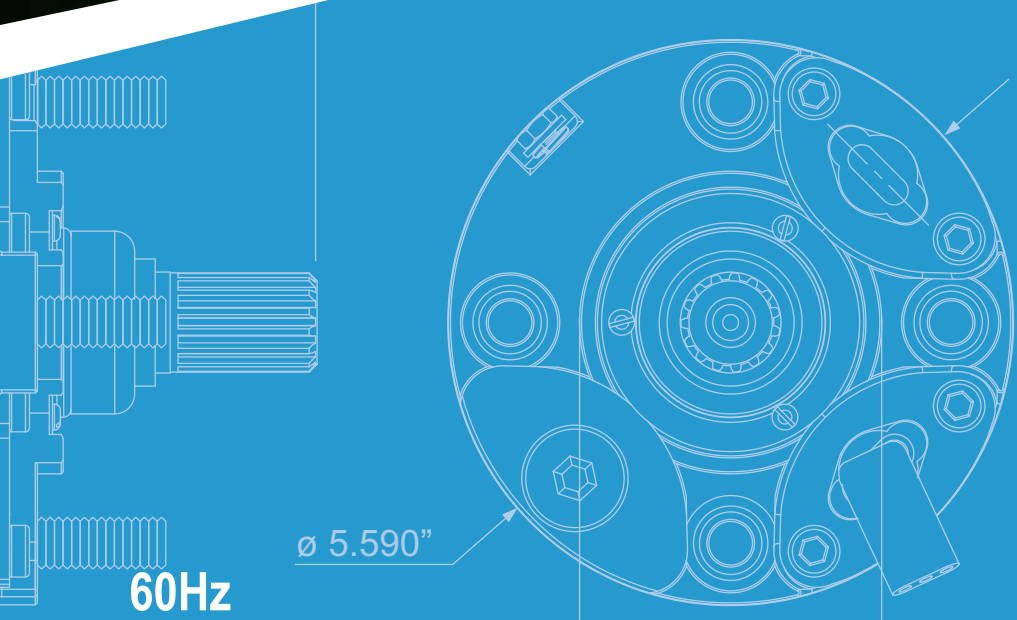
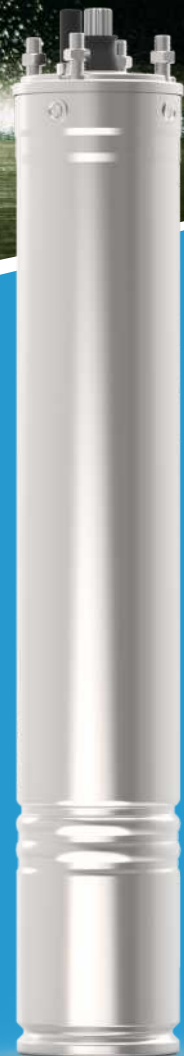


NM-H SERIES



4" SUBMERSIBLE MOTORS

NON TOXIC OIL FILLED



PRODUCT CATALOGUE

www.northam-inc.com

4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

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4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

0.5 HP to 7.5 HP MODEL CODE MOTOR SIZE: 4"

NM **H** **4** **0005** **6** **2W** **A** **2**

Pole

Code	Pole
2	2

Volts

Code	Volts
A	110-115V
B	220-230V
C	380V
D	460V

Power Supply

Code	Power Supply
2W	2 Wire single phase
3W	3 Wire single phase
3P	3 Phase

Frequency

Code	Hz
6	60

Motor HP

Code	HP
0005	0.5 HP
0007	0.75 HP
0010	1 HP
0075	7.5 HP

Motor size

Code	Size
4	4"

Motor type

Code	Material
H	Oil filled type

Series name

Code	Series
NM	Submersible Motors (Non Toxic Oil Filled)

4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

0.5 HP to 7.5 HP

GENERAL DATA

MOTOR SIZE: 4"

SUITABLE WELL SIZE

- ▶ These motors are designed and sized for installation in 4" diameter or larger water wells.

