89%	91%	92%	94%	95%	95%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz





unit [mm]

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
250.20	300	564	214
250.30	400	664	314
250.40	500	764	414
250.50	600	864	514
250.60	700	964	614

POWERTECH SY48 FLUID 315
HIGH TORQUE PM SYNCHRONOUS MOTORS

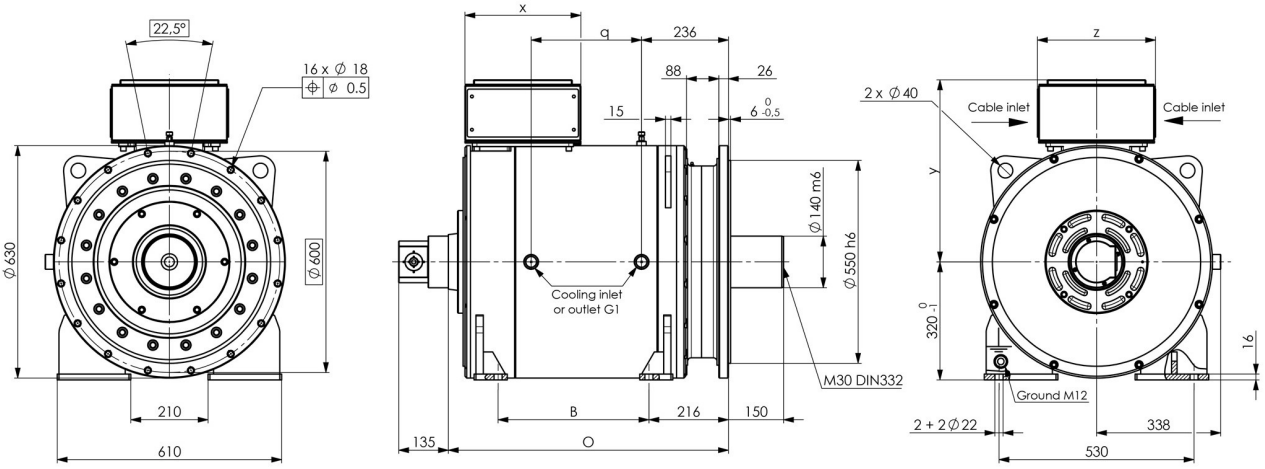
TECHNICAL DATA

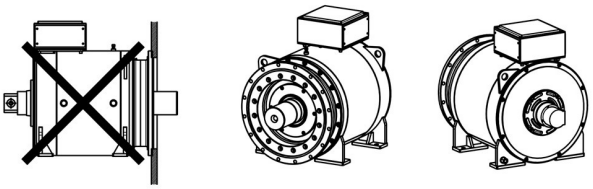
POLES 2p=48

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	100	150	200	250	300	350	400	500	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	40,0	60,0	80,0	100,0	120,0	140,0	160,0	200,0	L /min	kW
315.30	Tn	Nm	5.020	4.960	4.900	4.830	4.750	4.660	4.570	4.350	45	12,5
	Pn	kW	53	78	103	126	149	171	191	228		
	Eff.	%	85%	89%	92%	93%	94%	95%	95%	96%		
315.40	Tn	Nm	6.760	6.680	6.600	6.500	6.400	6.260	6.130	5.850	50	16,5
	Pn	kW	71	105	138	170	201	229	257	306		
	Eff.	%	85%	90%	92%	93%	94%	95%	95%	96%		
315.50	Tn	Nm	8.360	8.260	8.140	8.000	7.850	7.700	7.500	7.100	55	20
	Pn	kW	88	130	170	209	247	282	314	372		
	Eff.	%	86%	90%	92%	93%	94%	95%	95%	96%		
315.60	Tn	Nm	10.200	10.070	9.950	9.780	9.600	9.400	9.200	8.700	58	24
	Pn	kW	107	158	208	256	302	344	385	455		
	Eff.	%	86%	90%	92%	93%	94%	95%	95%	96%		
315.70	Tn	Nm	11.870	11.730	11.550	11.370	11.160	10.930	10.680	9.900	60	28
	Pn	kW	124	184	242	298	351	401	447	518		
	Eff.	%	86%	90%	92%	93%	94%	95%	95%	96%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz





