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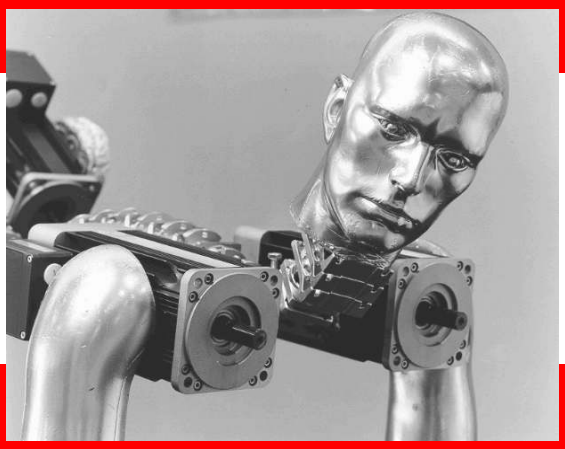
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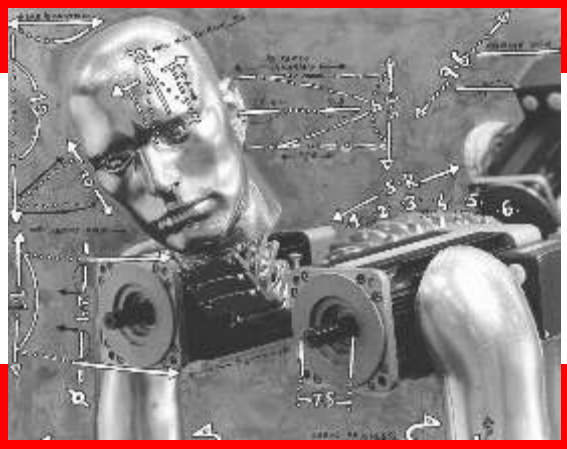
Find the *Motor Power M-ESA 2S 1020* at our website: ***Click HERE***



ESA

C.C. SERVOMOTOR





MOTOR POWER COMPANY

www.motorpowerco.com

ESA

This series of permanent magnets servomotors ensures long-life, high reliability and dynamic performances. This series, that includes torque from 0,32 till 15 Nm, is the solution for any application where smooth running and overload capability is required.



Servomotor	*Continuous Stall Torque (Nm)*	*Motor Diameter (mm)*	*Brake Lenght (mm)*	*Motor Lenght (mm)*
ESA 2S	0.32	58	41.5	136
ESA 2L	0.47			183.5
ESA 3XS	0.6	83.5	44	177.5
ESA 3S	0.93			212.5
ESA 3SL	1.3			229
ESA 3M	1.6			267.5
ESA 3L	2.1			322.5
ESA 6S	2.65	116	*	268
ESA 6F	3.5		*	268
ESA 6M	5.5		*	340
ESA 6L	8		*	412
ESA 9S	6	153.5	*	298
ESA 9M	11		*	363
ESA 9L	15		*	424

* Included in motor's lenght

Il freno di emergenza incrementa la lunghezza del motore del valore relativo riportato in tabella alla voce "Lunghezza Freno"

Protection IP54
Commutator with high number of blades for a sound commutation
Four pole tacho generator with rare earth magnets combined in motor
Skewed armature for smooth running at low speed

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SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 2S

COPPIA - *TORQUE*

Nm 0.32

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2				
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	3000				
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	0.32	0.32				
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	70	70				
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	4.6	3.2				
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	1.6	1.6				
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	23	16				
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	25.3	17.6				
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	21.9	31.2				
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	4000				
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg cm^2	0.324	0.324				
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	33950	33950				
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	6	6				
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.015	0.015				
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.002	0.002				
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	196	196				
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	58	58				
	PESO - *Weight*	M	[Kg]	1.3	1.3				
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	7.3	10.4				
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.07	0.1				
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	1.58	1.62				
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	15	15				
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.82	1.82				
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.85	1.85				
	INDUTTANZA - *Inductance*	La	[mH]	1.34	3				
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	0.5					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.42					
	POTENZA ASSORBITA - *Input power*	P	[W]	10					

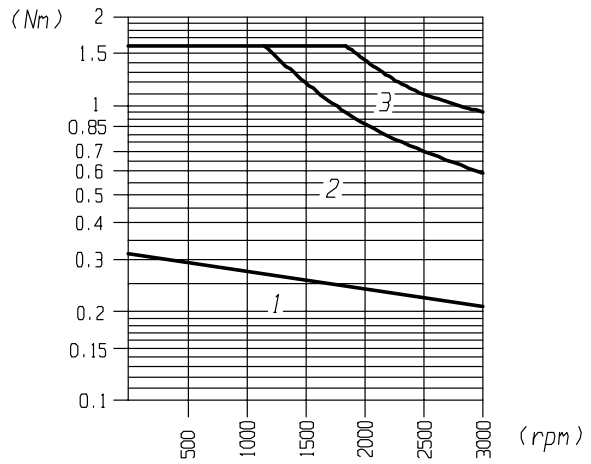
ESA2S

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

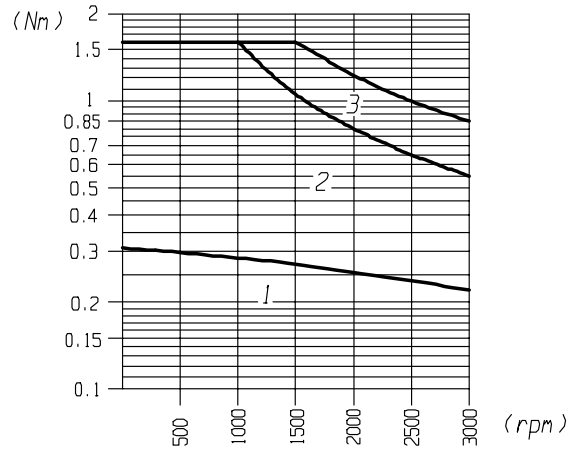
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

ESA 2S1



ESA 2S2



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 2L

COPPIA - *TORQUE*

Nm 0.47

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2				
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	3000				
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	0.47	0.47				
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	95	95				
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	6.5	4.6				
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	2.35	2.35				
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	32.5	23				
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	35.75	25.3				
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	22.5	32.1				
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	4000				
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg cm^2	0.607	0.607				
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	24711	24711				
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	6	7				
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.018	0.018				
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.003	0.003				
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	196	196				
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	58	58				
	PESO - *Weight*	M	[Kg]	1.85	1.85				
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	7.5	10.7				
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.072	0.103				
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	1.46	1.4				
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	25	25				
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.45	1.16				
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.48	1.19				
	INDUTTANZA - *Inductance*	La	[mH]	0.7	1.65				
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	0.5					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.42					
	POTENZA ASSORBITA - *Input power*	P	[W]	10					

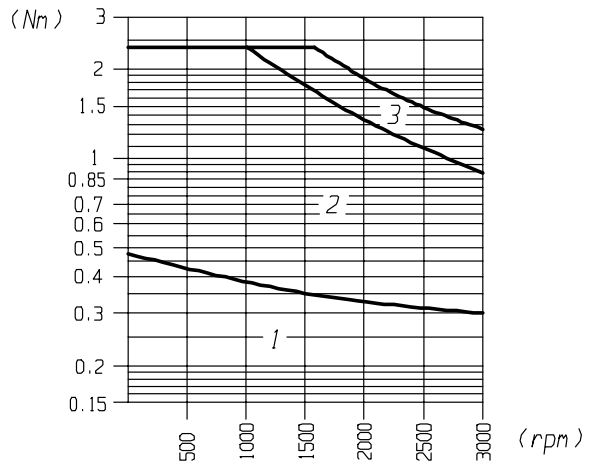
ESA2L

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

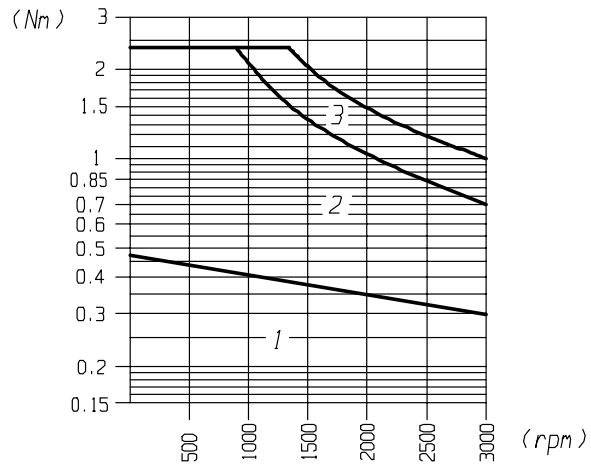
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

ESA 2L1

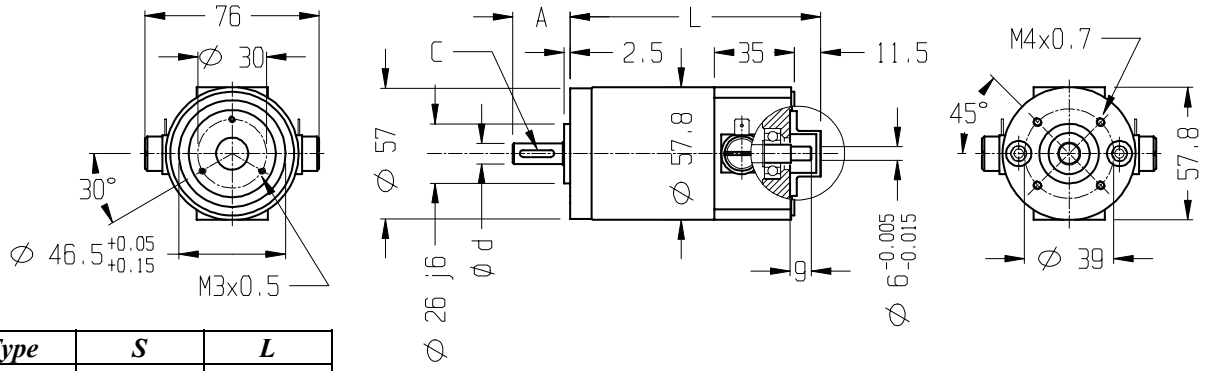


ESA 2L2



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

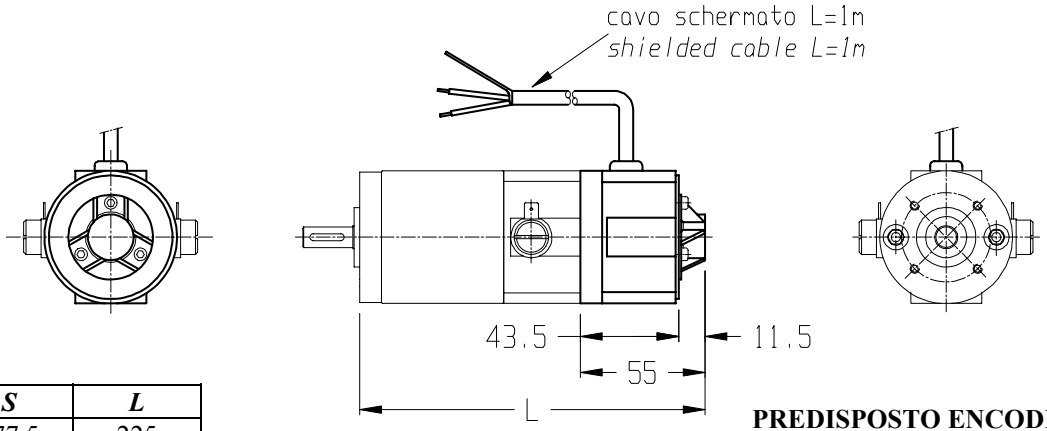
1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area



Type	*S*	*L*
A	20	25
L	136	183.5
d (j6)	7	9
C	-	3x3x15

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

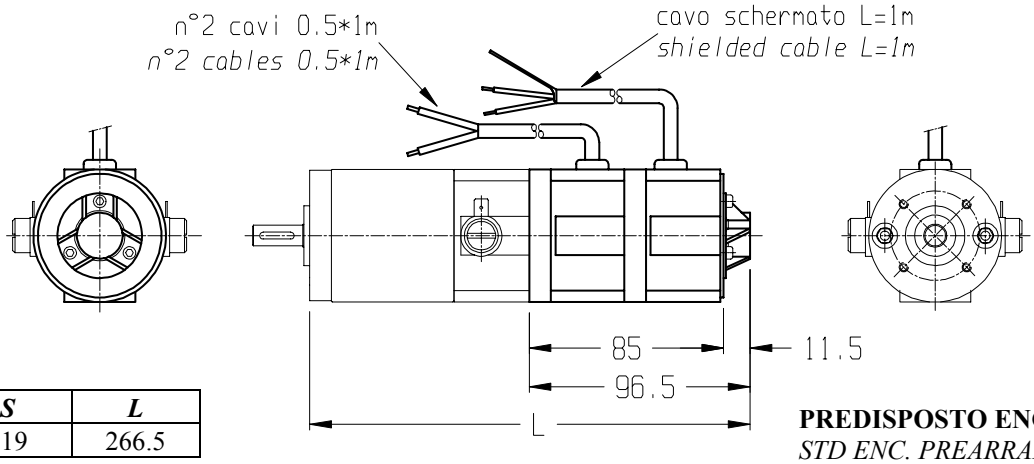
DINAMO TACHIMETRICA *TACHO GENERATOR*



Type	*S*	*L*
L	177.5	225

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO 0,5Nm + DINAMO TACHIMETRICA *TACHO GENERATOR + BRAKE 0,5Nm*

