

Turntide Smart Motor System™ Quick Reference Guide



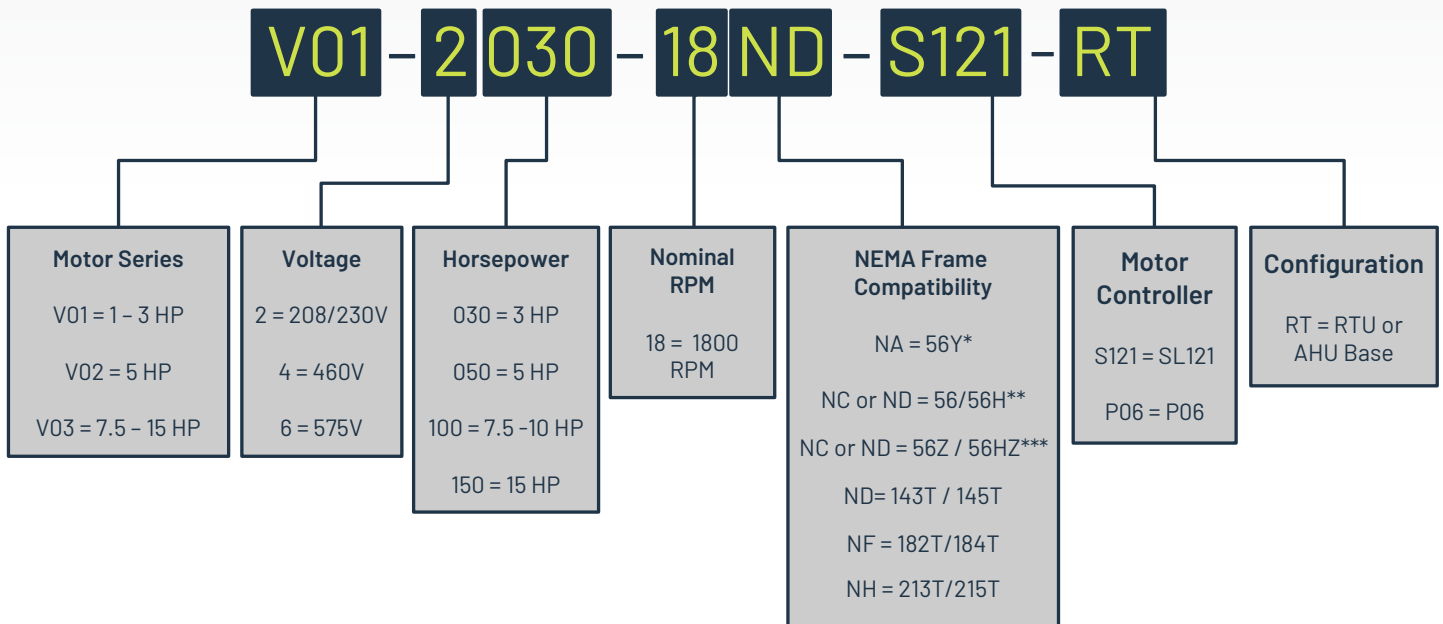
This document provides users with all the most important dimensions, SKU descriptions, and specifications on Turntide products relevant for your HVAC retrofit project.

To simplify the ordering process, Turntide bundles motors, motor controllers, and supplemental components into a Bundled Smart Motor System SKU so you can quickly select an option that includes all the necessary components for your job.

Note: This document is not intended to teach someone how to build a Turntide Bill of Materials (BOM) based on an equipment survey. For more information, go to Turntide Academy (www.turntideacademy.com).



Example Bundled Smart Motor System SKU



*56Y frame motors are not all the same dimensions. If the existing motor is 56Y, make sure to check that it matches with the Turntide motor.

**A shaft diameter of 5/8" = NC, if 7/8" = ND. 56/56H motors typically have a 5/8" shaft diameter, but are not all the same dimensions. Make sure to check that shaft diameter, shaft height, shaft length, and bolt hole positioning match the Turntide motor.

***A shaft diameter of 5/8" = NC, if 7/8" = ND. 56Z/56HZ motors typically have a 7/8" shaft diameter, but are not all the same dimensions. Make sure to check that shaft diameter, shaft height, shaft length, and bolt hole positioning match the Turntide motor.

