



C.R.I. MOTORS

Pumping trust. Worldwide.



**RESIN FILLED
ENCAPSULATED
SUBMERSIBLE
MOTORS**

- 60Hz







C.R.I. FLUID SYSTEMS

Pumping trust. Worldwide.

THE BEGINNING

of C.R.I., way back in 1961, was a resolute attempt to produce a few irrigation equipments using the limited facilities of an inhouse foundry. Eventually the founder's dream was coming true as the small production unit he started kept growing rapidly. Now, after more than five eventful decades, it is an enormous, widely reputed organization, which produces more than 9000 varieties of perfectly engineered pumps and motors and sells its products in 120 countries across 6 continents.

C.R.I. IS ONE AMONG

the few pioneers in the world to produce 100% stainless steel submersible pumps and it is a leading manufacturer of environment friendly water filled , rewindable motors.C.R.I.has extensive range of industrial pumps that include end suction pumps, Slurry pumps, Chemical pumps, Waste water pumps, Split case pumps, Booster pumps etc. today C.R.I. is rubbing its shoulders with the best brands in the world, with advanced technology and safety standards as its hallmarks.

THE INFRASTRUCTURE

of C.R.I. is pretty comprehensive with state-of-the-art machineries and a high potential R&D wing, Total production area over 3.2 million SF, Fully equipped with world class, Machineries with a manufacturing capacities of more than 3 Million pumps and Motors per year and over 9000 product variant are accredited with international quality certifications such as NSF, CSA, CE, UL, TSE, ISO 9001.

NEEDLESS TO SAY,

behind this legendary growth lies the untiring, innovative, enthusiastic and dedicated team work. and, of course, a flawlessly maintained value system too. The name C.R.I. itself encapsulates the company's ethos:

" Commitment, Reliability, Innovation".





C.R.I. FLUID SYSTEMS

Pumping trust. Worldwide.

Vision, Mission and Values

To be the industry leader providing best - in - class fluid management solutions to individual and institutional customers and societies in our chosen markets.

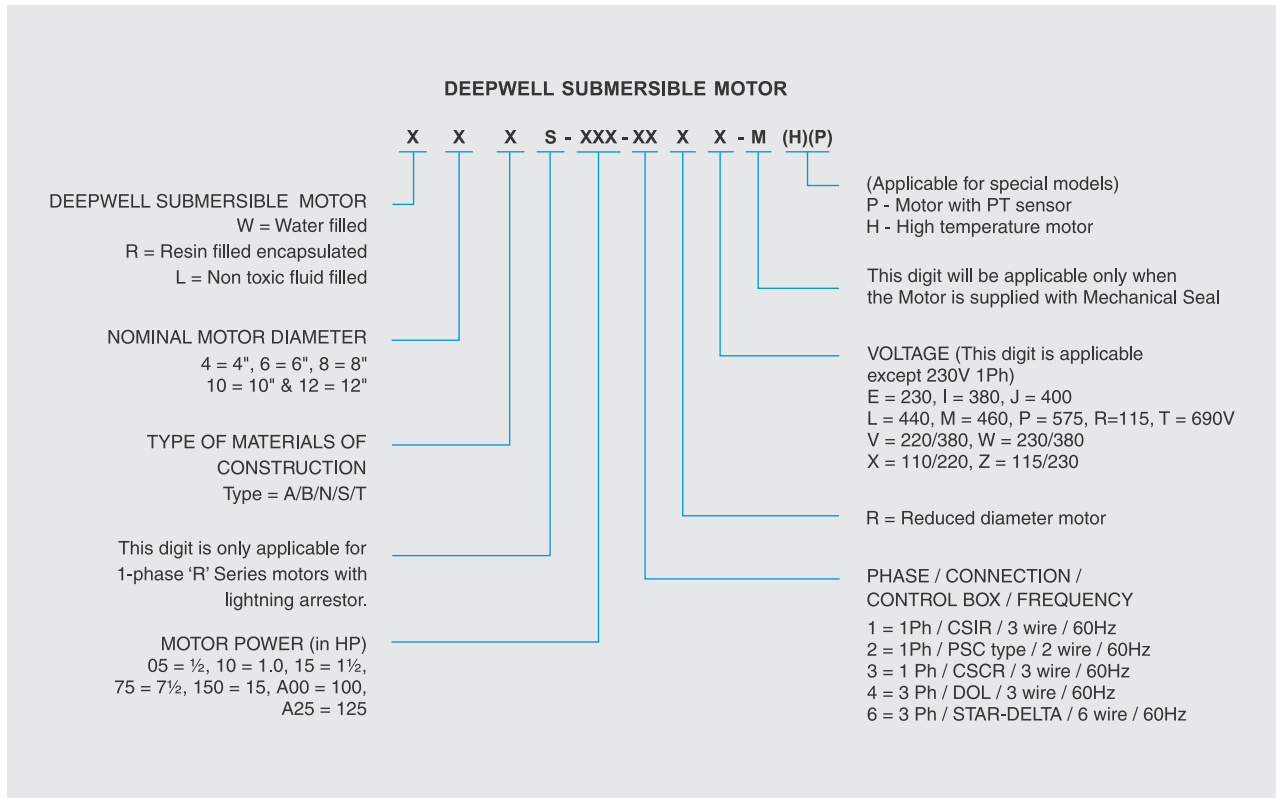
We will achieve this through our dedicated efforts to enhance the welfare of all our stakeholders and by living by our values of **commitment, reliability** and **innovation**.

C O N T E N T S

	Page No.
<hr/>	
RESINFILLED ENCAPSULATED SUBMERSIBLE MOTORS	
Model Identification Code (MIC)	04
Description, Features & Applications	05
4" Motors	
Technical Specification and Materials of Construction	06
Exploded View	07-09
Electrical, Weight & Dimensional Data	10-14
6" Motors	
Technical Specification and Materials of Construction	15
Exploded View	16
Electrical, Weight & Dimensional Data	17-18
Control Boxes	
Model Identification Code (MOC)	19
Description, Features & Specifications	20
Ordering Information, Specifications & Dimensions	21-22
Cable Selection Table	23-25



MODEL IDENTIFICATION CODE



Sample Description :

R4AS-15-3E - 1½ HP, 1Ph, 230V, 3W, 60Hz CSCR Type

R4A-20-4M - 2.0 HP, 3Ph, 460V, 60Hz DOL

RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

"R" Series

Description

Resin filled motors are hermetically sealed, encapsulated and water lubricated type with removable cable lead out. The stator windings are of enameled copper wire and the wound stator is mounted in a stainless steel shell and is completely protected by a stainless steel cylinder and stator room is pre-filled with resin. The resin filled in the space between the stator & the stainless steel cylinder dissipates heat quickly resulting in longer motor life. Except stator, other portions of the motor is pre-filled with deionised water containing propylene glycol (anti-freeze agent) which serves as coolant & lubricant for rotor, bushes and thrust bearing. Dynamically balanced rotor maintains uniform clearance to increase the life of radial bearings. Specially designed high performance thrust bearings are used to withstand high axial thrust loads and upthrust loads with minimum wear and tear.

Pressure equalizing rubber diaphragm is provided to balance the pressure and volume variations due to thermal expansion of the water inside the motor. Motor sealings are made by means of 'O' rings, lip seal & Mechanical seal. Shaft seal and sand guard prevents ingress of well water, sand and fiber particles into the motor. Care should be taken to ensure that the motor does not run when it is not submerged in the water. To prevent the motor from dry running, install dry run preventor. The motor needs a constant flow of water passing over it's body to keep it at correct operating temperature. Ideally the motor should be set just above the final yield point of bore well and when the level is not ascertained, fit a "flow inducer pipe" over the pumpset to ensure adequate cooling. It is mandatory to use C.R.I. Control box for single phase motors (except 2 wire motors) with adequate protection & control systems. Mounting dimensions are in accordance with NEMA standards.

