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					

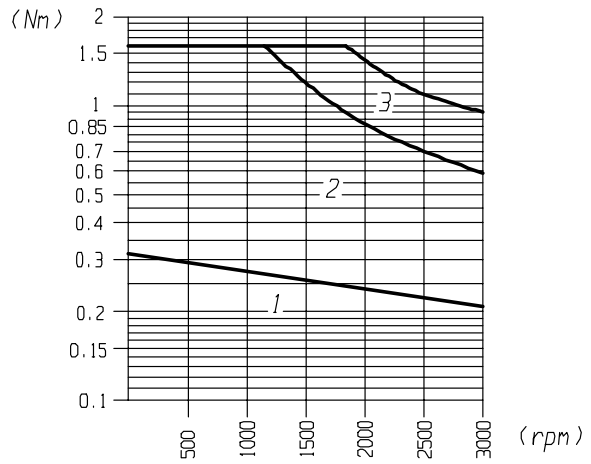
ESA2S

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

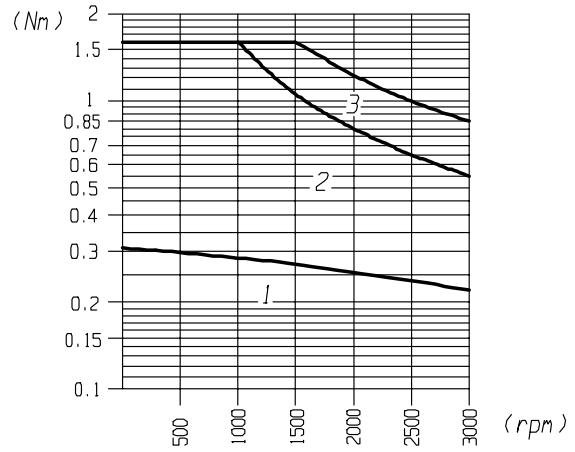
CURVE OPERATIVE
PERFORMANCE CURVES

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					

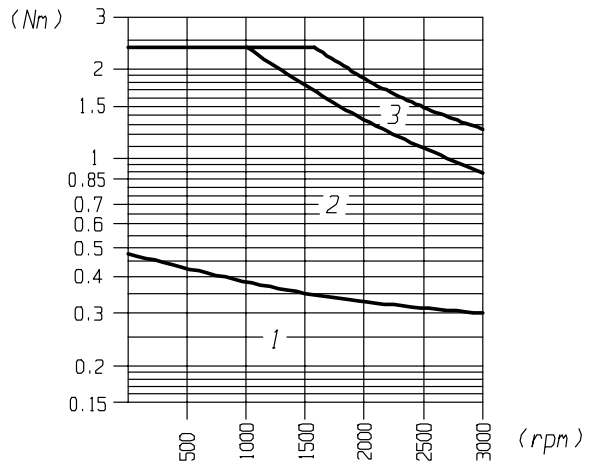
ESA2L

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

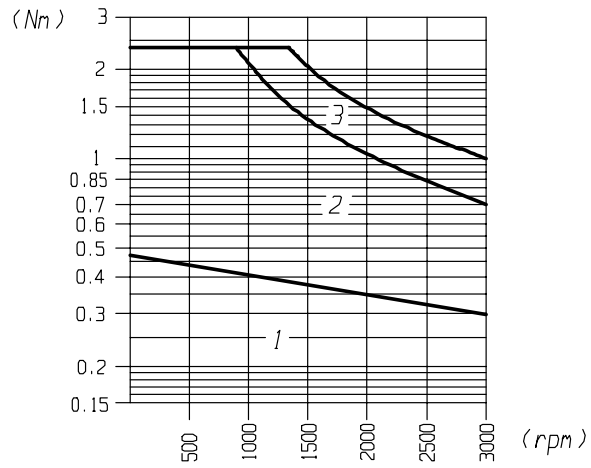
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

ESA 2L1



ESA 2L2



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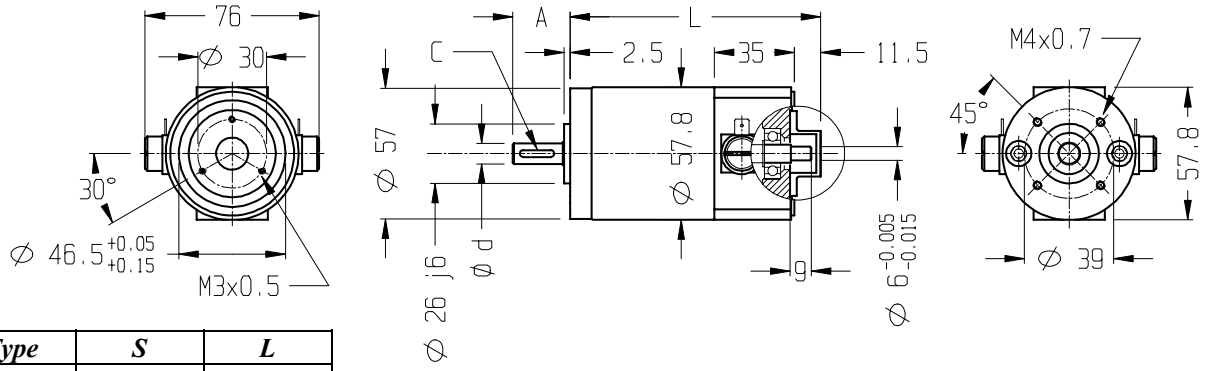
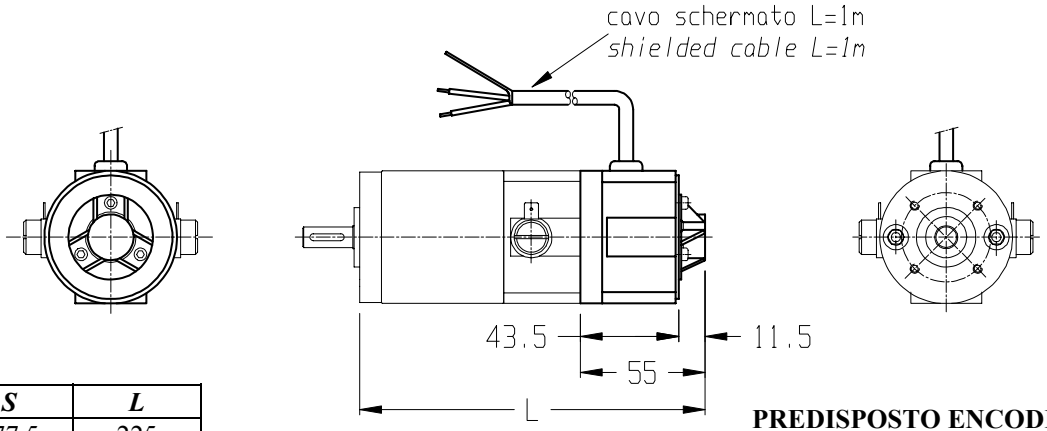