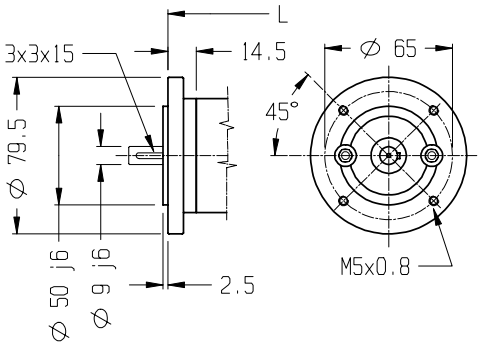


Type	*S*	*L*
L	219	266.5

PREDISPOSTO ENC. STD
STD ENC. PREARRANGEMENT

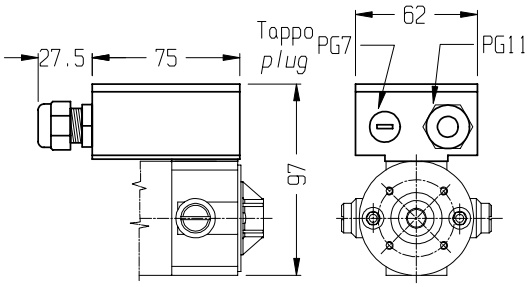
OPTIONALS

FLANGIA B14/56 *B14/56 FLANGE*

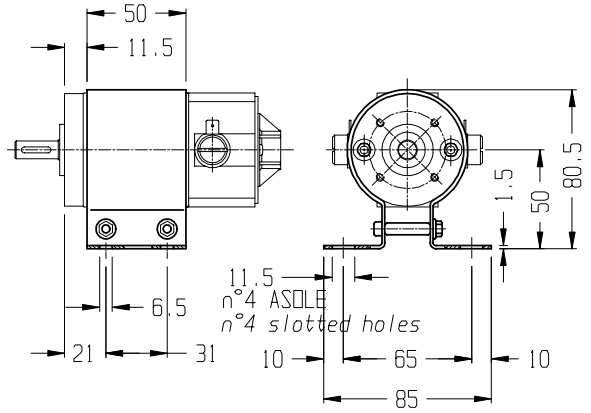


Type	*S*	*L*
L	141	188.5

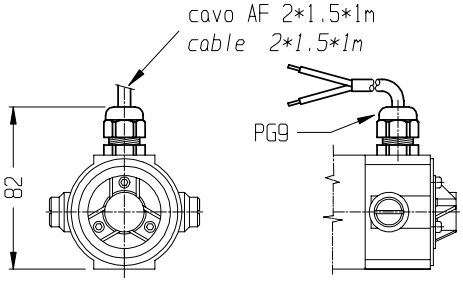
MORSETTIERA *TERMINAL BOX*



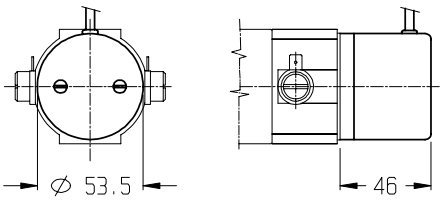
PIEDE A FASCIA *FOOT BAND TYPE*



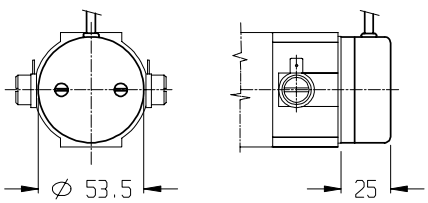
CAVO *FLYING LEADS*



ENCODER EH53 *ENCODER EH53*

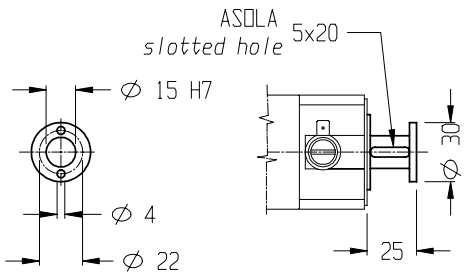


ENCODER EH38 *ENCODER EH38*

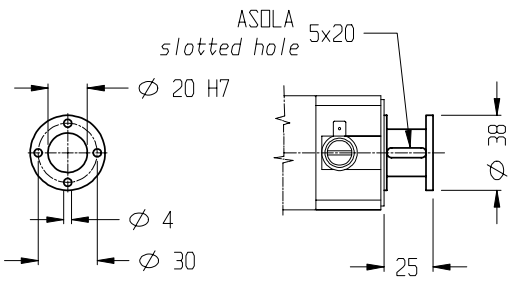


OPTIONALS

DISTANZ. ENC. N°1 *ENCODER SPACER N°1*



DISTANZ. ENC. N°2 *ENCODER SPACER N°2*



SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 3XS

COPPIA - *TORQUE*

Nm 0.6

DATI MOTORE - *MOTOR RATINGS*		SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding*					
				1	2	3			
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3500	3000	3000			
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	0.6	0.6	0.6			
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	140	150	150			
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	4.6	1.55	3			
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	3	3	3			
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	23	9.5	15			
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	25.3	8.525	16.5			
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	45.5	120	60			
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	4000	4000			
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0003	0.0003	0.0003			
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	10000	10000	10000			
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	17	15	21			
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.037	0.037	0.037			
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.027	0.027	0.027			
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	294	294	294			
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	88	88	88			
	PESO - *Weight*	M	[Kg]	3.5	3.5	3.5			
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	13	40	20			
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.13	0.386	0.2			
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	2.8	3.6	2.9			
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	20	20	20			
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.8	7.4	2.5			
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.9	7.5	2.6			
	INDUTTANZA - *Inductance*	La	[mH]	2.5	27	7.5			
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.42					
	POTENZA ASSORBITA - *Input power*	P	[W]	10					

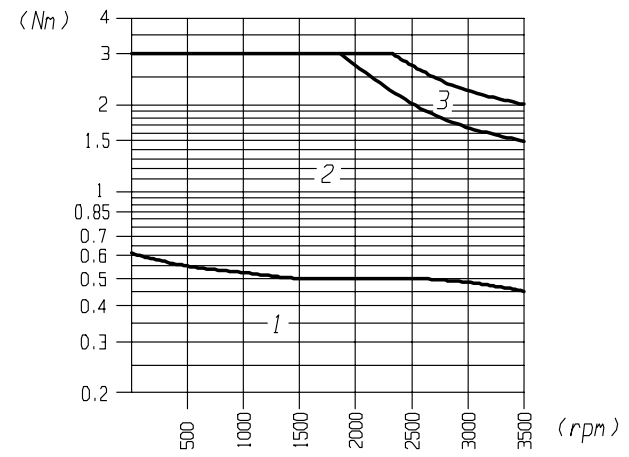
ESA 3XS

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

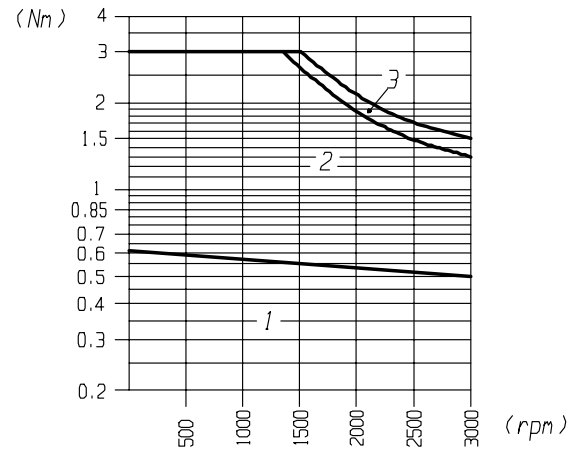
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

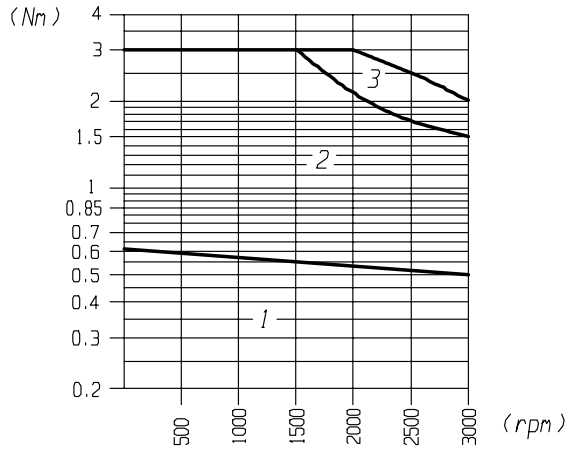
ESA 3XS1



ESA 3XS2



ESA 3XS3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 3S

COPPIA - *TORQUE*

Nm 0.93

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2	3			
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3500	3000	3000			
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	0.93	0.93	0.93			
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	200	200	200			
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	7	2.4	4.8			
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	4.65	4.65	4.65			
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	35	12	24			
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	38.5	13.2	26.4			
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	48.3	120	60			
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	4000	4000			
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0006	0.0006	0.0006			
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	7750	7750	7750			
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	16	12	16			
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.04	0.04	0.04			
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.03	0.03	0.03			
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	294	294	294			
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	88	88	88			
	PESO - *Weight*	M	[Kg]	4.6	4.6	4.6			
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	13.8	40	20			
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.133	0.386	0.193			
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	2.36	3.7	2.8			
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	25	25	25			
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.37	2.9	0.86			
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.47	3	0.96			
	INDUTTANZA - *Inductance*	La	[mH]	1.11	11	2.67			
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.42					
	POTENZA ASSORBITA - *Input power*	P	[W]	10					

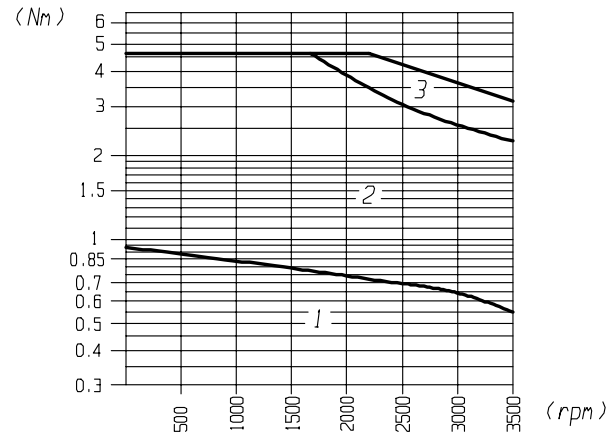
ESA3S

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

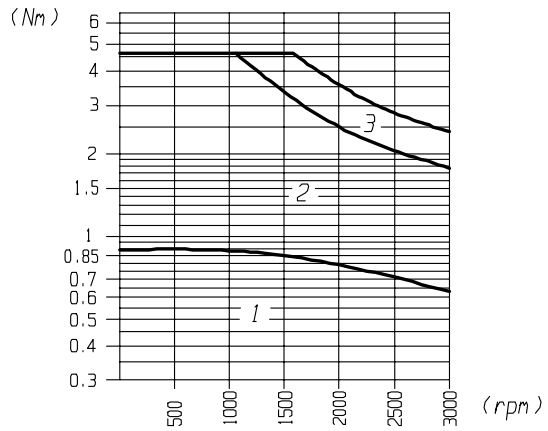
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

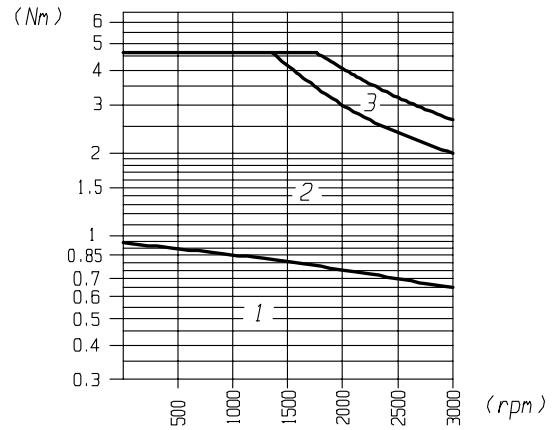
ESA 3S1



ESA 3S2



ESA 3S3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 3SL

COPPIA - *TORQUE*

Nm 1.3

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2	3	4		
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	3000	3000	3000		
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	1.3	1.3	1.3	1.3		
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	300	300	300	300		
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	8	2.25	3.46	7.1		
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	6.5	6.5	6.5	6.5		
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	40	11.25	17.3	35.5		
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	44	12.375	19.03	39.05		
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	49.5	160	120	57		
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	3400	4000	4000		
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0007	0.0007	0.0007	0.0007		
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	10714	10714	10714	10714		
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	14	12	12	14		
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.044	0.044	0.044	0.044		
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.032	0.032	0.032	0.032		
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	343	343	343	343		
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	103	103	103	103		
	PESO - *Weight*	M	[Kg]	5.3	5.3	5.3	5.3		
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	16.5	60	40	19		
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.16	0.58	0.375	0.183		
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	2.65	3.7	3.8	3		
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	30	30	30	30		
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.39	5.4	2.4	0.57		
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.49	5.5	2.5	0.63		
	INDUTTANZA - *Inductance*	La	[mH]	1.3	20.5	9.46	2		
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 Ma)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.42					
	POTENZA ASSORBITA - *Input power*	P	[W]	10					