Bundled Motor SKU Table



Motor SKU Bundle	Voltage Rating	HP	RPM	Compatible Frame Size	Motor SKU	Motor Controller SKU	Accessory Kit Included	Noise Isolation Feet Included	Motor Accessories Included
V01-2030-18ND-S121-RT	208/230V	1-3	100-3600	56Z/56HZ/143T/145T	V01-0300-2-D00	SL121-2030A-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V01-2030-18NA-S121-RT	208/230V	1-3	100-3600	56Y*	V01-0300-2-A00	SL121-2030A-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V01-2030-18NC-S121-RT	208/230V	1-3	100-3600	56/56H*	V01-0300-2-C00	SL121-2030A-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-ADAP-001 KIT-INST-SP01 KIT-INST-SP03
V01-2030-18NF-S121-RT	208/230V	1-3	100-3600	182T/184T	V01-0300-2-F00	SL121-2030A-RT	KIT-RTU-003	KIT-ISLN-FT-201	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V01-4030-18ND-S121-RT	400/460V	1-3	100-3600	56Z/56HZ/143T/145T	V01-0300-4-D00	SL121-4030A-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V01-4030-18NA-S121-RT	400/460V	1-3	100-3600	56Y*	V01-0300-4-A00	SL121-4030A-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-ADAP-001 KIT-INST-SP01 KIT-INST-SP03
V01-4030-18NC-S121-RT	400/460V	1-3	100-3600	56/56H*	V01-0300-4-C00	SL121-4030A-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-ADAP-001 KIT-INST-SP01 KIT-INST-SP03
V01-4030-18NF-S121-RT	400/460V	1-3	100-3600	182T/184T	V01-0300-4-F00	SL121-4030A-RT	KIT-RTU-003	KIT-ISLN-FT-201	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V01-6030-18ND-P06-RT	575V	1-3	100-3600	56Z/56HZ/143T/145T	V01-0300-6-D00	P06C-0500-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V01-6030-18NA-P06-RT	575V	1-3	100-3600	56Y*	V01-0300-6-A00	P06C-0500-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V01-6030-18NC-P06-RT	575V	1-3	100-3600	56/56H*	V01-0300-6-C00	P06C-0500-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH14-004 KIT-ADAP-001 KIT-INST-SP01 KIT-INST-SP03
V01-6030-18NF-P06-RT	575V	1-3	100-3600	182T/184T	V01-0300-6-F00	P06C-0500-RT	KIT-RTU-003	KIT-ISLN-FT-201	CBL-PH14-004 KIT-INST-SP01 KIT-INST-SP03
V02-2050-18ND-P06-RT	208/230V	5	100-3600	56Z/56HZ/143T/145T	V02-0500-2-D00	P06-0500-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH12-004 KIT-INST-SP01 KIT-INST-SP03
V02-2050-18NF-P06-RT	208/230V	5	100-3600	182T/184T	V02-0500-2-F00	P06-0500-RT	KIT-RTU-003	KIT-ISLN-FT-201	CBL-PH12-004 KIT-INST-SP01 KIT-INST-SP03
V02-4050-18ND-P06-RT	400/460V	5	100-3600	56Z/56HZ/143T/145T	V02-0500-4-D00	P06-0500-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH12-004 KIT-INST-SP01 KIT-INST-SP03
V02-4050-18NF-P06-RT	400/460V	5	100-3600	182T/184T	V02-0500-4-F00	P06-0500-RT	KIT-RTU-003	KIT-ISLN-FT-201	CBL-PH12-004 KIT-INST-SP01 KIT-INST-SP03
V02-6050-18ND-P06-RT	575V	5	100-3600	56Z/56HZ/143T/145T	V02-0500-6-D00	P06C-0500-RT	KIT-RTU-003	KIT-ISLN-FT-101	CBL-PH12-004 KIT-INST-SP01 KIT-INST-SP03
V02-6050-18NF-P06-RT	575V	5	100-3600	182T/184T	V02-0500-6-F00	P06C-0500-RT	KIT-RTU-003	KIT-ISLN-FT-201	CBL-PH12-004 KIT-INST-SP01 KIT-INST-SP03

Note: *56Y and 56H frame motors are not all the same dimensions. If the existing motor is 56Y or 56H, make sure to check that it matches with the Turntide motor.