FEATURES

- ▶ 4" Oil filled submersible motor.
- ▶ Completely rewindable.
- ▶ Cooling and lubrication by non toxic fluid complying with US FDA 21 CFR 172.878
- ▶ Stainless steel outer shell and shaft.
- ▶ Maintenance free lubricated ball bearings.
- ▶ Mechanical shaft seal (Carbon/Ceramic) provided.
- ▶ High efficiency electrical design (lower operating cost).
- ▶ Tropicalized design (lower winding temperature).
- ▶ All three wire single phase motors will require control box.
- ▶ 4" NEMA coupling flange.
- ▶ Pressure compensation diaphragm.



SPECIAL FEATURES ON-REQUEST

- ▶ Complete AISI 304/316 stainless steel construction.

CABLE DATA

HP	Phase	Type of start	Cable x Lead x Size (AWG)	Length [ft]
0.5 - 5	1	DOL	1 x 4 x 16	8.5
0.5 - 7.5	3	DOL	1 x 4 x 16	8.5

4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

0.5 HP to 7.5 HP GENERAL DATA MOTOR SIZE: 4"

SPECIFICATIONS 60Hz

	Motor construction
	Standard
Frequency	60Hz
Motor ratings	3 phase - 1.5 to 7.5 HP 1 phase - 0.5 to 5.0 HP
Voltage (Tolerance +6% / -10%)	3 phase - 460 V 1 phase - 115 V, 230 V
Pole/RPM	2 Pole / 3450 RPM
Degree of protection	IP 68
Duty rating	Continuous
Ambient temperature	113 °F / 45 °C
Rotation	3 phase - CCW & CW 1 phase - CCW
Maximum nos. of starts/hour	0.5 to 3.0 HP - 20 5 to 7.5 HP - 15
Minimum cooling flow along the motor	0.25 ft/sec
Maximum submerged depth	984 feet / 300 metres
Mounting	Vertical / Horizontal

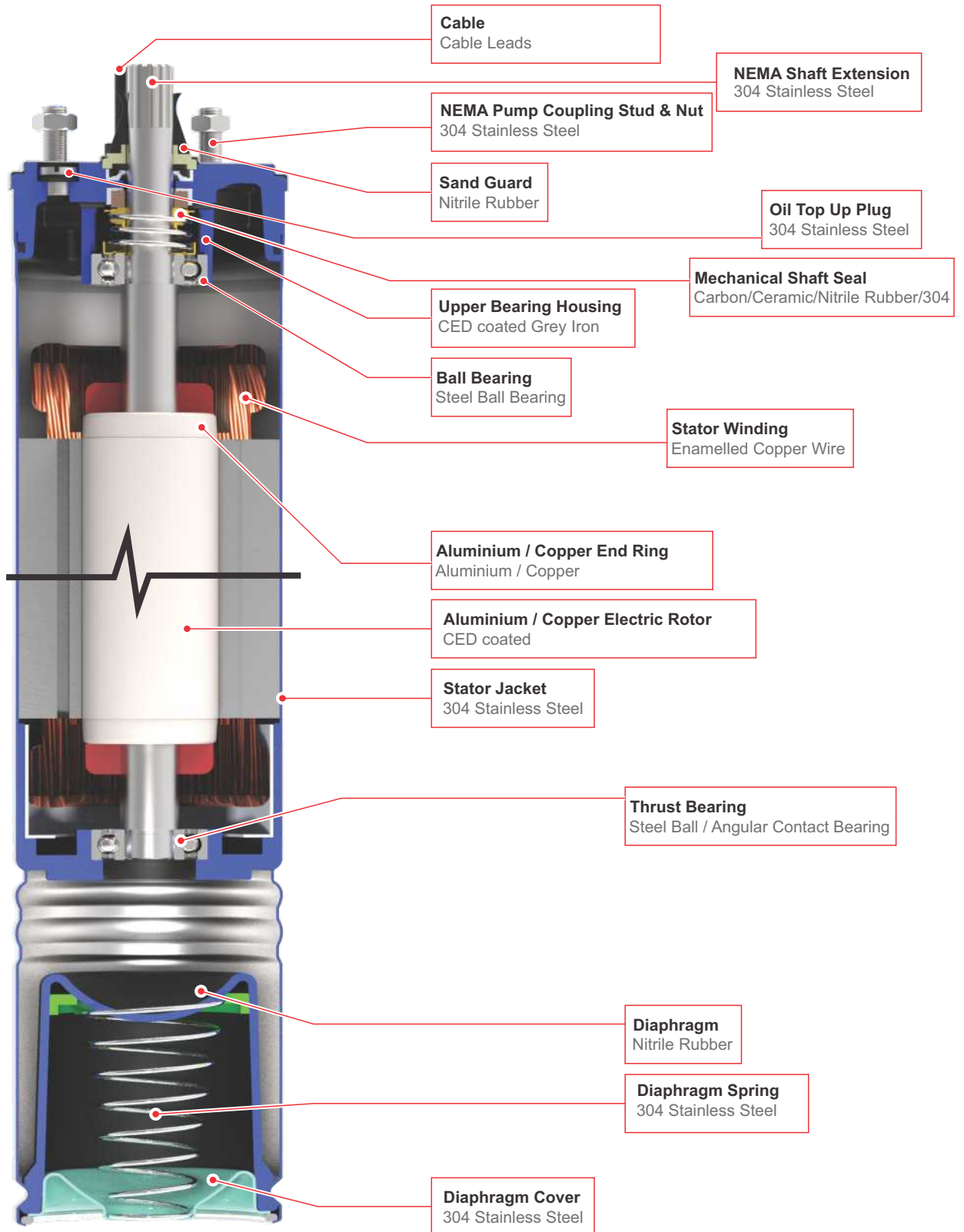
NOTE: SPECIFICATIONS ARE SUBJECT TO PERIODIC CHANGES DUE TO CONTINUOUS IMPROVEMENTS.