Type	*S*	*L*
A	20	25
L	136	183.5
d (j6)	7	9
C	-	3x3x15

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

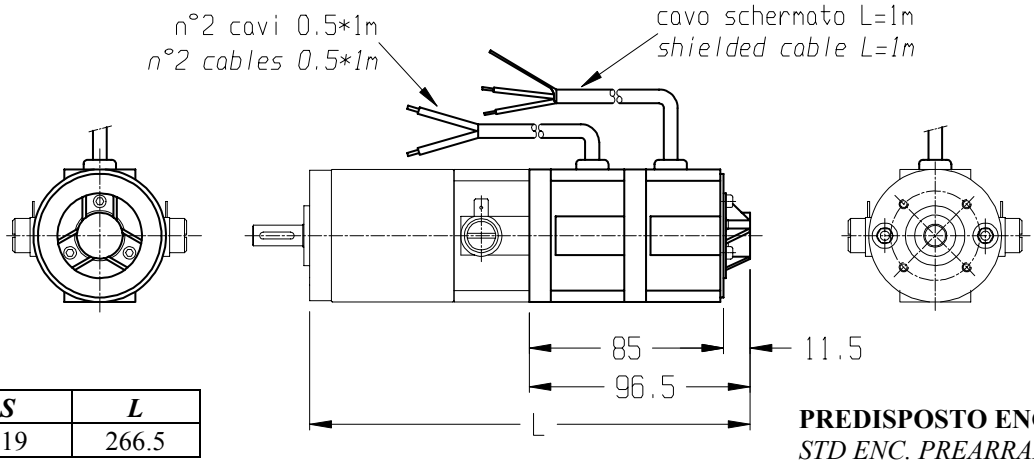
DINAMO TACHIMETRICA *TACHO GENERATOR*



Type	*S*	*L*
L	177.5	225

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

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

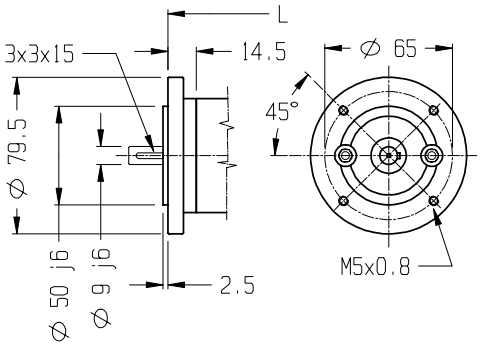


Type	*S*	*L*
L	219	266.5

PREDISPOSTO ENC. STD
STD ENC. PREARRANGEMENT

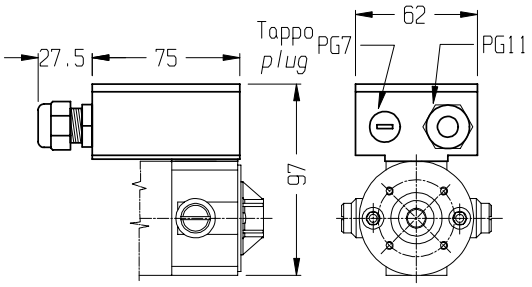
OPTIONALS

FLANGIA B14/56 *B14/56 FLANGE*

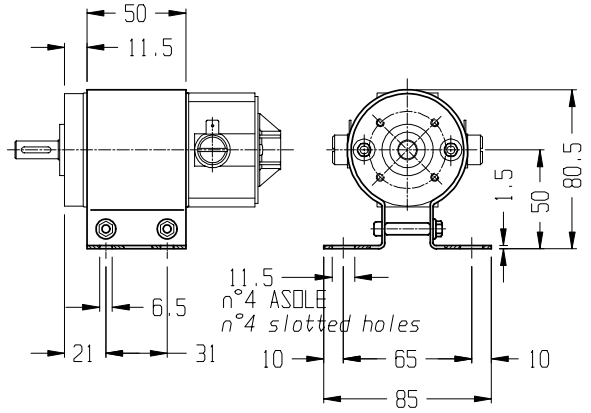


Type	*S*	*L*
L	141	188.5

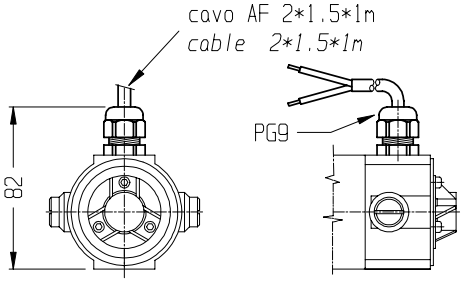
MORSETTIERA *TERMINAL BOX*



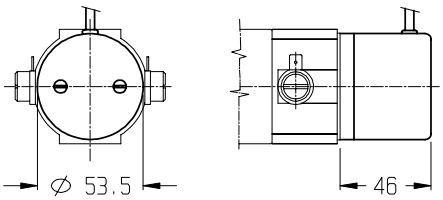
PIEDE A FASCIA *FOOT BAND TYPE*



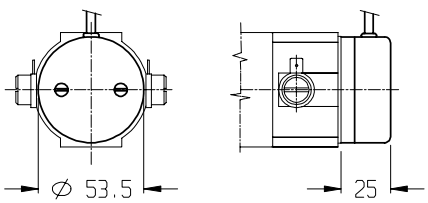
CAVO *FLYING LEADS*



ENCODER EH53 *ENCODER EH53*

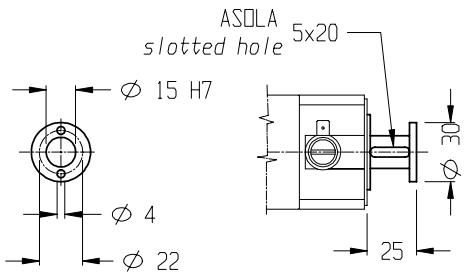


ENCODER EH38 *ENCODER EH38*

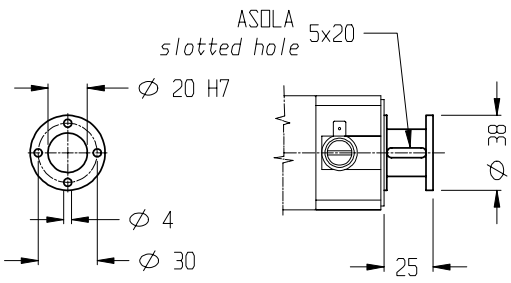


OPTIONALS

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					

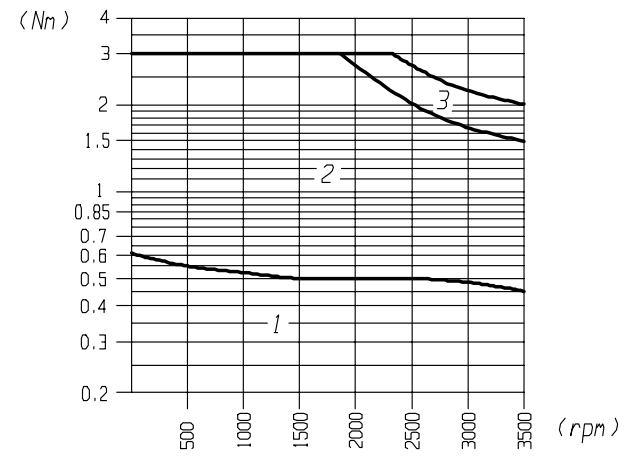
ESA 3XS

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

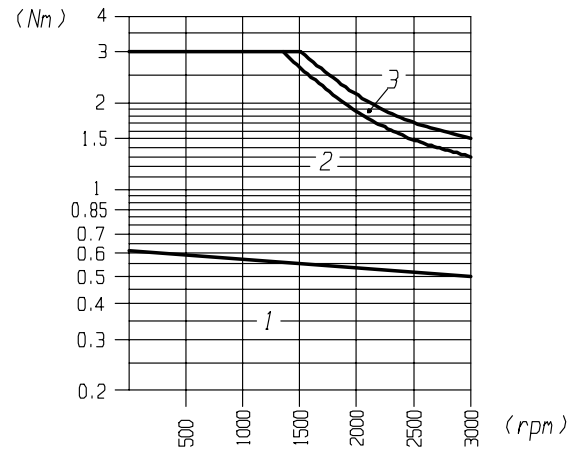
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

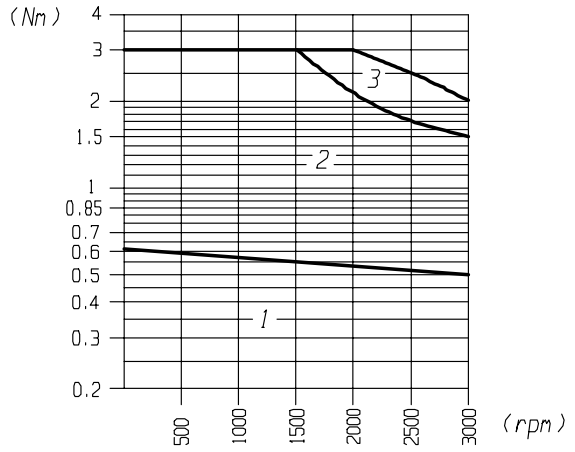
ESA 3XS1



ESA 3XS2



ESA 3XS3



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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					

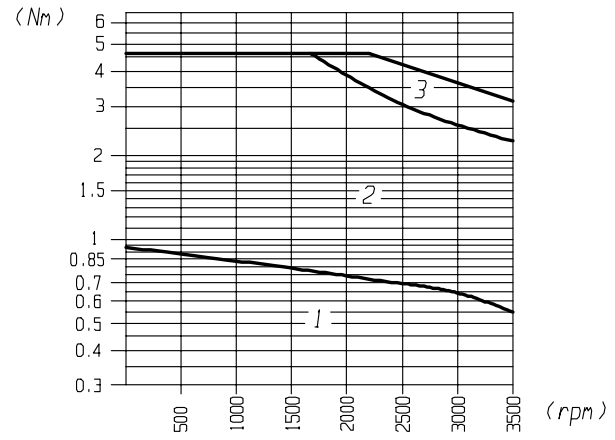
ESA3S

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

CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

ESA 3S1



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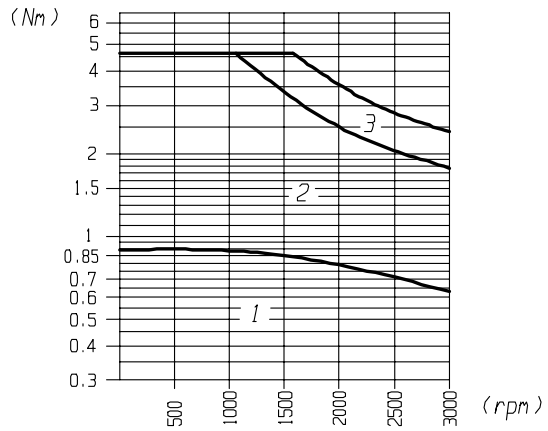

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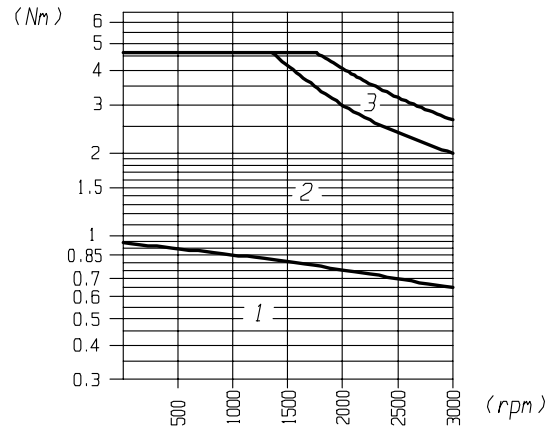


1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

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					

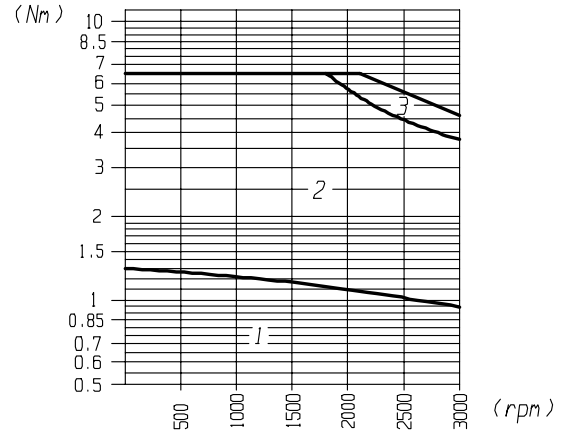
ESA 3SL

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

CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

ESA SL1



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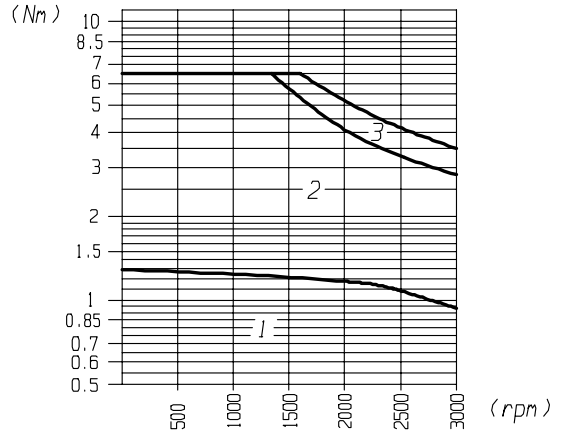