Bundled Motor SKU Table (continued)



Motor SKU Bundle	Voltage Rating	HP	RPM	Compatible Frame Size	Motor SKU	Motor Controller SKU	Accessory Kit Included	Noise Isolation Feet Included	Motor Accessories Included
V03-4100-18NH-P06-RT	400/460V	7.5-10	100-3600	213T/215T	V03-1000-4-H00	P06-1500-RT	KIT-RTU-003	KIT-ISLN-FT-301	CBL-PH10-004
V03-6100-18NH-P06-RT	575V	7.5-10	100-3600	213T/215T	V03-1000-6-H00	P06C-1500-RT	KIT-RTU-003	KIT-ISLN-FT-301	CBL-PH10-004
V03-4150-18NH-P06-RT	400/460V	15	100-3600	213T/215T	V03-1500-4-H00	P06-1500-RT	KIT-RTU-003	KIT-ISLN-FT-301	CBL-PH10-004
V03-6150-18NH-P06-RT	575V	15	100-3600	213T/215T	V03-1500-6-H00	P06C-1500-RT	KIT-RTU-003	KIT-ISLN-FT-301	CBL-PH10-004

CUSTOMERS: For detailed SKU descriptions, contact your Turntide Channel Partner or contact hvacmotorsales@turntide.com for more information.

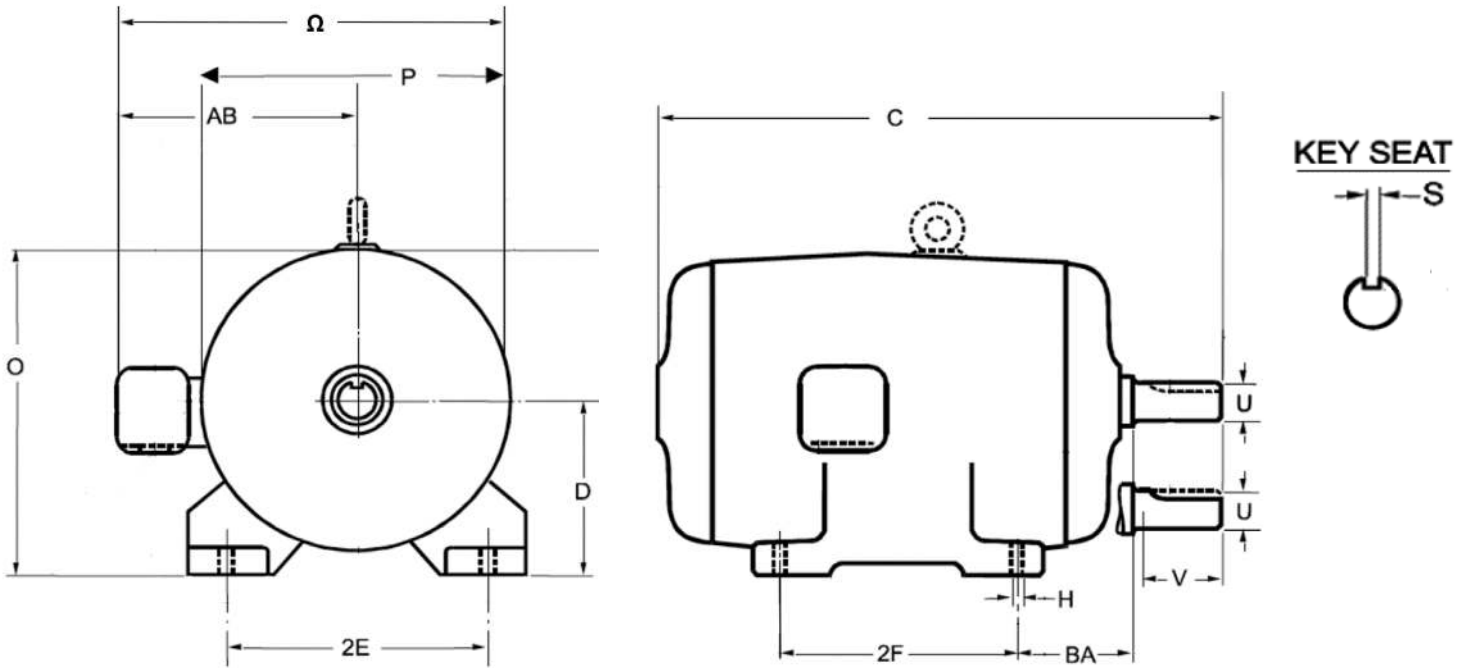
PARTNERS: For descriptions of all SKUs, refer to the Channel Price Book, which can be found on the Turntide Partner Portal.

