SAX 100
DC SERVOMOTORS

AXOR INDUSTRIES
MOTORS SERVO DRIVES

SAX 100

Complete line of DC Servomotors for use with Microspeed, Minispeed and Masterspeed Servo Amplifiers that range from 0.045 to 2.7 Nm (6.4 to 386 oz.-in.)

Typical applications are:
Small Robotics, X-Y Tables, Medical Equipment, Textile Equipment, Conveyors, Graphic Machinery, Packaging Machinery, Positioners, Converting Machinery, Feeders.

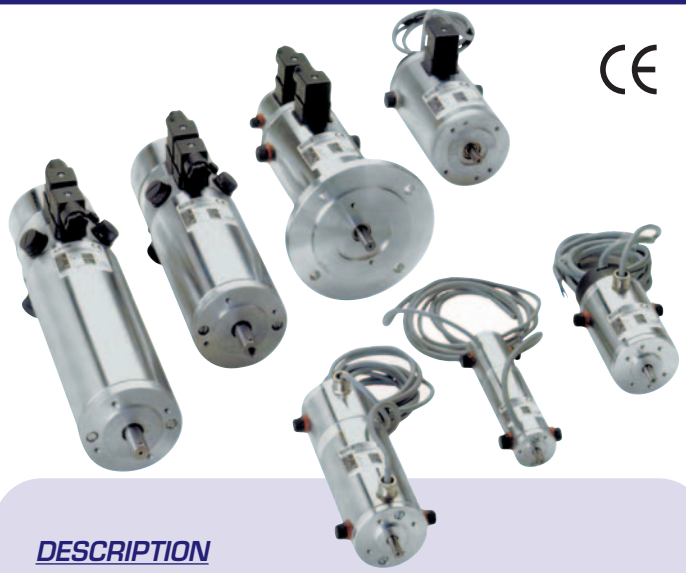
STANDARD FEATURES

- ✔ Complete line of DC Servomotors starting with extremely small sizes
- ✔ Ferrite permanent magnets
- ✔ Extremely favorable cost to perfomance ratio
- ✔ Easy installation and use
- ✔ Full torque in a wide range of speeds
- ✔ High overload capacity
- ✔ Encoder predisposition (see table on reverse)
- ✔ Environmental working temperature: 5 ÷40° C

OPTIONS

- ✔ Tachogenerator
- ✔ Brake
- ✔ Encoder fitted
- ✔ Connectors
- ✔ Terminal Box (except 117 and 130 series)
- ✔ Special flange listing available (see Catalogue)

TORQUE RANGES



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DESCRIPTION

*With restricted dimensions, the **SAX 100** series Servomotors offer the most dynamic features along with high peak torque, therefore they are particularly suitable for driving any type of movement applications where great motion regularity, at low speed is important.*

*Series: **SAX 117**: 2 poles, Torque range from 0.045 to 0.75 Nm (6.4 to 10.7 oz.-in.)*

*Series: **SAX 130**: 2 poles, Torque range from 0.13 to 0.49 Nm (18.6 to 70 oz.-in.)*

*Series: **SAX 156/163**: 2 poles, Torque range from 0.46 to 0.9 Nm (65.7 to 128.6 oz.-in.)*

*Series: **SAX 165/175**: 4 poles, Torque range from 0.85 to 2.7 Nm (121.4 to 386 oz.-in.).*

