



# HY DRIVE SERIES CATALOGUE

PERMANENT MAGNET ASSISTED SYNCHRONOUS RELUCTANCE MOTORS  
IP54 IPM-PMASR



**COMER s.r.l.**

Headquarter, Factory and Sales Department  
Italy - 27029 Vigevano (PV)  
Via Oroboni, 26/28  
Ph. (+39) 0381 42661 Fax (+39) 0381 42662  
info@comergroup.it  
www.comergroup.it  
www.facebook.com/ComerSrl  
www.linkedin.com/company/comer-s.r.l./

August 2022



August 2022

# 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<sub>2</sub> emissions and re-use the excess energy into the Factory needs.

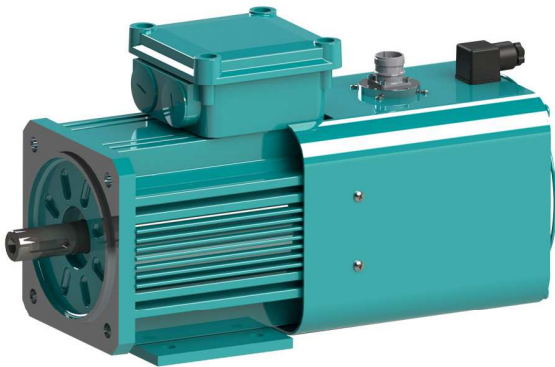
THANK YOU FOR TRUSTING US  
THESE FIRST 55 YEARS TOGETHER HAVE BEEN FANTASTIC!



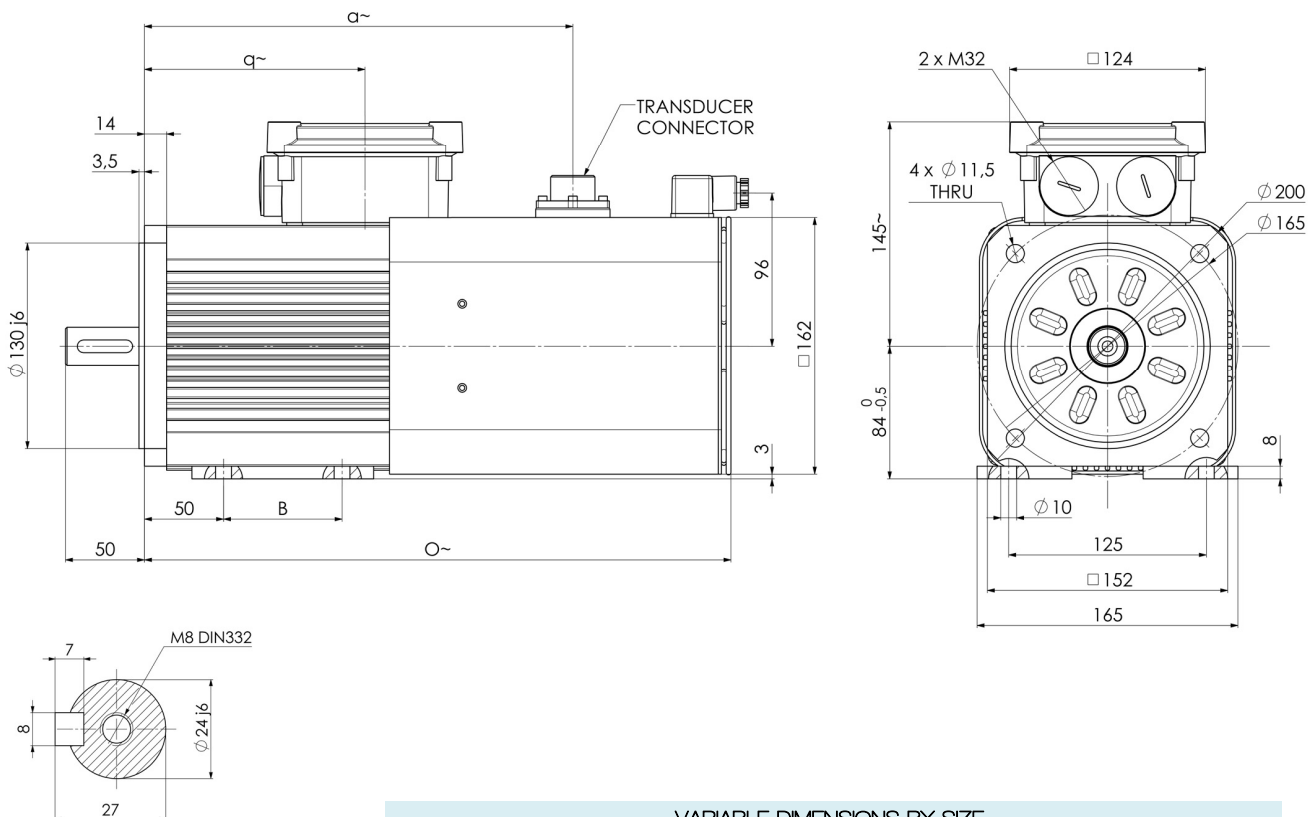
# POWERTECH HY6 DRIVE 80R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# OVERVIEW



IP PROTECTION	IP54
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
COOLING METHOD	IC416A
STANDARD FAN DETAILS	1x230Vac 50/60Hz 0,30A 46/42W
Amb. Cond.	0 + 40°C (32 + 104°F) 1000m ASL
TRANSDUCER	ENCODER OR RESOLVER (on request)
MOUNTING FORM	B5, B35, or other on request
BRAKE	up to 23 Nm (on request)
DE BEARING	BALL
NDE BEARING	BALL
MAX MECHANICAL SPEED BEMF MUST BE LESS THAN 500Vac	10000 r.p.m.
PAINTING SYSTEM	NITRO, POLYURETHANIC on request



unit [mm]

VARIABLE DIMENSIONS BY SIZE						
SIZE	a	q	B	O	a (with brake)	O (with brake)
80R.1	270	140	75	375	345	450
80R.2	310	180	115	415	385	490
80R.3	350	220	155	455	425	530
80R.4	390	260	195	495	465	570
80R.5	430	300	235	535	505	610

Speed values must be technically compatible with applied accessories

A specific electrical protection is needed when maximum speed BEMF>500Vac to avoid high voltage issues due to system failures