Motor Specifications Table

A few dimensions to fitting a motor retrofit are listed in this table. For all dimensions, see motor dimensions table and drawing below

SKU Bundle	Shaft Diameter (in.)	Shaft Length (in.)	Motor Diameter* (in.)	Motor Weight (lbs.)	Power Cable Size*	Motor Model	Motor SKU
V01-2030-18ND-S121-RT	7/8	2-1/4	7-11/16	54	14 AWG	V01	V01-0300-2-D00
V01-2030-18NA-S121-RT	5/8	4-1/2	7-11/16	54	14 AWG	V01	V01-0300-2-A00
V01-2030-18NC-S121-RT	5/8	1-7/8	7-11/16	54	14 AWG	V01	V01-0300-2-C00
V01-2030-18NF-S121-RT	1-1/8	2-3/4	7-11/16	54	14 AWG	V01	V01-0300-2-F00
V01-4030-18ND-S121-RT	7/8	2-1/4	7-11/16	54	14 AWG	V01	V01-0300-4-D00
V01-4030-18NA-S121-RT	5/8	4-1/2	7-11/16	54	14 AWG	V01	V01-0300-4-A00
V01-4030-18NC-S121-RT	5/8	1-7/8	7-11/16	54	14 AWG	V01	V01-0300-4-C00
V01-4030-18NF-S121-RT	1-1/8	2-3/4	7-11/16	54	14 AWG	V01	V01-0300-4-F00
V01-6030-18ND-P06-RT	7/8	2-1/4	7-11/16	54	14 AWG	V01	V01-0300-6-D00
V01-6030-18NA-P06-RT	5/8	4-1/2	7-11/16	54	14 AWG	V01	V01-0300-6-A00
V01-6030-18NC-P06-RT	5/8	1-7/8	7-11/16	54	14 AWG	V01	V01-0300-6-C00
V01-6030-18NF-P06-RT	1-1/8	2-3/4	7-11/16	54	14 AWG	V01	V01-0300-6-F00
V02-2050-18ND-P06-RT	7/8	2-1/4	7-11/16	72	12 AWG	V02	V02-0500-2-D00
V02-2050-18NF-P06-RT	1-1/8	2-3/4	7-11/16	72	12 AWG	V02	V02-0500-2-F00
V02-4050-18ND-P06-RT	7/8	2-1/4	7-11/16	72	12 AWG	V02	V02-0500-4-D00
V02-4050-18NF-P06-RT	1-1/8	2-3/4	7-11/16	72	12 AWG	V02	V02-0500-4-F00
V02-6050-18ND-P06-RT	7/8	2-1/4	7-11/16	72	12 AWG	V02	V02-0500-6-D00
V02-6050-18NF-P06-RT	1-1/8	2-3/4	7-11/16	72	12 AWG	V02	V02-0500-6-F00
V03-4100-18NH-P06-RT	1-3/8	3-3/8	11-11/16	151	10 AWG	V03	V03-1000-4-H00
V03-6100-18NH-P06-RT	1-3/8	3-3/8	11-11/16	151	10 AWG	V03	V03-1000-6-H00
V03-4150-18NH-P06-RT	1-3/8	3-3/8	11-11/16	151	10 AWG	V03	V03-1500-4-H00
V03-6150-18NH-P06-RT	1-3/8	3-3/8	11-11/16	151	10 AWG	V03	V03-1500-6-H00