Features

- Manufactured in ISO 9001 certified facility
- High efficiency
- Extremely hardwearing water lubricated bearings
- Specially designed thrust bearing to withstand high axial thrust loads
- Corrosion resistant stainless steel body

Applications

These submersible motors are suitable to couple with deepwell submersible pumpsets used for

- Ground water supply to residences, water works and industries
- Commercial
- Irrigation
- Pressure boosting system
- Livestock watering
- Coal bed methane (CBM)



RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series

Technical Specification

Nominal Diameter	4"
Maximum Diameter	3.76"
Power range	½HP to 2HP - 2Wire, 1Phase
	½HP to 5HP - 3Wire, 1Phase
	½HP to 10HP - 3Wire, 3Phase
Speed	3450 rpm
Power Supply	Single Phase : 115V & 230V, 60Hz, AC Supply
	Three Phase : 230V & 460V, 60Hz, AC Supply
Class of Insulation	F
Ingress Protection	IP 68
Direction of rotation	Counter Clock Wise : Single Phase
	Electrically reversible : Three Phase
Type of Duty	S1 (Continuous)
Thrust load	½HP & ¾ HP : 300 lbs 1Phase & 3Phase
	1HP to 2 HP : 650 lbs 3Phase
	3HP to 10HP - 1500 lbs 3Phase
Minimum cooling flow along the motor	0.26 ft / sec
Max. liquid Temperature	86° F
Starts per hour	Single phase - 13 times (Upto ¾ HP) / 4 Times - 1 HP to 5 HP
	Three phase - 13 times (Upto 5½ HP) / 4 Times - 7½ & 10 HP
Shaft End	Spline
Mounting Standard	NEMA
Method of Starting	1Phase - CSIR Capacitor (Capacitor Start Induction Run) (½ HP - 1.0 HP)
	1Phase - PSC (Permanent Split Capacitor) (½ HP - 2 HP) - 2 wire
	1Phase - CSCR (Capacitor Start Capacitor Run) (1½ & 5.0 HP)
	3 Phase - DOL (Direct On Line)
Cable Lead Out	2+1 / 3+1 (½ to 1½ HP) Wire removable type XLPE Individual leads



Materials of construction (3 Wire) 0.5 to 10.0 HP

Part Name	Material
End Shell	Cast Iron
Stator Shell	SS 304
Bush	Carbon Graphite
Thrust Segment	SS 420
Thrust Pad	Graphite Carbon
Diaphragm	NBR
Rubber Sand Guard	NBR
Fasteners	SS 304
End Bell Shell	SS 304
'O' Ring / Oil Seal	NBR
Shaft	SS 410 (Upto 1 HP)
	AISI-1040 (1½ HP & 2 HP)
	AISI-1040 (3 HP & 10 HP)
Shaft Extension	UNS (17400)
Motor Base	SS 304

Materials of construction (2 Wire) 0.5 to 1.5 HP

Part Name	Material
Shaft	SS 431
Oil seal / O-Ring	NBR
Stator shell	SS 304
Bush	Carbon Graphite
Thrust segment	SS 420
Motor base / Capacitor plate	Nylon - 6
Thrust Pad	Carbon Graphite
Diaphragm	NBR
Rubber sand guard	NBR
Fasteners	SS 304
End Bell Shell	SS 304
End Bell	Cast Iron

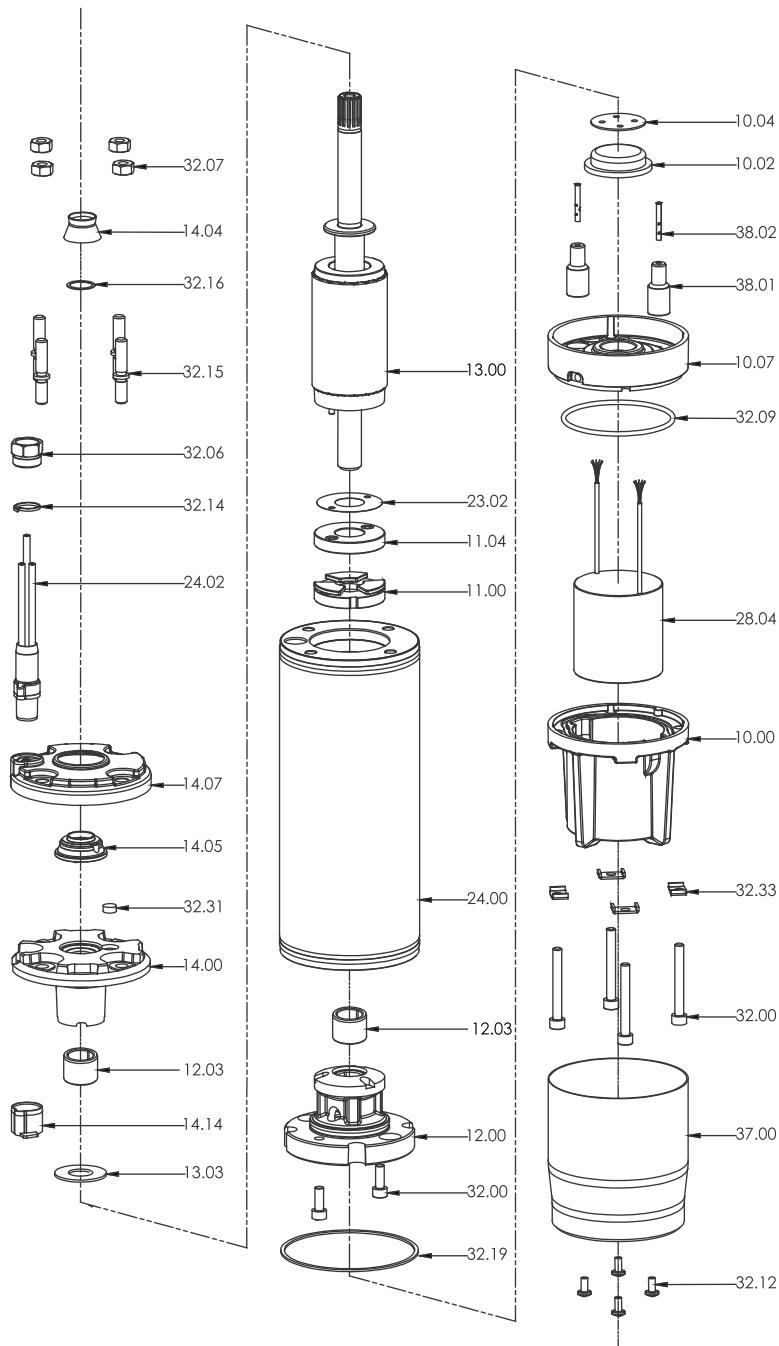
In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series
(½ to 1½ HP - 2 Wire)

Exploded View



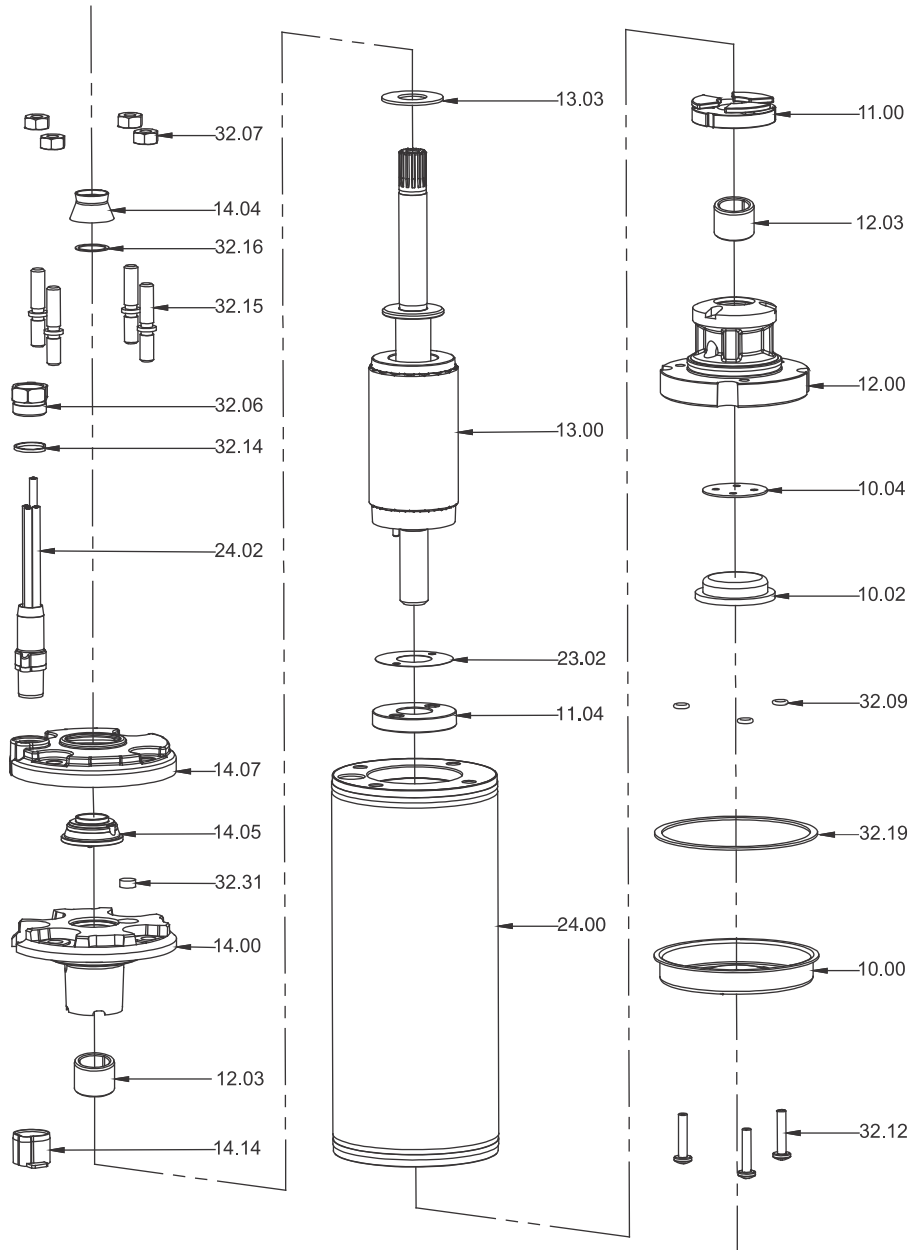
Part Description	Part No.
Screw	32.12
Motor Base Cover	37.00
Allen Bolt	32.00
Cap Washer	32.33
Motor Base	10.00
Capacitor	28.04
O Ring	32.09
Capacitor Plate	10.07
Connector Bush	38.01
Cable Socket Pin	38.02
Diaphragm	10.02
Diaphragm Plate	10.04
Gasket	32.19
Bottom End Bell	12.00
Carbon Bush	12.03
Stator Body	24.00
Thrust Base	11.00
Thrust Pad	11.04
Shim	23.02
Rotor Shaft	13.00
Uphrust Washer	13.03
Cable Plug Sleeve	14.14
Top End Bell	14.00
Valve filter sponge	32.31
Plastic Sand guard	14.05
Top End Bell Cladding	14.07
Cable	24.02
Spring Washer	32.14
Cable Plug Nut	32.06
Stud	32.15
Washer	32.16
Rubber Sand Guard	14.04
Hex Nut	32.07



RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series
(½ to 2 HP - 3 Wire)



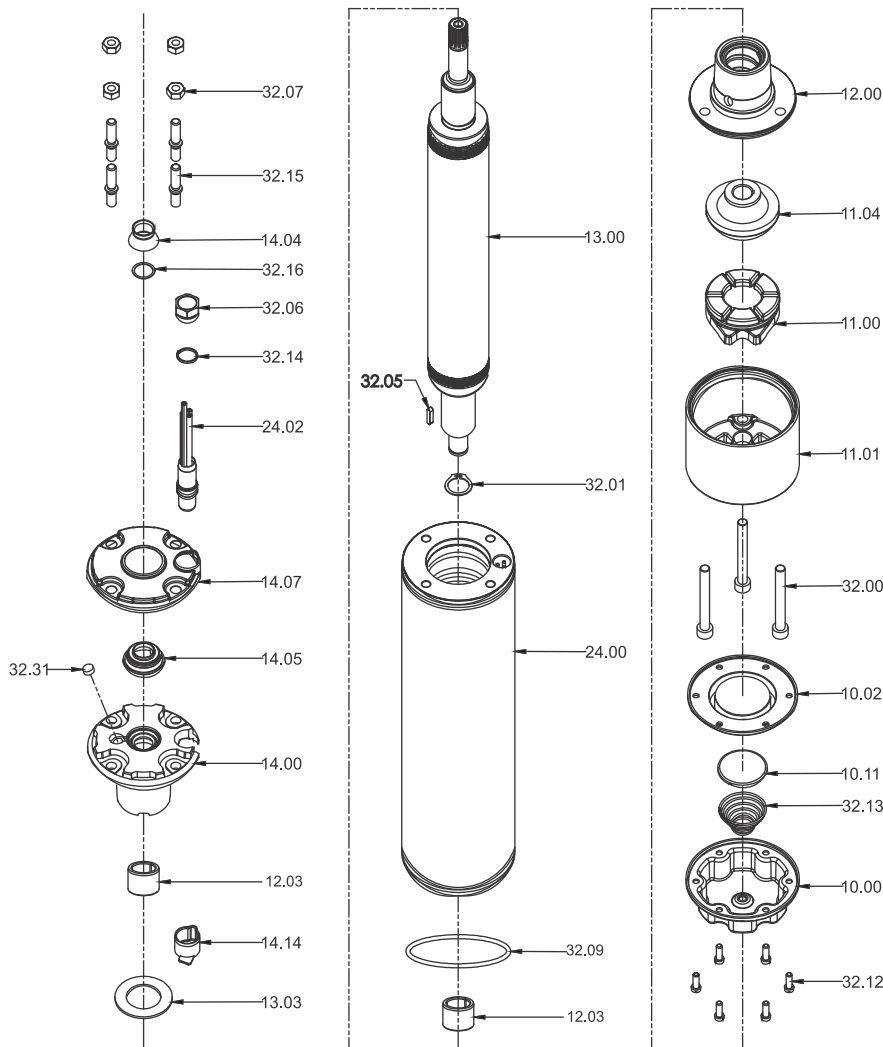
Part No.	Part Name
32.12	Screw
10.00	Motor Base
32.19	Gasket
32.09	O Ring
10.02	Diaphragm
10.04	Diaphragm Plate
12.00	Bottom End Bell
12.03	Carbon Bush
11.00	Thrust Base
24.00	Stator Body
11.04	Thrust Pad
23.02	Shim
13.00	Rotor Shaft
13.03	Upthrust Washer
14.14	Cable Plug Sleeve
14.00	Top End Bell
32.31	Valve filter sponge
14.05	Plastic Sand guard
14.07	Top End Bell Cladding
24.02	Cable
32.14	Spring Washer
32.06	Cable Plug Nut
32.15	Stud
32.16	Washer
14.04	Rubber Sand Guard
32.07	Nut

RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series
(3 to 10 HP - 3 Wire)

Exploded View



Part No.	
32.12	Screw
10.00	Motor Base
32.13	Spring
10.11	Spring Guide Plate
10.02	Diaphragm
32.00	Bolt
11.01	Thrust Base Housing
11.00	Thrust Base
11.04	Thrust Pad
12.00	Bottom End Bell
12.03	Carbon Bush
32.09	O Ring
24.00	Stator Body
32.01	Circlip
32.05	Key
13.00	Rotor Shaft
13.03	Up thrust Washer
14.14	Cable Plug Sleeve
14.00	Top End Bell
32.31	Valve filter Sponge
14.05	Plastic Sand guard
14.07	Top End Bell Cladding
24.02	Cable
32.14	Spring Washer
32.06	Cable Plug Nut
32.16	Washer
14.04	Rubber Sand Guard
32.15	Stud
32.07	Nut



RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series

4" 3 WIRE SINGLE PHASE, 115V

ELECTRICAL DATA

Product Code		Model	Voltage	HP	S.F.	Rated (F.L.)		(S.F.)		Eff. %		P.F. %		Locked Rotor Amps	Max. Down Thrust Load (lbs)	KVA Code	Panel Type	Start Cap μ F
CSA	Non CSA					Amps	Watts	Amps	Watts	S.F.	F.L.	S.F.	F.L.					
44233	-	R4AS-05-1R	115	1/2	1.6	10	708	12	922	65	53	75	66	45	300	M	CSIR	250/300

4" 2 WIRE SINGLE PHASE - 230V

ELECTRICAL DATA

Product code		Model	Voltage	HP	S.F.	Rated (F.L.)		(S.F.)		Eff. %		P.F. %		Locked Rotor Amps	Max. Down Thrust Load (lbs)	KVA Code	Panel TYPE	Run Cap (μ F)
CSA	Non CSA					Amps	Watts	Amps	Watts	S.F.	F.L.	S.F.	F.L.					
-	44122	R4AS-05-2E	230	1/2	1.6	4.8	920	5.5	1160	51	40	92	87	21	300	K	PSC	20
-	44121	R4AS-07-2E	230	3/4	1.5	5.8	1310	6.2	1420	58	42	99	98	26	300	J	PSC	30
44229	58900	R4AS-10-2E	230	1	1.4	6.4	1460	7.5	1720	61	51	99	99	31	650	H	PSC	35
44230	58901	R4AS-15-2E	230	1 1/2	1.3	8.4	1900	10	2250	66	57	99	98	46	650	H	PSC	45

4" 3 WIRE SINGLE PHASE, 230V

ELECTRICAL DATA

Product code		Model	Voltage	HP	S.F.	Rated (F.L.)		(S.F.)		Eff. %		P.F. %		Locked Rotor Amps	Max. Down Thrust Load (lbs)	KVA Code	Panel Type	Capacitor Value μ F	
CSA	Non CSA					Amps	Watts	Amps	Watts	S.F.	F.L.	S.F.	F.L.					Start	Run
44234	44201	R4AS-05-1E	230	1/2	1.6	4.5	630	6	960	64	59	70	61	23	300	M	CSIR	60/80	-
44235	44202	R4AS-07-1E	230	3/4	1.5	6.7	980	8	1310	66	56	71	64	32	300	M	CSIR	80/100	-
44236	44203	R4AS-10-1E	230	1	1.4	8.5	1210	10.4	1600	70	62	67	62	44	650	M	CSIR	100/120	-
44237	44204	R4AS-15-3E	230	1 1/2	1.3	8.1	1620	11.5	2080	71	67	79	87	52	650	J	CSCR	100/120	15
44238	44205	R4AS-20-3E	230	2	1.25	10.3	2130	13.1	2600	72	71	86	90	63	650	J	CSCR	150/200	20
-	58902	R4AS-30-3E	230	3	1.15	17	3330	18.5	3720	68	66	87	85	95	1500	J	CSCR	200/250	45
-	58903	R4AS-50-3E	230	5	1.15	24	5280	27	5910	72	70	95	96	115	1500	G	CSCR	200/250	80

RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series

4" Three Phase, 230 V

ELECTRICAL DATA

Product code	Model	Voltage	HP	S.F.	Rated (F.L.)		(S.F.)		Eff. %		P.F. %		Locked Rotor Amps	Max. Down Thrust Load (lbs)	KVA Code
					Amps	Watts	Amps	Watts	S.F.	F.L.	S.F.	F.L.			
44206	R4A-05-4E	230	½	1.6	2.1	570	2.9	890	69	65	81	71	13	300	M
44207	R4A-07-4E	230	¾	1.5	3.1	810	3.8	1160	71	69	80	71	20	300	M
44208	R4A-10-4E	230	1	1.4	3.7	1110	4.7	1530	69	68	85	79	21	650	K
44209	R4A-15-4E	230	1½	1.3	5.5	1570	6.2	1970	73	72	83	75	34	650	K
44210	R4A-20-4E	230	2	1.25	7.5	2000	8.1	2470	76	75	80	70	46	650	L
-	R4A-30-4E	230	3	1.15	11	3050	11.9	3470	74	74	77	73	67	1500	K
44123	R4A-50-4E	230	5	1.15	17.3	4800	18.7	5500	78	78	81	79	102	1500	K
44124	R4A-75-4E	230	7½	1.15	23	7150	26.4	8200	78	78	82	82	152	1500	K

4" Three Phase, 460 V

ELECTRICAL DATA

Product Code	Model	Voltage	HP	S.F.	Rated (F.L.)		(S.F.)		Eff. %		P.F. %		Locked Rotor Amps	Max. Down Thrust Load (lbs)	KVA Code
					Amps	Watts	Amps	Watts	S.F.	F.L.	S.F.	F.L.			
44221	R4A-05-4M	460	½	1.6	1.2	590	1.5	870	68	63	73	62	7.5	300	N
44222	R4A-07-4M	460	¾	1.5	1.4	760	1.9	1130	74	73	75	68	8	300	K
44223	R4A-10-4M	460	1	1.4	2	1100	2.3	1470	72	69	80	69	13.5	650	M
44224	R4A-15-4M	460	1½	1.3	2.5	1510	3	1930	74	73	81	76	15.5	650	K
44225	R4A-20-4M	460	2	1.25	3.5	2080	4	2560	74	73	80	75	22	650	K
-	R4A-30-4M	460	3	1.15	4.8	2970	5.5	3360	76	76	81	78	32	1500	K
44128	R4A-50-4M	460	5	1.15	8.5	5010	9.2	5720	75	75	84	81	54	1500	K
44129	R4A-75-4M	460	7½	1.15	11.6	7060	13	8110	78	78	80	76	80	1500	K
44130	R4A-100-4M	460	10	1.15	15.7	10100	17	11550	75	75	85	81	90	1500	J

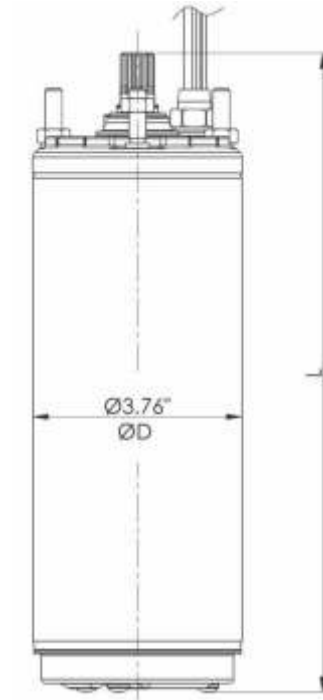
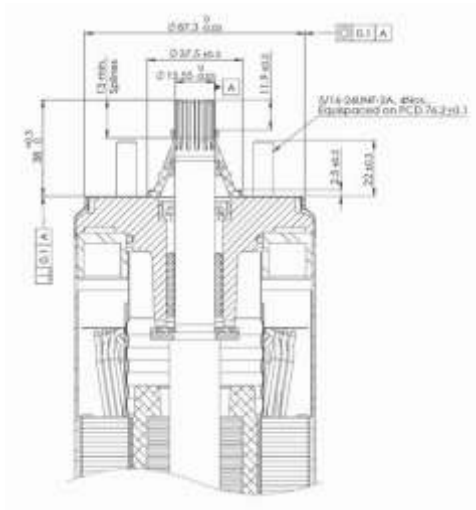
RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series

(½ to 2.0 HP - Single Phase)
(½ to 3.0 HP - Three Phase)

3 Wire - Motor Dimension Details



Weight & Dimensions Data

Model	HP / Ph	ØD(inch)	L(inch)	Weight (lbs) ± 0.11	Cable size in AWG	Cable length in feet
R4AS-05-1R	½ / 1Ph	3.78	12.06	20.41	14	4.9
R4AS-05-3E	½ / 1Ph	3.78	12.06	20.41	14	4.9
R4AS-07-3E	¾ / 1Ph	3.78	13.05	22.81	14	4.9
R4AS-10-3E	1.0 / 1Ph	3.78	14.03	25.41	14	4.9
R4AS-15-3E	1½ / 1Ph	3.78	14.62	27	14	4.9
R4AS-20-3E	2.0 / 1Ph	3.78	16.59	32	14	4.9
R4A-05-4	½ / 3Ph	3.78	11.47	19	14	4.9
R4A-07-4	¾ / 3Ph	3.78	12.06	20.54	14	4.9
R4A-10-4	1.0 / 3Ph	3.78	13.05	23.10	14	4.9
R4A-15-4	1½ / 3Ph	3.78	14.03	25.74	14	4.9
R4A-20-4	2.0 / 3Ph	3.78	15.01	28.39	14	4.9
R4A-30-4 #	3.0 / 3Ph	3.78	17.38	34.78	14	4.9

Non CSA Model

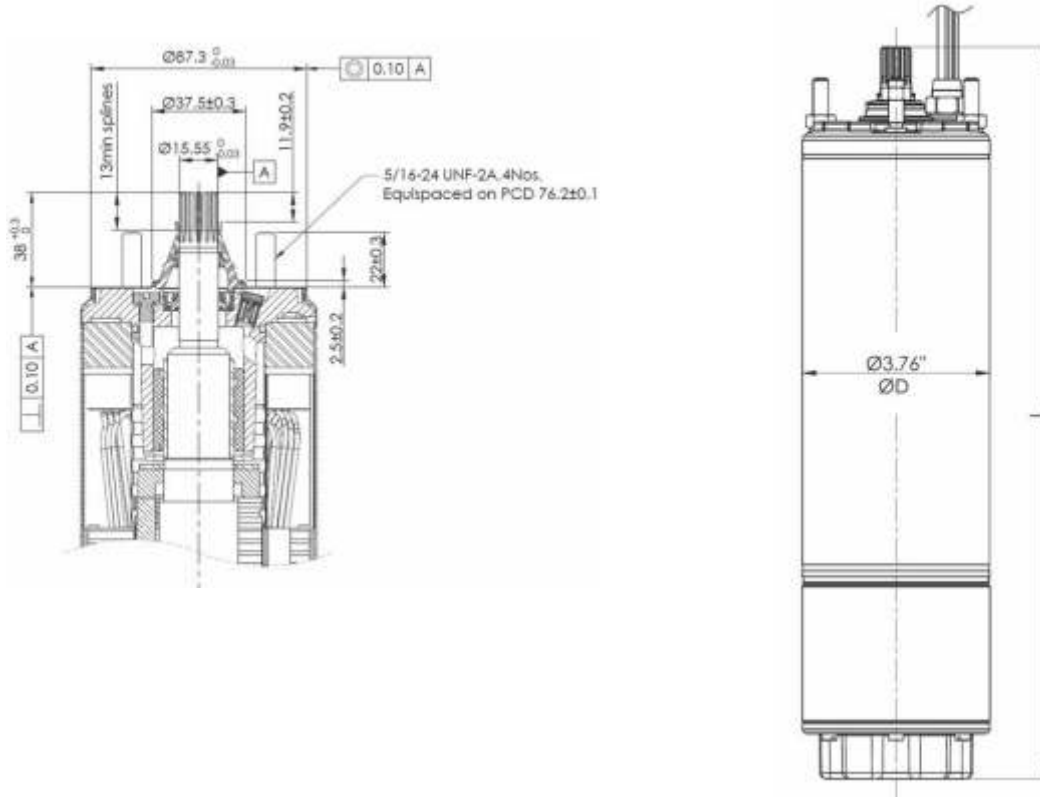


RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **4"**

"R" Series
 (3.0 & 5.0 HP - Single Phase)
 (5.0 to 10 HP - Three Phase)