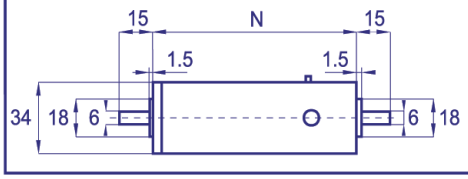
SERIES		SAX 117 (2 poles)			SAX 130 (2 poles)						SAX 156 / 163 (2 poles)						SAX 163 (2 poles)			SAX 165 / 175 (4 poles)								175 (4 poles)	
SIZE		S	M		S	M	L		XL		S		M				L			S			M				L	
Nm **Mo** (Stall Torque) (Δt=115°C) oz.-in.		.045	.06	.075	.13	.17	.3	.3	.43	.49	.49	.55	.65	.7	.75	.75	.65	.8	.9	1.15	1.0	.85	1.7	1.45	1.45	1.8	2.2	2.7
		6.4	8.6	11	19	24	43	43	61	70	70	79	93	100	107	107	93	115	129	165	143	121	243	207	207	257	314	386
N_n Nominal Speed RPM		3900	3500	1100	2750	2800	3200	3150	2750	2750	2800	2650	2900	3100	3000	2000	3200	2250	3000	2100	3300	4600	2250	3500	4850	3200	3400	2100
InO ADC (Δt=115°C) Blocked Rotor Rated Current	24V DC	1.4	1.7	.75	2.5	3.1	5.2	–	6.3	–	7.3	–	10	–	–	–	10	–	–	–	–	–	–	–	–	–	–	–
	48V DC	–	–	–	–	–	–	2.5	–	4.1	–	4	–	5.6	–	–	–	5.6	5.9	–	–	–	–	–	–	–	–	–
	65V DC	–	–	–	–	–	–	–	–	–	–	–	–	–	4	2.9	–	–	–	4.6	5.8	6.5	6.8	8.5	11.5	–	–	–
	90V DC	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7.4	8.8	7
Rotor Inertia J $kgm^2 \cdot 10^{-4}$		0.03	0.052		0.2	0.28	0.43		0.75		2.8		3.8				5			3.9			7				8.5	
Tacho (OPTIONAL)		DT03 - 3V/1000 Rpm (2 POLES)			DT10 - 10V/1000 Rpm (2 POLES)															DT10 - 10V/1000 Rpm (2 POLES)								
Tacho Inertia J_T $kgm^2 \cdot 10^{-4}$		0.015			0.057															0.8								
Brake (OPTIONAL)		Not available			1 Nm - 24 Vdc - 0.3A															2 Nm - 24 Vdc - 0.4A								
Brake Inertia J_B $kgm^2 \cdot 10^{-4}$		—			0.1															0.24								

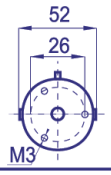
Drawings are not to scale (see quotations)

To obtain the dimensions in INCHES, divide mm by 25.4 *Ex: 40 mm/25.4 = 1.57 Inches*

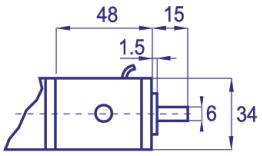
MECHANICAL DIMENSIONS

VERSION WITH BRAKE: N+35 mm



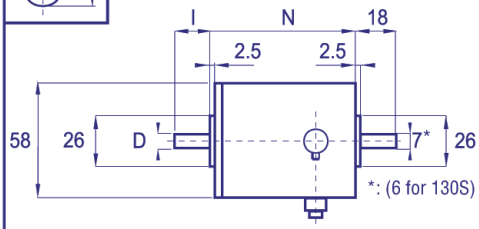


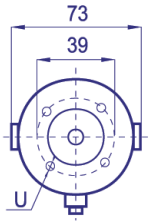
WITH TACHO



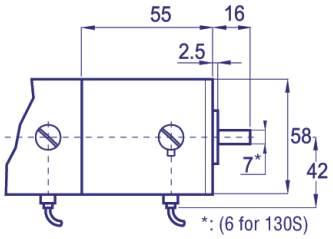
SAX	117S	117M
N	73	97
Motor WT	0.3 (Kg) 0.7 (Lbs)	0.4 (Kg) 0.9 (Lbs)
TACHO WT	0.2 (Kg) 0.4 (Lbs)	0.2 (Kg) 0.4 (Lbs)

VERSION WITH BRAKE: N+35 mm



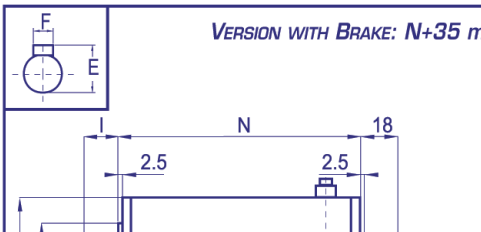


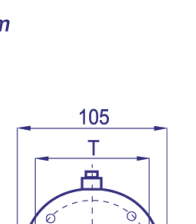
WITH TACHO



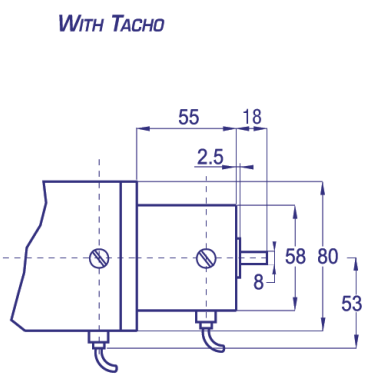
SAX	130 S	130 M	130 L	130 XL
D	6	7	7	9
I	18	18	18	25
E	-	-	-	10
F	-	-	-	3
N	72	92	117	169
U	M4	M4	M4	M5
Motor WT	0.7 (Kg) 1.5 (Lbs)	0.9 (Kg) 2.0 (Lbs)	1.3 (Kg) 2.9 (Lbs)	2 (Kg) 4.4 (Lbs)
TACHO WT	0.58 Kg - 1.3 (Lbs)			
BRAKE WT	0.5 Kg - 1.1 (Lbs)			