Motor Dimensions (Fractions) all dimensions are in inches



Motor	Frame Size	D**		O**		2E	2F	H	BA	U	V	C	P	S	AB	Ω***
		Standard Foot	N.I. Foot	Standard Foot	N.I. Foot											
V01	56	3-1/2	4	7-5/16	7-13/16	4-7/8	3	11/32	2-3/4	5/8	1-7/8	12-1/4	7-11/16	3/16	6-1/2	10-3/8
	56Y*	3-1/2	4	7-5/16	7-13/16	4-7/8	3	11/32	2-3/4	5/8	4-1/2	14-5/6	7-11/16	3/16	6-1/2	10-3/8
	56H*	3-1/2	4	7-5/16	7-13/16	4-7/8	5	11/32	2-3/4	5/8	1-7/8	12-1/4	7-11/16	3/16	6-1/2	10-3/8
	56HZ	3-1/2	4	7-5/16	7-13/16	4-7/8	5	11/32	2-3/4	7/8	2-1/4	12-5/8	7-11/16	3/16	6-1/2	10-3/8
	143T	3-1/2	4	7-5/16	7-13/16	5-1/2	4	11/32	2-3/4	7/8	2-1/4	12-5/8	7-11/16	3/16	6-1/2	10-3/8
	145T	3-1/2	4	7-5/16	7-13/16	5-1/2	5	11/32	2-3/4	7/8	2-1/4	12-5/8	7-11/16	3/16	6-1/2	10-3/8
	182T	4-1/2	5	7-5/16	7-13/16	7-1/2	4-1/2	11/32	2-3/4	11/8	2-3/4	12-7/8	7-11/16	3/16	6-1/2	10-3/8
	184T	4-1/2	5	7-5/16	7-13/16	7-1/2	5-1/2	11/32	2-3/4	11/8	2-3/4	12-7/8	7-11/16	3/16	6-1/2	10-3/8
V02	143T	3-1/2	3-5/7	8-5/16	8-51/100	5-1/2	4	11/32	2-1/4	7/8	2-1/4	15-1/2	7-11/16	1/4	6-1/2	10-3/8
	145T	3-1/2	3-5/7	8-5/16	8-51/100	5-1/2	5	11/32	2-1/4	7/8	2-1/4	15-1/2	7-11/16	1/4	6-1/2	10-3/8
	182T	4-1/2	4-5/7	8-5/16	8-51/100	7-1/2	4-1/2	11/32	2-3/4	1-1/8	2-3/4	15-3/4	7-11/16	1/4	6-1/2	10-3/8
	184T	4-1/2	4-5/7	8-5/16	8-51/100	7-1/2	5-1/2	11/32	2-3/4	1-1/8	2-3/4	15-3/4	7-11/16	1/4	6-1/2	10-3/8
V03	213T	5-1/4	5-85/100	11-1/2	12-1/10	8-1/2	5-1/2	13/32	3-1/2	1-3/8	3-1/2	17-7/16	11-11/16	5/16	8-3/16	14-3/8
	215T	5-1/4	5-85/100	11-1/2	12-1/10	8-1/2	7	13/32	3-1/2	1-3/8	3-1/2	17-7/16	11-11/16	5/16	8-3/16	14-3/8

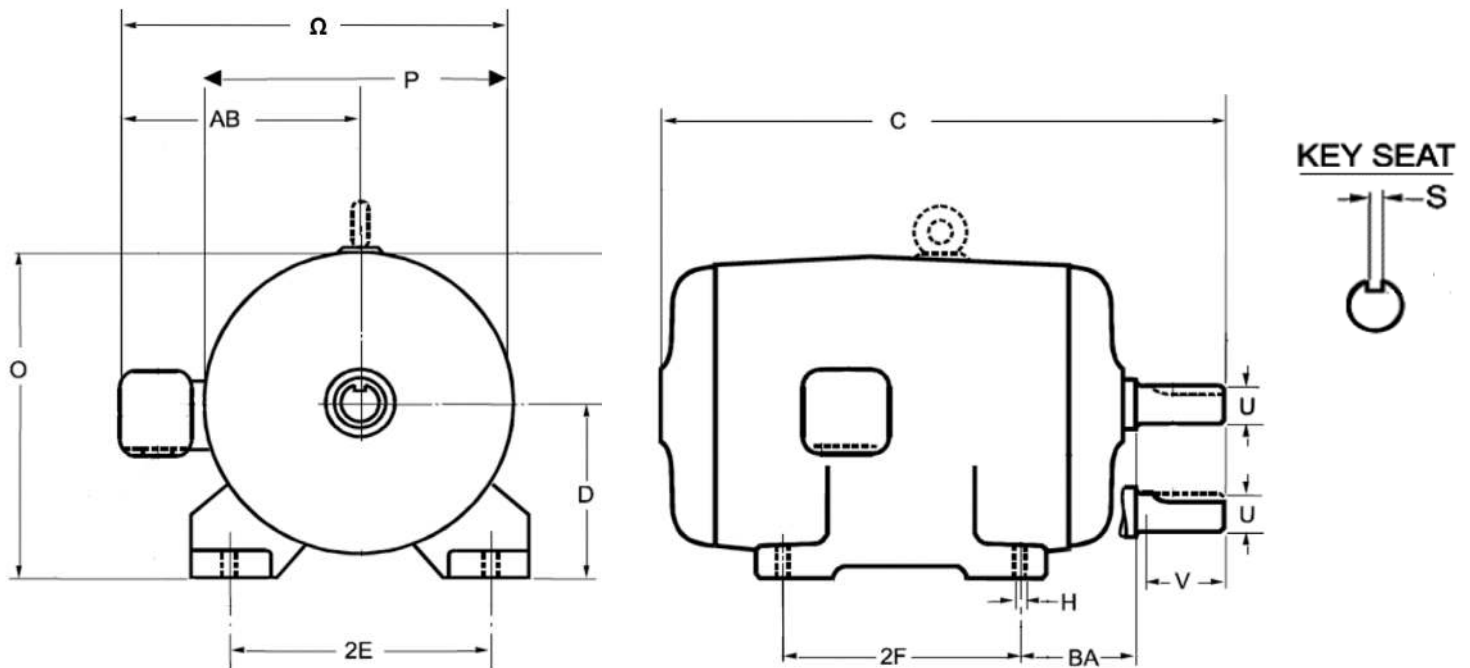
Note: N.I. Foot stands for noise isolation feet