4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

0.5 HP to 7.5 HP

Material of Construction

MOTOR SIZE: 4"



4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

0.5 HP to 7.5 HP	ORDER INFORMATION	MOTOR SIZE: 4"
-------------------------	--------------------------	-----------------------

HP	Hz	WIRE	PHASE	VOLTS	POLE	MOTOR SIZE	ORDER NO. / MODEL CODE
							STANDARD
0.5	60	2	1	115	2	4"	NM-H-4-0005-6-2W-A-2
				230	2	4"	NM-H-4-0005-6-2W-B-2
0.75	60	2	1	115	2	4"	NM-H-4-0007-6-2W-A-2
				230	2	4"	NM-H-4-0007-6-2W-B-2
1.0	60	2	1	115	2	4"	NM-H-4-0010-6-2W-A-2
				230	2	4"	NM-H-4-0010-6-2W-B-2
1.5	60	2	1	230	2	4"	NM-H-4-0015-6-2W-B-2
0.5	60	3	1	115	2	4"	NM-H-4-0005-6-3W-A-2
				230	2	4"	NM-H-4-0005-6-3W-B-2
0.75	60	3	1	115	2	4"	NM-H-4-0007-6-3W-A-2
				230	2	4"	NM-H-4-0007-6-3W-B-2
1.0	60	3	1	115	2	4"	NM-H-4-0010-6-3W-A-2
				230	2	4"	NM-H-4-0010-6-3W-B-2
1.5	60	3	1	230	2	4"	NM-H-4-0015-6-3W-B-2
2.0	60	3	1	230	2	4"	NM-H-4-0020-6-3W-B-2
3.0	60	3	1	230	2	4"	NM-H-4-0030-6-3W-B-2
5.0	60	3	1	230	2	4"	NM-H-4-0050-6-3W-B-2

