

SOUTHERN CROSS SEMA X SERIES

6 INCH ENCAPSULATED SUBMERSIBLE ELECTRIC MOTORS

EFFICIENT AND RELIABLE MOTORS FOR BOREHOLE AND SUBMERSIBLE PUMPING APPLICATIONS



FEATURES

Excellent heat resistance and strength against thermal fluctuations and internal mechanical stress.

Can operate in water temperatures of up to 35°C without power derating. (3.7kW - 30kW models).

Can operate in temperatures as low as -30°C

Stainless steel frame and water proof sealed cylinder.

Moisture resistant insulation.

Stainless steel slinger and slinger guide prevent sand entry and double rubber seals prevent the ingress of water and contaminants into the motor.

High quality 3 shoe (3.7kW-30kW) and 6 shoe (37kW) Kingsbury design thrust bearings.

Baked epoxy coating on rotor core for water and rust resistance.

Reliable water lubricated carbon bearings.

Rotor balancing rings ensure excellent dynamic balance for rotating elements.

APPLICATIONS

Domestic Water Supplies
Agriculture
Stock Watering
Irrigation

OPERATING PARAMETERS

Max Temp.	+35°C (3.7-30kW) +25°C (37kW)
Min. Flow	0.15m/sec
pH Level	6.5-8 (X-II Motors) 2-12 (X-III Motors)
Axial Thrust	15500N (3.7-22.5kW) 22200N (30-37kW)

TECHNICAL SPECIFICATIONS

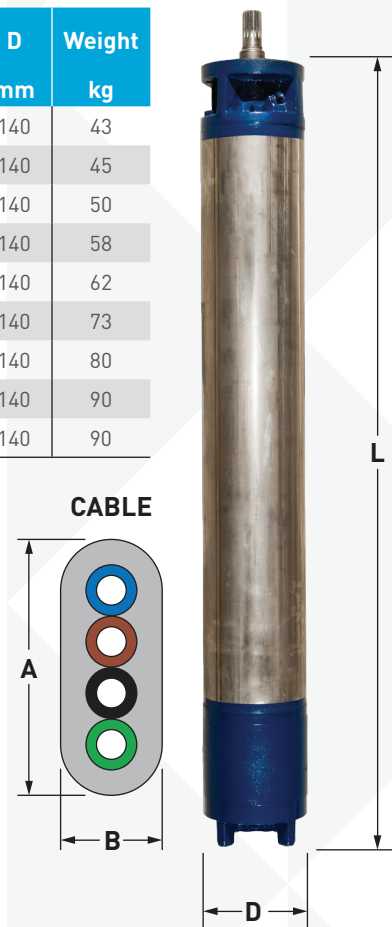
Output	3.7-37kW
Standard Voltage	415V
Mounting Flange	6" NEMA Standard
IP Rating	IP68
Insulation Class	E (3.7-22.5kW) B (30kW) F (37kW)
Cable Length	3.8m

TECHNICAL SPECIFICATIONS

Power		Thrust	Efficiency	FLA	LRA	Nominal Speed	Cable	AxB	L	D	Weight
kW	HP	N	%	A	A	RPM	mm ²	mm	mm	mm	kg
3.7	5	15500	77.3	7.7	40	2850	5.5	25.1x9.6	583	140	43
5.5	7.5	15500	78.7	11.9	52	2850	5.5	25.1x9.6	630	140	45
7.5	10	15500	80.5	15.4	86	2850	5.5	25.1x9.6	685	140	50
11	15	15500	82.3	22.1	123	2850	5.5	25.1x9.6	760	140	58
15	20	15500	81.4	28.9	158	2850	5.5	25.1x9.6	800	140	62
18.5	25	15500	82.2	36.6	198	2850	5.5	25.1x9.6	920	140	73
22.5	30	15500	81.9	44.9	251	2850	5.5	25.1x9.6	970	140	80
30	40	22200	80.5	58.5	278	2850	5.5	25.1x9.6	1060	140	90
37	50	22200	79.8	77.9	330	2850	8	27.7x10.4	1060	140	90

CONSTRUCTION MATERIAL OPTIONS

Component	Model		
	XII	XIII	XE
Motor Shell	316 Stainless Steel	316 Stainless Steel	Available in a range of materials
End Caps	Epoxy Coated Cast Iron	316 Stainless Steel	Available in a range of materials
Shaft	420 Stainless Steel	316 Stainless Steel	Available in a range of materials.



X-E ENGINEERED MOTORS

Southern Cross SEMA X-E motors are engineered to order submersible electric motors which can be designed and manufactured to meet the most demanding specification or application. Incorporating the highest quality components and assembled to the finest tolerances, X-E motors represent the pinnacle in submersible motor design.

Utilizing Pentair Southern Cross' considerable experience in the submersible pumping industry, we can develop an engineered solution which can incorporate an extensive range of options and modifications.

Material Options

316 Stainless Steel
Duplex (SAF2205)
Super Duplex
NAB (Nickel Aluminium Bronze)
Copper Nickel
Monel K500
Other exotic materials available.

Motor Modifications

Alternative voltages and frequencies
Alternative pump mounts and shaft sizes.
Motor/pump coupling.
Alternative shaft sizes.
Alternative mechanical seal faces.
Motor centralisers.

Motor Protection

Motor derating for cooling in high temperature applications.
Protective paint and coatings.
Temperature monitoring (RTDs) including remote monitoring options.
Increased down thrust bearings.
External cooling options.
Cooling shroud design.
Anti fouling and cathodic protection.



PENTAIR SOUTHERN CROSS

8618 Warrego Highway, Withcott, QLD 4352 www.southerncross.pentair.com

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SOUTHERN CROSS SEMA X SERIES

8, 10 & 12 INCH WATER TIGHT SUBMERSIBLE ELECTRIC MOTORS

EFFICIENT REWINDABLE SUBMERSIBLE ELECTRIC MOTORS FOR BOREHOLE AND SUBMERSIBLE PUMPING APPLICATIONS



FEATURES

- Standard 415 Volt, 50Hz three phase.
- Rewindable design for easy, cost effective maintenance and repair.
- Denatured polypropylene coil conductor material for excellent leak resistant performance.
- Three barrier copper conductor protection for complete insulation from internal cooling fluid.
- Stainless steel slinger and slinger guide prevent sand entry and double rubber seals prevent the ingress of water and contaminants into the motor.
- High quality 6 shoe (8 inch models) and 8 shoe (10 and 12 inch models) Kingsbury design thrust bearings.
- Baked epoxy coating on rotor core for water and rust resistance.
- Reliable water lubricated carbon bearings.
- Rotor balancing rings ensure excellent dynamic balance for rotating elements.

APPLICATIONS

Domestic Water Supplies
Agriculture
Stock Watering
Irrigation

OPERATING PARAMETERS

Temperature -30°C to +25°C
Min. Flow 0.15m/sec
pH Level 6.5-8 (X-I & X-II Motors)
2-12 (X-III Motors)
Axial Thrust 44100N

TECHNICAL SPECIFICATIONS

Output 37-225kW
Mounting Flange NEMA Standard
Shaft NEMA Splined (8")
NEMA Keyed (10" & 12")
IP Rating IP68
Insulation Class Y
Cable Length 5m

TECHNICAL SPECIFICATIONS

Motor Size	Power		Thrust N	Efficiency %	FLA A	LRA A	Nominal Speed RPM	Lead Wire mm ²	Cable Dia. mm	L mm	D mm	Weight kg
	kW	HP										
8"	37	50	44100	84.4	69.9	400	2850	8	9.2	1250	191	185
8"	45	60	44100	87	80.3	533	2850	8	9.2	1350	191	210
8"	55	75	44100	86.8	105.7	740	2850	14	11.0	1480	191	235
8"	75	100	44100	86.6	137.8	938	2850	14	11.0	1680	191	270
8"	90	125	44100	84.6	190.9	1114	2850	14	11.0	1680	191	270
8"	110	150	44100	83.3	238.9	1354	2850	22	13.5	1780	191	300
10"	132	175	44100	85.8	235.6	1380	2850	30	15.0	1770	216.5	370
10"	150	200	44100	87	264.7	1610	2850	30	15.0	2020	216.5	430
10"	185	250	44100	85.4	335.9	1610	2850	30	15.0	2020	216.5	430
12"	220	300	44100	88.6	396.2	2950	2850	60	19.5	2000	267.5	660

CONSTRUCTION MATERIAL OPTIONS

Component	Model			
	XI	XII	XIII	XE
Motor Shell	Epoxy Coated Carbon Steel	316 Stainless Steel	316 Stainless Steel	Available in a range of materials
End Caps	Epoxy Coated Cast Iron	Epoxy Coated Cast Iron	316 Stainless Steel	Available in a range of materials
Shaft	420 Stainless Steel	420 Stainless Steel	316 Stainless Steel	Available in a range of materials.

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Alternative shaft sizes.
Alternative mechanical seal faces.
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