*56Y and 56H frame motors are not all the same. If the existing motor is 56Y or 56H, make sure to check it matches with the Turntide motor.

**Motors with noise isolation feet attached will have different "D" and "O" dimensions

***Not a NEMA reference

Motor Dimensions (Decimals) all dimensions are in inches



Motor	Frame Size	D**		O**		2E	2F	H	BA	U	V	C	P	S	AB	Ω***
		Standard Foot	N.I. Foot	Standard Foot	N.I. Foot											
V01	56	3.50	4.00	7.31	7.81	4.88	3.00	0.34	2.75	0.6250	1.88	12.25	7.69	0.188	6.50	10.38
	56Y*	3.50	4.00	7.31	7.81	4.88	3.00	0.34	2.75	0.6250	4.50	14.83	7.69	0.188	6.50	10.38
	56H*	3.50	4.00	7.31	7.81	4.88	5.00	0.34	2.75	0.6250	1.88	12.25	7.69	0.188	6.50	10.38
	56HZ	3.50	4.00	7.31	7.81	4.88	5.00	0.34	2.75	0.8750	2.25	12.63	7.69	0.188	6.50	10.38
	143T	3.50	4.00	7.31	7.81	5.50	4.00	0.34	2.75	0.8750	2.25	12.63	7.69	0.188	6.50	10.38
	145T	3.50	4.00	7.31	7.81	5.50	5.00	0.34	2.75	0.8750	2.25	12.63	7.69	0.188	6.50	10.38
	182T	4.50	5.00	7.31	7.81	7.50	4.50	0.34	2.75	1.1250	2.75	12.88	7.69	0.188	6.50	10.38
	184T	4.50	5.00	7.31	7.81	7.50	5.50	0.34	2.75	1.1250	2.75	12.88	7.69	0.188	6.50	10.38
V02	143T	3.50	3.70	8.31	8.51	5.50	4.00	3.67	2.25	0.8750	2.25	15.50	7.69	0.250	6.50	10.38
	145T	3.50	3.70	8.31	8.51	5.50	5.00	3.67	2.25	0.8750	2.25	15.50	7.69	0.250	6.50	10.38
	182T	4.50	4.70	8.31	8.51	7.50	4.50	3.67	2.75	1.1250	2.75	15.75	7.69	0.250	6.50	10.38
	184T	4.50	4.70	8.31	8.51	7.50	5.50	3.67	2.75	1.1250	2.75	15.75	7.69	0.250	6.50	10.38
V03	213T	5.25	8.85	1.50	12.10	8.50	5.50	0.41	3.50	1.3750	3.50	17.44	11.69	0.313	8.19	14.38
	215T	5.25	8.85	1.50	12.10	8.50	7.00	0.41	3.50	1.3750	3.50	17.44	11.69	0.313	8.19	14.38

