

SERIES 40S-OS6

Submersible motors in cooling filling fluid suitable for use with foodstuffs.

The choice of component materials ensures optimum operating performances, superior quality, reliability and ease of installation.

- ❑ **REWINDABLE STATOR**
- ❑ **ENVIRONMENTAL FRIENDLY COOLING FLUID (F.D.A. APPROVED)**
- ❑ **HIGH STARTING TORQUE**
- ❑ **REMOVABLE LEAD CONNECTOR**
 - Shaft extension and couplings in compliance with **NEMA** standards.
 - **Rewindable stator.**
 - Winding insulation: class B (4OS)
 - Protection grade: IP58.
 - **Filling fluid** in compliance with standards concerning oils in contact with foodstuffs and with the purity requirements specified by the annex to G.U. no. 104 of 20/04/1973; it also complies with F.D.A. (FOOD AND DRUG ADMINISTRATION) standards.
 - **Large compensation bellows** provide for the expansion of the internal liquid.
 - Shaft supported by angular bearings.
 - **Mechanical seal with sand protection.**
 - Maximum immersion depth: 350 m (4OS)
 - Maximum number of starts per hour, at regular intervals:
 - 4OS: 30 for direct start;
 - Maximum allowable voltage fluctuations over the rated voltage:
 - 10% / +6% 50 Hz
 - ±10% 60 Hz.
 - **Models:**
 - Single-phase 4OS:
 - from 0,25 to 2,2 kW 220-230 V, 230-240 V, 50 Hz
 - from 0,37 to 2,2 kW 220-230 V, 60 Hz
 - Three-phase 4OS:
 - from 0,37 to 5,5 kW 220-240 V, 50 Hz
 - from 0,37 to 7,5 kW 380-415 V, 50 Hz
 - Horizontal operation:
 - Up to 2,2 kW for 4OS



MATERIALS

| COMPONENT | MATERIAL |
|----------------------|---|
| Outer sleeve | CrNi stainless steel (AISI 304) |
| Shaft extension | Stainless steel (AISI 303 for 4OS) (AISI 304 for OS6) |
| Upper support | Pressed brass alloy (4OS Version) Cast iron + CrNi (OS6 Version) |
| Mechanical seal | Carbon/Ceramic with sand labyrinth |
| Elastomers | nitrile rubber |
| Lower protection | Stainless steel (AISI 304) (4OS Version) Cast iron + CrNi |
| Compensation bellows | Oilproof rubber |
| Cooling Fluid | ESSO MARCOL |

4OS SERIES OPERATING CHARACTERISTICS AT 2850 rpm

| | MOTOR TYPE 380-415 V 50 HZ | RATED POWER | | VOLTAGE V | CAPACITOR 450 V μF | OPERATING FEATURES AT RATED OUTPUT | | | | DIRECT STARTING | | MAX WATER TEMPERATURE °C | CABLE TYPE | |
|-----------------------|----------------------------------|-------------|------|--------------|--------------------------|---------------------------------------|-----------|--------------|--------------------|-----------------|-----------------|-----------------------------|----------------------------------|-------|
| | | kW | HP | | | SPEED tr/mn | EFF. % | cos φ | RATED CURRENT A | $\frac{Ca}{Cn}$ | $\frac{Ia}{In}$ | | Nc x sect. (mm ²) | L (m) |
| SINGLEPHASE 220-230 V | 4OS 02 M22 | 0,25 | 0,33 | 220 230 | 12,5 | 2835 2850 | 50 47 | 0,92 0,9 | 2,5 2,6 | 0,85 0,93 | 3,4 3,5 | 30 | 4x1,5 | 1,8 |
| | 4OS 03 M22 | 0,37 | 0,5 | 220 230 | 16 | 2825 2840 | 53 53 | 0,94 0,92 | 3,5 3,6 | 0,76 0,83 | 3,1 3,2 | | | |
| | 4OS 05 M22 | 0,55 | 0,75 | 220 230 | 20 | 2815 2830 | 60 58 | 0,96 0,95 | 4,5 4,4 | 0,69 0,75 | 3,4 3,6 | | | |
| | 4OS 07 M22 | 0,75 | 1 | 220 230 | 30 | 2825 2840 | 60 59 | 0,98 0,97 | 5,7 5,6 | 0,85 0,93 | 3,4 3,6 | | | |
| | 4OS 11 M22 | 1,1 | 1,5 | 220 230 | 40 | 2820 2835 | 63 62 | 0,98 0,97 | 8,2 8,1 | 0,77 0,84 | 3,5 3,7 | | | |
| | 4OS 15 M22 | 1,5 | 2 | 220 230 | 50 | 2810 2825 | 66 65 | 0,98 0,97 | 10,5 10,3 | 0,67 0,73 | 3,2 3,4 | | | |
| | 4OS 22 M22 | 2,2 | 3 | 220 230 | 70 | 2805 2825 | 66 67 | 0,99 0,98 | 15,9 15,5 | 0,59 0,64 | 3,1 3,4 | | | |
| SINGLEPHASE 230-240 V | 4OS 02 M24 | 0,25 | 0,33 | 230 240 | 12,5 | 2835 2850 | 50 47 | 0,92 0,9 | 2,4 2,5 | 0,85 0,93 | 3,5 3,5 | 30 | 4x1,5 | 1,8 |
| | 4OS 03 M24 | 0,37 | 0,5 | 230 240 | 16 | 2825 2840 | 53 53 | 0,94 0,92 | 3,4 3,5 | 0,76 0,83 | 3,1 3,1 | | | |
| | 4OS 05 M24 | 0,55 | 0,75 | 230 240 | 20 | 2815 2830 | 60 58 | 0,96 0,95 | 4,4 4,3 | 0,69 0,75 | 3,3 3,5 | | | |
| | 4OS 07 M24 | 0,75 | 1 | 230 240 | 30 | 2825 2840 | 60 59 | 0,98 0,97 | 5,5 5,4 | 0,85 0,93 | 3,4 3,6 | | | |
| | 4OS 11 M24 | 1,1 | 1,5 | 230 240 | 40 | 2820 2835 | 63 62 | 0,98 0,97 | 7,9 7,8 | 0,77 0,84 | 3,5 3,7 | | | |
| | 4OS 15 M24 | 1,5 | 2 | 230 240 | 50 | 2810 2825 | 66 65 | 0,98 0,97 | 10,1 9,9 | 0,67 0,73 | 3,4 3,4 | | | |
| | 4OS 22 M24 | 2,2 | 3 | 230 240 | 70 | 2805 2825 | 66 67 | 0,99 0,98 | 15,2 14,8 | 0,59 0,64 | 3,1 3,4 | | | |