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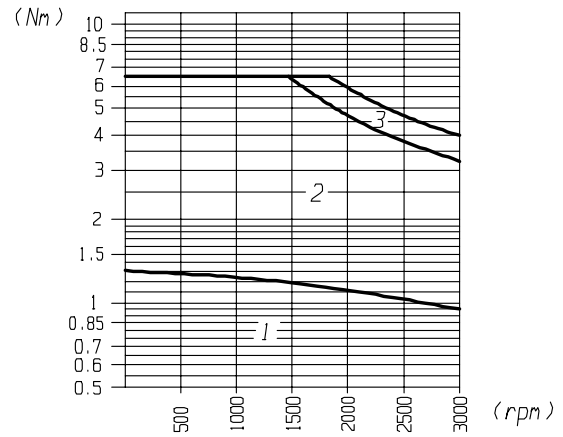

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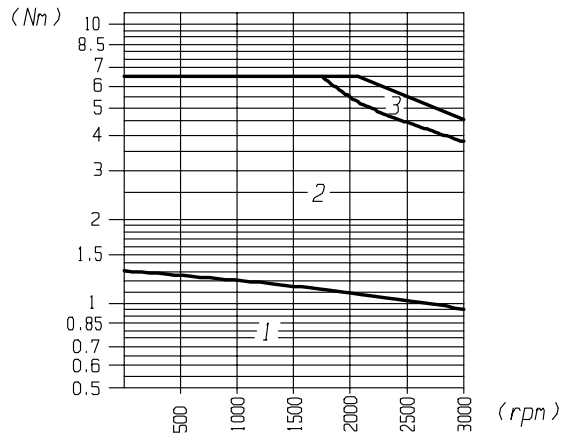

1 = Area di ciclo continuo
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1 = Continuous duty area
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SERVOMOTORI C.C.
D.C. SERVOMOTORS

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					

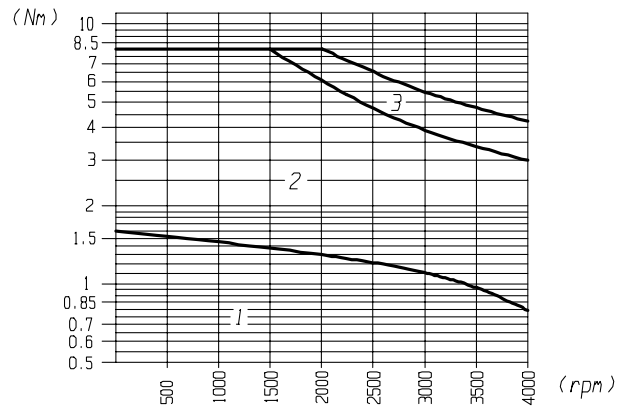
ESA 3M

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

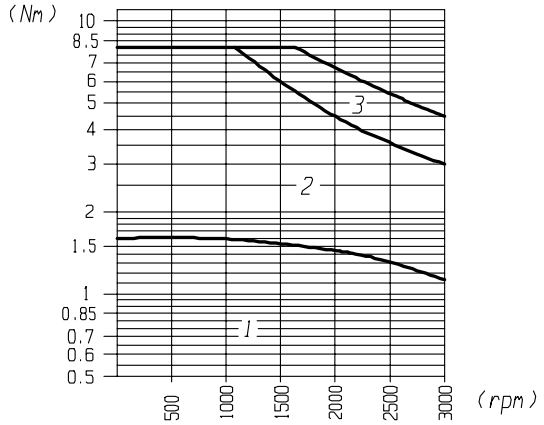
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

ESA 3M2



ESA 3M3



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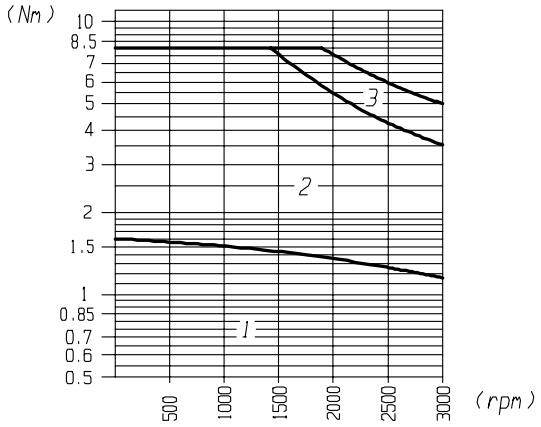

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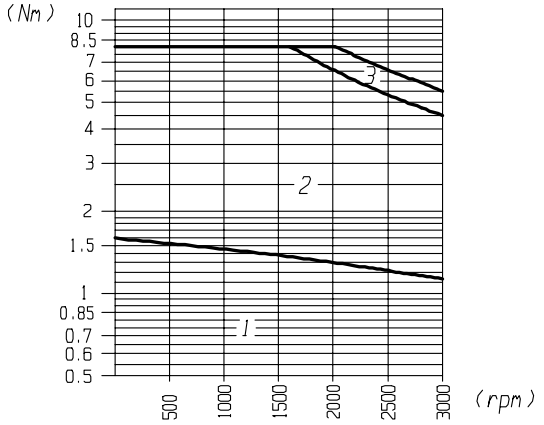

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SERVOMOTORI C.C.
D.C. SERVOMOTORS

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				

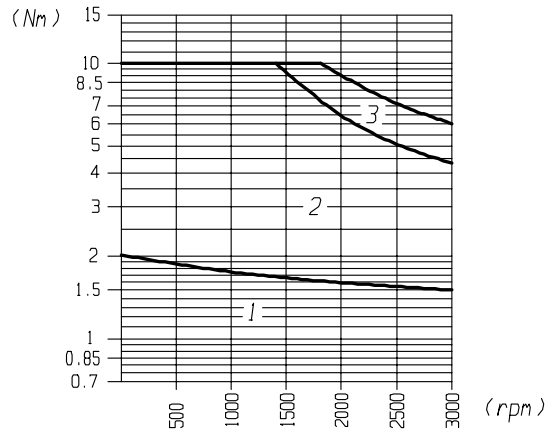
ESA 3L

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

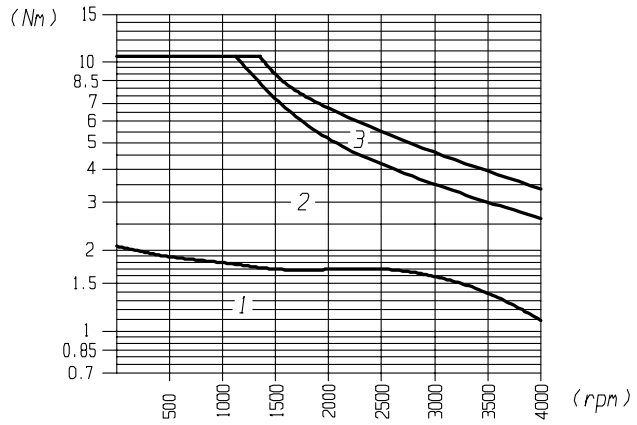
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