TERMINAL BOX DIMENSIONS			
MOTOR CURRENT	x	y	z
TILL 600 A	315	495	325
* OVER 600 A	585	595	400

unit [mm]

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	q
315.30	410	761	300
315.40	510	861	400
315.50	610	961	500
315.60	710	1061	600
315.70	810	1161	700

* NOT AVAILABLE ON 315.30 AND 315.40

POWERTECH SY54 FLUID 400
HIGH TORQUE PM SYNCHRONOUS MOTORS

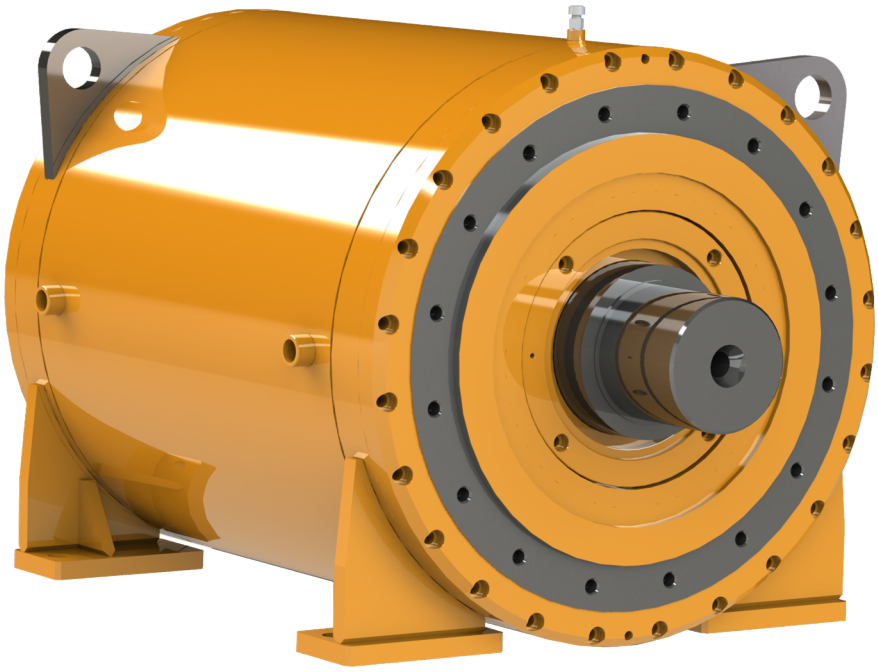
TECHNICAL DATA

POLES 2p=54

MOTOR TYPE	Speed	rpm	DUTY S1 50	100	150	200	250	300	350	450	Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F) Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	22,5	45,0	67,5	90,0	112,5	135,0	157,5	202,5	L /min	kW
400.35	Tn	Nm	11.400	11.300	11.200	11.000	10.700	10.500	10.200	9.400	80	21
	Pn	kW	60	120	175	230	280	330	375	445		
	Eff.	%	82%	89%	91%	93%	94%	95%	96%	96%		
400.40	Tn	Nm	13.200	13.100	12.850	12.600	12.350	11.700	11.300	10.850	84	23
	Pn	kW	70	135	200	265	325	365	415	510		
	Eff.	%	82%	90%	93%	94%	95%	96%	96%	97%		
400.50	Tn	Nm	16.600	16.400	16.100	15.800	15.500	14.600	14.100	13.550	88	28
	Pn	kW	85	170	255	330	405	460	515	640		
	Eff.	%	82%	90%	93%	94%	95%	96%	96%	96%		
400.60	Tn	Nm	20.000	19.700	19.400	19.000	18.550	18.100	16.850	16.200	92	31
	Pn	kW	105	205	305	400	485	570	615	765		
	Eff.	%	82%	90%	93%	94%	95%	96%	96%	97%		
400.70	Tn	Nm	23.300	23.000	22.650	22.200	21.700	21.100	20.450	18.900	96	36
	Pn	kW	120	240	355	465	570	665	750	890		
	Eff.	%	83%	90%	93%	94%	95%	96%	96%	97%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz



The drawing will be provided on demand only according to the Custormer's specifics

POWERTECH SY64 FLUID 500
HIGH TORQUE PM SYNCHRONOUS MOTORS

TECHNICAL DATA

POLES 2p=64

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	50	100	150	200	250	300	350	400	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	26,7	53,3	80,0	106,7	133,3	160,0	186,7	213,3	L /min	kW
500.35	Tn	Nm	19.400	19.000	18.500	18.000	17.300	16.500	15.600	14.500	95	25
	Pn	kW	102	199	291	377	453	518	572	607		
	Eff.	%	86%	92%	94%	95%	96%	96%	97%	97%		
500.40	Tn	Nm	22.300	21.800	21.300	20.600	20.000	19.000	17.800	16.500	98	28
	Pn	kW	117	228	335	431	524	597	652	691		
	Eff.	%	86%	92%	94%	95%	96%	96%	97%	97%		
500.50	Tn	Nm	28.000	27.400	26.700	25.900	24.900	23.700	22.300	20.600	102	35
	Pn	kW	147	287	419	542	652	744	817	863		
	Eff.	%	87%	92%	94%	95%	96%	96%	97%	97%		
500.60	Tn	Nm	33.700	33.000	32.000	31.000	29.800	28.400	26.600	24.500	106	38
	Pn	kW	176	346	503	649	780	892	975	1.026		
	Eff.	%	87%	93%	95%	96%	96%	97%	97%	97%		
500.70	Tn	Nm	39.400	38.500	37.500	36.200	34.700	33.000	30.900	28.300	110	42
	Pn	kW	206	403	589	758	908	1.037	1.132	1.185		
	Eff.	%	87%	93%	95%	96%	96%	97%	97%	97%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz

The drawing will be provided on demand only according to the Custormer's specifics

POWERTECH SY64 FLUID 600
HIGH TORQUE PM SYNCHRONOUS MOTORS

TECHNICAL DATA

POLES 2p=64

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	50	75	100	150	200	250	300	350	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	26,7	40,0	53,3	80,0	106,7	133,3	160,0	186,7	L /min	kW
600.40	Tn	Nm	31.100	30.700	30.300	29.300	28.000	26.600	24.800	22.700	105	32
	Pn	kW	163	241	317	460	586	696	779	832		
	Eff.	%	90%	93%	94%	95%	96%	96%	96%	97%		
600.45	Tn	Nm	35.200	34.700	34.300	34.100	31.700	30.000	28.100	27.600	108	35
	Pn	kW	184	272	359	536	664	785	883	1.011		
	Eff.	%	90%	93%	94%	95%	96%	96%	97%	97%		
600.50	Tn	Nm	39.200	38.700	38.200	36.900	35.300	33.400	31.100	28.400	110	37
	Pn	kW	205	304	400	580	739	874	977	1.041		
	Eff.	%	90%	93%	94%	96%	96%	97%	97%	97%		
600.60	Tn	Nm	47.300	46.650	46.000	44.400	42.400	40.000	37.200	33.700	115	43
	Pn	kW	248	366	482	697	888	1.047	1.168	1.235		
	Eff.	%	90%	93%	94%	96%	97%	97%	97%	97%		
600.70	Tn	Nm	55.300	54.500	53.700	51.800	49.500	46.600	43.200	39.100	120	48
	Pn	kW	289	428	562	814	1.037	1.220	1.357	1.433		
	Eff.	%	90%	92%	94%	96%	97%	97%	97%	97%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz

The drawing will be provided on demand only according to the Custormer's specifics