3 Wire - Motor Dimension Details



Weight & Dimensions Data

Model	HP / Ph	ØD(inch)	L(inch)	Weight (lbs) ± 0.11	Cable size in AWG	Cable length in feet
R4AS-30-3E #	3 / 1Ph	3.76	24.84	51.36	14	4.9
R4AS-50-3E #	5 / 1Ph	3.76	30.94	67.68	14	4.9
R4A-50-4 #	5 / 3Ph	3.76	24.84	51.36	14	4.9
R4A-75-4 #	7½ / 3Ph	3.76	30.94	67.68	14	4.9
R4A-100-4 #	10 / 3Ph	3.76	33.89	75.83	14	4.9

Non CSA Model

RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"R" Series

Technical Specifications

Nominal Dia	6"
Maximum outer diameter	5.66" (144 mm)
Power range	7½ HP to 30 HP
Speed	3450 rpm
Power supply	Three Phase - 230V & 460 V, 60 Hz, A.C Supply
Class of insulation	F
Ingress protection	IP 68
Direction of rotation	Electrically Reversible : Three Phase
Type of duty	S1 (Continuous)
Thrust load	5.0 HP to 30 HP - 3500 lbs
Minimum cooling flow along the motor	0.25 ft/sec
Maximum liquid temperature	86°F
Maximum Starts per hour	4 Times
Shaft end	Spline
Mounting standard	NEMA
Method of starting	3 Phase - Direct On Line (DOL)
Cable lead out	Removable type XLPE individual leads (3 + 1)



Materials of Construction

Part Name	Material
Mechanical Seal	NBR / Ceramic Carbon
Stator Shell	SS 304
Shaft	7.5 HP to 25 HP - SS 431, 30 HP - AISI - 1040
Shaft Sleeve	SS 431 (30 HP)
Shaft Extension	UNS 17400 (30HP)
Bush	Graphite Carbon
Thrust Segment	SS 420
End Bells	Cast Iron
Thrust Pad	Graphite Carbon
Diaphragm	NBR
Rubber Sand Guard	NBR
Fasteners	SS 304
Top End Bell Cladding	SS 304
'O' Ring	NBR

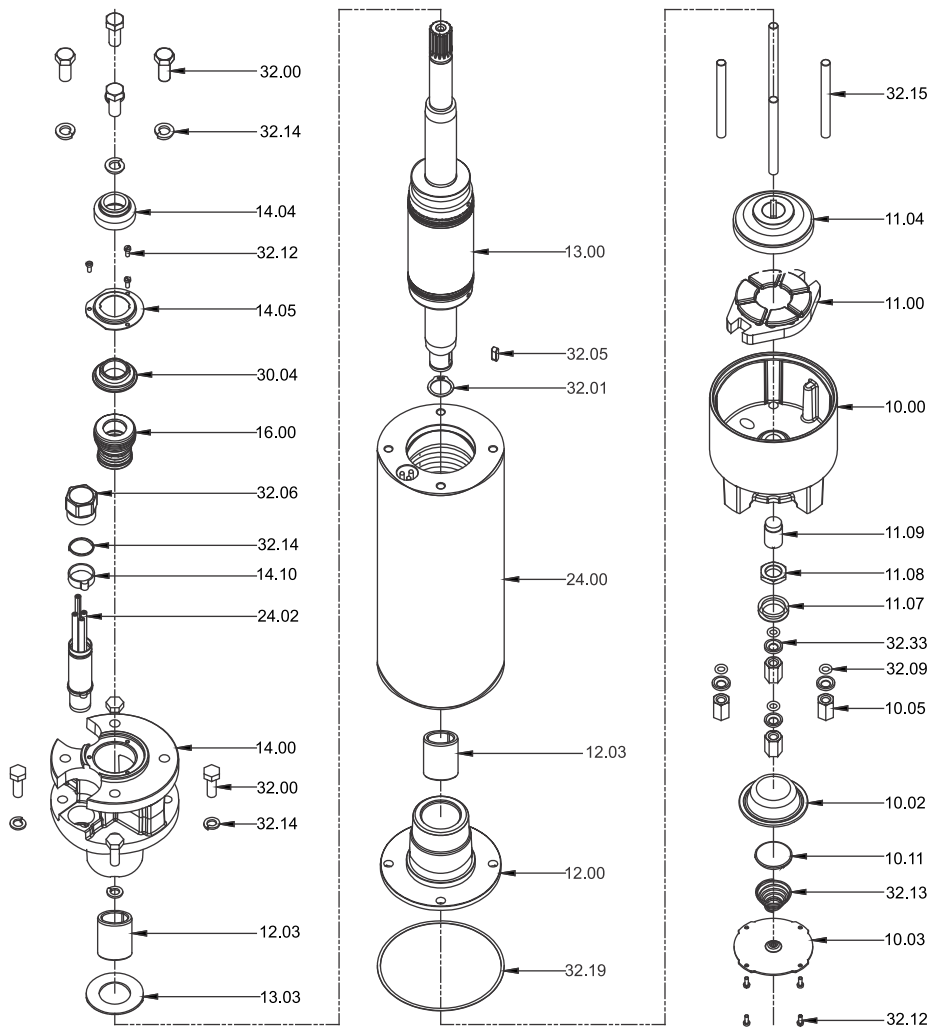


RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"R" Series
(7½ to 30 HP)

Exploded View



Part Name	Part No.	Part Name	Part No.	Part Name	Part No.
Screw	32.12	Motor Base	10.00	Upthrust Washer	13.03
Diaphragm Bottom Plate	10.03	Thrust Base	11.00	Spring Washer	32.14
Spring	32.13	Thrust Pad	11.04	Bolt	32.00
Spring Guide Plate	10.11	Stud	32.15	Top End bell	14.00
Diaphragm	10.02	Gasket	32.19	Cable	24.02
Doom Nut	10.05	Bottom End Bell	12.00	Cable Plug Outer Ring	14.10
O Ring	32.09	Carbon Bush	12.03	Cable Plug Nut	32.06
Cap Washer	32.33	Stator Body	24.00	Mechanical Seal	16.00
Rocker Cap	11.07	Circlip	32.01	Seal Lock Plate	30.04
Rocker Lock Nut	11.08	Key	32.05	SS Sand guard	14.05
Rocker Screw	11.09	Rotor Shaft	13.00	Rubber Sand Guard	14.04

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"R" Series

6" Three Phase, 230 V

ELECTRICAL DATA

Product Code Non CSA	Model	Voltage	HP	S.F.	Rated (F.L.)		(S.F.)		Eff. %		P.F. %		Locked Rotor Amps	Max. Down Thrust Load (lbs)	KVA Code
					Amps	Watts	Amps	Watts	S.F.	F.L.	S.F.	F.L.			
-	R6B-75-4E	230	7½	1.15	21.8	7000	24.6	8000	80	80	82	81	130	3485	H
-	R6B100-4E	230	10	1.15	28.4	9400	32.2	10800	79	79	84	83	172	3485	H
-	R6B-150-4E	230	15	1.15	41.6	13700	47.4	15800	81	81	84	83	306	3485	H
-	R6B-200-4E	230	20	1.15	53.8	18100	60.6	20900	82	82	87	84	362	3485	J
-	R6B-225-4E	230	25	1.15	67	22500	76.4	25700	83	83	84	84	480	3485	J
-	R6B-300-4E	230	30	1.15	79	26900	90.4	31100	83	83	86	85	568	3485	J

6" Three Phase, 460 V

ELECTRICAL DATA

Product Code Non CSA	Model	Voltage	HP	S.F.	Rated (F.L.)		(S.F.)		Eff. %		P.F. %		Locked Rotor Amps	Max. Down Thrust Load (lbs)	KVA Code
					Amps	Watts	Amps	Watts	S.F.	F.L.	S.F.	F.L.			
56428	R6B-75-4M	460	7½	1.15	10.9	6970	12.3	8010	79	79	82	80	60	3485	H
56429	R6B-100-4M	460	10	1.15	14.4	9440	16.2	10860	80	80	84	82	75	3485	G
56431	R6B-150-4M	460	15	1.15	20.9	13750	23.7	15850	80	80	84	83	123	3485	H
56433	R6B-200-4M	460	20	1.15	26.9	17950	30.5	20690	84	84	85	84	170	3485	H
56434	R6B-225-4M	460	25	1.15	33.9	22530	38.4	26000	82	82	85	83	230	3485	J
56435	R6B-300-4M	460	30	1.15	40	27000	45	31100	82	82	87	85	274	3485	J

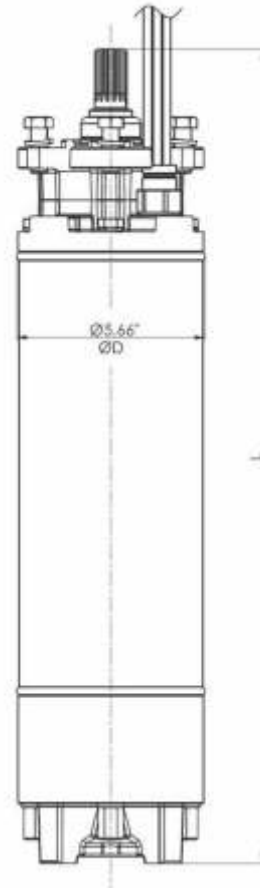
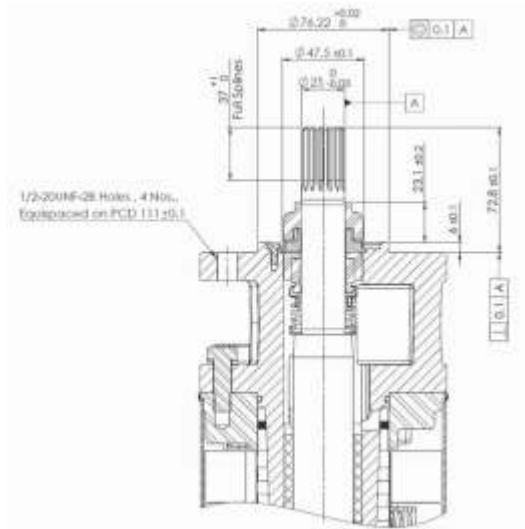


RESIN FILLED ENCAPSULATED SUBMERSIBLE MOTORS

Nominal Diameter : **6"**

"R" Series
(7½ to 30 HP)

Motor Dimension Details

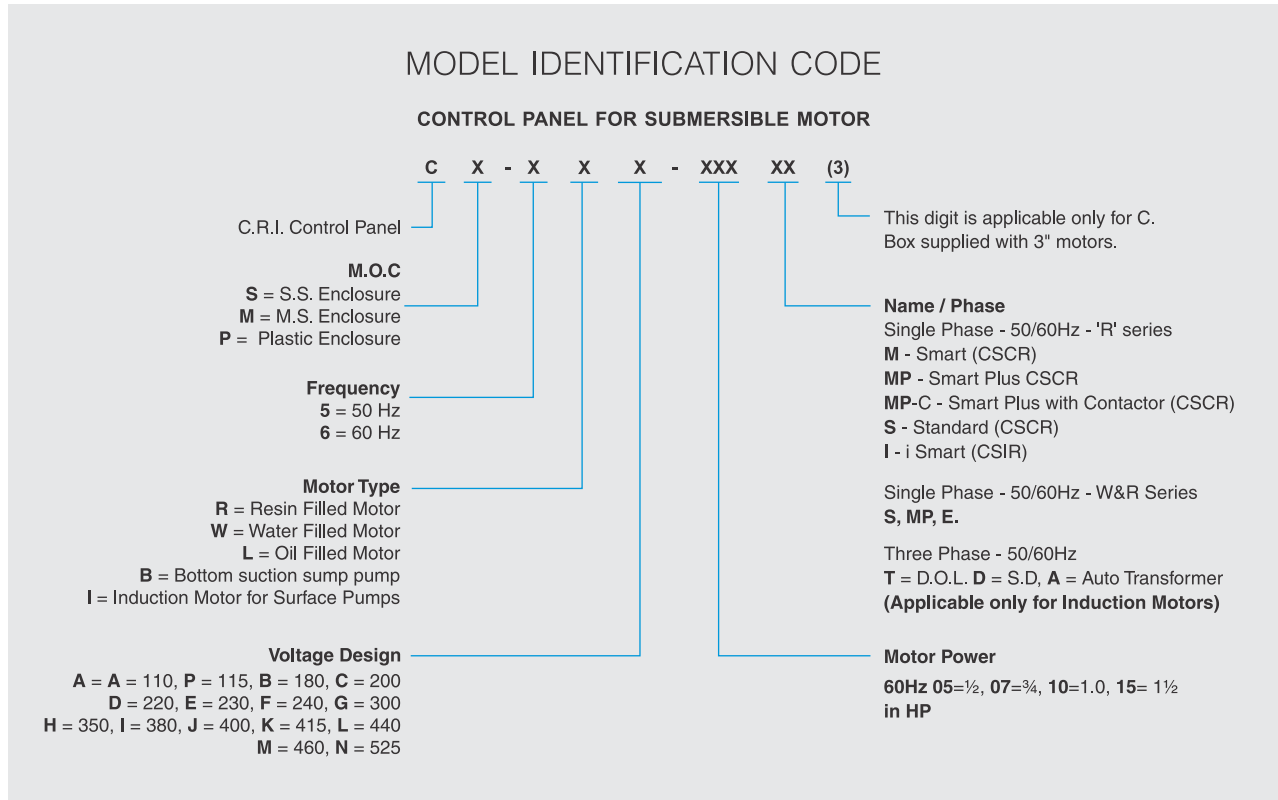


Weight & Dimensions Data

Model	HP	ØD(inch)	L(inch)	Weight (lbs) ± 0.11	Cable size in AWG	Cable length in ft
					DOL	
R6B-75-4M	7½	5.66	26.02	103.30	7	14.76
R6B-100-4M	10	5.66	27.0	109.17	7	14.76
R6B-125-4M	12½	5.66	27.99	115.23	7	14.76
R6B-150-4M	15	5.66	29.17	122.02	7	14.76
R6B-175-4M	17½	5.66	31.53	136.35	7	14.76
R6B-200-4M	20	5.66	33.50	148.65	7	14.76
R6B-250-4M	25	5.66	35.27	159.70	7	14.76
R6B-300-4M	30	5.66	37.83	175.51	7	14.76

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

CONTROL BOXES



Sample Description:

CM-6RE-15M - 1½ HP, 60 Hz, 230V, 1Ph, Resin filled submersible motor MS Enclosure control panel.

CM-6RE-15MP - 1½ HP, 60Hz, 230V, 1Ph, Resin filled submersible motor MS Enclosure control panel.



CONTROL BOXES

Description

The Elegant control panel boxes are designed for use with C.R.I 3-wire, single-phase submersible motors upto 1HP. The smart plus control boxes are designed for use with C.R.I 3-wire, single-phase submersible motors of 1½ & 2 HP, and are recommended for water system that use pressure switches, or other pilot devices. Contactors are carefully matched to the motor rating, eliminating the need for external line connectors.

Features :

- Suitable for outdoor mounting
- Capacitor Start/Run design (Except QD boxes)
- Heavy duty, box-type terminals
- External access to overload test
- Multiple-size knockouts
- User-friendly connection diagrams
- Easy access to grounding lugs.
- CSA Compliance

Single-phase specifications

Product Code	Box Type	Model	Connection Type	(CSA) HP	Volt	Hz	Capacitor Values		Enclosure	IP
							Start	Run		
156482	Elegant	CM-6RP-05I	CSIR	½	115	60	250/300µF 115V	NA	NEMA 3R	IP 23
160851		CM-6RE-05I	CSIR	½	230	60	60/80µF 250V	NA	NEMA 3R	IP 23
160852		CM-6RE-07I	CSIR	¾	230	60	80/100µF 250V	NA	NEMA 3R	IP 23
160853		CM-6RE-10I	CSIR	1.0	230	60	100/120µF 250V	NA	NEMA 3R	IP 23
160854	Smart plus	CM-6RE-15MP-C	CSCR (Contactor version)	1½	230	60	100/120µF 250V	15µF 370V	NEMA 3R	IP 23
160855		CM-6RE-15MP	CSCR	1½	230	60			NEMA 3R	IP 23
160856		CM-6RE-20MP-C	CSCR (Contactor version)	2.0	230	60	150/200µF 250V	20µF 370V	NEMA 3R	IP 23
160857		CM-6RE-20MP	CSCR	2.0	230	60			NEMA 3R	IP 23
210909		CM-6RE-30MP	CSCR	3.0 Non CSA	230	60	200/250µF 230V	45µF 440V	NEMA 3R	IP 23
210910		CM-6RE-50MP	CSCR	5.0 Non CSA	230	60	280/350µF 230V	40+40µF 440V	NEMA 3R	IP 23

Box Type	Hz	HP Range	Enclosure	Terminal Block		Contactor	Agency Approvals
				Terminals	Max Wire size		
Elegant	60	½ - 1.0	NEMA 3R, IP23	5	AWG16	No	CSA certified
Smart Plus	60	1½ & 2.0	NEMA 3R, IP23	6	AWG14	Yes	CSA certified
Smart Plus	60	3.0 & 5.0	NEMA 3R, IP23	5	AWG10	No	Non CSA