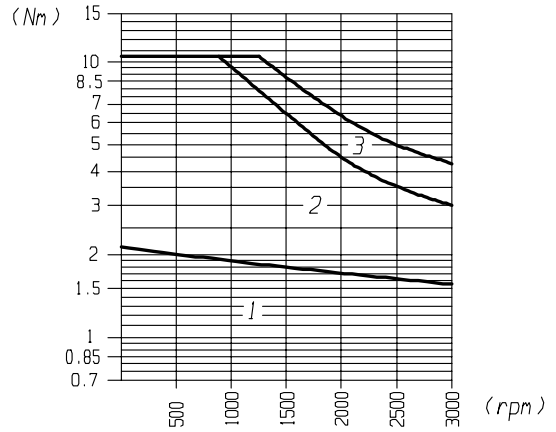
ESA 3L1



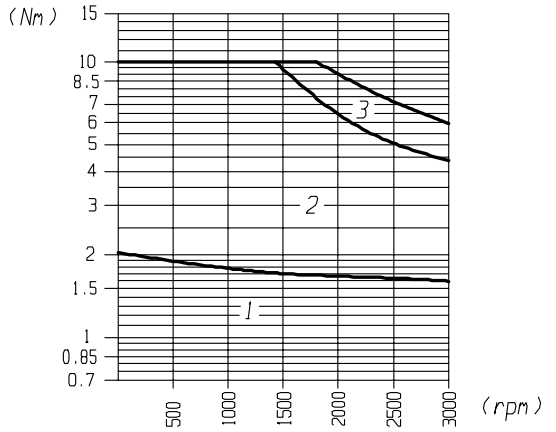
ESA 3L3



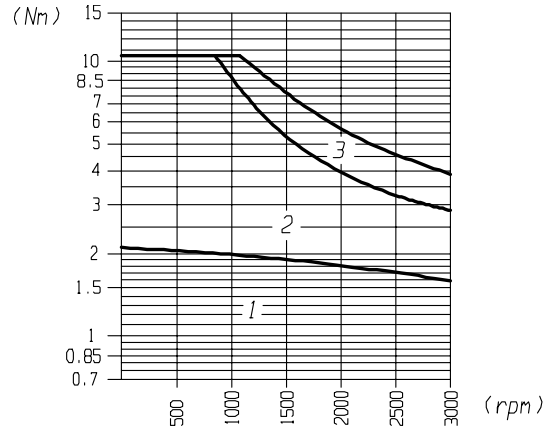
ESA 3L4



ESA 3L6



ESA 3L7



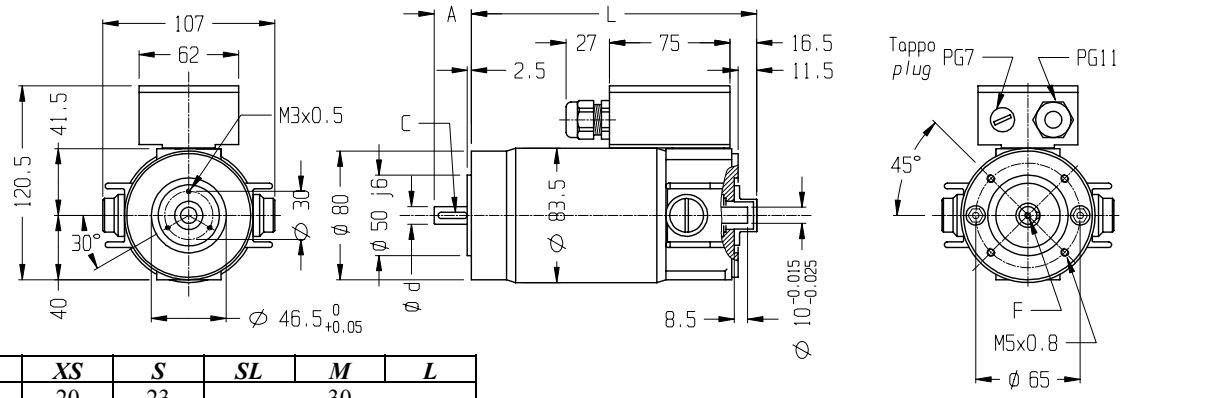
1 = Area di ciclo continuo
2 = Area di ciclo intermittente
3 = Area di accel. decel.

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

ESA 3

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

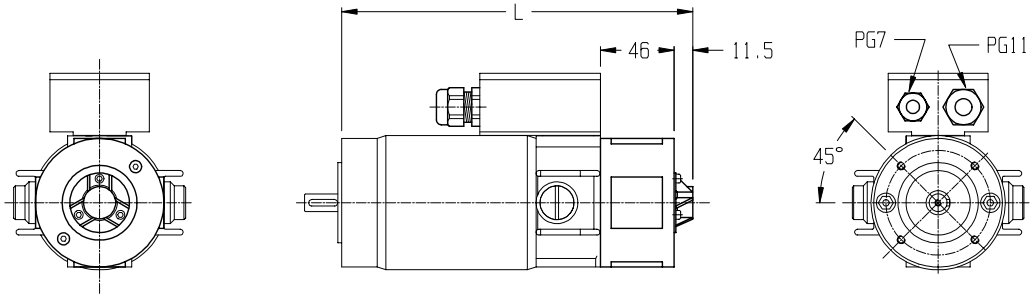
DIMENSIONI (mm) *DIMENSIONS (mm)*



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

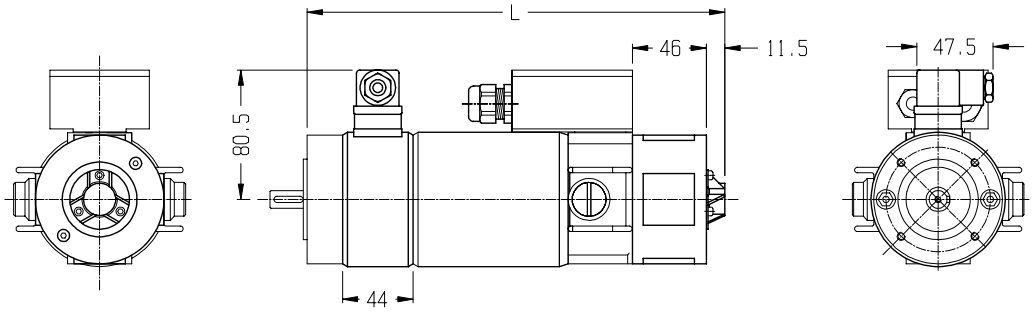
DINAMO TACHIMETRICA *TACHO GENERATOR*



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*

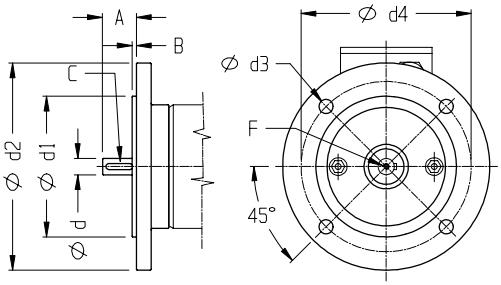


Type	*XS*	*S*	*SL*	*M*	*L*
L	262.5	297.5	314	352.5	407.5

PREDISPOSTO ENCODER STD
STD ENCODER

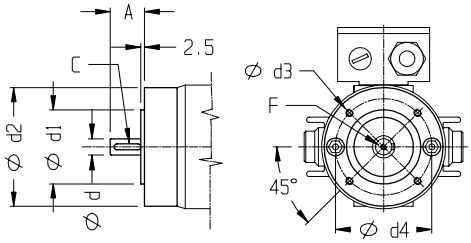
OPTIONALS

FLANGIA B5 *B5 FLANGE*



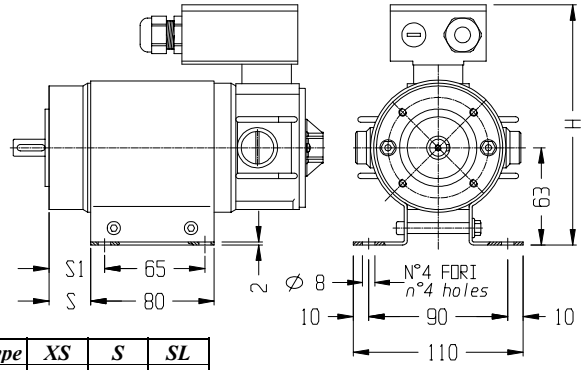
Size	*A*	*B*	*d(j6)*	*d1(j6)*	*d2*	*d3*	*d4*	*F*	*C*
56	20	3	9	80	120	8.5	100	-	3*3*15
63	23	3	11	95	140	9.5	115	M4	4*4*18
71	30	3.5	14	110	160	9.5	130	M5	5*5*25

FLANGIA B14 *B14 FLANGE*



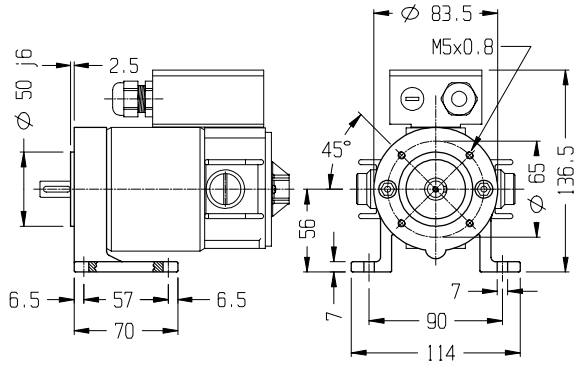
Size	*A*	*d(j6)*	*d1(j6)*	*d2*	*d3*	*d4*	*F*	*C*
63	23	11	60	90	M5	75	M4	4*4*18
71	30	14	70	105	M6	85	M5	5*5*25