Note: N.I. Foot stands for noise isolation feet

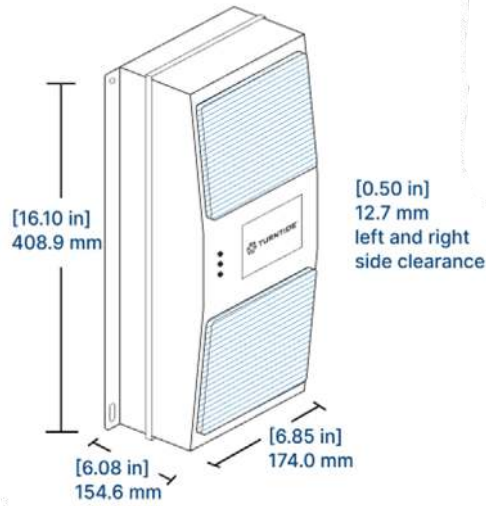
*56Y and 56H frame motors are not all the same. If the existing motor is 56Y or 56H, make sure to check it matches with the Turntide motor.

**Motors with noise isolation feet attached will have different "D" and "O" dimensions

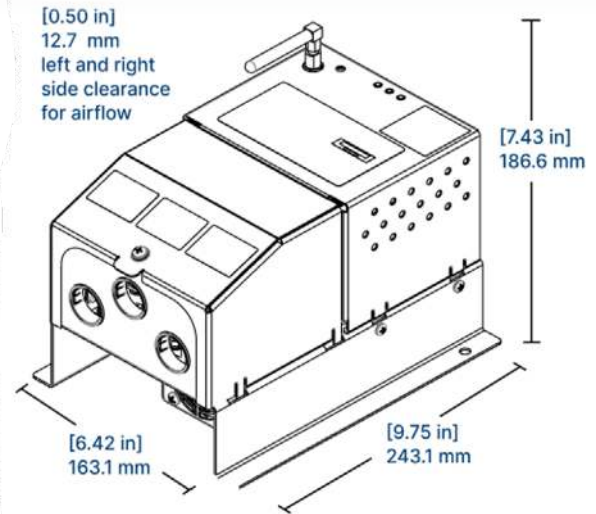
***Not a NEMA reference

Motor Controller Dimensions

P06 Motor Controller

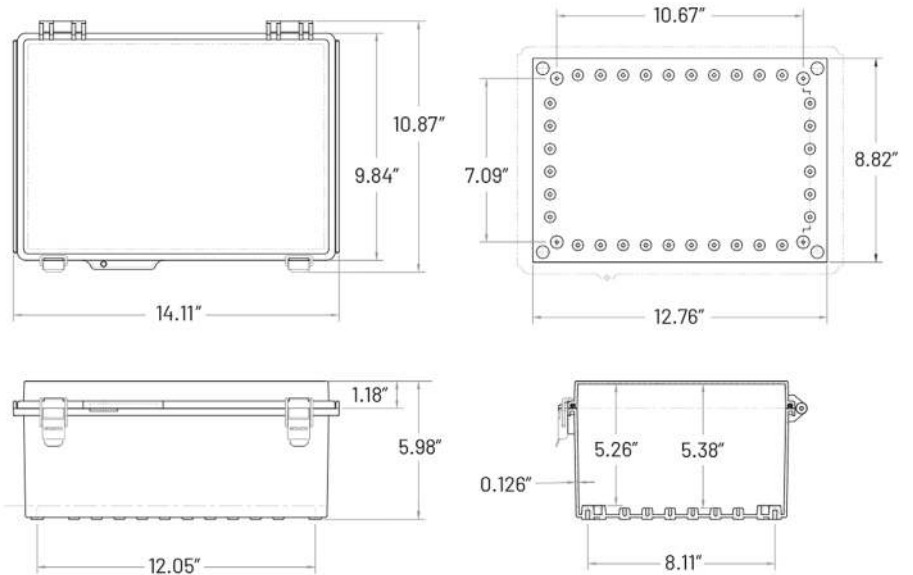


SL121 Motor Controller



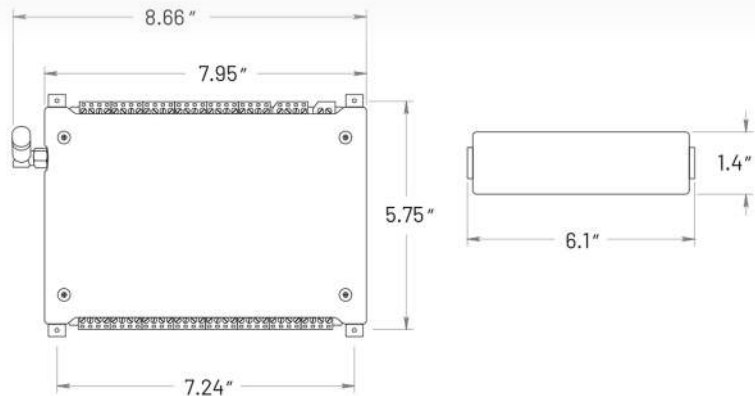
Edge Device / Monitoring Equipment Dimensions (all dimensions are in inches)

Remote Monitoring Kit (RMK)



Supervisor

Will typically be housed in the RMK but can be in a different location depending on the installation environment



Optional Features

Connectivity

Depending on how many motors are on a site, you may need one or multiple Turntide Remote Monitoring Kits (RMKs) on a rooftop. There are two RMK options: RMK and RMK+ (RMK for longer range Wi-Fi).

Product	SKU	"Wifi Signal Radius (ft.)"	Max amount of connected motor systems	Description
RMK	RMK-001	Varies [^]	20 [^]	Standard RMK for USA (using customer internet)
	RMK-001-CA	Varies [^]	20 [^]	Standard RMK for Canada (using customer internet)
	RMK-002	40	4	Standard RMK for USA
	RMK-002-CA	40	4	Standard RMK for Canada
	RMK-003	40	4 ^{**}	Standard RMK with energy monitoring for USA
	RMK-003-CA	40	4 ^{**}	Standard RMK with energy monitoring for Canada
	RMK-004	Varies [^]	20 ^{^**}	Standard RMK with energy monitoring for USA (using customer internet)
	RMK-004-CA	Varies [^]	20 ^{^**}	Standard RMK with energy monitoring for Canada (using customer internet)
RMK+	RMK-002-US-LR	250	20	Long range RMK for USA
	RMK-002-CA-LR	250	20	Long range RMK for Canada
	RMK-003-US-LR	250	20 ^{**}	Long range RMK with energy monitoring for USA