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

CONTROL BOXES

ORDERING INFORMATION

HP	Description				Panel code
	Phase	Volts	Hz	Type	
½	1	115	60	Elegant	156482
		230	60	Elegant	160851
¾		230	60	Elegant	160852
1.0		230	60	Elegant	160853
1.½		230	60	Smart Plus	160854
		230	60	Smart Plus	160855
2.0		230	60	Smart Plus	160856
		230	60	Smart Plus	160857
3.0		230	60	Smart Plus	210909
5.0		230	60	Smart Plus	210910

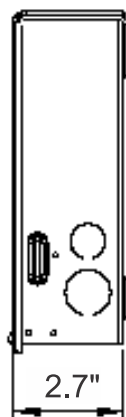
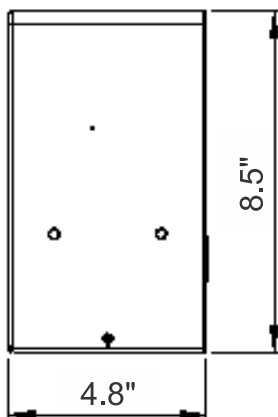
CONTROL BOXES - ELEGANT

Specifications

- Bottom knockout: Two 0.88" knockout and one 1.13" knockout
- Side knockout: one 0.88" knockout and one 1.13" knockout
- Terminals Block: Five terminals provided for wiring upto AWG16 wire

Dimensions

Box Type	HP	Carton Size (in)			Shipping (Wt)
		W	H	L	Lbs.
Elegant	½	5	3	8.75	2.65
	¾				
	1.0				



Elegant



CONTROL BOXES

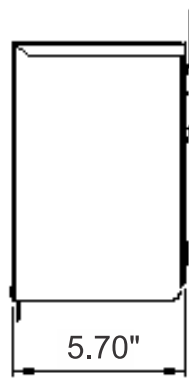
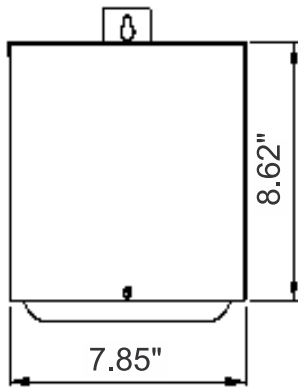
CONTROL BOXES - SMART PLUS

Specifications

- **Knockouts** : one 0.88" knockout and two 1.31" knockout
- **Terminals Block** : Six terminals provided for wiring upto AWG14 wire - (1½ & 2.0 HP)
 Five terminals provided for wiring upto AWG10 wire - (3.0 & 5.0 HP)

Dimensions

Box Type	HP	Carton Size (in)			Shipping (Wt)
		W	H	L	Lbs.
Smart Plus	1½	8	6	8.1	5.73
	2.0				
Smart Plus	3.0	8	6	8.4	14.3
	5.0				



Smart Plus

CABLE SELECTION TABLE (5% Voltage drop)

		1Ph, 2/3 WIRE MOTORS, MAXIMUM LENGTH OF COPPER CABLE IN FEET													
		Motor Rating	CABLE SIZE IN AMERICAN WIRE GAUGE												
VOLT	HP	Calculate Cable Length (FEET)	14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0
110V	0.5		95	151	239	381	604	963	1213	1529	1928	2429	3065	3865	4873
	0.75		75	119	190	302	479	764	962	1213	1529	1926	2431	3065	3865
	1		68	108	172	274	434	692	872	1099	1386	1746	2203	2778	3503
	1.5		54	87	138	219	347	554	697	879	1108	1397	1762	2222	2802
230V	0.5		345	550	1390	2203	3515	4427	5584	7038	8868				
	0.75		262	417	1055	1672	2668	3360	4238	5342	6731	8493			
	1		203	324	819	1297	2069	2607	3288	4144	5221	6588			
	1.5		177	282	712	1129	1800	2268	2860	3605	4542	5731			
	2		165	262	664	1052	1677	2113	2665	3359	4232	5340			
	3	122	195	492	780	1244	1567	1976	2491	3139	3960				
	5			313	496	791	996	1256	1583	1995	2518				

		THREE PHASE 3 WIRE (D.O.L.) MOTOR MAXIMUM LENGTH OF COPPER CABLE - SINGLE CABLE PER PHASE														
		Motor Rating	CABLE SIZE IN AMERICAN WIRE GAUGE													
VOLT	HP	Calculate Cable Length (FEET)	14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	
230V	0.5		842	1341	2130	3391	5373									
	0.8		607	967	1535	2445	3874	6179								
	1.0		475	756	1200	1911	3029	4831	6085							
	1.5		358	569	904	1440	2282	3640	4585	5782						
	2.0		272	433	688	1095	1735	2768	3486	4397	5542					
	3.0		218	346	550	876	1388	2214	2789	3518	4434	5587	7049			
	4.0		155	247	393	626	992	1582	1992	2513	3167	3991	5035			
	5.0		112	178	282	449	712	1135	1430	1804	2274	2865	3615	4559	5748	
	6.0		95	151	239	381	604	963	1213	1529	1928	2429	3065	3865	4873	
	7.5			126	200	319	505	805	1014	1279	1612	2032	2563	3233	4076	
	10.0			99	157	250	397	633	797	1005	1267	1596	2014	2540	3202	
	12.5				134	214	339	540	680	858	1081	1363	1719	2168	2734	
	15.0				112	179	283	452	569	718	905	1140	1439	1814	2287	
	17.5				97	154	244	388	489	617	778	980	1237	1560	1966	
	20.0					136	216	344	433	546	688	868	1095	1380	1740	
	25.0					112	178	283	357	450	567	714	901	1137	1433	
	30.0						151	241	303	382	482	607	766	966	1218	
	35.0						108	172	217	274	345	435	549	692	873	
	40.0						147	185	233	293	370	466	588	742		
50.0						130	164	206	260	328	414	522	658			

		THREE PHASE 3 WIRE (S.D) MOTOR MAXIMUM LENGTH OF COPPER CABLE														
		Motor Rating	CABLE SIZE IN AMERICAN WIRE GAUGE													
VOLT	HP	Calculate Cable Length (FEET)	14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	
230V	0.5		1769	2816	4472	7121	11284									
	0.8		1275	2030	3224	5134	8135	12976								
	1.0		997	1587	2521	4014	6360	10145	12779							
	1.5		751	1196	1899	3024	4792	7643	9628	12143						
	2.0		571	909	1444	2299	3644	5812	7321	9234	11639					
	3.0		457	727	1155	1840	2915	4650	5857	7387	9311	11732	14803			
	4.0		326	520	825	1314	2082	3321	4184	5276	6651	8380	10574			
	5.0		234	373	592	943	1495	2384	3004	3788	4775	6017	7591	9573	12071	
	6.0		199	316	502	800	1267	2022	2547	3212	4048	5101	6436	8116	10234	
	7.5			264	420	669	1060	1691	2130	2686	3386	4266	5383	6788	8559	
	10.0			208	330	526	833	1329	1673	2111	2660	3352	4229	5334	6725	
	12.5				282	449	711	1134	1429	1802	2271	2862	3610	4553	5741	
	15.0				236	375	595	949	1195	1508	1900	2394	3021	3810	4804	
	17.5				203	323	511	816	1028	1296	1633	2058	2597	3275	4129	
	20.0					286	453	722	909	1147	1446	1822	2299	2899	3655	
	25.0					235	373	595	749	945	1191	1500	1893	2387	3010	
	30.0					317	505	637	803	1012	1275	1609	2029	2558		
35.0					227	362	456	575	725	914	1153	1454	1833			
40.0						308	388	489	616	776	979	1235	1557			
50.0						273	344	433	546	688	868	1095	1381			

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

CABLE SELECTION TABLE (5% Voltage drop)