PIEDE A FASCIA *FOOT BAND TYPE*

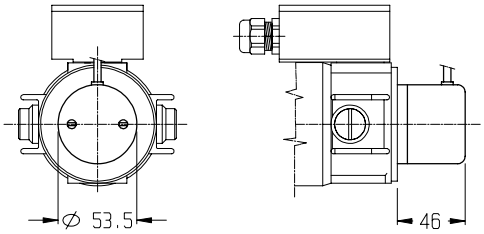


Type	*XS*	*S*	*SL*
H	155.5	143.5	143.5
S	27	27	27
S1	36	36	36

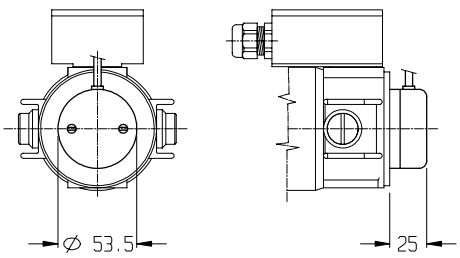
FLANGIA B3-B14/56 *B3-B14/56 FLANGE*



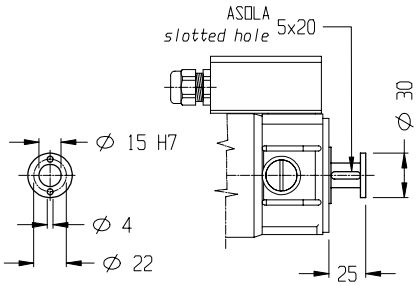
ENCODER EH53 *ENCODER EH53*



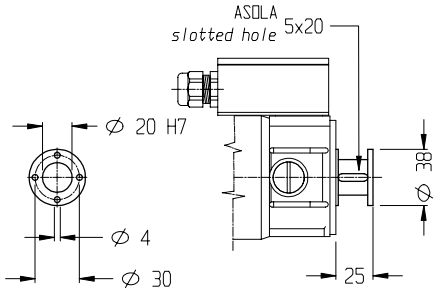
ENCODER EH38 *ENCODER EH38*



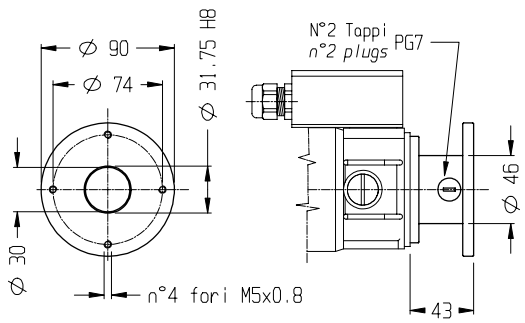
DISTANZ. ENC. N°1 *ENCODER SPACER N°1*



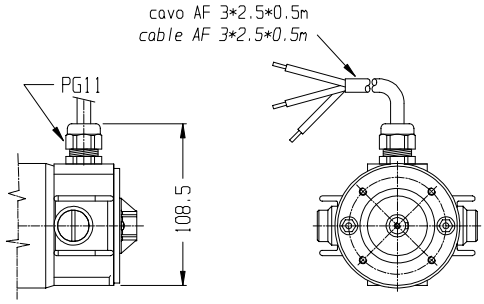
DISTANZ. ENC. N°2 *ENCODER SPACER N°2*



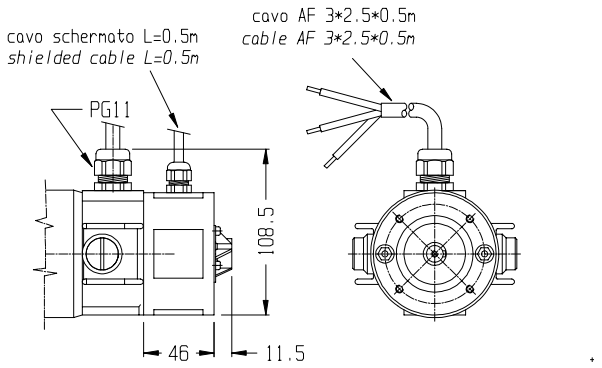
DISTANZ. ENC. N°3 *ENCODER SPACER N°3*



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				

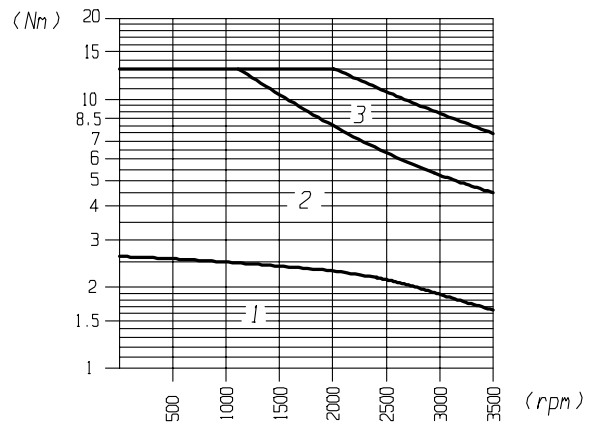
ESA 6S

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

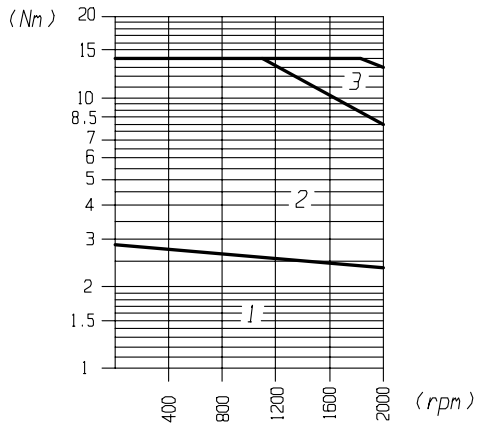
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

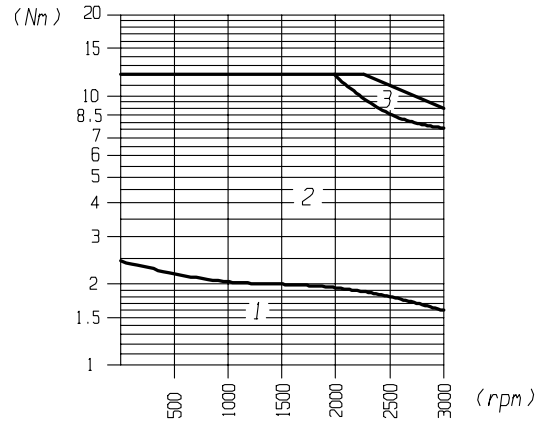
ESA 6S1



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				

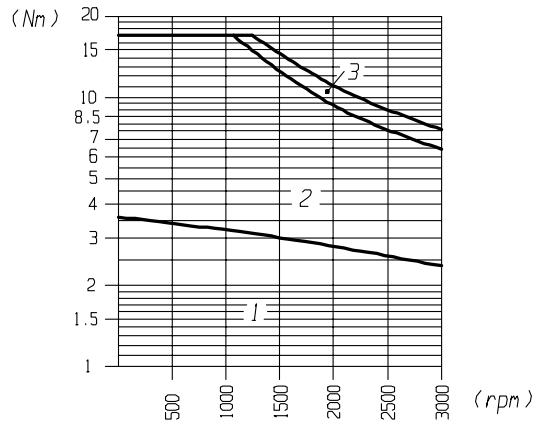
ESA 6F

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

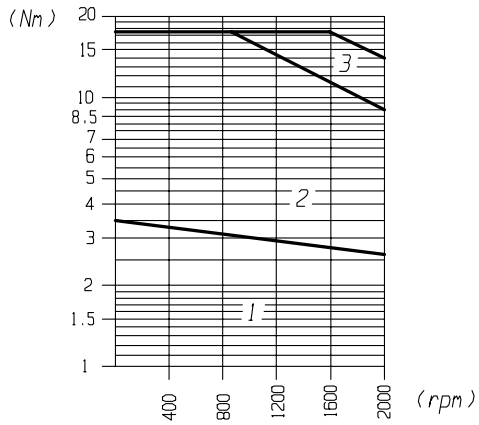
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

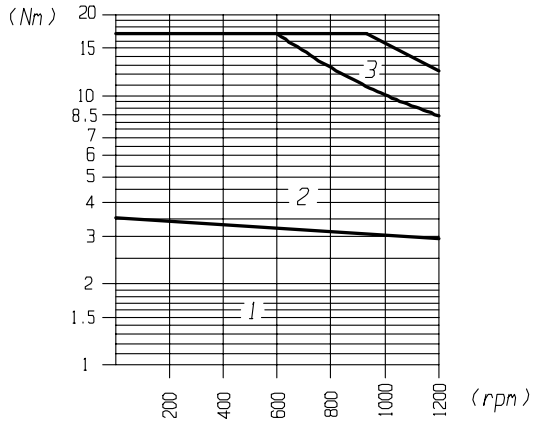
ESA 6F2



ESA 6F3



ESA 6F4



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3 = Area di accel. decel.

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

SERVOMOTORI C.C.
D.C. SERVOMOTORS

SERIE
Series

ESA 6M

COPPIA - *TORQUE*

Nm 5.5

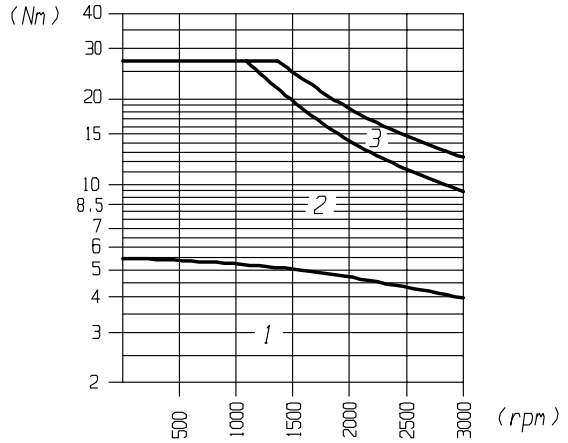
DATI MOTORE - *MOTOR RATINGS*		SIMBOLI Symbols	UNITA' Units	TIPO DI AVVOLGIMENTO *Type of winding*				
				1	2	3	4	7
SERVOMOTORE - Servomotor	VELOCITA' NOMINALE - *Rated speed*	n	[rpm]	3000	3500	3000	3000	1200
	COPPIA ROTORE BLOCCATO - *Continuos stall torque*	Cn	[Nm]	5.5	4.6	5.5	5.5	5.5
	POTENZA A VELOCITA' 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