VERSION WITH BRAKE: N+35 mm



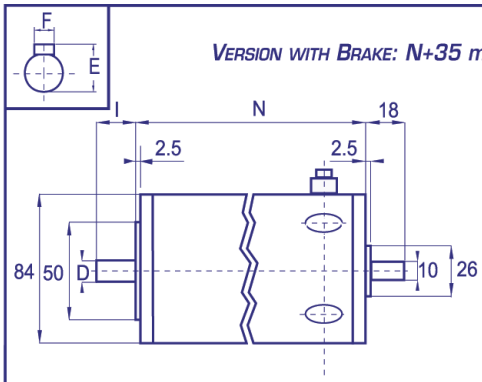


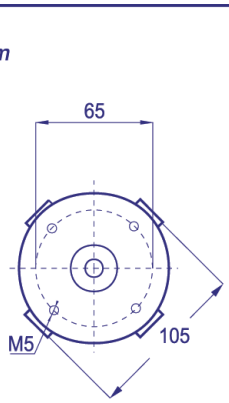
WITH TACHO



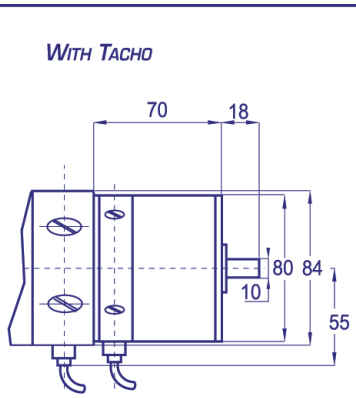
SAX	156 S	156 M	163 S	163 M	163 L
B	50	50	60	60	60
D	9	9	11	11	11
E	10	10	12	12	12
F	3	3	4	4	4
I	20	20	23	23	23
N	139	157	139	157	188
R	80	80	90	90	90
T	65	65	75	75	75
Motor WT	2.7 (Kg) 5.9 (Lbs)	3.2 (Kg) 7.0 (Lbs)	2.7 (Kg) 5.9 (Lbs)	3.2 (Kg) 7.0 (Lbs)	4.0 (Kg) 8.8 (Lbs)
TACHO WT	0.38 Kg - 0.8 (Lbs)				
BRAKE WT	0.5 Kg - 1.1 (Lbs)				

VERSION WITH BRAKE: N+35 mm





WITH TACHO



SAX	165 S	165 M	175 S	175 M	175 L
D	11	11	14	14	14
E	12	12	16	16	16
F	4	4	5	5	5
I	20	20	27	27	27
N	147	207	147	207	272
Motor WT	3.1 (Kg) 6.8 (Lbs)	5.2 (Kg) 11.4 (Lbs)	3.1 (Kg) 6.8 (Lbs)	5.2 (Kg) 11.4 (Lbs)	6.8 (Kg) 15 (Lbs)
TACHO WT	0.8 Kg - 1.8 (Lbs)				
BRAKE WT	0.55 Kg - 1.2 (Lbs)				

ORDERING CODE
Example:

SAX - 117 - S - 3.90 / 024 - XX - 09 - P - 00

NAME: Line of DC Servomotors

SERIES: 117, 130, 156, 163, 165 or 175

SIZE: S, M, L or XL

NOMINAL SPEED:
(KRPM) Ex: 3.9=3900 Rpm (see table on reverse)

NOMINAL VOLTAGE:
24, 48, 65 or 90VDC (at nominal speed)

FLANGES & SHAFTS:
XX = Standard (see above)

OPTIONS: **09** = Only motor (standard)
01 = With Tacho
06 = Brake+Tacho
...other solutions in our catalogue

ELECTRICAL CONNECTIONS:
P = Flying leads, 1.5m length
C = Connectors (optional)
F = Fast-on

CUSTOM MADE:
00 = Standard

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