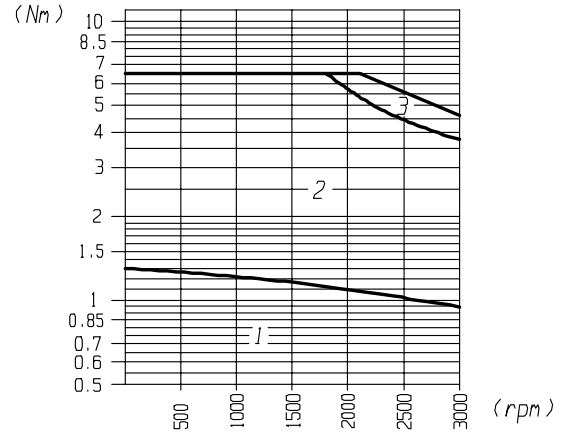
ESA 3SL

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

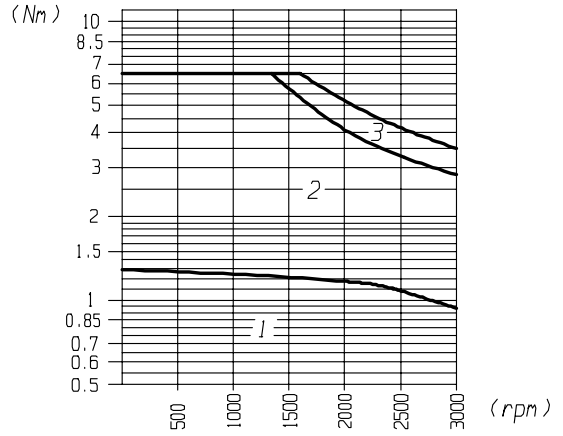
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

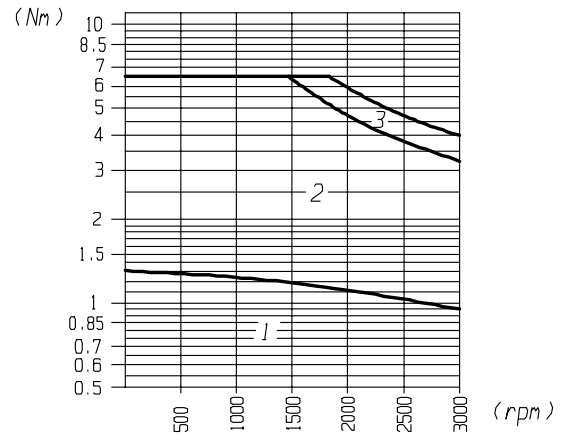
ESA SL1



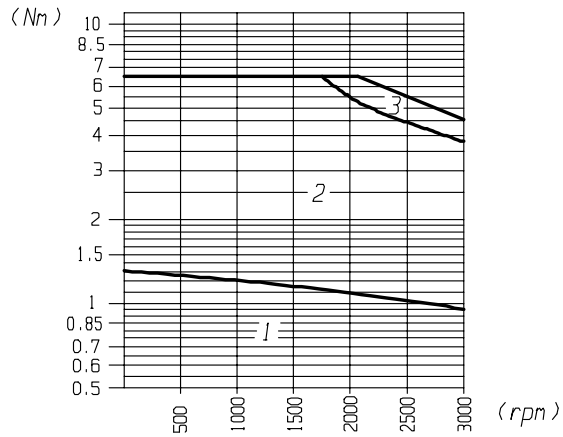
ESA 3SL2



ESA 3SL3



ESA 3SL4



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
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SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 3M

COPPIA - *TORQUE*

Nm 1.6

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding*					
				2	3	5	8		
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	4000	3000	3000	3000		
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	1.6	1.6	1.6	1.6		
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	335	360	360	360		
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	6.2	3	4.15	10		
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	8	8	8	8		
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	31	15	20.75	50		
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	34.1	16.5	22.825	55		
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	108	157.5	120	49.5		
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4500	3400	4000	4000		
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0008	0.0008	0.0008	0.0008		
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	10000	10000	10000	10000		
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	12	10	10	13		
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.048	0.048	0.048	0.048		
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.04	0.04	0.04	0.04		
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	343	343	343	343		
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	103	103	103	103		
	PESO - *Weight*	M	[Kg]	6.4	6.4	6.4	6.4		
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	27	52.5	40	16.5		
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.26	0.5	0.385	0.16		
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	3	3.3	3.7	2.75		
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	40	40	40	40		
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.8	2.96	1.74	0.3		
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.9	3.06	1.84	0.4		
	INDUTTANZA - *Inductance*	La	[mH]	3	10.2	6.8	1.1		
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 Ma)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	3					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.42					
	POTENZA ASSORBITA - *Input power*	P	[W]	10					

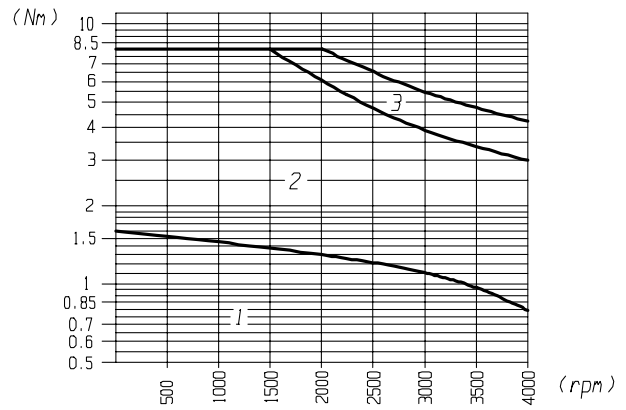
ESA 3M

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

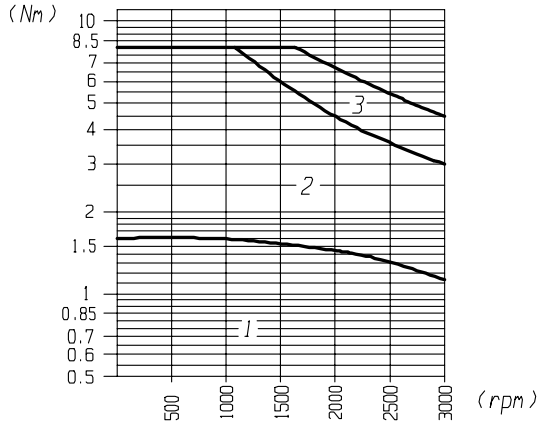
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

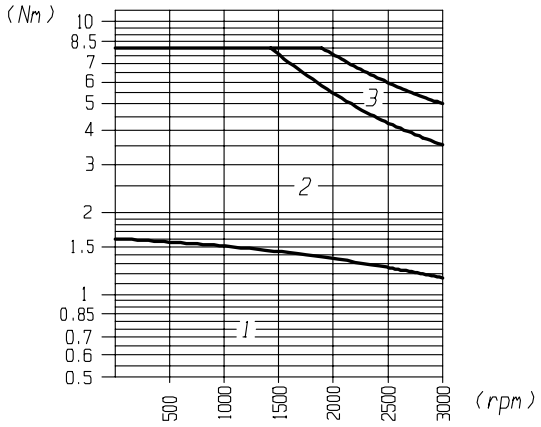
ESA 3M2



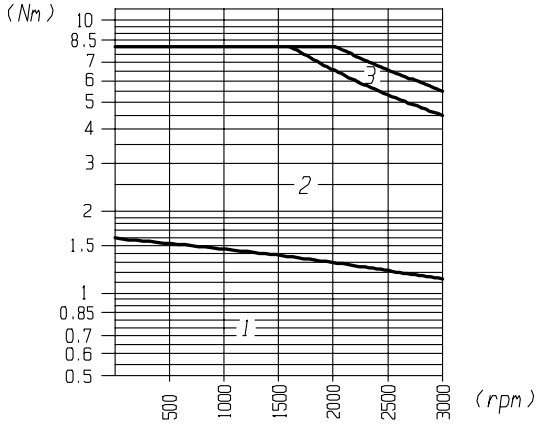
ESA 3M3



ESA 3M5



ESA 3M8



1 = Area di ciclo continuo
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SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 3L

COPPIA - *TORQUE*

Nm 2.1

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding*				
				1	3	4	6	7
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	4000	3000	3000	3000
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	2	2.1	2.1	2	2.1
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	500	460	500	500	500
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	10.5	6.65	5.4	12.5	3.8
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	10	10.5	10.5	10	10.5
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	52.5	33.25	27	62.5	19
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	57.75	36.575	29.7	68.75	20.9
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	59.7	128.8	120	49.5	171
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	4000	4000	4000	3200
	DATI MECCANICI - *MECHANICAL DATA*							
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.001	0.001	0.001	0.001	0.001
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	10000	10500	10500	10000	10500
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	11	9	7	12	8
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.055	0.055	0.055	0.055	0.055
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.05	0.05	0.05	0.05	0.05
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	343	343	343	343	343
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	103	103	103	103	103
	PESO - *Weight*	M	[Kg]	8	8	8	8	8
	DATI ELETTRICI - *WINDING DATA*							
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	19.9	32.8	40	16.5	57
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.191	0.316	0.39	0.16	0.55
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	2.9	3.3	3.9	2.4	4.1
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	50	50	50	50	50
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.32	0.82	1	0.19	2.52
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.42	0.92	1.1	0.29	2.62
	INDUTTANZA - *Inductance*	La	[mH]	1.23	3.04	4.3	0.69	10.8
	GRADO DI PROTEZIONE - *Protection degree*		IP	54				
	CLASSE D' ISOLAMENTO - *Insulation class*			F				
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)				
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm				
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1				
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12				
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02				
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40				
	RESISTENZA - *Resistance*	Ra	[Ohm]	86				
	INDUTTANZA - *Inductance*	La	[mH]	13				
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)				
	NUMERO POLI - *Number of poles*			4				
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm				
FRENO Brake	TIPO - *Type*			STD				
	COPPIA STATICA - *Static torque*	C	[Nm]	3				
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24				
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.42				
	POTENZA ASSORBITA - *Input power*	P	[W]	10				

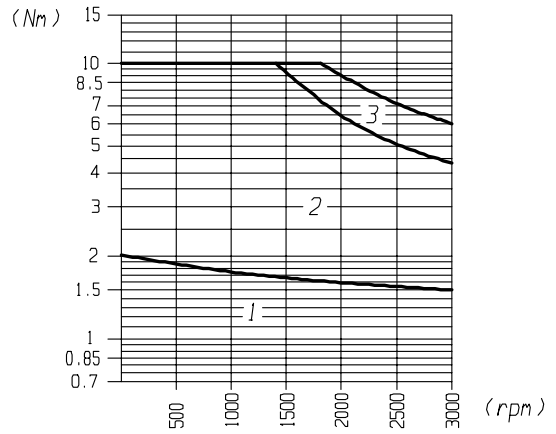
ESA 3L

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

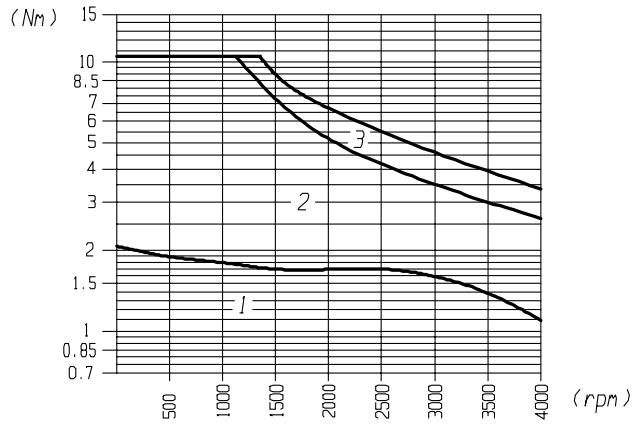
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