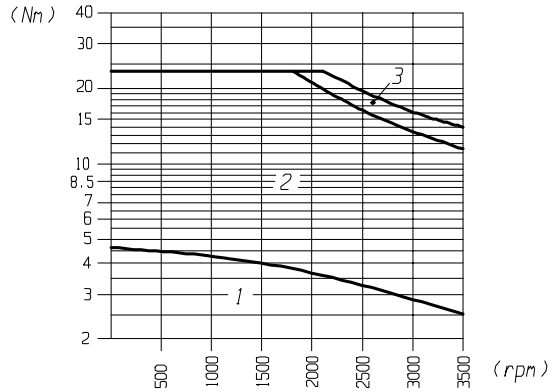
SERVOMOTORI C.C. *D.C. SERVOMOTORS*

CURVE OPERATIVE
PERFORMANCE CURVES

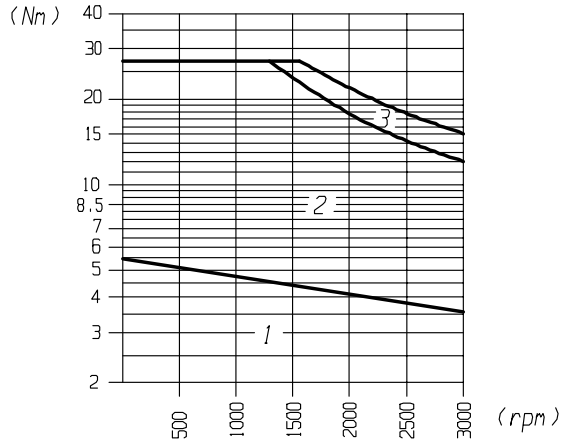
ESA 6M1



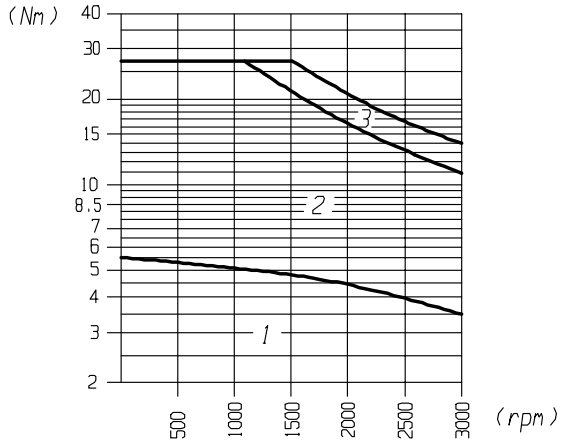
ESA 6M2



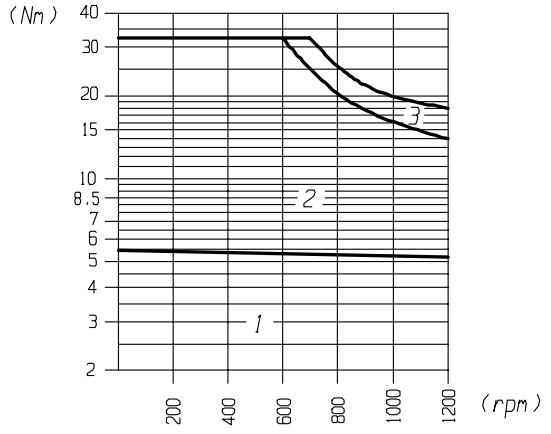
ESA 6M3



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				

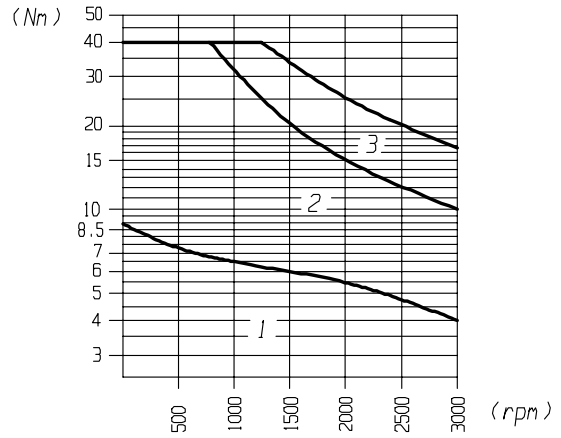
ESA 6L

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

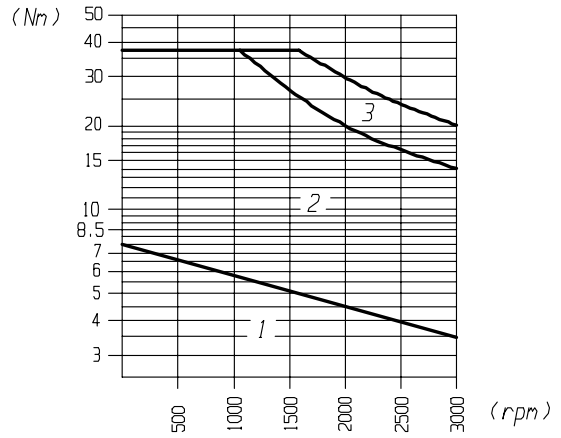
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

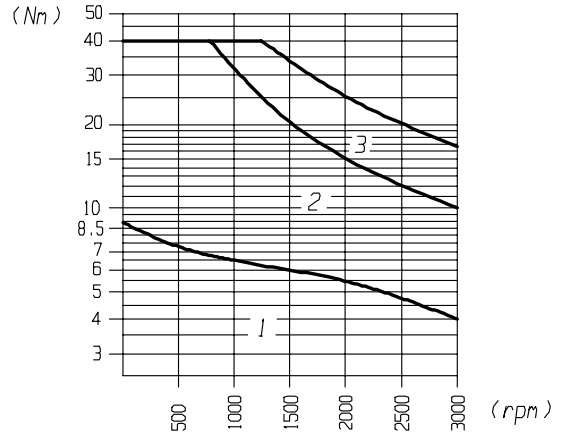
ESA 6L1



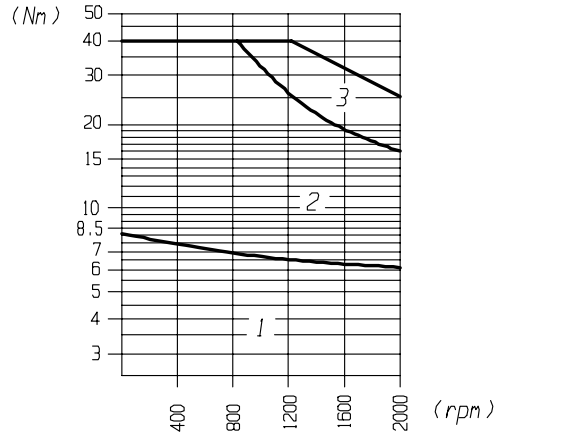
ESA 6L2



ESA 6L3



ESA 6L5



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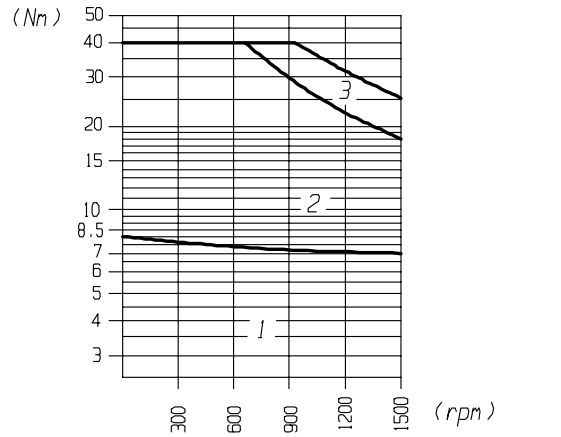
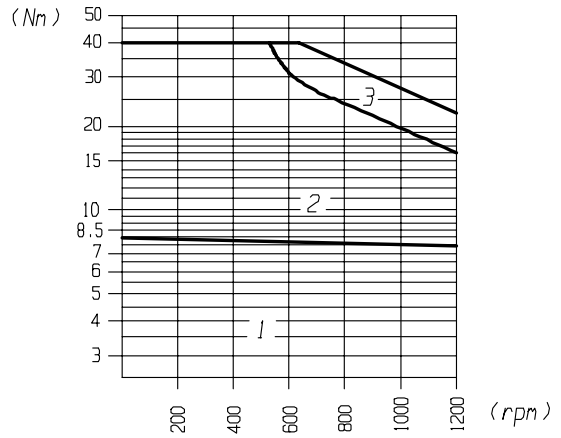


ESA 6L8



1 = Area di ciclo continuo
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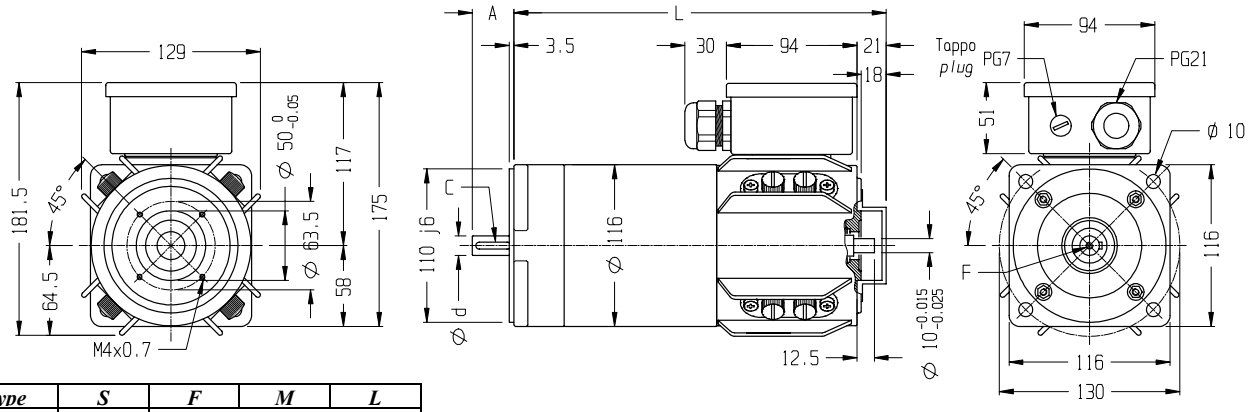
ESA 6