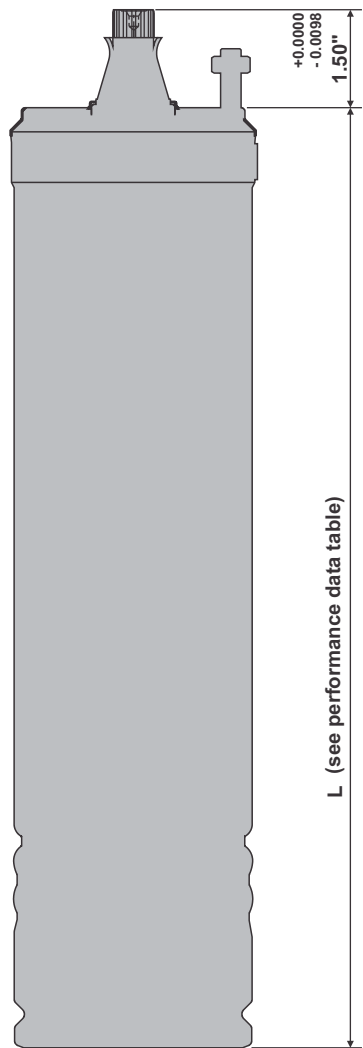
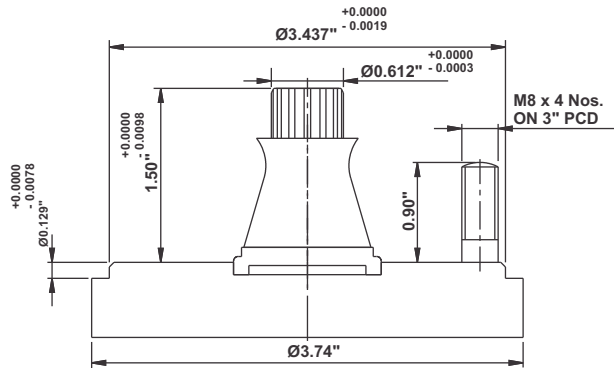
HP	Hz	PHASE	VOLTS	POLE	MOTOR SIZE	ORDER NO. / MODEL CODE
						STANDARD
1.5	60	3	460	2	4"	NM-H-4-0015-6-3P-D-2
2	60	3	460	2	4"	NM-H-4-0020-6-3P-D-2
3	60	3	460	2	4"	NM-H-4-0030-6-3P-D-2
5	60	3	460	2	4"	NM-H-4-0050-6-3P-D-2
7.5	60	3	460	2	4"	NM-H-4-0075-6-3P-D-2

4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

0.5 HP to 7.5 HP

DIMENSIONS

MOTOR SIZE: 4"



4" SUBMERSIBLE MOTORS (NON TOXIC OIL FILLED)

0.5 HP to 7.5 HP

PERFORMANCE DATA-60 Hz

MOTOR SIZE: 4"

2 WIRE SINGLE PHASE

P _N [HP]	P _N [kw]	U _N [V]	S.F	Rated Current Amp	Max Current Amp	Locked Rotor Current Amp	n _N [min ⁻¹]	Cos φ PF	η (Eff.) [%]	Capacitor Run mfd	Rated Torque Nm	Thrust Load N	Shipping Weight [lbs]	Length [L] [inch]
0.5	0.37	115	1.6	7	10	20	3411	0.99	50.4	20	1	1500	24	13.6
		230	1.6	3.5	5	10	3411	0.99	50.4	20	1	1500	24	13.6
0.75	0.55	115	1.5	10.2	13	30	3415	0.99	52.5	30	1.5	1500	26	14.2
		230	1.5	5.1	6.5	19	3457	0.96	53.4	25	1.5	1500	26	14.2
1	0.75	115	1.4	13.8	16.8	35	3415	0.99	53.7	36	2	1500	29	14.8
		230	1.4	6.9	8.4	27	3470	0.97	53.7	30	2	1500	29	14.8
1.5	1.1	230	1.3	9.1	10.8	36	3462	0.91	62.4	36	3	3000	33	15.9