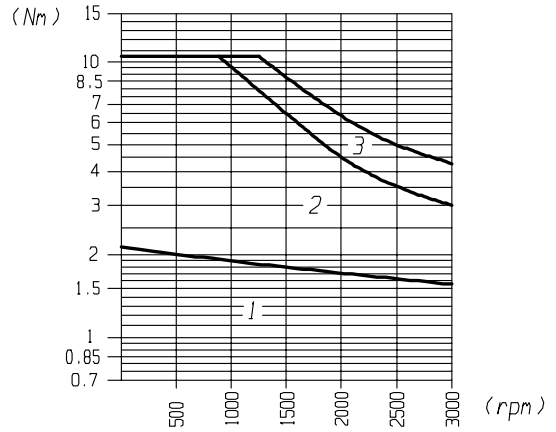
ESA 3L1



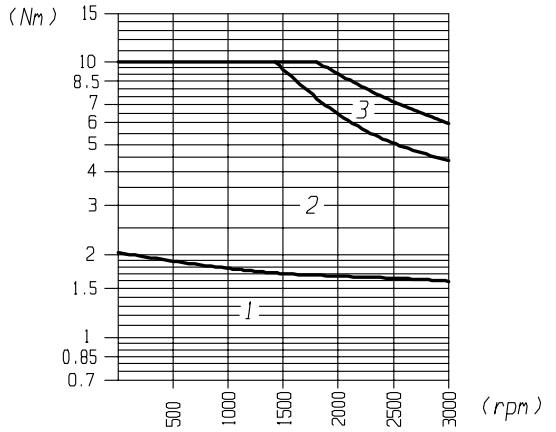
ESA 3L3



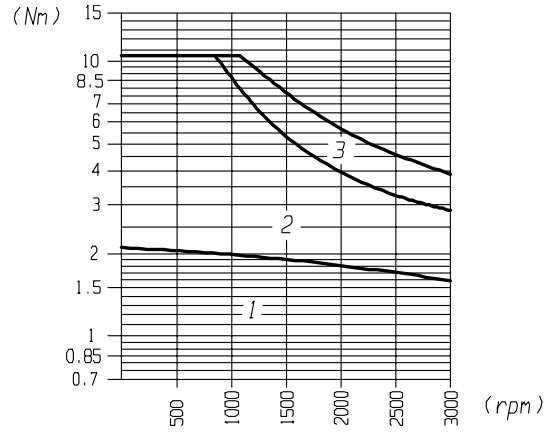
ESA 3L4



ESA 3L6



ESA 3L7



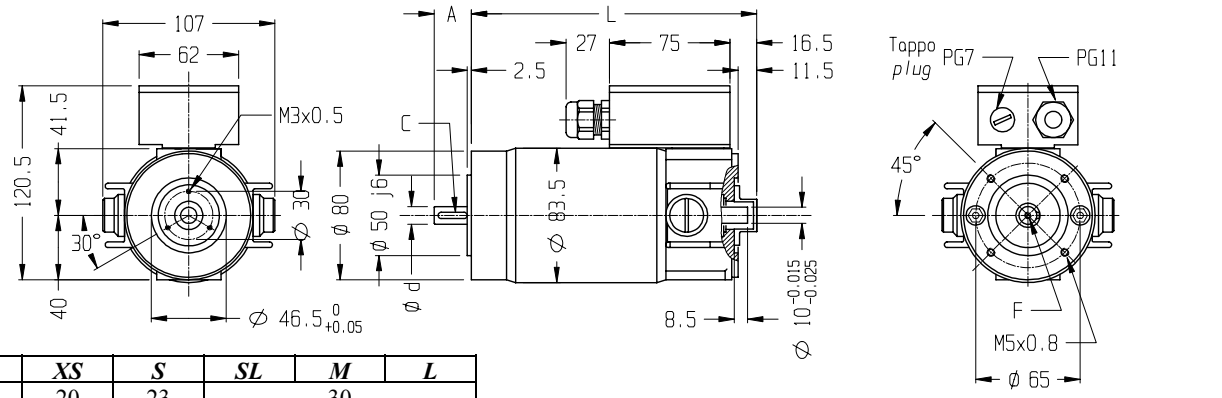
1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

ESA 3

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

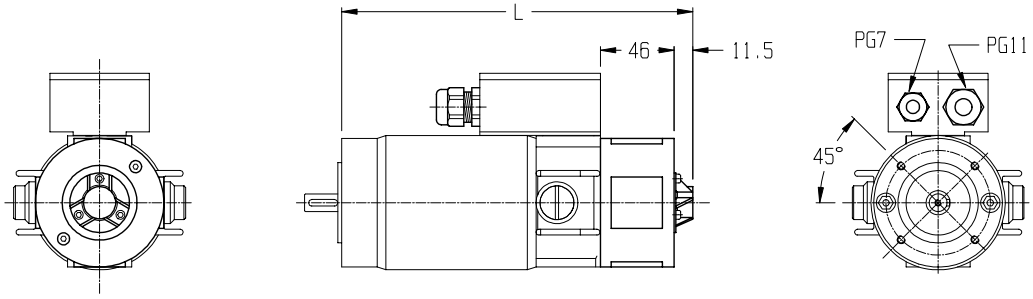
DIMENSIONI (mm) *DIMENSIONS (mm)*



Type	*XS*	*S*	*SL*	*M*	*L*
A	20	23	30		
F	-	M4	M5		
L	177.5	212.5	229	267.5	322.5
d (j6)	9	11	14		
C	3x3x15	4x4x18	5x5x25		

PREDISPOSTO ENCODER STD
STD ENCODER

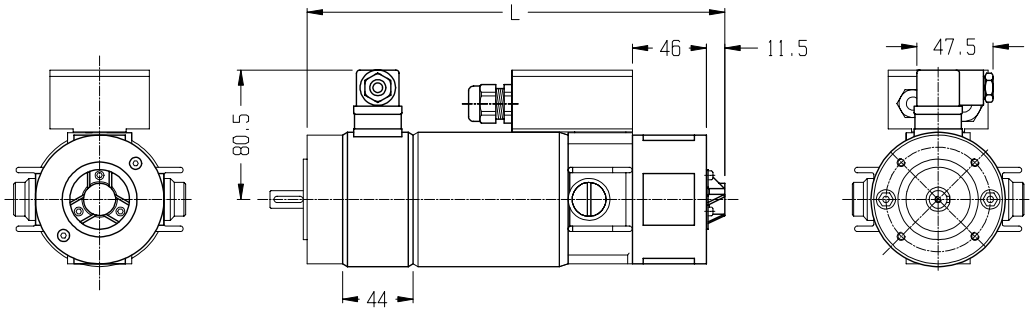
DINAMO TACHIMETRICA *TACHO GENERATOR*



Type	*XS*	*S*	*SL*	*M*	*L*
L	218.5	253.5	270	308.5	363.5

PREDISPOSTO ENCODER STD
STD ENCODER

FRENO + DINAMO TACHIMETRICA *TACHO GENERATOR + BRAKE*

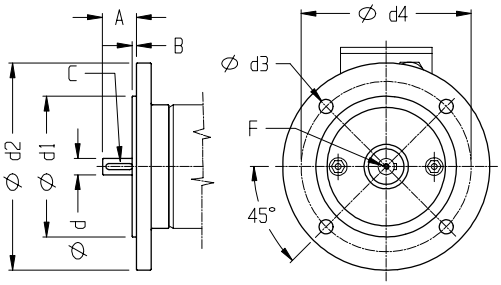


Type	*XS*	*S*	*SL*	*M*	*L*
L	262.5	297.5	314	352.5	407.5

PREDISPOSTO ENCODER STD
STD ENCODER

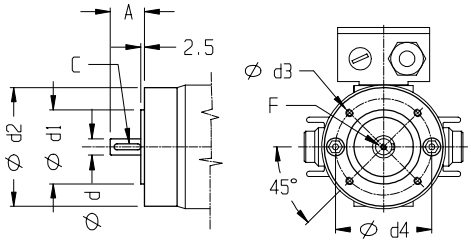
OPTIONALS

FLANGIA B5 *B5 FLANGE*



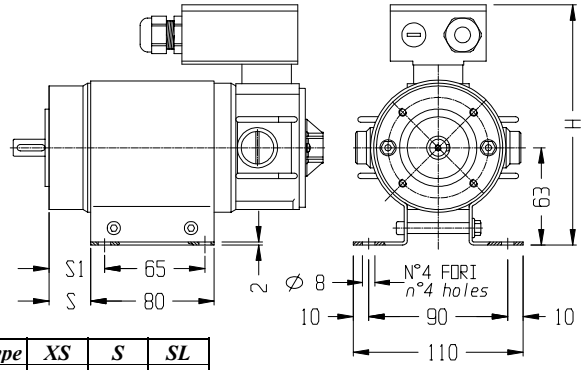
Size	*A*	*B*	*d(j6)*	*d1(j6)*	*d2*	*d3*	*d4*	*F*	*C*
56	20	3	9	80	120	8.5	100	-	3*3*15
63	23	3	11	95	140	9.5	115	M4	4*4*18
71	30	3.5	14	110	160	9.5	130	M5	5*5*25

FLANGIA B14 *B14 FLANGE*



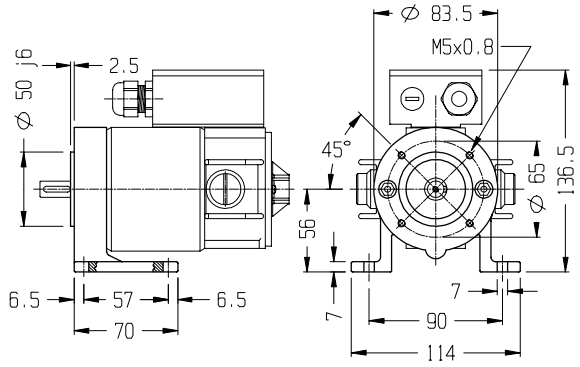
Size	*A*	*d(j6)*	*d1(j6)*	*d2*	*d3*	*d4*	*F*	*C*
63	23	11	60	90	M5	75	M4	4*4*18
71	30	14	70	105	M6	85	M5	5*5*25