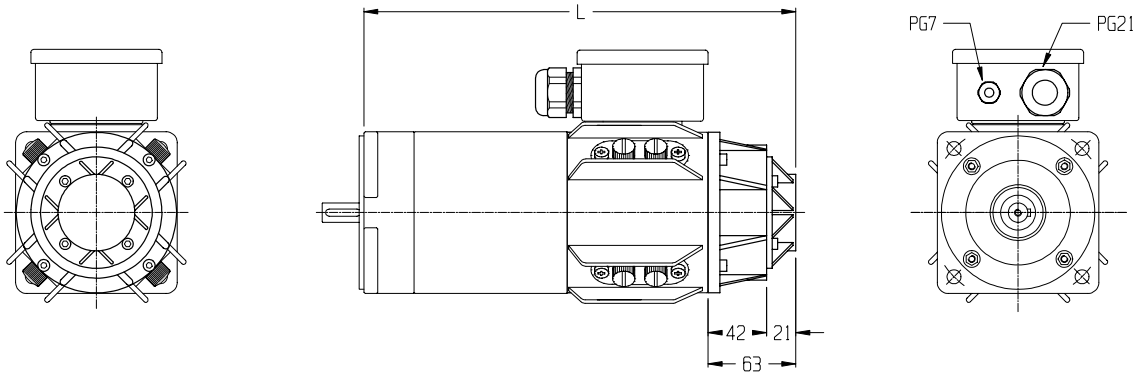
DIMENSIONI (mm) *DIMENSIONS (mm)*



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

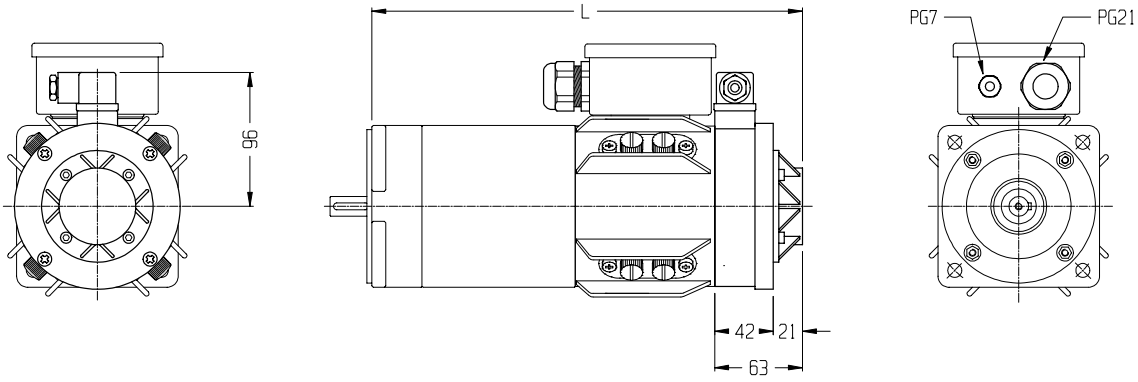
DINAMO TACHIMETRICA *TACHO GENERATOR*



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

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO + DINAMO TACHIMETRICA *TACHO GENERATOR + BRAKE*

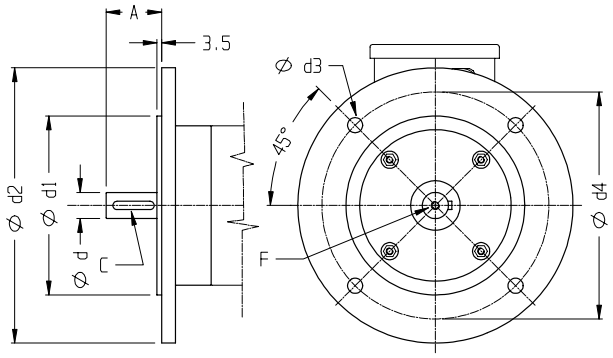


Type	*S*	*F*	*M*	*L*
L	309		381	453

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

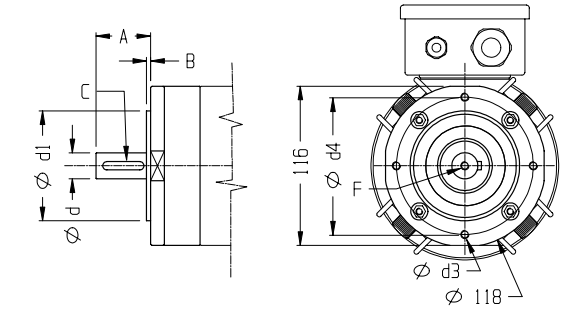
OPTIONALS

FLANGIA B5 *B5 FLANGE*



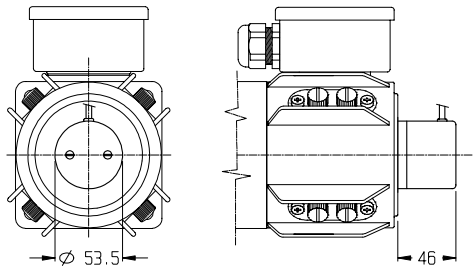
Size	*A*	*C*	*d(h7)*	*d1(h7)*	*d2*	*d3*	*d4*	*F*
71	30	5x5x25	14	110	160	9.5	130	M5
80	40	6x6x30	19	130	200	11	165	M6

FLANGIA B14 *B14 FLANGE*

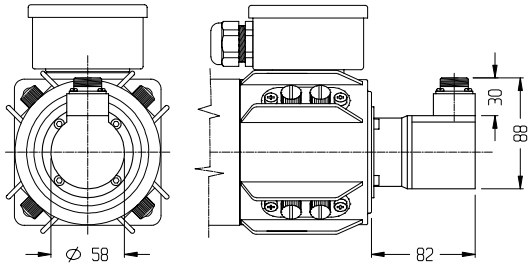


Size	*A*	*B*	*C*	*d(h7)*	*d1(h7)*	*d3*	*d4*	*F*
71	30	2.5	5x5x25	14	70	M6	85	M5
80	40	3	6x6x30	19	80	M6	100	M6

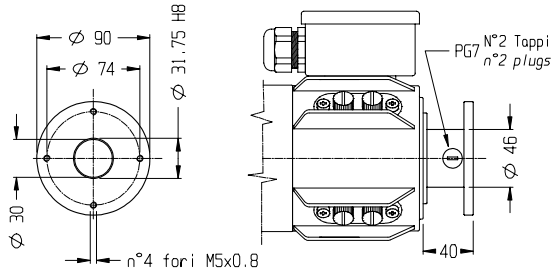
ENCODER EH53 *ENCODER EH53*



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					

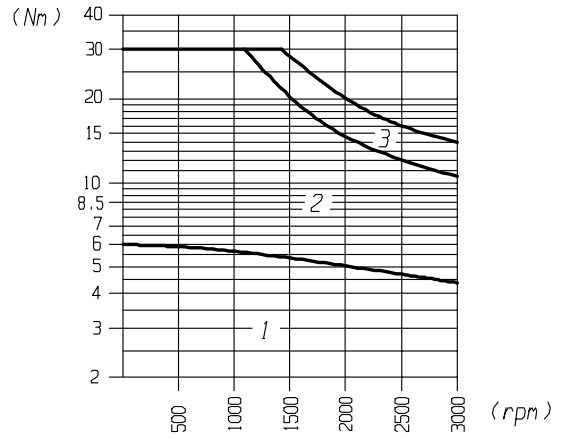
ESA 9S

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

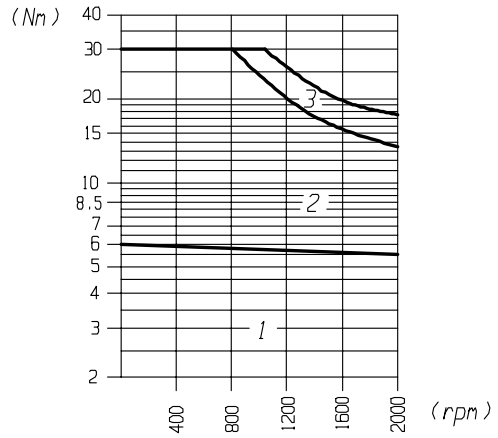
CURVE OPERATIVE
PERFORMANCE CURVES

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
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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					

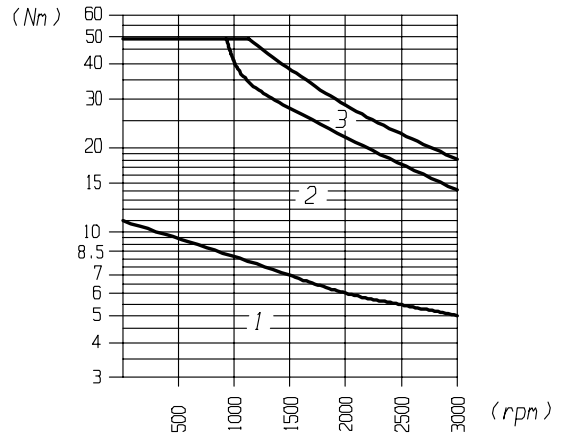
ESA 9M

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

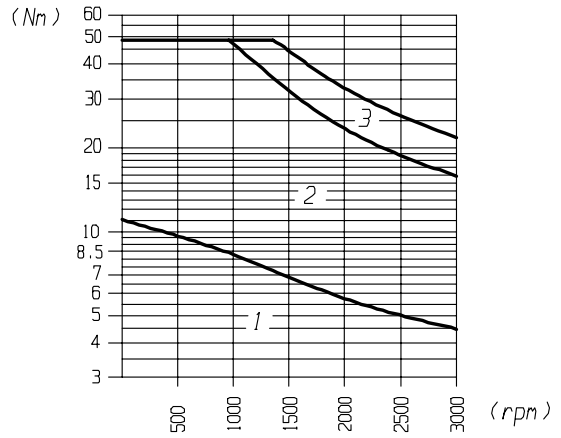
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