HY6 DRIVE 80R.1			J=0,0023Kgm <sup>2</sup>							Tmax=47Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
360	1000	50,0	16,0	3,2	1,7	88,0	21,0	4,1	2,2	1500	850
350	1700	85,0	15,5	5,3	2,8	91,0	20,0	6,7	3,6	2600	1600
355	2500	125,0	15,0	7,1	3,9	92,0	19,5	9,2	5,1	3650	2400

HY6 DRIVE 80R.2			J=0,0034Kgm <sup>2</sup>							Tmax=70Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
350	1000	50,0	24,0	4,9	2,5	88,0	31,0	6,2	3,3	1550	900
355	1700	85,0	23,5	7,7	4,2	91,0	30,5	9,9	5,4	2500	1650
350	2500	125,0	23,0	10,9	6,0	92,5	30,0	14,1	7,8	3650	2500

HY6 DRIVE 80R.3			J=0,0046Kgm <sup>2</sup>							Tmax=94Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
355	1000	50,0	33,0	6,5	3,5	88,5	43,5	8,6	4,6	1500	900
365	1700	85,0	32,5	10,4	5,8	91,5	42,0	13,3	7,5	2450	1600
365	2500	125,0	31,5	14,3	8,2	92,5	41,0	18,6	10,7	3450	2350

HY6 DRIVE 80R.4			J=0,0057Kgm <sup>2</sup>							Tmax=116Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
345	1000	50,0	41,0	8,3	4,3	89,0	53,5	10,8	5,6	1600	950
340	1700	85,0	40,5	13,7	7,2	92,0	53,0	17,9	9,4	2700	1700
360	2500	125,0	39,5	18,3	10,3	93,5	51,0	23,5	13,4	3550	2450

HY6 DRIVE 80R.5			J=0,0068Kgm <sup>2</sup>							Tmax=140Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
345	1000	50,0	50,0	9,9	5,2	90,0	65,0	12,7	6,8	1550	950
355	1700	85,0	48,5	15,4	8,6	92,5	63,0	20,0	11,2	2550	1650
350	2500	125,0	46,5	21,8	12,2	93,5	60,5	27,8	15,8	3650	2450

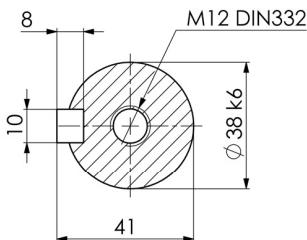
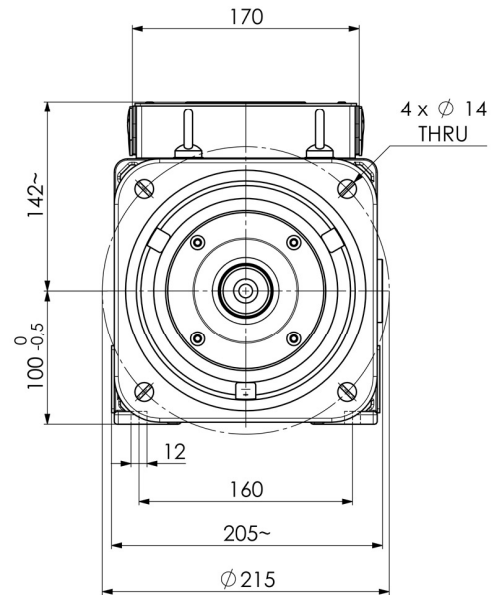
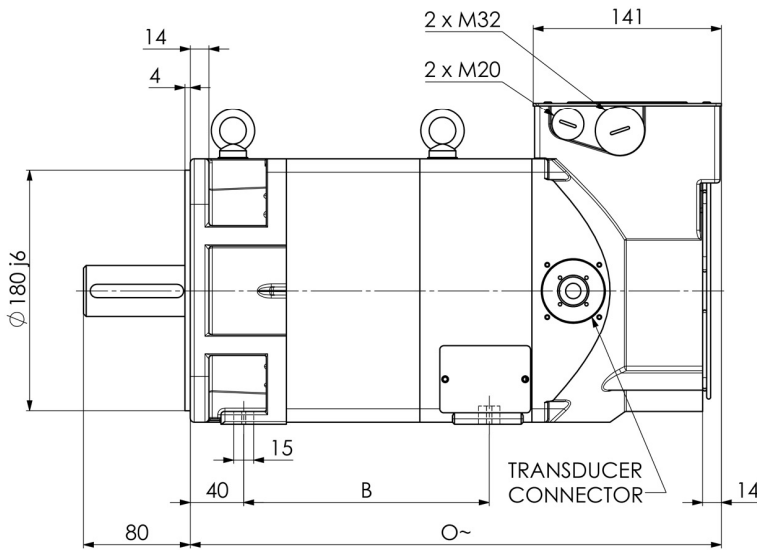
# POWERTECH HY6 DRIVE 100R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# OVERVIEW



IP PROTECTION	IP54
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
COOLING METHOD	IC416A
STANDARD FAN DETAILS	3x400Vac 50/60Hz 0,13/0,09A 45/43W
OPTIONAL FAN DETAILS	1x230Vac 50/60Hz 0,23/0,23A 47/53W
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	BALL
MAX MECHANICAL SPEED BEMF MUST BE LESS THAN 500Vac	9000 r.p.m. (4500 r.p.m. roller bearing)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request



VARIABLE DIMENSIONS BY SIZE

SIZE	B	O	O (with brake)
100R.1	184	400	485
100R.2	234	450	535
100R.3	284	500	585
100R.4	334	550	635
100R.5	384	600	685

unit [mm]

Speed values must be technically compatible with bearings type and applied accessories  
 A specific electrical protection is needed when maximum speed BEMF>500Vac to avoid high voltage issues due to system failures

HY6 DRIVE 100R.1			J=0,0128Kgm <sup>2</sup>							Tmax=130Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
365	1000	50,0	42,0	8,3	4,4	88,0	55	10,6	5,7	1650	850
350	1700	85,0	40,0	13,1	7,1	93,0	52	15,4	9,2	2750	1500
355	2500	125,0	37,0	17,5	9,7	93,5	48	22,3	12,6	4000	2250

HY6 DRIVE 100R.2			J=0,0192Kgm <sup>2</sup>							Tmax=190Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
350	1000	50,0	64,0	12,6	6,7	90,5	83	16,0	8,7	1750	900
360	1700	85,0	60,0	19,1	10,7	93,5	78	24,3	13,9	2700	1500
345	2500	125,0	56,0	27,0	14,7	94,0	73	28,7	19,1	4100	2300