POWERTECH SY72 FLUID 700
HIGH TORQUE PM SYNCHRONOUS MOTORS

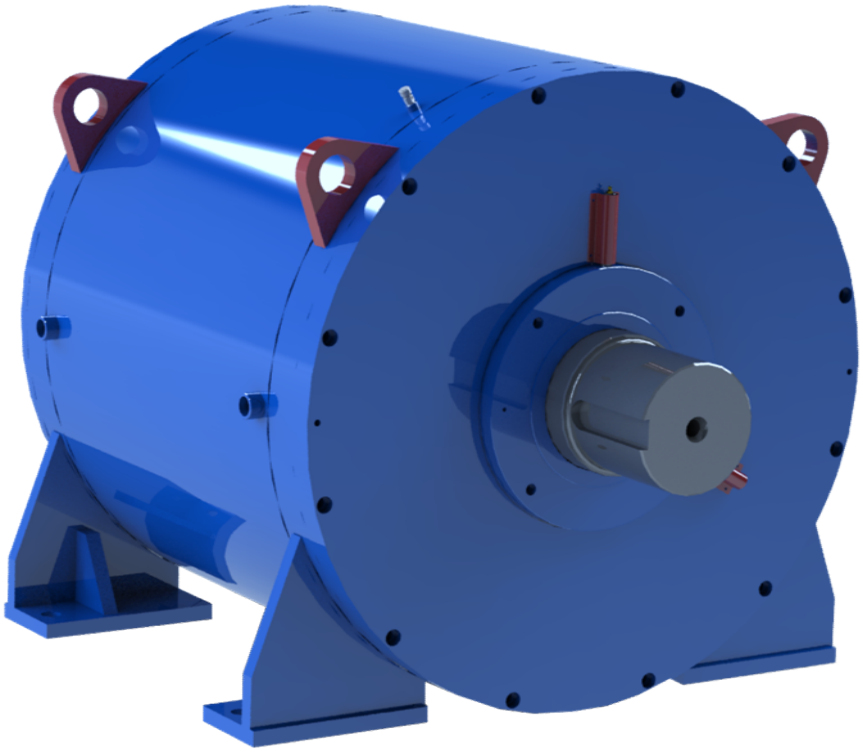
TECHNICAL DATA

POLES 2p=72

MOTOR TYPE			DUTY S1								Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	25	50	75	100	150	200	250	300	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	15,0	30,0	45,0	60,0	90,0	120,0	150,0	180,0	L /min	kW
700.45	Tn	Nm	46.600	45.900	45.100	44.100	41.900	39.100	35.700	31.300	115	38
	Pn	kW	122	240	354	462	658	819	934	983		
	Eff.	%	83%	90%	93%	95%	95%	96%	97%	97%		
700.50	Tn	Nm	52.000	51.100	50.100	49.100	46.600	43.500	37.700	35.200	118	41
	Pn	kW	136	268	393	514	732	911	987	1.106		
	Eff.	%	83%	90%	93%	95%	96%	97%	97%	97%		
700.55	Tn	Nm	57.200	56.300	55.300	54.100	51.300	48.700	46.500	38.000	120	44
	Pn	kW	150	295	434	566	806	1.020	1.217	1.194		
	Eff.	%	84%	90%	94%	95%	96%	97%	97%	97%		
700.65	Tn	Nm	68.000	66.800	65.500	64.100	60.700	56.500	51.300	46.500	130	52
	Pn	kW	178	350	514	671	953	1.183	1.343	1.461		
	Eff.	%	84%	91%	94%	95%	96%	97%	97%	97%		
700.75	Tn	Nm	80.000	77.000	75.500	74.000	70.000	65.000	58.600	50.400	140	58
	Pn	kW	209	403	593	775	1.099	1.361	1.534	1.583		
	Eff.	%	84%	92%	94%	95%	96%	97%	97%	97%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz



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POWERTECH SY80 FLUID 800
HIGH TORQUE PM SYNCHRONOUS MOTORS

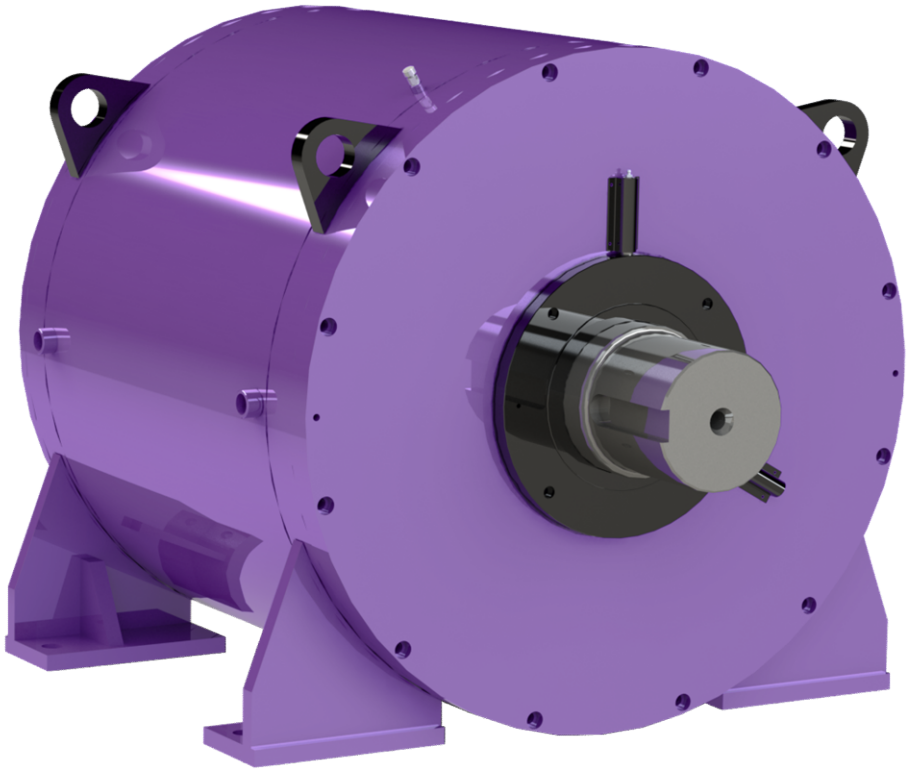
TECHNICAL DATA

POLES 2p=80

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	25	50	75	100	125	150	200	250	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	16,7	33,3	50,0	66,7	83,3	100,0	133,3	166,7	L /min	kW
800.45	Tn	Nm	61.400	60.100	58.600	56.800	54.800	52.400	46.600	38.600	135	38
	Pn	kW	160	310	460	590	720	820	980	1.010		
	Eff.	%	87%	92%	94%	96%	97%	97%	97%	97%		
800.50	Tn	Nm	68.500	67.100	65.400	63.400	61.000	58.300	51.900	42.700	145	41
	Pn	kW	180	350	510	660	800	920	1.090	1.120		
	Eff.	%	87%	92%	94%	96%	97%	97%	97%	97%		
800.55	Tn	Nm	75.700	74.100	72.200	70.000	67.300	64.500	57.100	47.000	150	45
	Pn	kW	200	390	570	730	880	1.010	1.200	1.230		
	Eff.	%	87%	93%	94%	96%	97%	97%	97%	97%		
800.65	Tn	Nm	90.000	91.800	89.400	86.600	80.100	76.600	67.800	55.500	165	53
	Pn	kW	240	480	700	910	1.050	1.200	1.420	1.450		
	Eff.	%	87%	93%	95%	96%	97%	97%	97%	97%		
800.75	Tn	Nm	104.300	102.200	99.400	96.300	92.700	88.500	78.100	63.600	180	61
	Pn	kW	270	540	780	1.010	1.210	1.390	1.640	1.660		
	Eff.	%	87%	93%	95%	96%	97%	97%	97%	97%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz



The drawing will be provided on demand only according to the Custormer's specifics