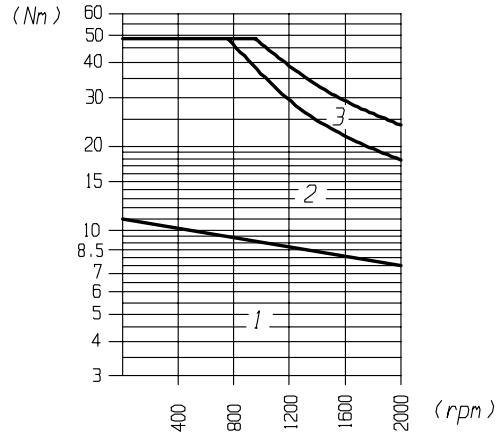
ESA 9M1



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		

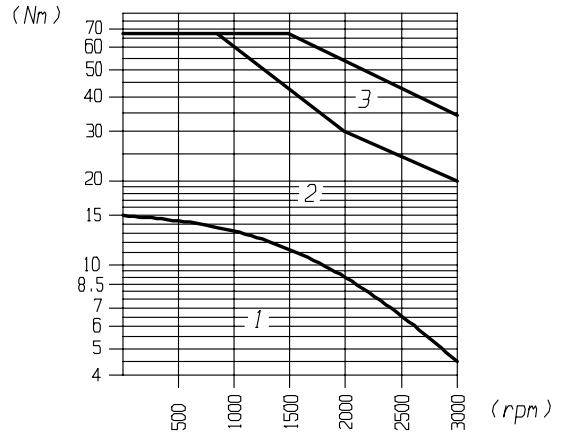
ESA 9L

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

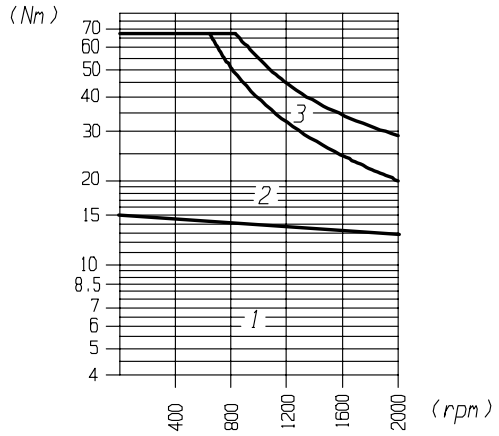
CURVE OPERATIVE
PERFORMANCE CURVES

MOTOR POWER COMPANY

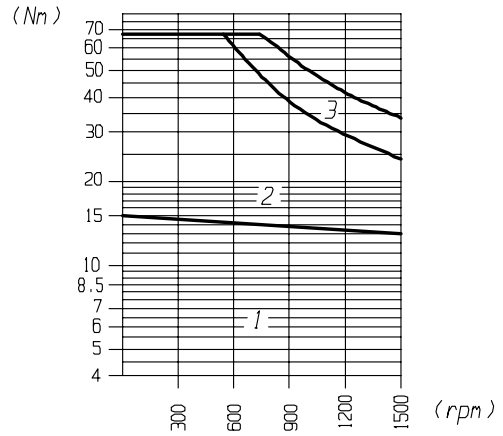
ESA 9L1



ESA 9L2



ESA 9L3



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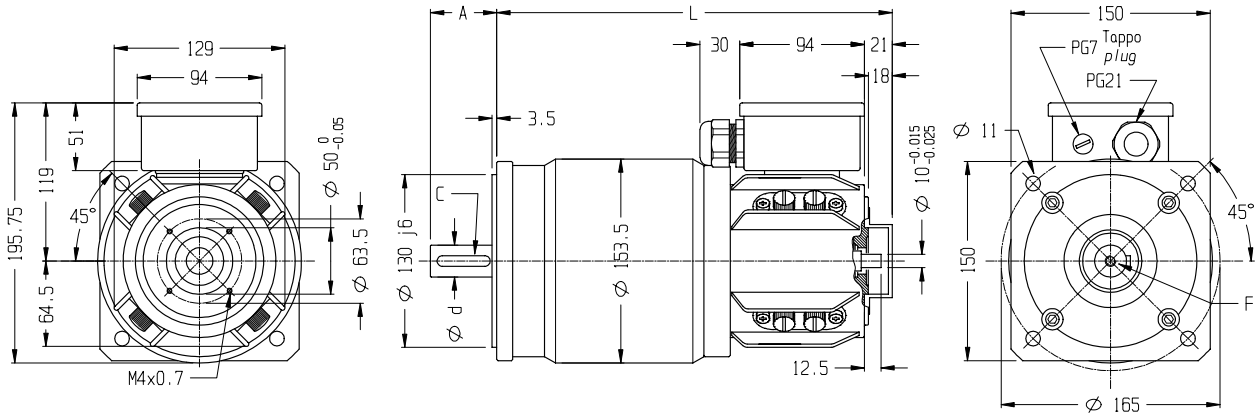
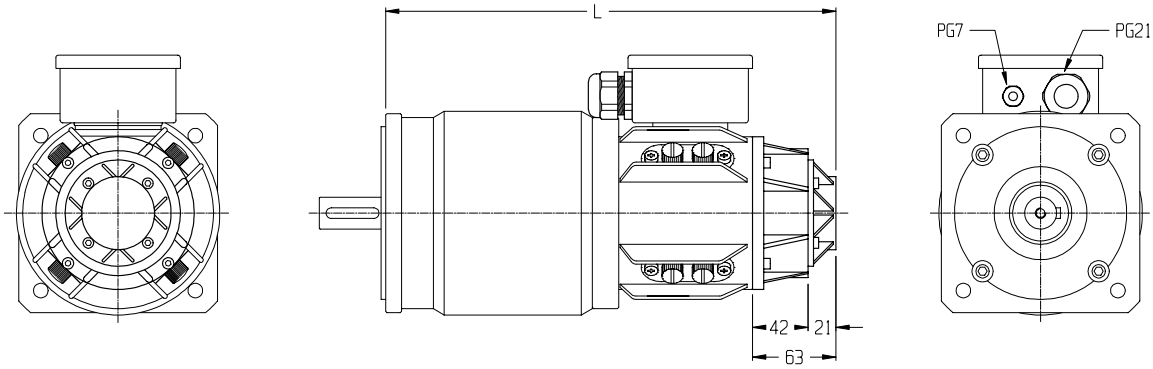


Type	*S*	*M*	*L*
A	50		
F	M8		
d(j6)	24		

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

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

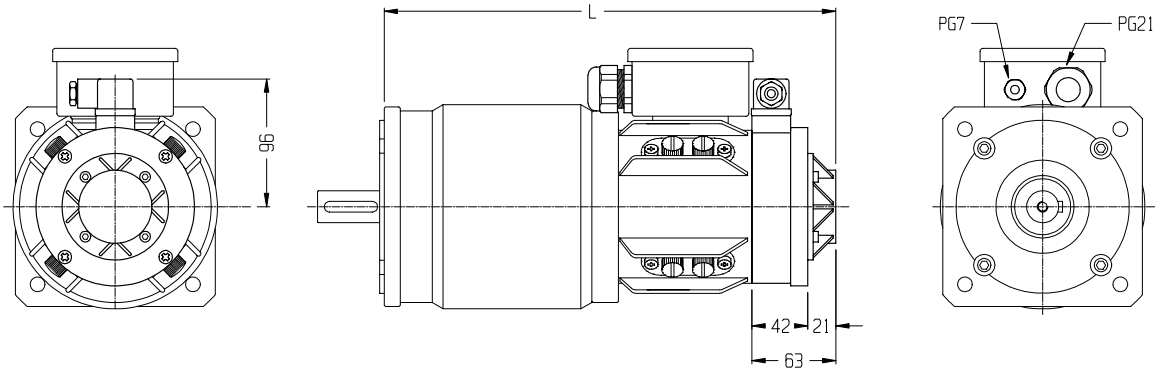
DINAMO TACHIMETRICA *TACHO GENERATOR*



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

PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

FRENO + DINAMO TACHIMETRICA *TACHO GENERATOR + BRAKE*

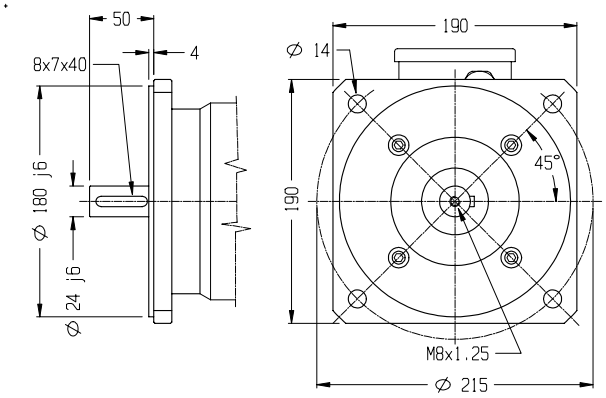


Type	*S*	*M*	*L*
L	339	404	465

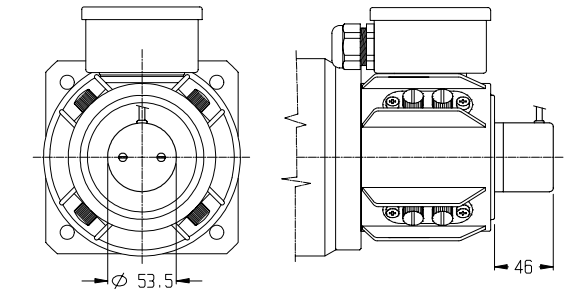
PREDISPOSTO ENCODER STD
STD ENCODER PREARRANGEMENT

OPTIONALS

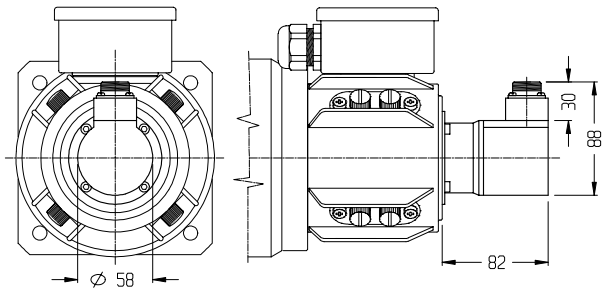
FLANGIA B5/100 *B5/100 FLANGE*



ENCODER EH53 *ENCODER EH53*



ENCODER EL72 *ENCODER EL72*



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