PIEDE A FASCIA *FOOT BAND TYPE*

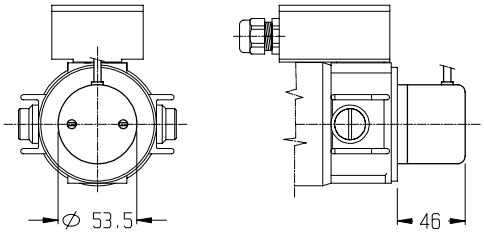


Type	*XS*	*S*	*SL*
H	155.5	143.5	143.5
S	27	27	27
S1	36	36	36

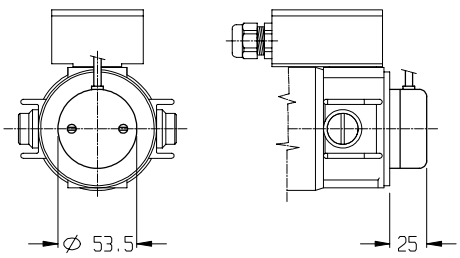
FLANGIA B3-B14/56 *B3-B14/56 FLANGE*



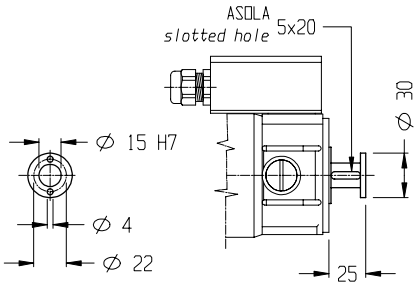
ENCODER EH53 *ENCODER EH53*



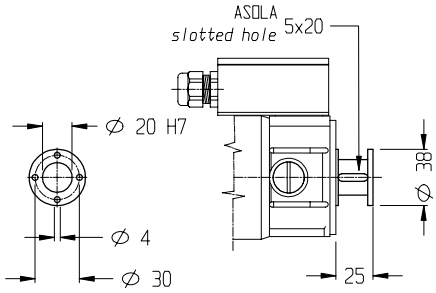
ENCODER EH38 *ENCODER EH38*



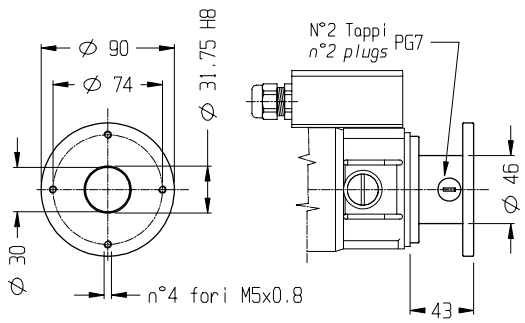
DISTANZ. ENC. N°1 *ENCODER SPACER N°1*



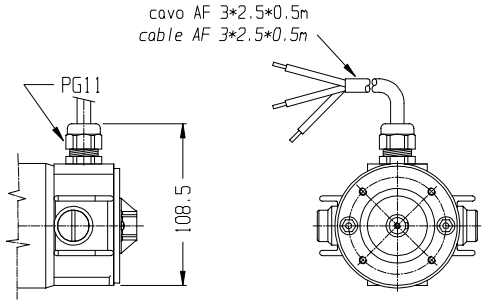
DISTANZ. ENC. N°2 *ENCODER SPACER N°2*



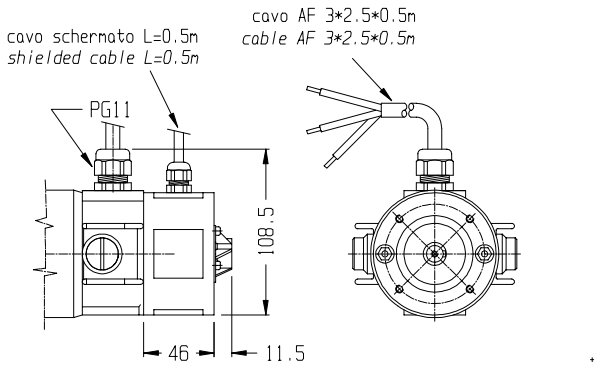
DISTANZ. ENC. N°3 *ENCODER SPACER N°3*



CAVO *FLYING LEADS*



CAVO + DINAMO *TACHO + FLYING LEDS*



SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 6S

COPPIA - *TORQUE*

Nm 2.65

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2	5			
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3500	2000	3000			
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	2.65	2.95	2.4			
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	590	500	500			
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	7.8	5.1	13.7			
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	13.25	14.25	12			
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	39	25.5	68.5			
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	42.9	28.05	75.35			
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	124.25	116	50.7			
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	3000	4000			
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0018	0.0018	0.0018			
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	7360	7916	6660			
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	17	14	23			
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.113	0.113	0.113			
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.068	0.068	0.068			
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	588	588	588			
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	176	176	176			
	PESO - *Weight*	M	[Kg]	9.4	9.4	9.4			
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	35.5	58	16.9			
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.34	0.56	0.175			
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	5.35	5.9	2.94			
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	40	40	40			
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	1	2.25	0.24			
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	1.1	2.35	0.34			
	INDUTTANZA - *Inductance*	La	[mH]	5.9	13.8	1			
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD	SVS				
	COPPIA STATICA - *Static torque*	C	[Nm]	12	16				
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24	24				
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.6	0.4				
	POTENZA ASSORBITA - *Input power*	P	[W]	14	9.5				

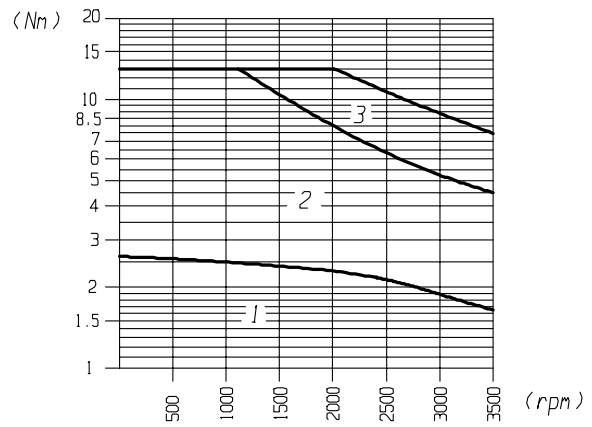
ESA 6S

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

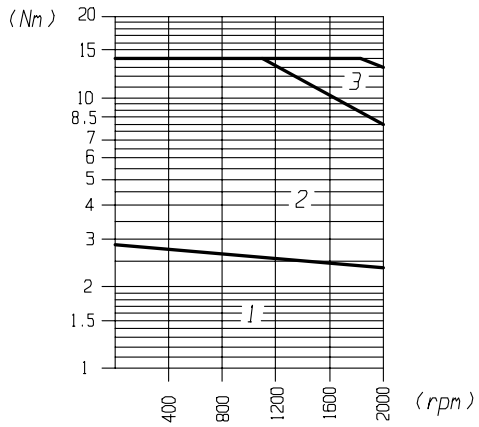
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

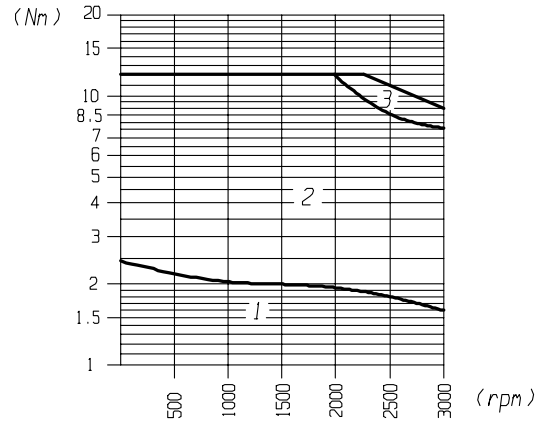
ESA 6S1



ESA 6S2



ESA 6S5



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 6F

COPPIA - *TORQUE*

Nm 3.5

DATI MOTORE - *MOTOR RATINGS*		SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding*					
				2	3	4			
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	2000	1200			
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	3.5	3.5	3.5			
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	720	580	380			
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	9	6	3.65			
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	17.5	17.5	17.5			
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	45	30	16.5			
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	49.5	33	20.075			
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	120	120	119			
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	4000	3000	1800			
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0018	0.0018	0.0018			
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	9720	9720	9720			
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	12	9	9			
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.138	0.138	0.138			
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.143	0.143	0.143			
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	588	588	588			
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	176	176	176			
	PESO - *Weight*	M	[Kg]	9.4	9.4	9.4			
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	40	60	99			
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.39	0.58	0.96			
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	3.5	4	4.47			
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	40	40	40			
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.92	1.7	4.4			
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.97	1.75	4.45			
	INDUTTANZA - *Inductance*	La	[mH]	3.4	7.1	19.9			
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD	SVS				
	COPPIA STATICA - *Static torque*	C	[Nm]	12	16				
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24	24				
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.6	0.4				
	POTENZA ASSORBITA - *Input power*	P	[W]	14	9.5				

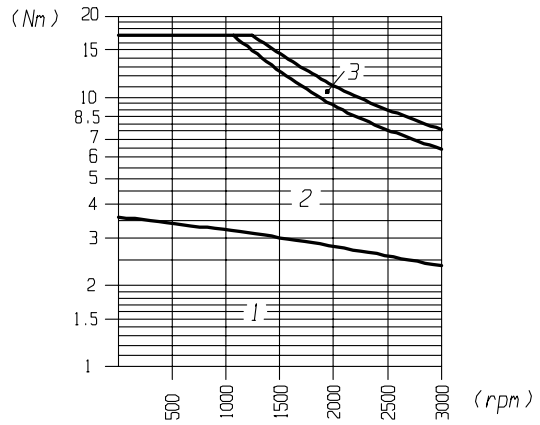
ESA 6F

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

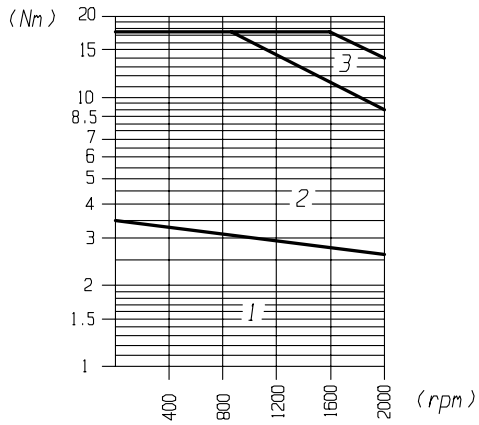
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

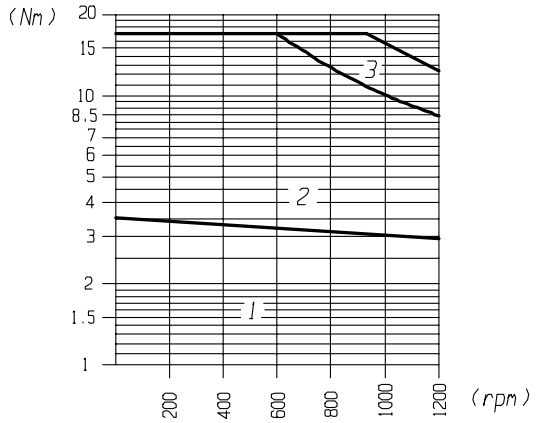
ESA 6F2



ESA 6F3



ESA 6F4



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 6M

COPPIA - *TORQUE*

Nm 5.5

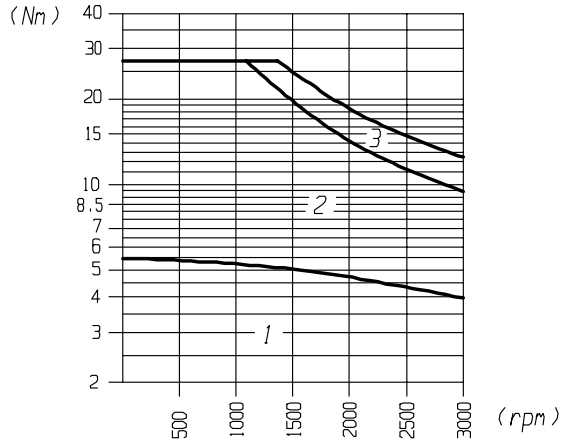
DATI MOTORE - *MOTOR RATINGS*		SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding*				
				1	2	3	4	7
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	3500	3000	3000	1200
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	5.5	4.6	5.5	5.5	5.5
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	1250	920	1100	1100	720
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	9.8	14	14	12	5.5
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	27.5	23	27.5	27.5	27.5
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	49	70	70	60	27.5
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	53.9	77	77	66	30.25
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	173	119	120	141	126
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	3500	4000	4000	3500	1800
	DATI MECCANICI - *MECHANICAL DATA*							
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0028	0.0028	0.0028	0.0028	0.0028
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	9820	8214	9820	9820	9820
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	8	9	9	8	6.5
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.191	0.191	0.191	0.191	0.191
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.162	0.162	0.162	0.162	0.162
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	588	588	588	588	588
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	176	176	176	176	176
	PESO - *Weight*	M	[Kg]	13.6	13.6	13.6	13.6	13.6
	DATI ELETTRICI - *WINDING DATA*							
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	57.7	34	40	47	105
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.56	0.33	0.39	0.453	1
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	3.7	3.2	3.67	3.6	4
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	50	50	50	50	50
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.8	0.29	0.4	0.53	2.3
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.85	0.34	0.45	0.58	2.35
	INDUTTANZA - *Inductance*	La	[mH]	3.15	1.1	1.65	2.1	9.4
	GRADO DI PROTEZIONE - *Protection degree*		IP	54				
	CLASSE D' ISOLAMENTO - *Insulation class*			F				
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)				
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm				
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1				
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12				
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02				
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40				
	RESISTENZA - *Resistance*	Ra	[Ohm]	86				
	INDUTTANZA - *Inductance*	La	[mH]	13				
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)				
	NUMERO POLI - *Number of poles*			4				
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm				
FRENO Brake	TIPO - *Type*			STD	SVS			
	COPPIA STATICA - *Static torque*	C	[Nm]	12	16			
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24	24			
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.6	0.4			
	POTENZA ASSORBITA - *Input power*	P	[W]	14	9.5			