3 WIRE WITH PSC CONTROL BOX SINGLE PHASE

P _N [HP]	P _N [kw]	U _N [V]	S.F	Rated Current Amp	Max Current Amp	Locked Rotor Current Amp	n _N [min ⁻¹]	Cos φ PF	η (Eff.) [%]	Capacitor Run mfd	Rated Torque Nm	Thrust Load N	Shipping Weight [lbs]	Length [L] [inch]
0.5	0.37	230	1.6	3.5	5.0	10	3411	0.99	50.4	20	1	1500	24	13.6
0.75	0.55	230	1.5	5.1	6.5	19	3457	0.96	53.4	25	1.5	1500	26	14.2
1	0.75	230	1.4	6.9	8.4	27	3470	0.97	53.7	30	2	1500	29	14.8
1.5	1.1	230	1.3	9.1	10.8	36	3462	0.91	62.4	36	3	3000	33	15.9
2	1.5	230	1.25	11.0	13.5	40	3434	0.94	69	36	4	3000	37	17.9
3	2.2	230	1.15	16.9	18.7	45	3481	0.98	63.3	72	6.2	5000	48	20.3

3 WIRE WITH CSCR CONTROL BOX SINGLE PHASE

P _N [HP]	P _N [kw]	U _N [V]	S.F	Rated Current Amp	Max Current Amp	Locked Rotor Current Amp	n _N [min ⁻¹]	Cos φ PF	η (Eff.) [%]	Capacitor		Rated Torque Nm	Thrust Load N	Shipping Weight [lbs]	Length [L] [inch]
										Run mfd	Start mfd				
0.5	0.37	230	1.6	3.5	5.0	17	3411	0.99	50.4	20	60-80	1	1500	24	13.6
0.75	0.55	230	1.5	5.1	6.5	24	3457	0.96	53.4	25	60-80	1.5	1500	26	14.2
1	0.75	230	1.4	6.9	8.4	36	3470	0.97	53.7	30	100-120	2	1500	29	14.8
1.5	1.1	230	1.3	9.1	10.8	48	3462	0.91	62.4	36	150-200	3	3000	33	15.9
2	1.5	230	1.25	11.0	13.5	52	3434	0.94	69	36	150-200	4	3000	37	17.9
3	2.2	230	1.15	16.9	18.7	60	3481	0.98	63.3	72	150-200	6.2	5000	48	20.3
5	3.7	230	1.15	27.5	31.9	93	3423	0.99	68	90	200-250	10.3	5000	55	26.8

THREE PHASE

P _N [HP]	P _N [kw]	U _N [V]	S.F	Rated Current Amp	Max Current Amp	Locked Rotor Current Amp	n _N [min ⁻¹]	Cos φ PF	η (Eff.) [%]	T Start / T Rated	Rated Torque Nm	Thrust Load N	Shipping Weight [lbs]	Length [L] [inch]
1.5	1.1	460	1.3	3.3	3.9	14	3407	0.69	65.3	3.3	3	1500	16	14.8
2	1.5	460	1.25	4.2	4.7	20	3400	0.69	70.7	3.6	4	3000	18	16.3
3	2.2	460	1.15	5.9	6.5	26	3403	0.73	70.3	2.5	6.1	5000	20	17.9
5	3.7	460	1.15	8.8	9.9	40	3402	0.78	73.5	2	10.3	5000	27	24.8
7.5	5.5	460	1.15	13.5	15.0	59	3403	0.74	76.2	2	15	5000	29	26.8

CONTROL BOX

0.5 HP to 5 HP

MODEL CODE

MOTOR SIZE: 4"

NB

H

4

R

0005

A

Volts

Code	Volts
B	220-230V

Motor HP

Code	HP
0005	0.5 HP
0007	0.75 HP
0010	1 HP
0050	5 HP

Capacitor Type

Code	Capacitor Type
R	Run capacitor
D	Start & Run capacitor

Motor size

Code	Size
4	4"