HY6 DRIVE 100R.3			J=0,0264Kgm <sup>2</sup>							Tmax=260Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
350	1000	50,0	86,0	17,0	9,0	91,0	112	21,7	11,7	1800	900
355	1700	85,0	81,0	26,4	14,4	93,5	105	33,5	18,7	2850	1550
345	2500	125,0	73,0	35,3	19,1	94,0	95	44,9	24,8	4150	2400

HY6 DRIVE 100R.4			J=0,0320Kgm <sup>2</sup>							Tmax=320Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
360	1000	50,0	105	20,0	11,0	91,5	137	25,5	14,3	1550	850
360	1700	85,0	100	31,9	17,8	93,5	130	40,6	23,1	2750	1550
340	2500	125,0	90,0	43,5	23,6	94,5	117	55,5	30,7	4200	2350

HY6 DRIVE 100R.5			J=0,0384Kgm <sup>2</sup>							Tmax=390Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
345	1000	50,0	125	24,9	13,1	92,0	163	31,8	17,0	1750	900
355	1700	85,0	118	37,9	21,0	94,0	153	48,0	27,3	2750	1600
340	2500	125,0	107	52,1	28,0	94,0	139	66,0	36,4	4200	2400

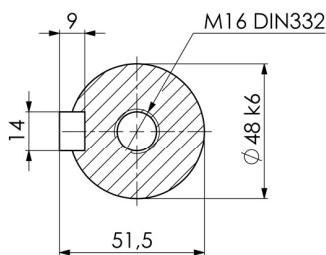
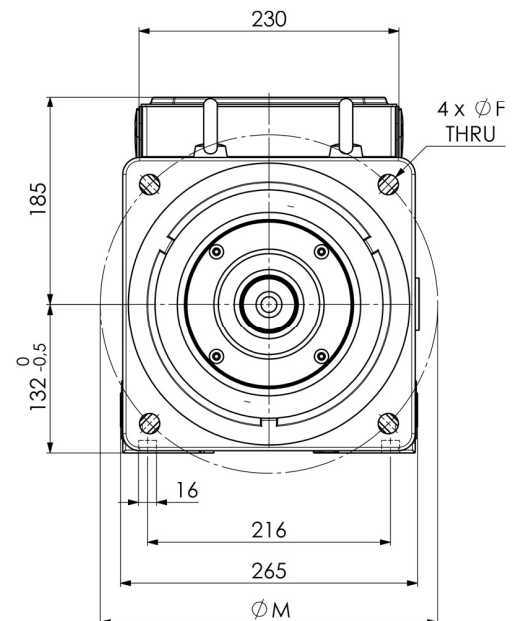
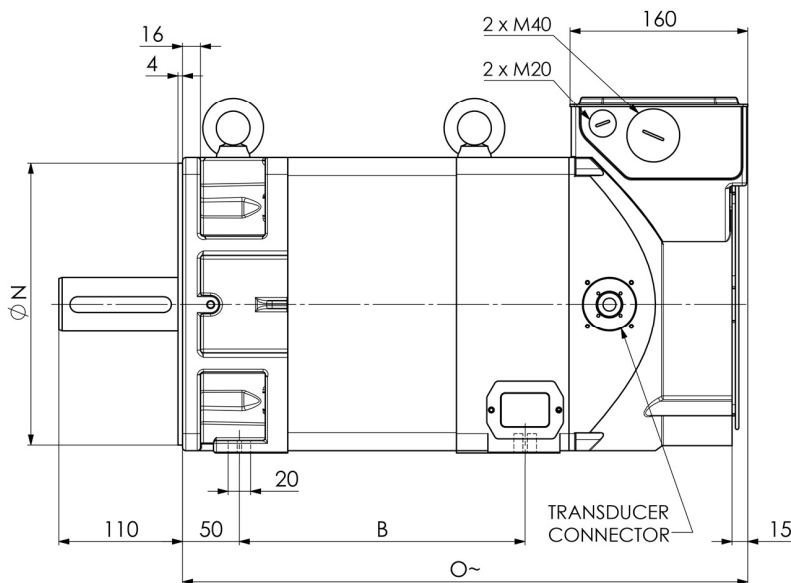
# POWERTECH HY8 DRIVE 132R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# OVERVIEW



IP PROTECTION	IP54
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
COOLING METHOD	IC416A
STANDARD FAN DETAILS	3x400Vac 50/60Hz 0,18/0,22A 105/140W
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	BALL
MAX MECHANICAL SPEED BEVIF MUST BE LESS THAN 500Vac	6500 r.p.m. (4000 r.p.m. roller bearing)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request



unit [mm]

FLANGE DIMENSIONS		
M	N	F
265	230 j6	14
300	250 h6	18

VARIABLE DIMENSIONS BY SIZE			
SIZE	B	O	O (with brake)
132R.1	254	505	605
132R.2	304	555	655
132R.3	354	605	705
132R.4	404	655	755
132R.5	454	705	805



# POWERTECH HY8 DRIVE 132R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# WINDINGS

at 400Vac (PWM>4kHz)

Speed values must be technically compatible with bearings type and applied accessories  
 A specific electrical protection is needed when maximum speed BEMF>500Vac to avoid high voltage issues due to system failures

HY8 DRIVE 132R.1			J=0,065Kgm <sup>2</sup>							Tmax=400Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
360	1000	66,7	134	25,8	14,0	93,5	174	32,3	18,2	1650	850
355	1700	113,3	126	40,7	22,5	95,0	164	51,8	29,2	2800	1650
385	2500	166,7	115	49,4	30,0	95,0	149	62,7	39,0	3450	2100

HY8 DRIVE 132R.2			J=0,086Kgm <sup>2</sup>							Tmax=530Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
355	1000	66,7	178	34,2	18,6	94,0	230	43,6	24,1	1700	900
355	1700	113,3	165	53,1	29,3	95,0	213	67,5	38,0	2750	1550
380	2500	166,7	150	65,4	39,3	95,5	195	82,9	51,0	3450	2100

HY8 DRIVE 132R.3			J=0,108Kgm <sup>2</sup>							Tmax=660Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
355	1000	66,7	215	40,7	22,5	94,5	280	51,9	29,3	1650	900
370	1700	113,3	205	62,2	36,4	95,0	266	79,2	47,3	2500	1450
375	2500	166,7	188	82,8	49,3	95,5	245	105	64,1	3450	2150