| | MOTOR TYPE THREEPHASE | RATED OUTPUT | | VOLTAGE V | OPERATING FEATURES AT RATED OUTPUT | | | | DIRECT STARTING | | MAX WATER TEMPERATURE °C | CABLE TYPE | |
|----------------------|--------------------------|--------------|------|--------------|---------------------------------------|-----------|-------|--------------------|-----------------|-----------------|-----------------------------|--------------------|---------------------|
| | | kW | HP | | SPEED tr/mn | EFF. % | cos φ | RATED CURRENT A | $\frac{Ca}{Cn}$ | $\frac{Ia}{In}$ | | (mm ²) | Nc x sect. L (m) |
| THREEPHASE 220-240 V | 4OS 03 T23 | 0,37 | 0,5 | 230 | 2850 | 65 | 0,7 | 1,9 | 2 | 4,3 | 30 | 4x1,5 | 1,8 |
| | 4OS 05 T23 | 0,55 | 0,75 | 230 | 2840 | 66 | 0,75 | 2,8 | 1,79 | 3,9 | | | |
| | 4OS 07 T23 | 0,75 | 1 | 230 | 2855 | 65 | 0,75 | 3,7 | 1,92 | 4,3 | | | |
| | 4OS 11 T23 | 1,1 | 1,5 | 230 | 2825 | 72 | 0,76 | 5,2 | 2,71 | 4,9 | | | |
| | 4OS 15 T23 | 1,5 | 2 | 230 | 2840 | 71 | 0,76 | 7 | 2,59 | 4,9 | | | |
| | 4OS 22 T23 | 2,2 | 3 | 230 | 2825 | 72 | 0,76 | 10,3 | 2,75 | 4,4 | | | |
| | 4OS 30 T23 | 3 | 4 | 230 | 2835 | 75 | 0,75 | 13,5 | 3,17 | 4,9 | | | |
| | 4OS 40 T23 | 4 | 5,5 | 230 | 2840 | 77 | 0,78 | 17,3 | 3,16 | 5,3 | | | |
| 4OS 55 T23 | 5,5 | 7,5 | 230 | 2835 | 77 | 0,8 | 23,7 | 3,19 | 5,3 | 30 | 2,5 | | |
| THREEPHASE 380-415 V | 4OS 03 T40 | 0,37 | 0,5 | 400 | 2850 | 65 | 0,7 | 1,1 | 2,03 | 4,3 | 30 | 4x1,5 | 1,8 |
| | 4OS 05 T40 | 0,55 | 0,75 | 400 | 2840 | 66 | 0,75 | 1,6 | 1,82 | 3,9 | | | |
| | 4OS 07 T40 | 0,75 | 1 | 400 | 2855 | 65 | 0,75 | 2,1 | 1,95 | 4,4 | | | |
| | 4OS 11 T40 | 1,1 | 1,5 | 400 | 2825 | 72 | 0,76 | 3 | 2,75 | 4,9 | | | |
| | 4OS 15 T40 | 1,5 | 2 | 400 | 2840 | 71 | 0,76 | 4 | 2,63 | 4,9 | | | |
| | 4OS 22 T40 | 2,2 | 3 | 400 | 2825 | 72 | 0,76 | 5,9 | 2,79 | 4,5 | | | |
| | 4OS 30 T40 | 3 | 4 | 400 | 2835 | 75 | 0,75 | 7,8 | 3,21 | 5 | | | |
| | 4OS 40 T40 | 4 | 5,5 | 400 | 2240 | 77 | 0,78 | 10 | 3,2 | 5,4 | | | |
| 4OS 55 T40 | 5,5 | 7,5 | 400 | 2835 | 77 | 0,8 | 13,7 | 3,24 | 5,4 | 30 | 2,5 | | |
| 4OS 75 T40 | 7,5 | 10 | 400 | 2825 | 76 | 0,73 | 19,8 | 3,2 | 4,8 | 30 | | | |

Cs/Cn = Starting torque/Rated torque

I_s/I_n Courant de démarrage/Courant nominal

The maximum temperature regards motors operating in a 6" well or other installation which will ensure a minimum water circulation speed around the motor sleeve of at last 8 cm/sec.