POWERTECH SY88 FLUID 900
HIGH TORQUE PM SYNCHRONOUS MOTORS

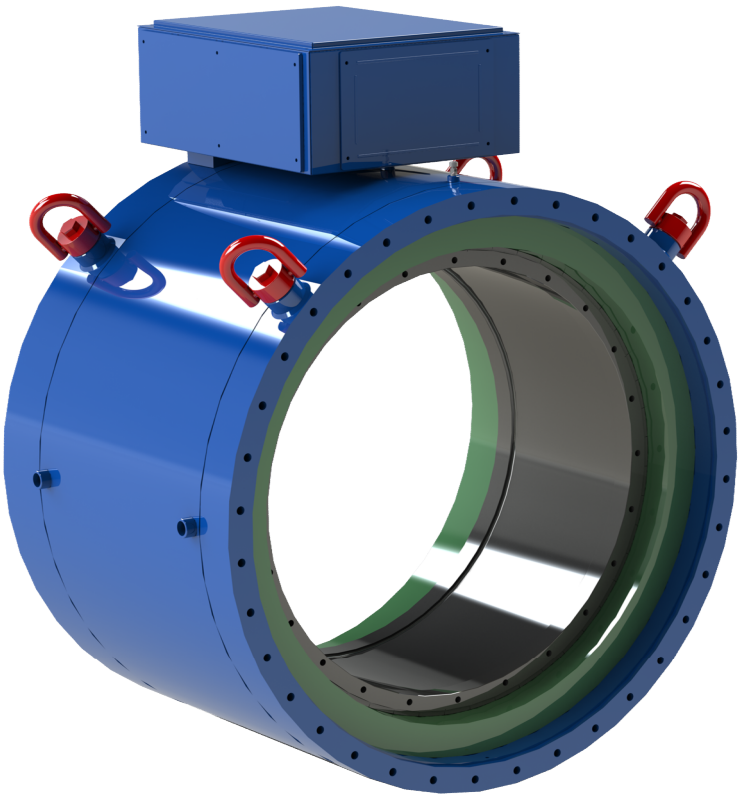
TECHNICAL DATA

POLES 2p=88

MOTOR TYPE	DUTY S1										Fluid circuit parameters Water + max 20% Ethylene Glycol T_{in}=20°C (68°F)	
	Speed	rpm	25	50	75	100	125	150	175	200	Flow Rate	Suggested Chiller min. Diss. Power
	Freq.	Hz	18,3	36,7	55,0	73,3	91,7	110,0	128,3	146,7	L /min	kW
900.50	Tn	Nm	86.400	84.200	81.600	78.600	75.100	71.000	66.100	60.500	165	43
	Pn	kW	230	440	640	820	980	1.120	1.210	1.270		
	Eff.	%	88%	93%	95%	96%	97%	97%	97%	97%		
900.55	Tn	Nm	95.200	92.800	89.900	86.500	82.500	78.000	72.600	66.200	175	47
	Pn	kW	250	490	710	910	1.080	1.220	1.330	1.390		
	Eff.	%	88%	93%	95%	96%	97%	97%	97%	97%		
900.60	Tn	Nm	104.500	101.900	98.600	95.000	90.600	85.600	79.800	72.800	180	51
	Pn	kW	270	530	770	990	1.190	1.340	1.460	1.520		
	Eff.	%	88%	93%	95%	96%	97%	97%	97%	97%		
900.70	Tn	Nm	122.100	118.900	115.100	110.600	105.400	99.400	92.300	83.900	195	60
	Pn	kW	320	620	900	1.160	1.380	1.560	1.690	1.760		
	Eff.	%	88%	93%	95%	96%	97%	97%	97%	97%		
900.80	Tn	Nm	140.000	136.500	132.500	127.500	121.500	114.000	106.000	96.500	210	68
	Pn	kW	370	710	1.040	1.330	1.590	1.790	1.940	2.020		
	Eff.	%	88%	94%	95%	96%	97%	97%	97%	97%		

The winding will be defined according to the speed and Customer's specific voltage supply

All data outputs are referred to power converter clocking frequency (PWM) >4kHz



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