ESA 6M

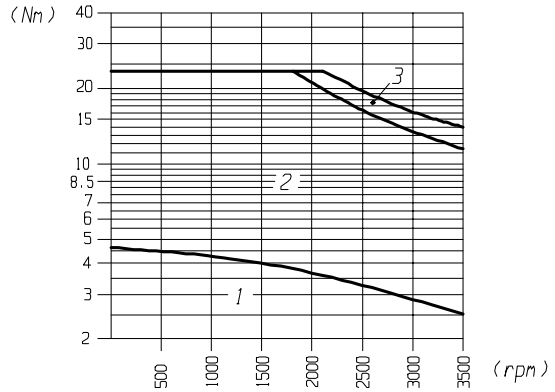
SERVOMOTORI C.C. *D.C. SERVOMOTORS*

CURVE OPERATIVE
PERFORMANCE CURVES

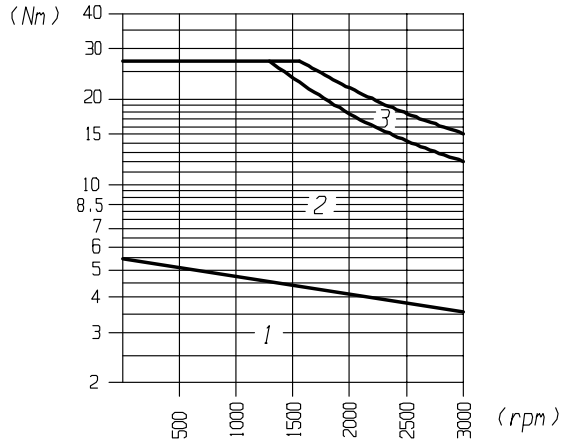
ESA 6M1



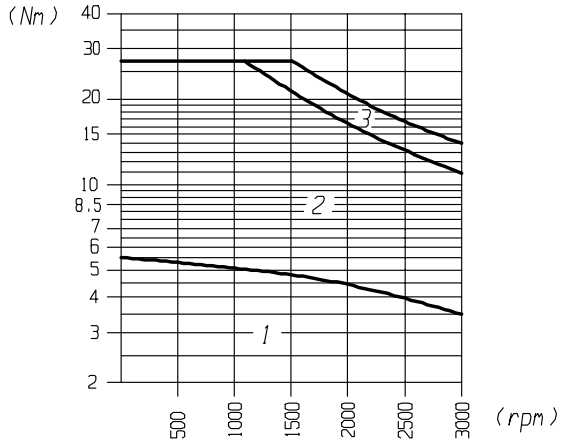
ESA 6M2



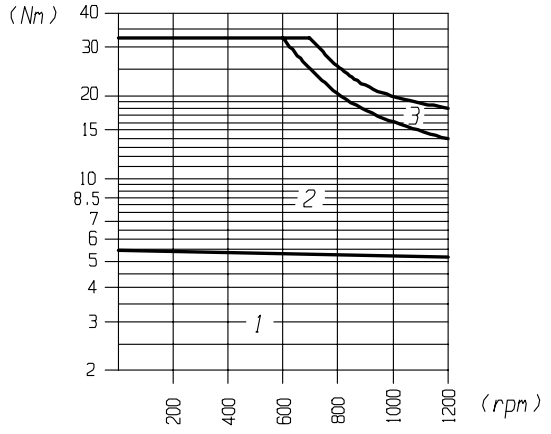
ESA 6M3



ESA 6M4



ESA 6M7



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 6L

COPPIA - *TORQUE*

Nm 8

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding*					
				1	2	3	5	7	8
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	3000	3000	2000	1500	1200
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	8	7.5	8	8	8	8
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	1260	1100	1260	1320	1100	920
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	14.5	21	15.5	13.8	9.9	8
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	40	37.5	40	40	40	40
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	72.5	105	77.5	69	49.5	40
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	79.75	115.5	82.25	75.9	54.45	44
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	171	114	160.5	120	128	128
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	3500	4000	3500	3000	2500	1800
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.0051	0.0051	0.0051	0.0051	0.0051	0.0051
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	7840	7350	7840	7840	7840	7840
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	7	12	7	8	8	7
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.21	0.21	0.21	0.21	0.21	0.21
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.21	0.21	0.21	0.21	0.21	0.21
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	588	588	588	588	588	588
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	176	176	176	176	176	176
	PESO - *Weight*	M	[Kg]	17	17	17	17	17	17
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	57	37.5	53.5	60	84	105
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.55	0.36	0.514	0.57	0.808	1
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	4.1	2.7	4.1	3.8	4.15	4.5
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	60	60	60	60	60	60
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.37	0.26	0.35	0.45	1	1.26
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.42	0.31	0.4	0.5	1.05	1.31
	INDUTTANZA - *Inductance*	La	[mH]	1.72	0.85	1.65	1.9	4.2	5.9
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD	SVS				
	COPPIA STATICA - *Static torque*	C	[Nm]	12	16				
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24	24				
	CORRENTE NOMINALE - *Rated current*	I	[A]	0.6	0.4				
	POTENZA ASSORBITA - *Input power*	P	[W]	14	9.5				

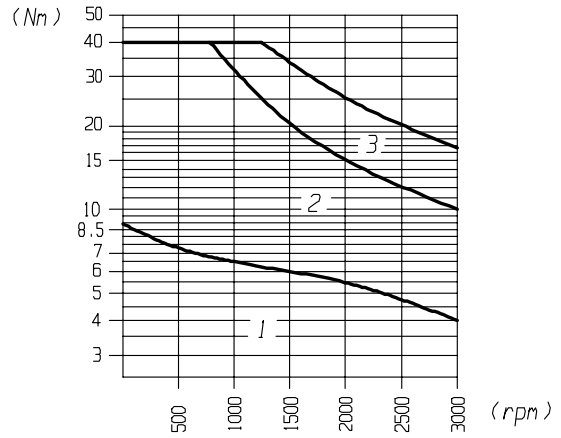
ESA 6L

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

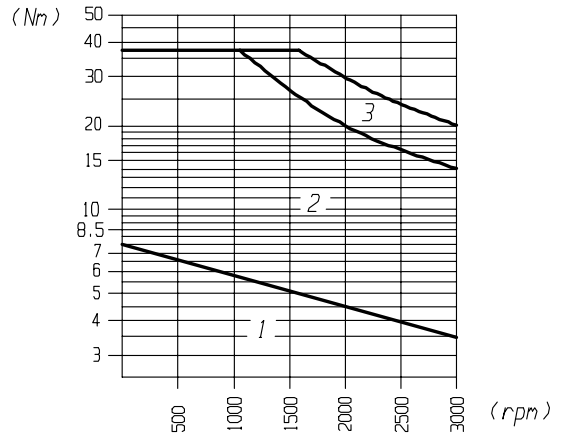
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

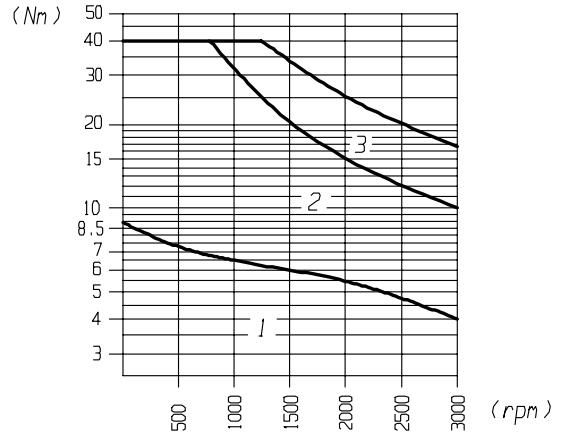
ESA 6L1



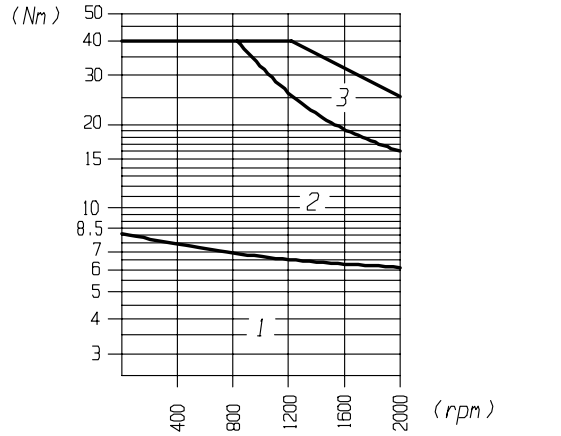
ESA 6L2



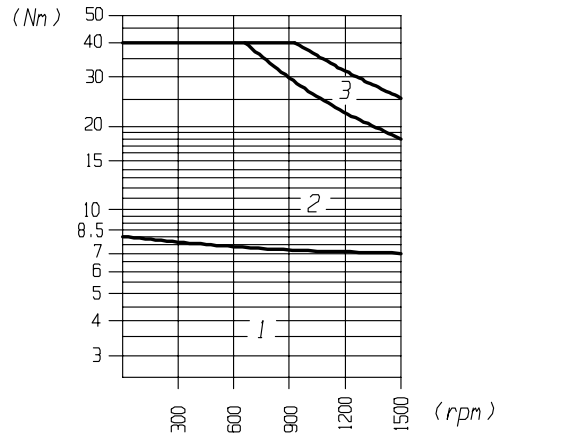
ESA 6L3



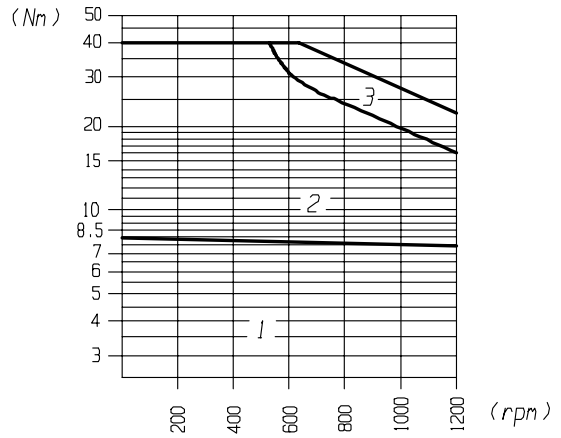
ESA 6L5



ESA 6L7



ESA 6L8

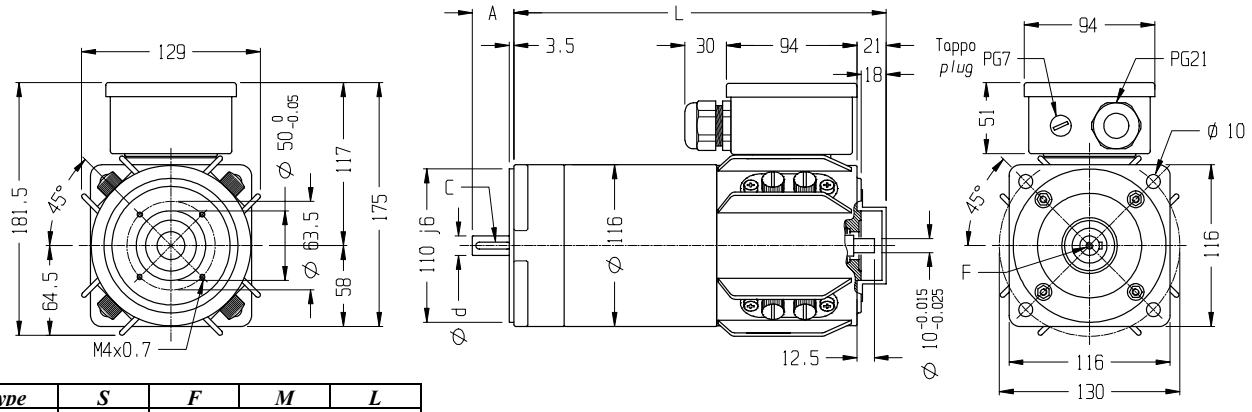


1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

ESA 6

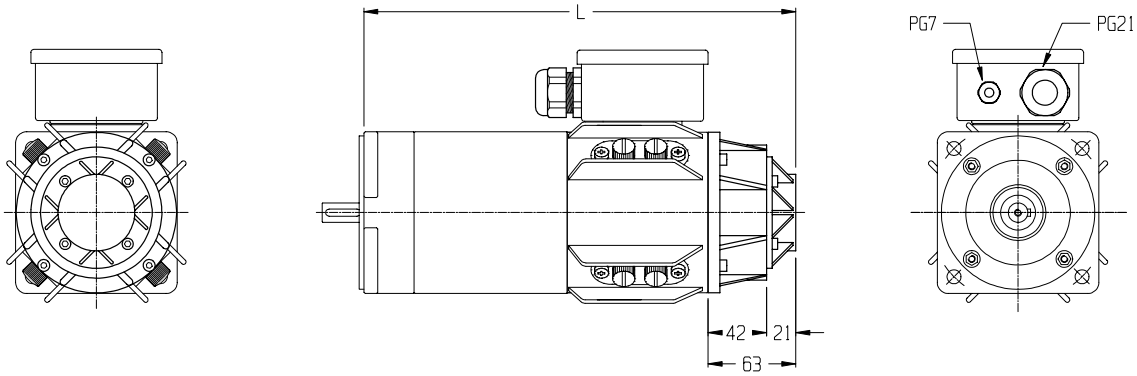
DIMENSIONI (mm) *DIMENSIONS (mm)*



Type	*S*	*F*	*M*	*L*
A	30	40		
F	M5	M6		
L	268		340	412
d (j6)	14	19		
C	5x5x25	6x6x30		