		THREE PHASE 3 WIRE (D.O.L.) MOTOR MAXIMUM LENGTH OF COPPER CABLE - SINGLE CABLE PER PHASE																				
		Motor Rating	CABLE SIZE IN AMERICAN WIRE GAGE												MCM Copper wire size							
VOLT	HP		14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	250	300	350	400	500		
380V	0.5	Calculate Cable Length (FEET)	2374	3779	6002	9556	15143															
	0.8		1879	2991	4751	7565	11988															
	1.0		1253	1994	3168	5044	7992															
	1.5		940	1496	2376	3783	5994															
	2.0		778	1238	1966	3131	4961															
	3.0		626	997	1584	2522	3996															
	4.0		475	756	1200	1911	3029															
	5.0			544	864	1376	2180															
	6.0			460	731	1164	1844	2942														
	7.5			374	594	946	1499	2390														
	10.0			288	457	727	1153	1839														
	12.5			239	380	605	959	1530														
	15.0				322	513	813	1296	1633													
	17.5				291	463	733	1170	1587													
	20.0					362	573	954	1301	1894												
	25.0					321	509	812	983	1240	1563											
	30.0						426	680	922	1163	1466	1848										
	35.0							603	818	1031	1300	1638										
	40.0							503	634	799	887	1117	1410	1778								
	50.0							403	507	640	806	894	1128	1293	1630							
60.0							477	602	618	779	983	1183	1421									
75.0								558	552	696	798	1007	1270									
85.0								516	511	643	738	931	1173									
100.0									438	551	696	877	974	886								
125.0										442	558	704	887	807	1145							
150.0											534	673	849	748	1061							
175.0												660	661	937	994							
200.0													500	709	745							
225.0																647	754	798	1078			
250.0																492	574	607	820			
300.0																	552	584	788			
350.0																			507	685		
400.0																			434	586		

		THREE PHASE 3 WIRE (S.D) MOTOR MAXIMUM LENGTH OF COPPER CABLE																			
		Motor Rating	CABLE SIZE IN AMERICAN WIRE GAGE												MCM Copper wire size						
VOLT	HP		14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	250	300	350	400	500	
380V	0.5	Calculate Cable Length (FEET)	4985	7935	12604	20068	31800														
	0.8		3946	6282	9978	15887	25175														
	1.0		2631	4188	6652	10592	16784														
	1.5		1973	3141	4989	7944	12588														
	2.0		1633	2599	4129	6574	10417														
	3.0		1315	2094	3326	5296	8392														
	4.0		997	1587	2521	4014	6360														
	5.0			1142	1814	2889	4577														
	6.0			966	1535	2444	3873	6178													
	7.5			785	1247	1986	3147	5020													
	10.0			604	959	1528	2421	3861													
	12.5			503	798	1271	2014	3213													
	15.0				676	1077	1707	2723	3429												
	17.5				610	972	1540	2457	3333												
	20.0					759	1203	2003	2733	3977											
	25.0					674	1069	1705	2065	2604	3282										
	30.0						895	1428	1937	2443	3079	3880									
	35.0							1266	1717	2165	2729	3439									
	40.0							1057	1331	1679	1862	2346	2961	3734							
	50.0							845	1065	1343	1693	1877	2368	2715	3424						
60.0							1002	1264	1298	1636	2064	2485	2984								
75.0								1171	1160	1462	1677	2114	2666								
85.0								1083	1072	1351	1550	1954	2464								
100.0									919	1158	1461	1843	2044	1860							
125.0										929	1172	1478	1863	1695	2405						
150.0											1121	1414	1783	1570	2228						
175.0												1387	1388	1969	2088						
200.0													1050	1489	1564						
225.0																1358	1584	1677	2264		
250.0																1033	1205	1275	1722		
300.0																	1158	1226	1655		
350.0																		1066	1439		
400.0																			912	1231	

CABLE SELECTION TABLE ((5% Voltage drop)

		3Ph, 460V, 3 WIRE (DOL) MOTORS, MAXIMUM LENGTH OF COPPER CABLE IN FEET																	
Motor Rating		CABLE SIZE IN AMERICAN WIRE GAGE												MCM Copper wire size					
VOLT	HP	14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	250	300	350	400	500
460V	0.5	3770	6020	9460															
	0.75	2730	4350	6850															
	1	2300	3670	5770	9070														
	1.5	1700	3710	4270	6730														
	2	1300	2070	3270	5150	8050													
	3	1000	1600	2520	3970	6200													
	4	748	1190	1891	3011	4771													
	5	590	950	1500	2360	3700	5750												
	5.5	557	887	1409	2243	3554	5669												
	6	510	812	1290	2054	3255	4933												
	7.5	420	680	1070	1690	2640	4100	5100	6260	7180									
	10	310	500	790	1250	1960	3050	3800	4680	5750	7050								
	12.5		410	651	1036	1642	2619	3299	4086	4963	6136	7593							
	15		340	540	850	1340	2090	2600	3200	3930	4810	5900	7110						
	20			410	650	1030	1610	2000	2470	3040	3730	4580	5530						
	25				530	830	1300	1620	1990	2450	3010	3700	4470	5430					
	30				430	680	1070	1330	1640	2030	2490	3060	3700	4500	5128	5850			
	35					580	926	1145	1418	1753	2124	2680	3177	3835	4264	4960			
	40					500	790	980	1210	1490	1830	2250	2710	3192	3720	4242			
	50						640	800	980	1210	1480	1810	2190	2650	2998	3409	3830	4171	4842
	60						540	670	830	1020	1250	1540	1850	2240	2532	2881	3230	3529	4188
	75								680	840	1030	1260	1520	1850	2088	2390	2688	2940	3428
	85									745	919	1136	1371	1652	1884	2127	2291	2491	2909
	100									620	760	940	1130	1380	1550	1782	2000	2182	2540
	110											696	877	1048	1107	1364	1447	1531	1860
	125												740	890	1000	1209	1381	1549	1949
	150													760	920	1040	1182	1330	1452
	175														810	921	1052	1181	1292
	200															802	910	1018	1122
	225																764	886	984
250																	755	886	
300																		623	
350																			
400																			
450																			
500																			
550																			
600																			

		3Ph, 460V, 3 WIRE (S/D) MOTORS, MAXIMUM LENGTH OF COPPER CABLE IN FEET																	
Motor Rating		CABLE SIZE IN AMERICAN WIRE GAGE												MCM Copper wire size					
VOLT	HP	14	12	10	8	6	4	3	2	1	1/0	2/0	3/0	4/0	250	300	350	400	500
460V	0.5	880	1420	2250	3450	5550	8620												
	0.75	743	1182	1878	2990	4739	7559												
	1	681	1083	1720	2739	4340	6923												
	1.5	630	1020	1600	2530	3960	6150	7650	9390										
	2	460	750	1180	1870	2940	4570	5700	7020	8620									
	3	368	585	930	1480	2345	3741	4713	5943	7491									
	4	310	510	810	1270	2010	3130	3900	4800	5800	7210	8850							
	5	230	380	610	970	1540	2410	3000	3700	4560	5590	6870	8290						
	5.5	190	310	490	790	1240	1950	2430	2980	3670	4510	5550	6700						
	6		250	410	640	1020	1600	1990	2460	3040	3730	4590	5550						
	7.5			335	533	844	1347	1697	2140	2697	3398	4288	5002						
	10			300	480	750	1180	1470	1810	2230	2740	3370	4080						
	12.5				370	590	960	1200	1470	1810	2220	2710	3280						
	15				320	500	810	1000	1240	1530	1870	2310	2770						
	20					420	660	810	1020	1260	1540	1890	2280						
	25						577	727	916	1155	1341	1691	2133	8140					
	30							500	610	760	930	1140	1410	1690	6750	7690	8730		
	35								507	640	806	1016	1282	1478	5965	6822	7259		
	40								470	590	730	880	1110	1330	4930	5590	6370		
	50									510	630	770	950	1140	3970	4510	5130	5740	6270
	60										550	680	830	1000	3360	3810	4330	4860	5310
	75											590	730	880	2770	3150	3600	4050	4420
	85												623	755	2459	2691	3272	3563	3771
	100													591	2070	2340	2680	3010	3280
	110														1863	2039	2480	2893	3061
	125															1500	1830	2080	2340
	150															1380	1570	1790	2000
	175															1220	1390	1580	1780
	200																1070	1210	1380
	225																919	1050	1247
250																820	951	1116	
300																722	853	984	
350																623	722	853	
400																	623	722	
450																	411	584	
500																	364	517	
550																	332	471	
600																	296	420	

In view of continuous developments, the information / descriptions / specifications / illustrations are subject to change without notice.

NOTES

A series of horizontal dotted lines for writing notes, starting from the top of the page and extending downwards.

NOTES

A series of horizontal dotted lines for writing notes, starting from the top of the page and extending downwards.

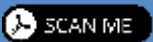
NOTES

A series of horizontal dotted lines for writing notes, starting from the top of the page and extending downwards.

W I N N I N G W A Y S

When you have a good thing going it is quite in the fitting of things that recognitions come our way. Several prestigious awards, which decorate our shelf, say it all. These rewards not only acknowledge our position as a leader in the water pump industry but also serve as reminders about what the customer expects from a winner. And we, as ever, have our ears perfectly tuned to customer expectations.





C.R.I. FLUID SYSTEMS USA LLC.

620 N Fairfield St, Amarillo, Texas 79107. USA.

Tel : 832-430-4660 E-mail : sales.us@crifluidsystems.com Website: www.crifluidsystems.com

Overseas subsidiaries : India, Brazil, Bangladesh, China, Italy, Indonesia, Philippines, South Africa, Spain, Turkey, UAE