Submersible Motor Type

Code	Submersible Motor Type
H	Oil filled motor

Series name

Code	Series
NB	Control box

Single Phase

ORDER INFORMATION

MOTOR SIZE: 4"

PSC CONTROL BOX

Model	Capacitor Type	HP	Voltage [V]	Run Capacitor MFD
NB-H-4-R-0005-B**	RUN	0.5	230	20 MFD 400V
NB-H-4-R-0005-B**	RUN	0.75	230	25 MFD 400V
NB-H-4-R-0010-B**	RUN	1.0	230	30 MFD 400V
NB-H-4-R-0015-B**	RUN	1.5	230	36 MFD 400V
NB-H-4-R-0020-B**	RUN	2.0	230	36 MFD 400V
NB-H-4-R-0030-B**	RUN	3.0	230	72 MFD 400V

CSCR CONTROL BOX

Model	Capacitor Type	HP	Voltage [V]	Start Capacitor MFD	Run Capacitor UF
NB-H-4-D-0005-B*	START & RUN	0.5	220-230	60 - 80 MFD 250V	20 MFD 400V
NB-H-4-D-0005-B*	START & RUN	0.75	220-230	60 - 80 MFD 250V	25 MFD 400V
NB-H-4-D-0010-B*	START & RUN	1.0	220-230	100 - 120 MFD 250V	30 MFD 400V
NB-H-4-D-0015-B*	START & RUN	1.5	220-230	150 - 200 MFD 250V	36 MFD 400V
NB-H-4-D-0020-B*	START & RUN	2.0	220-230	150 - 200 MFD 250V	36 MFD 400V
NB-H-4-D-0030-B*	START & RUN	3.0	220-230	150 - 200 MFD 250V	72 MFD 400V
NB-H-4-D-0050-B*	START & RUN	5.0	220-230	200 - 250 MFD 250V	90 MFD 400V

* START CAPACITOR x 1, RUN CAPACITOR x 1 + RELAY x 1 + OVERLOAD PROTECTOR

** RUN CAPACITOR X 1 + OVERLOAD PROTECTOR

CONTROL BOX

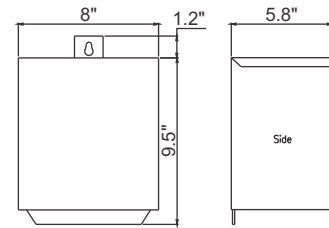
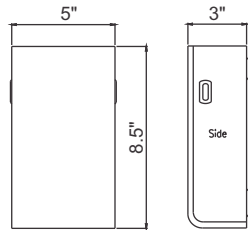
Single Phase

DIMENSIONS

MOTOR SIZE: 4"

PSC Control box

CSCR Control box



PSC CONTROL BOX

HP	kW	Voltage [V]	Capacitor Type	Carton Box Size			Bottom Knockouts Quantity	Side Knockouts Diameter	Volume
				L	W	H			
0.5	0.37	220-230	RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
0.75	0.55	220-230	RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
1.0	0.75	220-230	RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
1.5	1.1	220-230	RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
2.0	1.5	220-230	RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
3.0	2.2	220-230	RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"

CSCR CONTROL BOX

HP	kW	Voltage [V]	Capacitor Type	Carton Box Size			Bottom Knockouts Quantity	Side Knockouts Diameter	Volume
				L	W	H			
0.5	0.37	220-230	START & RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
0.75	0.55	220-230	START & RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
1.0	0.75	220-230	START & RUN	9.9"	5.5"	3.6"	2	Ø0.86"	39.3" x 32.2" x 54.3"
1.5	1.1	220-230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"
2.0	1.5	220-230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"
3.0	2.2	220-230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"
5.0	3.7	220-230	START & RUN	11.5"	8.5"	6.5"	2	Ø1.3"	40.9" x 34.6" x 55.1"



NOTES

Lined area for notes, consisting of multiple horizontal lines.



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Product Improvement and changes are a continuous process at 'Northam'. The data given in this publication is therefore subject to revision.