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

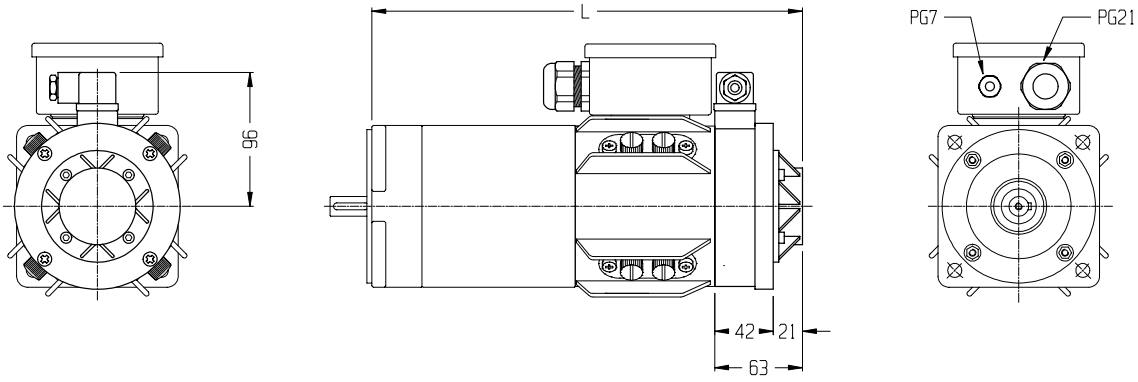
DINAMO TACHIMETRICA *TACHO GENERATOR*



Type	*S*	*F*	*M*	*L*
L	309		381	453

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO + DINAMO TACHIMETRICA *TACHO GENERATOR + BRAKE*

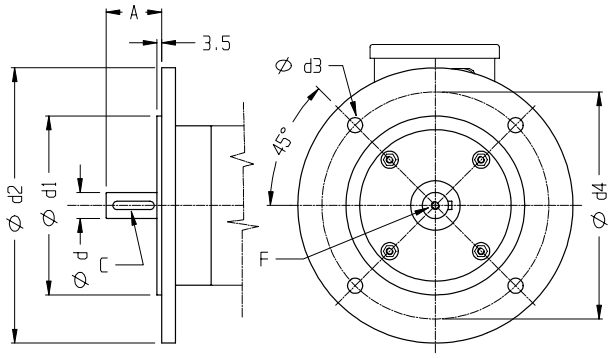


Type	*S*	*F*	*M*	*L*
L	309		381	453

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

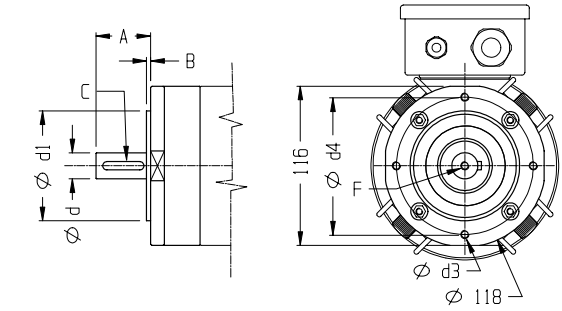
OPTIONALS

FLANGIA B5 *B5 FLANGE*



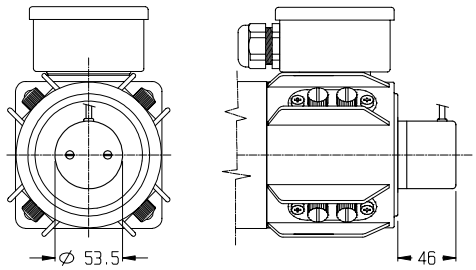
Size	*A*	*C*	*d(h7)*	*d1(h7)*	*d2*	*d3*	*d4*	*F*
71	30	5x5x25	14	110	160	9.5	130	M5
80	40	6x6x30	19	130	200	11	165	M6

FLANGIA B14 *B14 FLANGE*

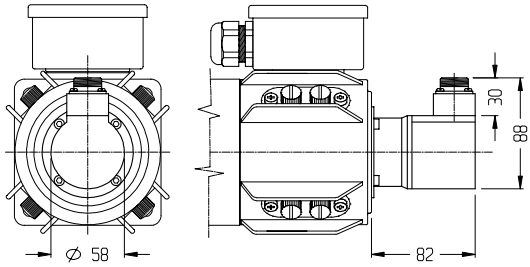


Size	*A*	*B*	*C*	*d(h7)*	*d1(h7)*	*d3*	*d4*	*F*
71	30	2.5	5x5x25	14	70	M6	85	M5
80	40	3	6x6x30	19	80	M6	100	M6

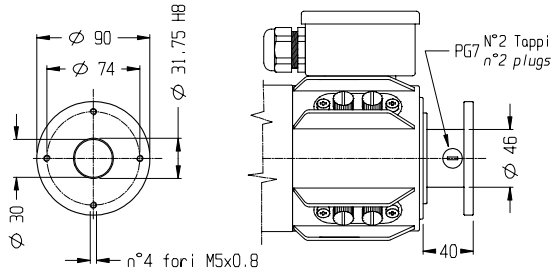
ENCODER EH53 *ENCODER EH53*



ENCODER EL72 *ENCODER EL72*



DISTANZ. ENC N°1 *ENCODER SPACER N°1*



SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 9S

COPPIA - *TORQUE*

Nm 6

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2				
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	2000				
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	6	6				
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	1380	1150				
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	11	7.8				
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	27	27				
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	49.5	35				
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	60.5	42.9				
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	171	160				
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	3500	2500				
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.006	0.006				
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	4500	4500				
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	17	17				
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.25	0.25				
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.17	0.17				
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	784	784				
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	235	235				
	PESO - *Weight*	M	[Kg]	14	14				
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	57	80				
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.55	0.77				
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	6.5	7				
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	70	70				
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.8	1.6				
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.85	1.65				
	INDUTTANZA - *Inductance*	La	[mH]	5.5	11.55				
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	16					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	2.3					
	POTENZA ASSORBITA - *Input power*	P	[W]	9.5					

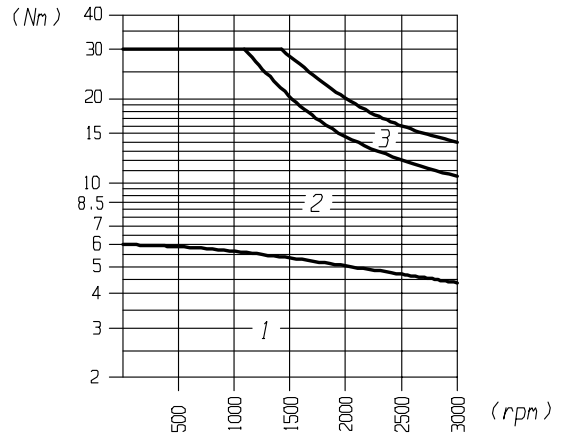
ESA 9S

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

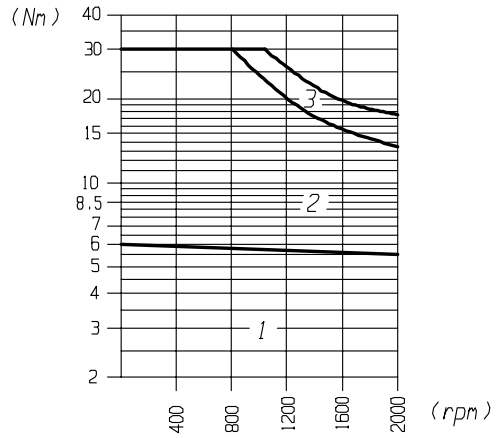
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

ESA 9S1



ESA 9S2



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 9M

COPPIA - *TORQUE*

Nm 11

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2	3			
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	3000	2000			
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	11	11	11			
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	1570	1400	1500			
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	20	25	13.4			
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	49.5	49.5	49.5			
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	90	112.5	60			
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	110	137.5	73.7			
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	171	138	170			
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	3500	3500	2500			
	DATI MECCANICI - *MECHANICAL DATA*								
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.01	0.01	0.01			
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	4950	4950	4950			
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	12	13	10			
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.35	0.35	0.35			
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.22	0.22	0.22			
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	784	784	784			
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	235	235	235			
	PESO - *Weight*	M	[Kg]	22	22	22			
	DATI ELETTRICI - *WINDING DATA*								
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	57	46	85			
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.55	0.44	0.82			
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	6.4	6	6.6			
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	80	80	80			
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.31	0.2	0.61			
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.36	0.25	0.66			
	INDUTTANZA - *Inductance*	La	[mH]	2.3	1.5	4.35			
	GRADO DI PROTEZIONE - *Protection degree*		IP	54					
	CLASSE D' ISOLAMENTO - *Insulation class*			F					
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)					
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm					
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1					
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12					
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02					
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40					
	RESISTENZA - *Resistance*	Ra	[Ohm]	86					
	INDUTTANZA - *Inductance*	La	[mH]	13					
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)					
	NUMERO POLI - *Number of poles*			4					
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm					
FRENO Brake	TIPO - *Type*			STD					
	COPPIA STATICA - *Static torque*	C	[Nm]	16					
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24					
	CORRENTE NOMINALE - *Rated current*	I	[A]	2.3					
	POTENZA ASSORBITA - *Input power*	P	[W]	9.5					

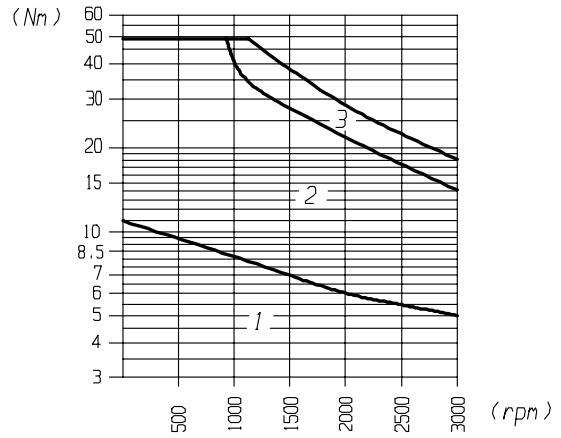
ESA 9M

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

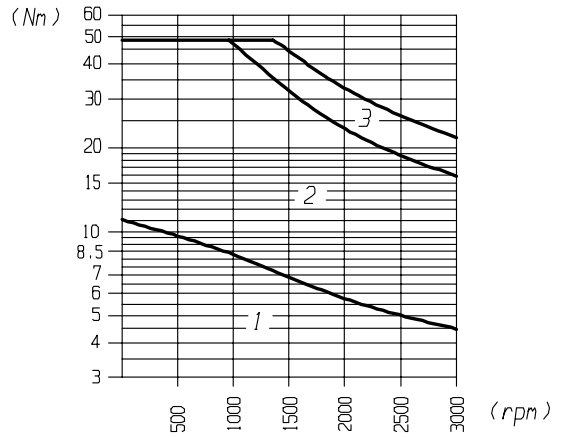
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

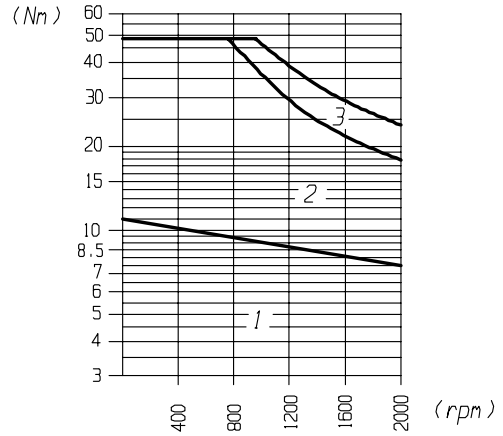
ESA 9M1



ESA 9M2



ESA 9M3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
2 = Intermittent duty area
3 = Accel. decel. duty area