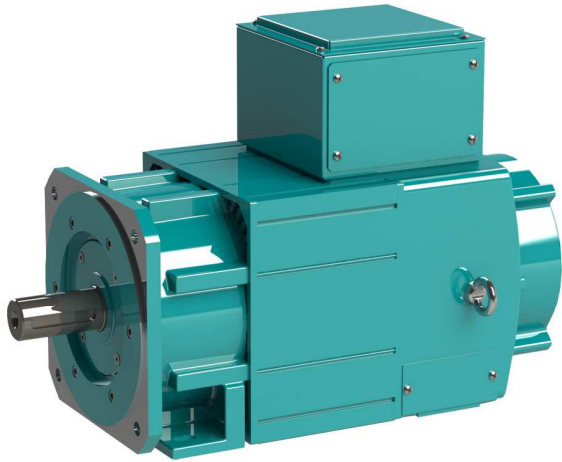
HY8 DRIVE 132R.4			J=0,129Kgm <sup>2</sup>							Tmax=800Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
370	1000	66,7	255	46,9	26,7	94,5	330	59,5	34,6	1550	850
350	1700	113,3	235	76,6	41,8	95,5	305	97,3	54,3	2750	1550
380	2500	166,7	214	94,1	56,0	95,5	278	119	72,8	3400	2050

HY8 DRIVE 132R.5			J=0,151Kgm <sup>2</sup>							Tmax=930Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
370	1000	66,7	296	54,3	31,0	94,5	385	69,2	40,3	1550	850
355	1700	113,3	270	85,9	48,0	95,5	350	109	62,3	2700	1550
365	2500	166,7	248	112	65,0	95,5	292	141	76,4	3550	2150

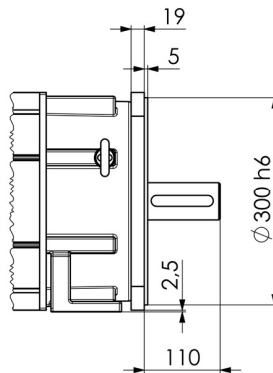
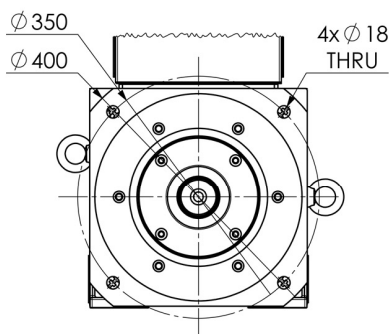
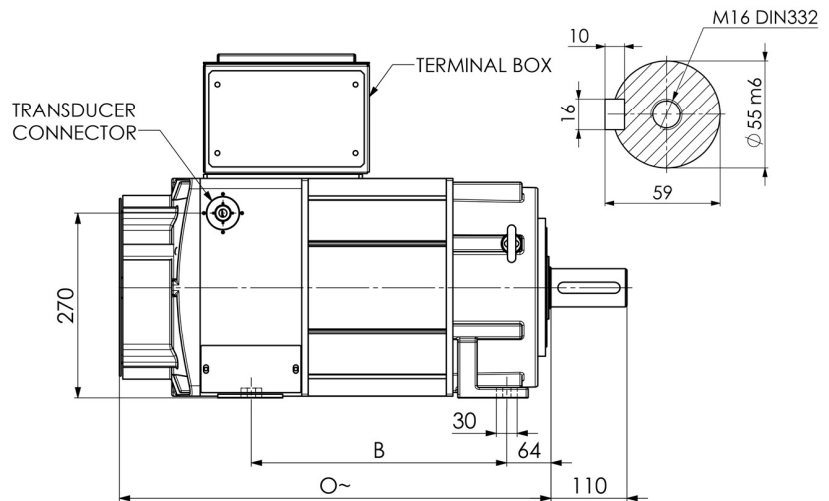
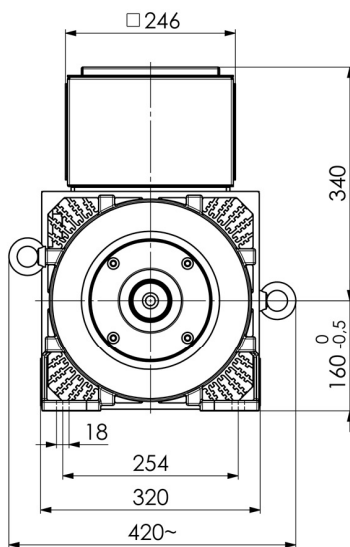
# POWERTECH HY8 DRIVE 160R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# OVERVIEW



IP PROTECTION	IP54
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
COOLING METHOD	IC416A
STANDARD FAN DETAILS	3x400Vac 50/60Hz 0,26/0,33A 150/210W
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 or INSULATED on request
NDE BEARING	BALL (insulated on request)
MAX MECHANICAL SPEED BEMF MUST BE LESS THAN 500Vac	5500 r.p.m. (3500 r.p.m. roller bearing)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request



unit [mm]

VARIABLE DIMENSIONS BY SIZE		
SIZE	B	O
160R.1	370	630
160R.2	420	680
160R.3	470	730
160R.4	570	830
160R.5	620	880

# POWERTECH HY8 DRIVE 160R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# WINDINGS

at 400Vac (PWM>4kHz)

Speed values must be technically compatible with bearings type and applied accessories  
 A specific electrical protection is needed when maximum speed BEMF>500Vac to avoid high voltage issues due to system failures

HY8 DRIVE 160R.1			J=0,16Kgm <sup>2</sup>							Tmax=800Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
340	800	53,3	275	43,1	23,0	94,0	356	55,0	29,9	1350	850
370	1500	100,0	255	66,8	40,0	95,0	332	86,5	52,0	2000	1450
360	2200	146,7	215	85,0	49,5	95,5	280	110	64,4	2950	2150

HY8 DRIVE 160R.2			J=0,20Kgm <sup>2</sup>							Tmax=1000Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
335	800	53,3	345	54,1	28,9	94,0	448	70,3	37,6	1250	800
350	1500	100,0	320	89,4	50,2	95,5	416	116	65,3	2150	1500
335	2200	146,7	265	112	61,0	95,5	344	144	79,3	3200	2300

HY8 DRIVE 160R.3			J=0,25Kgm <sup>2</sup>							Tmax=1200Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
355	800	53,3	418	62,1	35,0	94,5	544	80,4	45,5	1150	800
370	1500	100,0	382	99,8	60,0	95,5	496	129	78,0	1950	1400
370	2200	146,7	315	121	72,5	95,5	410	155	94,3	2750	2050

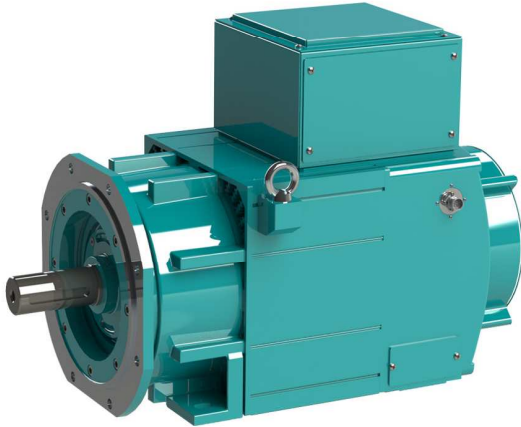
HY8 DRIVE 160R.4			J=0,32Kgm <sup>2</sup>							Tmax=1600Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
335	800	53,3	550	85,8	46,1	94,5	716	111	59,9	1200	850
370	1500	100,0	510	133	80,1	95,5	664	172	104	1900	1400
360	2200	146,7	412	163	95,0	95,5	536	210	124	2900	2150

HY8 DRIVE 160R.5			J=0,37Kgm <sup>2</sup>							Tmax=1800Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
340	800	53,3	620	95,5	52,0	94,5	806	124	67,5	1200	800
345	1500	100,0	570	159	89,5	95,5	740	205	116	2100	1500
350	2200	146,7	470	188	108	95,5	610	243	141	2950	2150

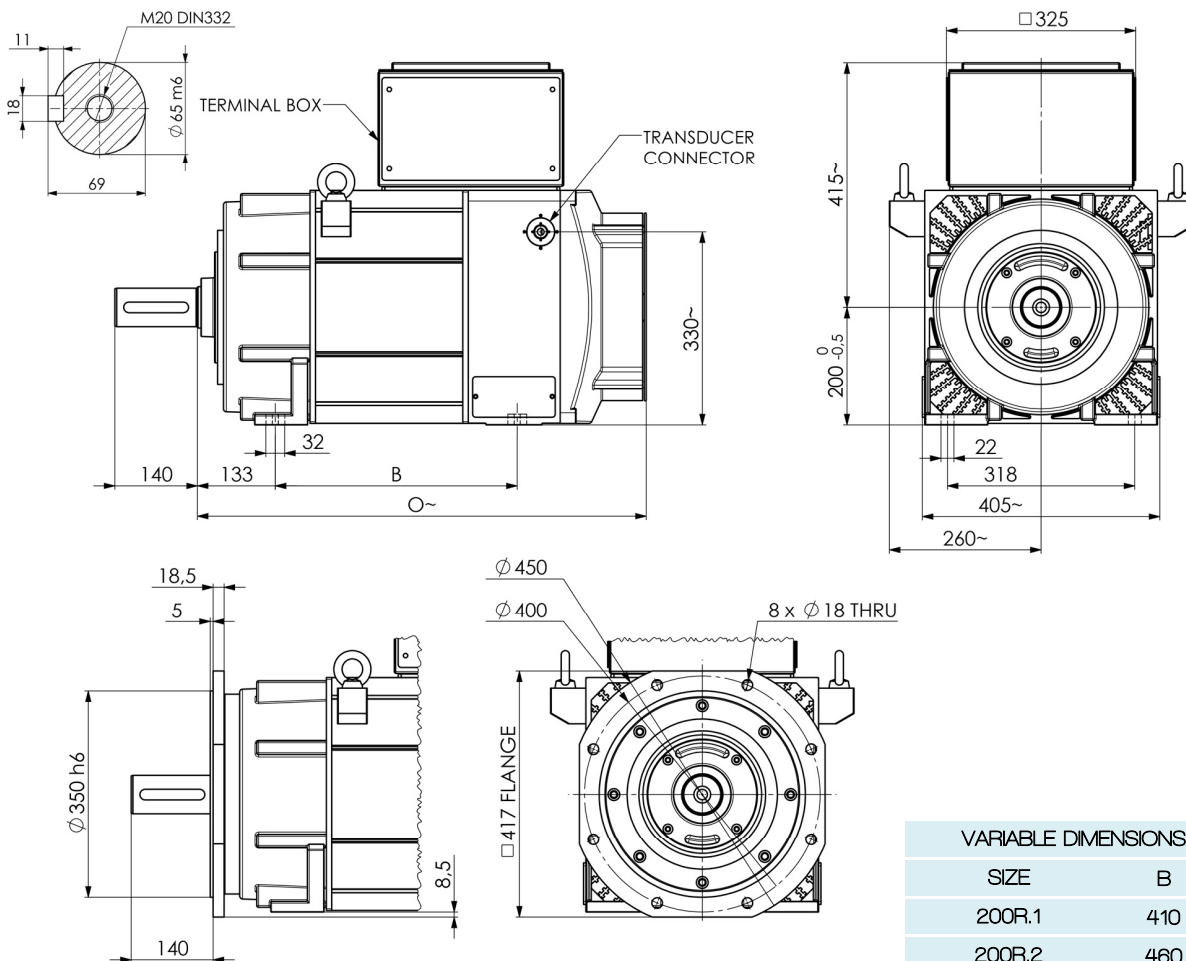
# POWERTECH HY6 DRIVE 200R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# OVERVIEW



IP PROTECTION	IP54
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
COOLING METHOD	IC416A
STANDARD FAN DETAILS	3x400Vac 50/60Hz 0,43/0,58A 270/370W
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 or INSULATED on request
NDE BEARING	BALL (insulated on request)
MAX MECHANICAL SPEED BEMF MUST BE LESS THAN 500Vac	4500 r.p.m. (3200 r.p.m. roller bearing)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request



### VARIABLE DIMENSIONS BY SIZE

SIZE	B	O
200R.1	410	770
200R.2	460	820
200R.3	510	870
200R.4	560	920
200R.5	660	1020

unit [mm]

Speed values must be technically compatible with bearings type and applied accessories  
 A specific electrical protection is needed when maximum speed BEMF>500Vac to avoid high voltage issues due to system failures

HY6 DRIVE 200R.1			J=0,64Kgm <sup>2</sup>							Tmax=1700Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
360	800	40,0	580	86,7	48,6	94,0	755	112	63,2	1450	800
360	1400	70,0	500	128	73,3	95,0	650	165	95,3	2200	1300
355	2000	100,0	420	156	88,0	95,0	545	200	114	3100	1950

HY6 DRIVE 200R.2			J=0,77Kgm <sup>2</sup>							Tmax=2000Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
355	800	40,0	680	103	57,0	94,0	885	133	74,0	1450	850
345	1400	70,0	600	161	88,0	95,0	780	207	114	2350	1400
360	2000	100,0	500	182	105	95,0	650	232	136	3000	1850

HY6 DRIVE 200R.3			J=0,90Kgm <sup>2</sup>							Tmax=2350Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
355	800	40,0	800	121	67,0	94,0	1040	156	87,1	1400	750
355	1400	70,0	700	184	103	95,0	910	235	133	2300	1400
355	2000	100,0	590	220	124	95,5	765	280	161	3100	1800

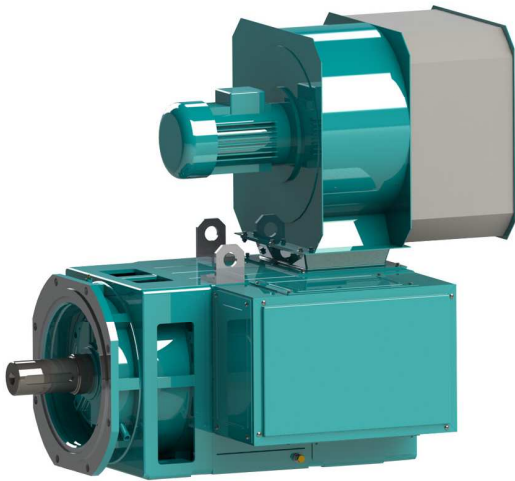
HY6 DRIVE 200R.4			J=1,02Kgm <sup>2</sup>							Tmax=2700Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
370	800	40,0	880	128	73,7	94,5	1145	165	96	1300	750
345	1400	70,0	765	206	112	95,0	995	264	146	2350	1400
370	2000	100,0	650	231	136	95,5	845	294	177	2800	1800

HY6 DRIVE 200R.5			J=1,27Kgm <sup>2</sup>							Tmax=3400Nm	
Poles: 2p=6			DUTY S1				DUTY S6/40%			Max speed at Pn and kIn	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
375	800	40,0	1070	152	89,6	94,5	1390	196	116	1250	750
355	1400	70,0	915	238	134	95,5	1190	304	174	2150	1300
345	2000	100,0	780	296	163	95,5	1015	378	212	3100	1950

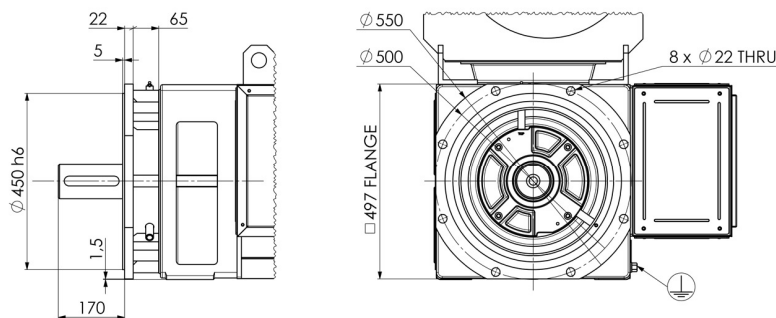
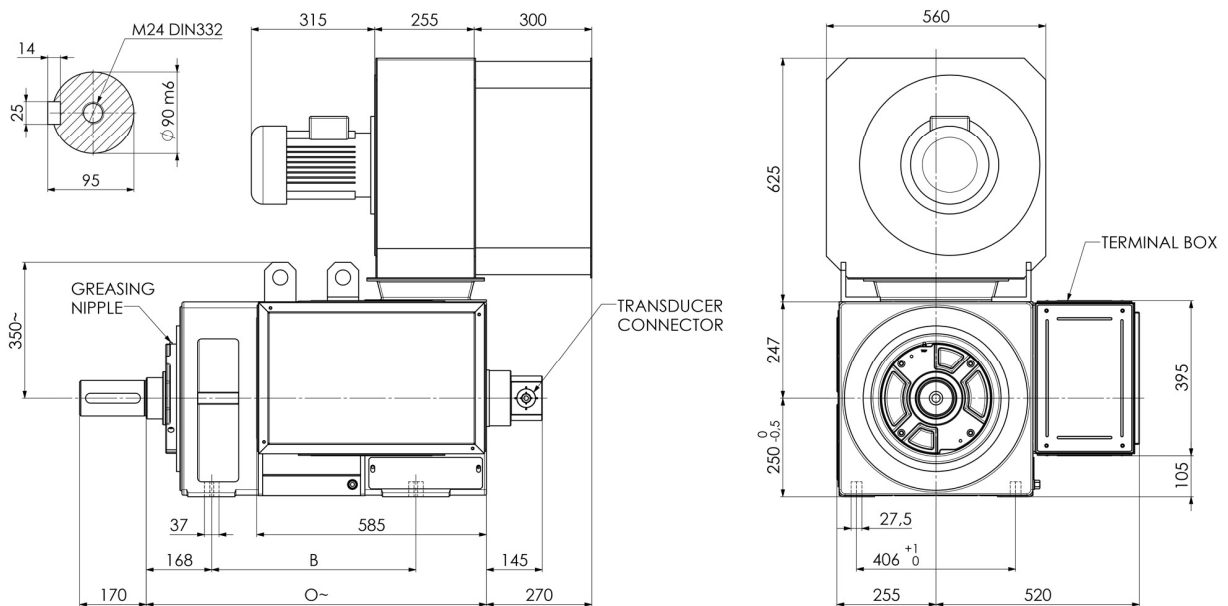
# POWERTECH HY8 DRIVE 250R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# OVERVIEW



IP PROTECTION	IP54
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
COOLING METHOD	IC416R (with filter on request)
STANDARD FAN DETAILS	3x230/400Vac 50Hz 11,2/8,4A 3,0kW
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 on request)
NDE BEARING	BALL (insulated on request)
MAX MECHANICAL SPEED BEMF MUST BE LESS THAN 500Vac	3500 r.p.m. (3000 r.p.m. roller bearing)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request



unit [mm]

VARIABLE DIMENSIONS BY SIZE		
SIZE	B	O
250R.1	521	870
250R.2	571	920
250R.3	671	1020
250R.4	771	1120
250R.5	871	1220
250R.6	971	1320

# POWERTECH HY8 DRIVE 250R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# WINDINGS

at 400Vac (PWM>4kHz)

Speed values must be technically compatible with bearings type and applied accessories  
 A specific electrical protection is needed when maximum speed BEMF>500Vac to avoid high voltage issues due to system failures

HY8 DRIVE 250R.1			J=1,71Kgm <sup>2</sup>							Tmax=3300Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and Ikin	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
335	600	40,0	1150	139	72,3	94,5	1495	179	94,0	1150	550
350	1200	80,0	1060	242	133	95,5	1380	311	173	2050	1100
385	1800	120,0	900	277	170	95,5	1170	355	220	2400	1500

HY8 DRIVE 250R.2			J=2,05Kgm <sup>2</sup>							Tmax=4000Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and Ikin	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
350	600	40,0	1350	157	84,8	94,5	1755	202	110	1150	550
380	1200	80,0	1250	272	157	95,5	1625	349	204	2000	1050
385	1800	120,0	1061	327	200	95,5	1380	419	260	2400	1500

HY8 DRIVE 250R.3			J=2,73Kgm <sup>2</sup>							Tmax=5200Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and Ikin	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
355	600	40,0	1720	196	108	95,0	2235	251	140	1000	550
345	1200	80,0	1550	355	195	95,5	2015	456	253	2000	1150
350	1800	120,0	1300	435	245	95,5	1690	557	319	2700	1650

HY8 DRIVE 250R.4			J=3,41Kgm <sup>2</sup>							Tmax=6600Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and Ikin	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
350	600	40,0	2070	236	130	95,5	2690	303	169	1000	550
345	1200	80,0	1940	445	244	96,0	2525	571	317	2000	1150
380	1800	120,0	1560	483	294	96,0	2030	620	382	2400	1550

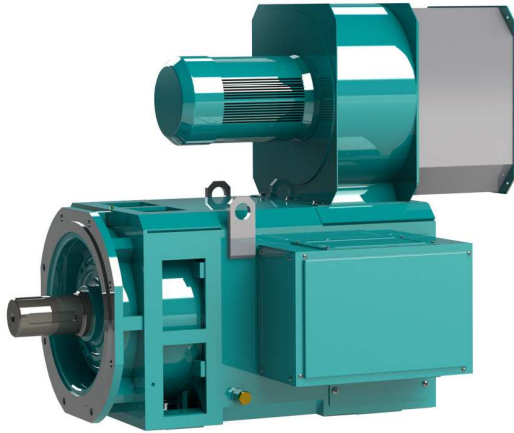
HY8 DRIVE 250R.5			J=4,1Kgm <sup>2</sup>							Tmax=8000Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and Ikin	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
370	600	40,0	2450	266	154	95,5	3185	342	200	900	550
360	1200	80,0	2300	507	289	96,0	2990	650	376	1800	1100
350	1800	120,0	1820	606	343	96,0	2365	783	446	2700	1650

HY8 DRIVE 250R.6			J=4,78Kgm <sup>2</sup>							Tmax=9000Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and Ikin	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
370	600	40,0	2870	311	180	95,5	3730	400	234	900	500
360	1200	80,0	2670	583	335	96,0	3470	747	436	1800	1100
350	1800	120,0	2100	699	396	96,0	2730	894	514	2650	1600

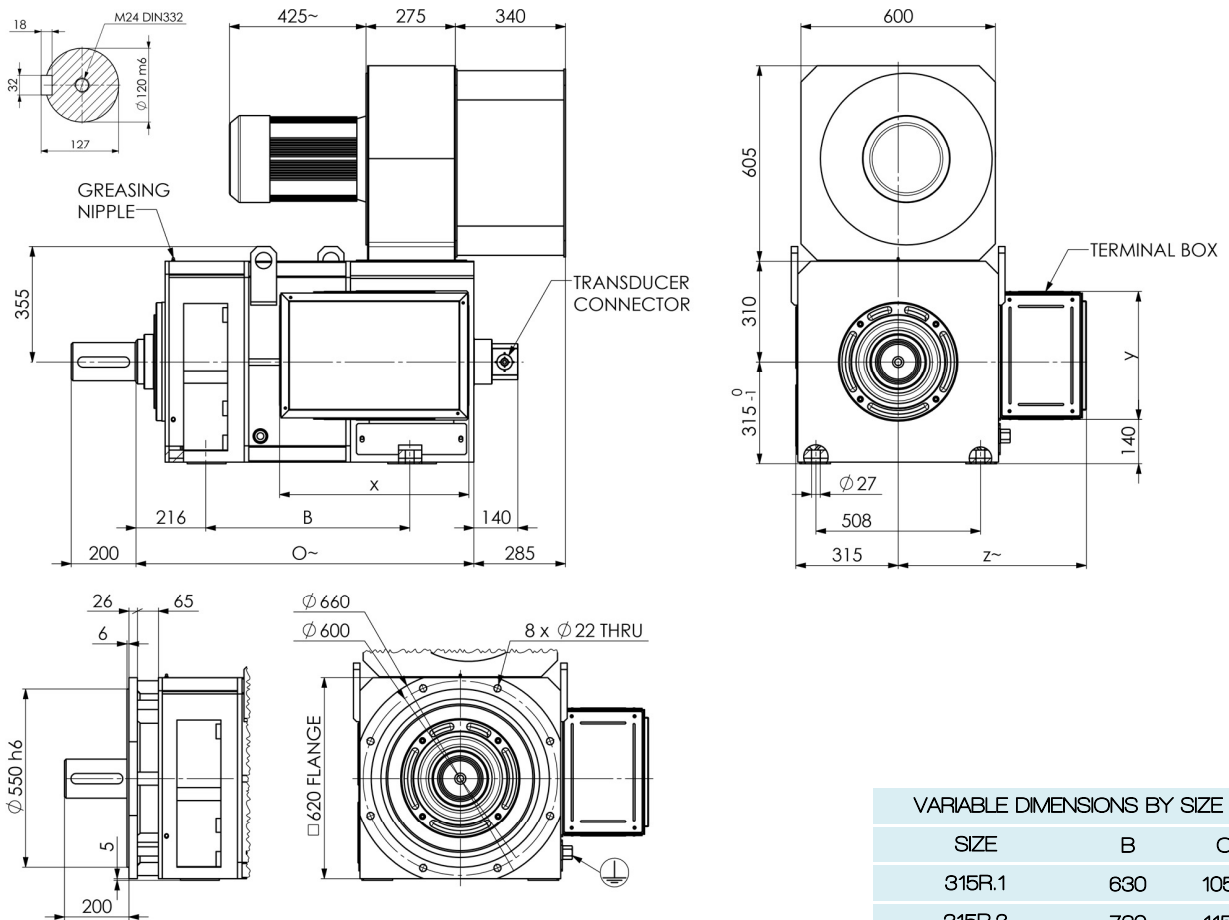
# POWERTECH HY8 DRIVE 315R

IP54 IPM-PMASR SYNCHRONOUS MOTORS

## OVERVIEW



IP PROTECTION	IP54
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
COOLING METHOD	IC416R (with filter on request)
STANDARD FAN DETAILS	3x230/400Vac 50Hz 19,6/11,3A 5,5kW
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 on request)
NDE BEARING	BALL (INSULATED)
MAX MECHANICAL SPEED BEMF MUST BE LESS THAN 500Vac	3200 r.p.m. (2400 r.p.m. roller bearing)
PAINTING SYSTEM	NITRO, POLYURETHANIC on request



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

unit [mm]

VARIABLE DIMENSIONS BY SIZE		
SIZE	B	O
315R.1	630	1050
315R.2	730	1150
315R.3	830	1250
315R.4	930	1350
315R.5	1030	1450
315R.6	1130	1550



# POWERTECH HY8 DRIVE 315R

## IP54 IPM-PMASR SYNCHRONOUS MOTORS

# WINDINGS

at 400Vac (PWM>4kHz)

Speed values must be technically compatible with bearings type and applied accessories  
 A specific electrical protection is needed when maximum speed BEMF>500Vac to avoid high voltage issues due to system failures

HY8 DRIVE 315R.1			J=4,83Kg <sup>m</sup> <sup>2</sup>							Tmax=7000Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and I<In	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
360	600	40,0	2350	268	148	95,5	3055	344	192	1300	550
385	1200	80,0	2080	440	261	96,0	2705	562	340	2100	1000
370	1800	120,0	1700	551	320	96,0	2210	699	416	2900	1550

HY8 DRIVE 315R.2			J=6,44Kg <sup>m</sup> <sup>2</sup>							Tmax=9300Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and I<In	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
350	600	40,0	3100	365	195	95,5	4030	469	253	1350	550
340	1200	80,0	2750	656	346	96,0	3575	837	449	2500	1150
370	1800	120,0	2230	724	420	96,0	2900	918	546	2900	1550

HY8 DRIVE 315R.3			J=8,1Kg <sup>m</sup> <sup>2</sup>							Tmax=11500Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and I<In	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
380	600	40,0	3850	414	242	95,5	5005	532	314	1150	500
365	1200	80,0	3380	744	425	96,0	4395	950	552	2150	1050
355	1800	120,0	2730	921	515	96,0	3550	1169	669	2850	1600

HY8 DRIVE 315R.4			J=9,65Kg <sup>m</sup> <sup>2</sup>							Tmax=14000Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and I<In	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
330	600	40,0	4620	573	290	96,0	6005	736	377	1450	600
385	1200	80,0	4060	849	510	96,5	5280	1086	663	2000	1050
375	1800	120,0	3300	1058	622	96,5	4290	1343	809	2800	1550

HY8 DRIVE 315R.5			J=10,3Kg <sup>m</sup> <sup>2</sup>							Tmax=16300Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and I<In	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
340	600	40,0	5300	635	333	96,0	6890	814	433	1350	550
340	1200	80,0	4700	1109	590	96,5	6110	1415	768	2500	1150
370	1800	120,0	3840	1234	724	96,5	4990	1565	941	2950	1550

HY8 DRIVE 315R.6			J=11,7Kg <sup>m</sup> <sup>2</sup>							Tmax=18600Nm	
Poles: 2p=8			DUTY S1				DUTY S6/40%			Max speed at Pn and I<In	Max speed at Tmax
Voltage	Speed	Freq.	Tn	In	Pn	Eff.	Tol	Iol	Pol		
V	RPM	HZ	Nm	A	kW	%	Nm	A	kW	RPM	RPM
345	600	40,0	6100	715	383	96,0	7930	919	498	1300	550
340	1200	80,0	5330	1263	670	96,5	6930	1616	870	2500	1150
395	1650	110,0	4460	1240	770	96,5	5800	1577	1002	2700	1400



# NOTICE

Data, technical features, drawings, images are only as estimates and can be modified at any time and without previous notice. COMER declines any responsibility for direct and indirect damage that can be caused by possible mistakes in this catalogue. COMER reserves the right to modify at any time and without previous notice the data, drawings, electric and/or mechanic details, dimensions and images. All information in this catalogue are COMER's property, therefore their reproduction (total and partial), copying and disclosure are prohibited, unless expressly authorized.

# AVVISO

Dati, prestazioni, disegni e immagini sono indicativi e possono essere modificati in qualsiasi momento senza preavviso. COMER declina ogni responsabilità per danni diretti o indiretti causati da eventuali errori nel presente catalogo. COMER si riserva il diritto di modificare in qualsiasi momento e senza preavviso i dati, i disegni, caratteristiche elettriche e/o meccaniche, le dimensioni e le immagini. Tutte le informazioni contenute in questo catalogo sono di proprietà COMER, sono vietate riproduzione (totale e parziale), copia e divulgazione se non espressamente autorizzate.



**COMER s.r.l.**

Headquarter, Factory and Sales Department  
Italy - 27029 Vigevano (PV)  
Via Oroboni, 26/28  
Ph. (+39) 0381 42661 Fax (+39) 0381 42662  
info@comergroup.it  
www.comergroup.it  
www.facebook.com/ComerSrl  
www.linkedin.com/company/comer-s.r.l./





August 2022