

4OS-OS6 SERIES

WITH REMOVABLE CONNECTOR

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**
- ❑ **ELECTRIC CABLE WITH REMOVAL CONNECTOR AVAILABLE FOR BOTH 4OS-OS6. (THIS ALLOWS TO CHANGE THE DAMAGED CABLE AT SITE OR USE THE SAME CABLE IF CHANGING THE MOTOR ALONE).**

SPECIFICATIONS

- Shaft extension and couplings in compliance with **NEMA** standards.
- **Rewindable stator.**
- Winding insulation: class B (4OS)
class F (OS6).
- 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: 150 m (OS6).
- Maximum number of starts per hour, at regular intervals:
4OS: 30 for direct start;
OS6: 15 for direct start;
20 for impedance 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
from 0,37 to 1,1 kW 110-115 V, 0,5 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
from 0,37 to 7,5 kW 380 V, 60 Hz
from 0,37 to 5,5 kW 220-230 V, 60 Hz
- Three-phase OS6:
from 3 to 30 kW 380-415 V, 50 Hz
from 3,7 to 15 kW 220-230 V, 60 Hz
from 3,7 to 30 kW 380 V, 60 Hz

Different voltages on request.

- OS6 motor version with dual cable outlet for star-delta starting is available on request, with 220-240 V for powers up to 15 kW (20 HP) and with 380-415 V, 50 Hz for all powers; up to 18.5 kW (25 HP) for the 60 Hz version.
- Horizontal operation:
 - Up to 2,2 kW for 4OS
 - Up to 15 kW for OS6

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 Stainless steel (OS6 version)
Compensation bellows	Oliproof rubber
Cooling Fluid	ESSO MARCOL

40S 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 rpm	EFF. %	cos φ	RATED CURRENT A	$\frac{C_a}{C_n}$	$\frac{I_a}{I_n}$		Nc x sect. (mm ²)	L (m)
SINGLEPHASE 220-230 V	40S 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
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
SINGLEPHASE 230-240 V	40S 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
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8
	40S 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	30	4x1,5	1,8

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

Cs/Cn = Starting torque/Rated torque

I_a/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.

OS6 SERIES OPERATING CHARACTERISTICS

MOTOR TYPE THREEPHASE 380-415 V 50 Hz	RATED OUTPUT		OPERATING CHARACTERISTICS AT RATED POWER				DIRECT START		MAX WATER TEMP. °C	CABLE	
	kW	HP	SPEED rpm	EFF. %	cos φ	RATED CURRENT A	$\frac{I_a}{I_n}$	$\frac{C_a}{C_n}$		ncsect. (mm ²)	L (m)
OS6 400 T53	3	4	2800	75,0	0,82	7,6	5,2	6,6	30	4x4	3
OS6 500 T53	3,7	5	2800	74,0	0,82	8,8	3,5	6	30	4x4	3
OS6 750 T53	5,5	7,5	2830	78,0	0,83	12,5	4	6,6	30	4x4	3
OS6 1000 T53	7,5	10	2820	79,0	0,83	17	4,3	6,5	30	4x4	3
OS6 1500 T53	11	15	2830	81,0	0,83	24,5	4,8	7	30	4x4	3
OS6 2000 T53	15	20	2880	84,0	0,83	31	4,1	7	25	4x6	3
OS6 2500 T53	18,5	25	2850	83,0	0,83	39	3,5	6,3	25	4x6	3
OS6 3000 T53	22	30	2870	84,0	0,82	46	3,4	6,6	20	4x8	4
OS6 4000 T53	30	40	2850	83,0	0,85	62	2,4	5,8	20	4x8	4

I_s/I_n = Starting torque/Rated torque

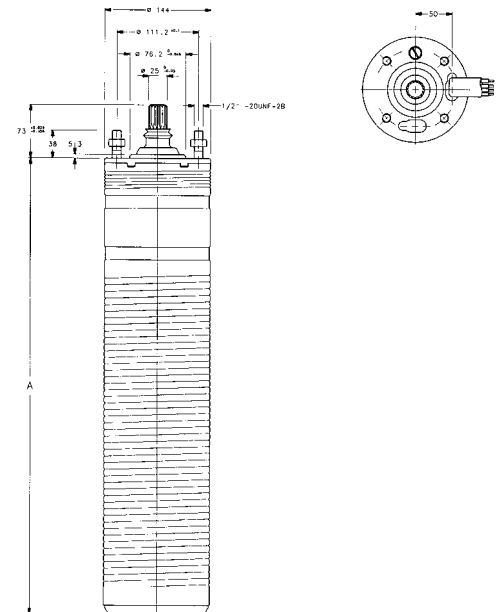
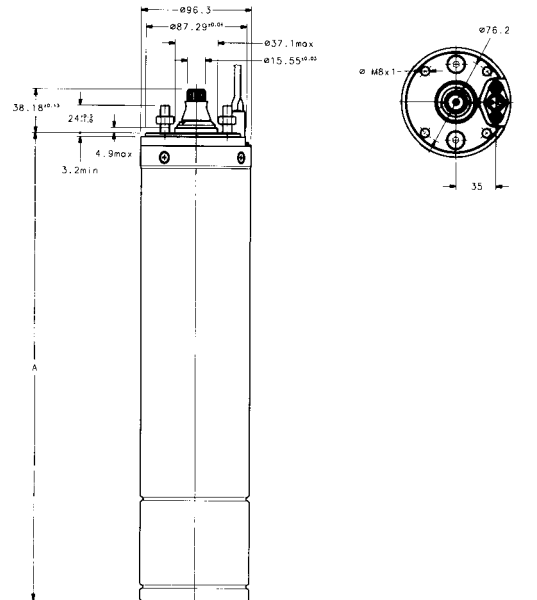
C_s/C_n = Starting current/Rated current

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 least 0,2 m/sec.

MOTOR DIMENSION AND WEIGHTS

40S SERIES - 50 Hz

MOTOR TYPE	POWER kW	DIMENSIONS IN mm A	WEIGHT kg
40S02M22-24	0,25	336	8,3
40S03T23-40	0,37	336	8
40S03M22-24	0,37	356	9
40S05T23-40	0,55	356	9
40S05M22-24	0,55	384	10,5
40S07T23-40	0,75	384	10
40S07M22-24	0,75	406	11,5
40S11T23-40	1,1	406	11
40S11M22-24	1,1	435	12,5
40S15T23-40	1,5	435	12,5
40S15M22-24	1,5	463	14
40S22T23-40	2,2	463	13,5
40S22M22-24	2,2	568	18,5
40S30T23-40	3	530	20
40S 40T23-40	4	606	23
40S55T23-40	5,5	721	27
40S75T23-40	7,5	797	31



OS6 SERIES - 50 Hz

MOTOR TYPE	POWER kW	HP	DIMENSIONS IN mm A	WEIGHT kg
OS6 400	3	4	624	38
OS6 500	3,7	5	624	38
OS6 750	5,5	7,5	704	46
OS6 1000	7,5	10	754	56
OS6 1500	11	15	861	65
OS6 2000	15	20	951	77
OS6 2500	18,5	25	1041	89
OS6 3000	22	30	1131	100
OS6 4000	30	40	1241	113