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 9L

COPPIA - *TORQUE*

Nm 15

	DATI MOTORE - *MOTOR RATINGS*	SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding* 1	2	3
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	2000	1500
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	15	15	15
	POTENZA A VELOCITA' NOMINALE - *Power at rated speed*	Pn	[W]	1400	2680	2040
	CORRENTE A ROTORE BLOCCATO - *Stall current*	In	[A]	27.5	18.3	14.2
	PICCO DI COPPIA ALLO SPUNTO - *Peak torque*	Cmax	[Nm]	67.5	67.5	67.5
	CORRENTE AL PICCO DI COPPIA - *Peak current*	Imax	[A]	124	82	64
	CORRENTE SMAGNETIZZANTE - *Demagnetise current*	Ipeak	[A]	151.25	100.65	78.1
	FCEM A VELOCITA' NOMINALE - *Bemf at rated speed*	E	[V]	171	170	165
	MAX VELOCITA' - *Max speed*	Nmax	[rpm]	3500	2400	1800
	DATI MECCANICI - *MECHANICAL DATA*					
	MOMENTO D'INERZIA - *Moment of inertia*	Jm	Kg m^2	0.014	0.014	0.014
	MAX. ACC. TEORICA - *Max theorethical acceleration*	αmax	rad/s^2	4820	4820	4820
	COSTANTE DI TEMPO MECCANICA - *Mechanical time constant*	Tm	[ms]	13	12	12
	COPPIA SMORZAMENTO A 1000 RPM - *Damping constant at 1000 rpm*	Td	[Nm]	0.45	0.45	0.45
	COPPIA ATTRITO STATICO - *Static friction torque*	Tf	[Nm]	0.3	0.3	0.3
	MAX CARICO RADIALE (A 3000 RPM) - *Max radial load (at 3000 rpm)*	Fr	[N]	784	784	784
	MAX CARICO ASSIALE - *Max axial load*	Fa	[N]	235	235	235
	PESO - *Weight*	M	[Kg]	30	30	30
	DATI ELETTRICI - *WINDING DATA*					
	COSTANTE DI TENSIONE ± 5% - *Voltage constant ± 5%*	Ke	V/Krpm	57	85	110
	COSTANTE DI COPPIA ± 5% - *Torque constant ± 5%*	Kt	[Nm/A]	0.55	0.82	1.06
	COSTANTE DI TEMPO ELETTRICA - *Electrical time constant*	Te	[ms]	4.95	5.2	5.4
	COSTANTE DI TEMPO TERMICA - *Thermal time constant*	Tt	[min]	90	90	90
	RESIST. ARMATURA ± 10% A 25°C - *Armature resistance ± 10% at 25°c*	Ra	[Ohm]	0.23	0.52	0.88
	RESIST. ARMATURA CON SPAZZOLE - *Terminal resistance*	Rt	[Ohm]	0.28	0.57	0.93
	INDUTTANZA - *Inductance*	La	[mH]	1.39	2.95	5
	GRADO DI PROTEZIONE - *Protection degree*		IP	54		
	CLASSE D' ISOLAMENTO - *Insulation class*			F		
DINAMO T. Tacho generator	COSTANTE DI TENSIONE - *Voltage constant*	Ke	V/Krpm	10 +/- 5% (MAX 9000 rpm)		
	ONDULAZIONE PICCO/PICCO - *Ripple*		[%]	< 1.5 A 1000 rpm		
	LINEARITA' A 6000 RPM - Linearity at 6000 rpm		[%]	< 0.1		
	ERRORE DI REVERSIBILITA' - *Reversibility error*		[%]	< 0.12		
	COEFFICIENTE DI TEMPERATURA - *Temperature coefficient*		[%]	0.02		
	MOMENTO D' INERZIA - *Moment of inertia*	J	g cm^2	40		
	RESISTENZA - *Resistance*	Ra	[Ohm]	86		
	INDUTTANZA - *Inductance*	La	[mH]	13		
	CORRENTE - *Current*	I	[mA]	2 (MAX 8 mA)		
	NUMERO POLI - *Number of poles*			4		
	VITA SPAZZOLE PREVISTA - *Life expctancy*			15000 A 3000 rpm		
FRENO Brake	TIPO - *Type*			STD		
	COPPIA STATICA - *Static torque*	C	[Nm]	16		
	TENSIONE DI ALIMENTAZIONE - *Power supply voltage*	E	[V]	24		
	CORRENTE NOMINALE - *Rated current*	I	[A]	2.3		
	POTENZA ASSORBITA - *Input power*	P	[W]	9.5		

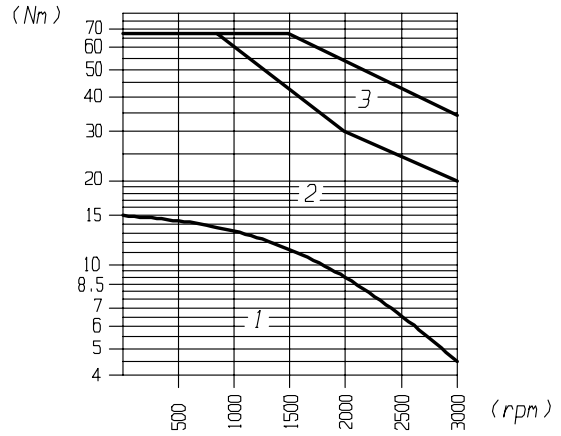
ESA 9L

SERVOMOTORI C.C. *D.C. SERVOMOTORS*

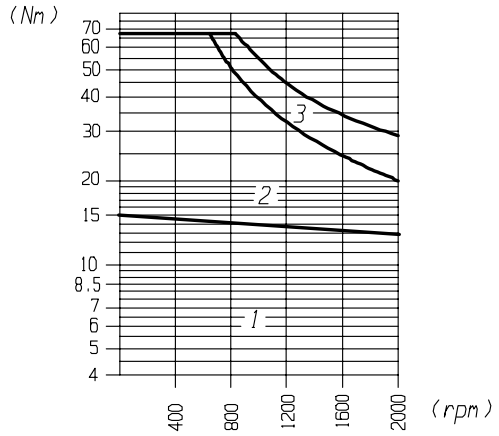
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

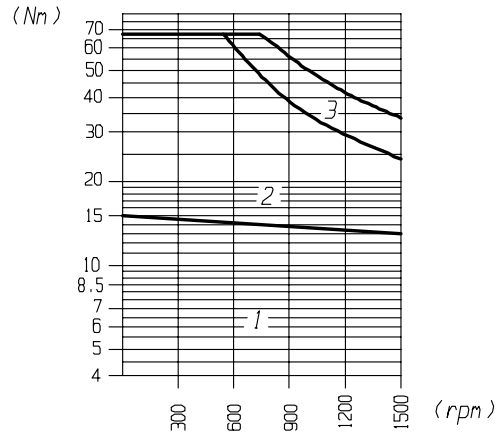
ESA 9L1



ESA 9L2

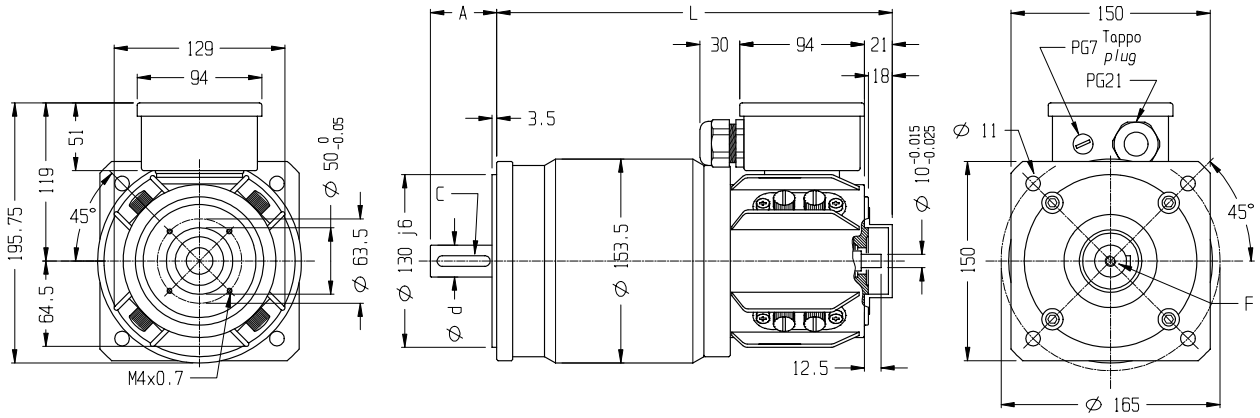


ESA 9L3



1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

1 = Continuous duty area
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3 = Accel. decel. duty area

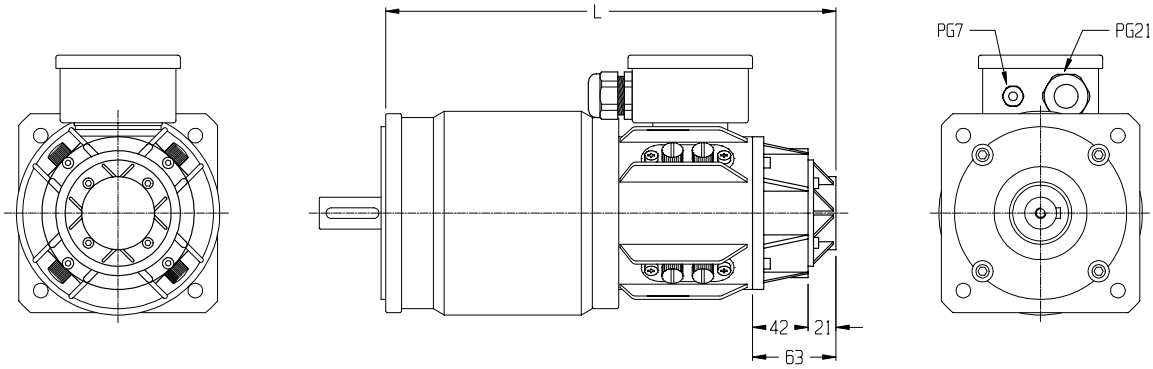


Type	*S*	*M*	*L*
A	50		
F	M8		
d(j6)	24		

Type	*S*	*M*	*L*
L	298	363	424
C	8*7*40		

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

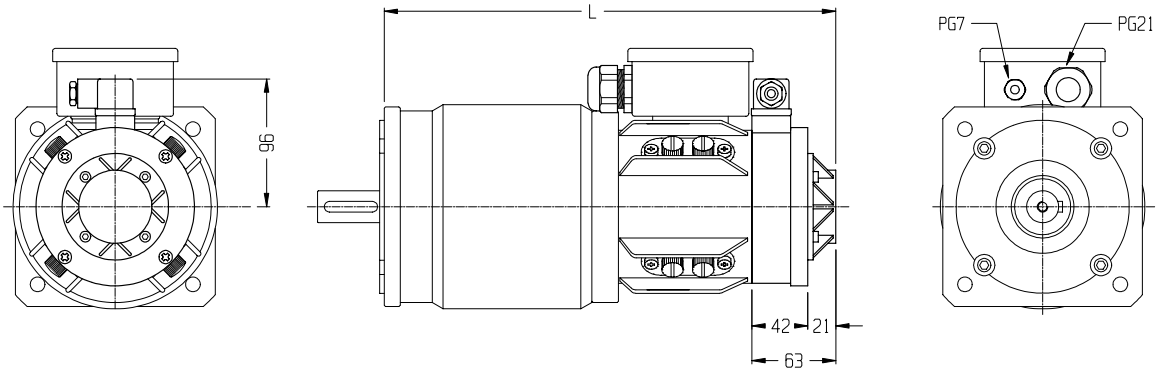
DINAMO TACHIMETRICA *TACHO GENERATOR*



Type	*S*	*M*	*L*
L	339	404	465

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO + DINAMO TACHIMETRICA *TACHO GENERATOR + BRAKE*

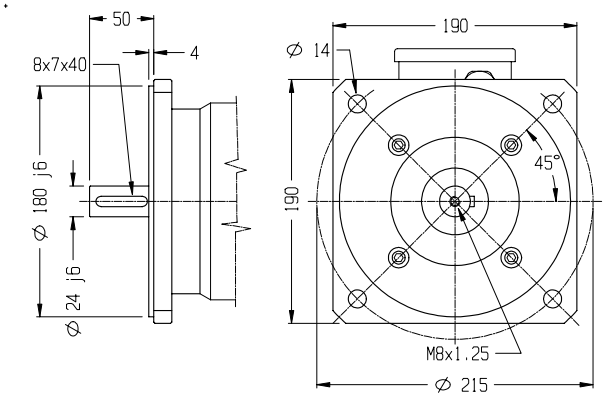


Type	*S*	*M*	*L*
L	339	404	465

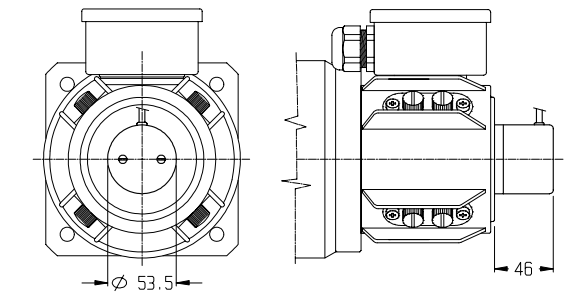
PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

OPTIONALS

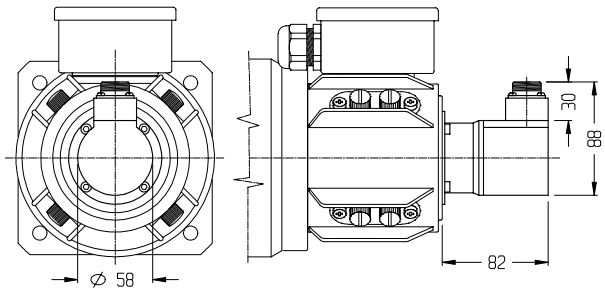
FLANGIA B5/100 *B5/100 FLANGE*



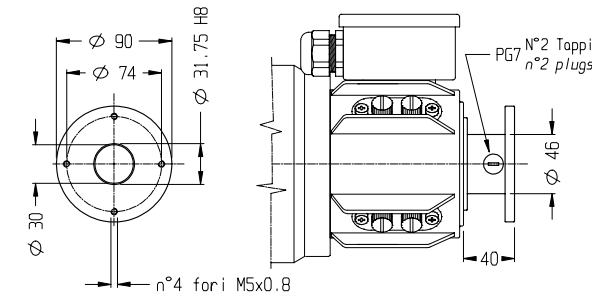
ENCODER EH53 *ENCODER EH53*



ENCODER EL72 *ENCODER EL72*



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