	RMK-003-CA-LR	250	20 ^{**}	Long range RMK with energy monitoring for Canada
Other	C01	0	N/A	Turntide Supervisor (included in RMK options and can connect to customer Internet if it works on-site)
	EMK-001	0	1	Energy Monitoring Kit (no cloud connection included)
RMK+ Upgrade Kit	KIT-RMK-US-LR	250	20	Kit to upgrade an RMK in the field to an RMK+ in the USA
	KIT-RMK-CA-LR	250	20	Kit to upgrade an RMK in the field to an RMK+ in Canada
Connectivity Subscription	SUB-CELL-US	N/A	N/A	Annual connected motor subscription after Year 1(USA)
	SUB-CELL-CA	N/A	N/A	Annual connected motor subscription after Year 1(Canada)

** Although more than 1 device can be connected for data, "-003" models only come with the required products to monitor energy usage on 1 unit

Note: A standard RMK can be upgraded in the field to a long range RMK+ later.

[^]Depends on customer-provided WiFi

Extended Warranty

Turntide includes a 1-year manufacturer's warranty with all motors and motor controllers. An optional extended warranty is available for these products as well.

SKU	Description
EW-MTR-V01	1 year extended warranty for V01 motors
EW-MTR-V02	1 year extended warranty for V02 motors
EW-MTR-V03-10	1 year extended warranty for V03 motors (10 hp)
EW-MTR-V03-15	1 year extended warranty for V03 motors (15hp)
EW-MC-SL121	1 year extended warranty for SL121 motor controller
EW-MC-P06-5	1 year extended warranty for 5 HP P06 motor controller
EW-MC-P06-15	1 year extended warranty for 15 HP P06 motor controller

Up to 4 years of extended warranty can be added to a particular product

The latest warranty information can always be found at <https://turntide.com/warranty>.



Questions?

Contact us at hvacmotorsales@turntide.com

TURNTIDE TECHNOLOGIES

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries