

P9 ASD Specifications



The P9 adjustable speed drive is a revolution in pump control. By incorporating Toshiba's proprietary, ground-breaking Virtual Linear Pump (VLP) Technology®, the P9 directly, precisely, and linearly controls pressure, temperature, level, or flow. The P9 eliminates many obstacles users thought were an integral part of pump control and sets a new standard in ingenuity, performance, and ease-of-use for the pump industry.

Product Scope

200 to 230 V at 0.75 to 125 HP
380 to 460 V at 1 to 400 HP

Highlights

- Proprietary VLP Technology®
- Maximized Energy Savings on Variable Torque Loads
- Time Based Alternation
- Booster Pump Control Across-the-Line
- Sensorless Operation
- Automatic Sleep Timer
- Sealing Water Control Interlocks
- No Flow/Low NPSH Cut-Off
- Thrust Bearing Protection
- 100% Continuous Overload Rating, 120% for 60 Seconds
- Eight Programmable Discrete Inputs with Selectable Sync or Source Logic
- Three Programmable Discrete Output Contacts: Two Form-A & One Form-C
- Three Programmable Analog Inputs: One 0 to 20 mA or 0 to 10 VDC Isolated Input, One 0 to 10 VDC Input, & One ±10 VDC Input
- Two Programmable Analog Outputs: One 4 to 20 mA or 0 to 10 VDC & One 4 to 20 mA Output
- Two-Wire/Four-Wire Duplex RS485; MODBUS RTU or Toshiba TSB Built-In Communications
- Auto-Restart Operation/Catch a Spinning Motor

Standard Features

- NEMA 1 Enclosure
- Built-in Dynamic Braking Drive Circuit up to 350 HP
- Built-In EMC Filter (Complies with the European EMC Directive)
- Regenerative Power Ride-Through
- Past Trip Monitoring: Stores the Last Four Faults in Succession, Along with Cumulative At Trip Times
- EOI: Backlit Plain-English LCD & Four-Digit/Seven-Segment LED Display
- Save, Restore, & Clone Multiple Drive Settings
- Ambient Temperature: 14° to 104°F (-10° to 40°C)
- Altitude: Up to 1000 Meters without Derate
- Humidity: 20 to 93% Non-Condensing
- Standards/Compliances: UL Listed in US & Canada, & American Recovery & Reinvestment Act Compliant (ARRA)



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230 V P9 Power Unit Pricing & Dimensions



VAC	HP	FLA	Model Number	Frame	H	W	D	Shipping Weight (lbs.)
					Dimensions (in.)			
230	0.75	3.2	VT130P9U2010	2	11.2	5.2	6.1	8
230	1	4.2	VT130P9U2015	2	11.2	5.2	6.1	8
230	2	6.8	VT130P9U2025	2	11.2	5.2	6.1	8
230	3	9.6	VT130P9U2035	3	12.4	6.1	6.6	12
230	5	15.2	VT130P9U2055	3	12.4	6.1	6.6	12
230	7.5	22	VT130P9U2080	4	15.0	6.9	6.6	17
230	10	28	VT130P9U2110	4	15.0	6.9	6.6	17
230	15	42	VT130P9U2160	5B	19.3	9.1	7.6	38
230	20	54	VT130P9U2220	5B	19.3	9.1	7.6	38
230	25	68	VT130P9U2270	5B	19.3	9.1	7.6	38
230	30	80	VT130P9U2330	6	25.9	11.1	13.2	98
230	40	104	VT130P9U2400	7B	33.1	14.3	15.0	165
230	50	130	VT130P9U2500	7B	33.1	14.3	15.0	165
230	60	154	VT130P9U2600	7B	33.1	14.3	15.0	165
230	75	192	VT130P9U2750	7B	33.1	14.3	15.0	165
230	100	248	VT130P9U210K	9	51.7	14.6	17.6	321
230	125	312	VT130P9U212K	10	53.2	15.7	17.6	362

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460 V P9 Power Unit Pricing & Dimensions



VAC	HP	FLA	Model Number	Frame	H	W	D	Shipping Weight (lbs.)
					Dimensions (in.)			
460	1	2.1	VT130P9U4015	2	11.2	5.2	6.1	9
460	2	3.4	VT130P9U4025	2	11.2	5.2	6.1	9
460	3	4.8	VT130P9U4035	2	11.2	5.2	6.1	9
460	5	7.6	VT130P9U4055	3	12.4	6.1	6.6	13
460	7.5	11	VT130P9U4080	3	12.4	6.1	6.6	13
460	10	14	VT130P9U4110	4	15.0	6.9	6.6	14
460	15	21	VT130P9U4160	5A	15.1	8.3	7.6	14
460	20	27	VT130P9U4220	5A	15.1	8.3	7.6	14
460	25	34	VT130P9U4270	5B	19.3	9.1	7.6	36
460	30	40	VT130P9U4330	5B	19.3	9.1	7.6	36
460	40	52	VT130P9U4400	6	25.9	11.1	13.2	98
460	50	65	VT130P9U4500	7A	30.8	11.1	14.3	124
460	60	77	VT130P9U4600	7A	30.8	11.1	14.3	124
460	75	96	VT130P9U4750	8	36.1	14.3	15.3	185
460	100	124	VT130P9U410K	8	36.1	14.3	15.3	185
460	125	156	VT130P9U412K	8	36.1	14.3	15.3	185
460	150	180	VT130P9U415K	9	51.7	14.6	17.6	321
460	200	240	VT130P9U420K	10	53.2	15.7	17.6	362
460	250	302	VT130P9U425K	11	63.1	15.0	17.6	405
460	300	361	VT130P9U430K	12	68.5	18.9	17.6	594
460	350	414	VT130P9U435K	12	68.5	18.9	17.6	594
460	400	477	VT130P9U440K	13	70.0	25.6	17.6	874

AS3/AS1

G9/P9

GX9

Micro Drives

W7/WX9

Plus Pack

LV Options

Reactors & Filters

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Assembly Unit

Part Numbering Convention



The P9 assembly unit combines the P9 power unit with commonly used options such as manual bypass and input disconnects in an easy-to-install turn-key package. P9 assembly units include a ground lug and door-mounted electronic operator interface.

Bypass units include an ASD/Bypass selector switch, a Bypass-Start lighted push-button (red), and a Bypass-Stop lighted push-button (green). They are used for system control and are all located on the enclosure door.

Ordering Information: Use the following part numbering convention to configure the P9 assembly unit package when placing your order.

Example Part Number:	P9	4	###/###K	AA
Series: P9 — P9 ASD				
Voltage: 2 — 230 4 — 460				
Model Number: 010 — 0.75 HP 015 — 1 HP 025 — 2 HP 035 — 3 HP 055 — 5 HP 080 — 7.5 HP 110 — 10 HP 160 — 15 HP 220 — 20 HP 270 — 25 HP 330 — 30 HP 400 — 40 HP 500 — 50 HP 600 — 60 HP 750 — 75 HP 10K — 100 HP 12K — 125 HP 15K — 150 HP 20K — 200 HP 25K — 250 HP 30K — 300 HP 35K — 350 HP 40K — 400 HP				
Style: AA — Includes Motor Circuit Protector AE — Includes Motor Circuit Protector, Three-contactor Bypass, and Overload Protection				

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230 V P9 Assembly Unit Pricing & Dimensions



VAC	HP	FLA	Model Number		H	W	D
					Dimensions (in.)		
AA - Includes Motor Circuit Protector							
230	3	9.6	P92035AA		36	24	10
230	5	15.2	P92055AA		36	24	10
230	7.5	22	P92080AA		48	24	12
230	10	28	P92110AA		48	36	20
230	15	42	P92160AA		48	36	20
230	20	54	P92220AA		48	36	20
230	25	68	P92270AA		48	36	20
230	30	80	P92330AA		60	36	20
230	40	104	P92400AA		60	36	20
230	50	130	P92500AA		90	36	24
230	60	154	P92600AA		90	36	24
230	75	192	P92750AA		90	36	24
230	100	248	P9210KAA		90	48	30
230	125	312	P9212KAA		90	48	30

VAC	HP	FLA	Model Number		H	W	D
					Dimensions (in.)		
AE - Includes Motor Circuit Protector, Three-Contactor Bypass, and Overload Protection							
230	3	9.6	P92035AE		36	24	10
230	5	15.2	P92055AE		36	24	10
230	7.5	22	P92080AE		48	24	12
230	10	28	P92110AE		48	36	20
230	15	42	P92160AE		48	36	20
230	20	54	P92220AE		48	36	20
230	25	68	P92270AE		48	36	20
230	30	80	P92330AE		60	36	20
230	40	104	P92400AE		60	36	20
230	50	130	P92500AE		90	36	24
230	60	154	P92600AE		90	36	24
230	75	192	P92750AE		90	36	24
230	100	248	P9210KAE		90	48	30
230	125	312	P9212KAE		90	48	30

For quotes, please contact TIC-ASD@toshiba.com

P9 ASD**460 V P9 Assembly Unit
Pricing & Dimensions**

VAC	HP	FLA	Model Number		H	W	D
					Dimensions (in.)		
AA - Includes Motor Circuit Protector							
460	5	7.6	P94055AA		36	24	10
460	7.5	11	P94080AA		36	24	10
460	10	14	P94110AA		48	24	12
460	15	21	P94160AA		48	36	20
460	20	27	P94220AA		48	36	20
460	25	34	P94270AA		48	36	20
460	30	40	P94330AA		48	36	20
460	40	52	P94400AA		48	36	20
460	50	65	P94500AA		48	36	20
460	60	77	P94600AA		60	36	20
460	75	96	P94750AA		60	36	20
460	100	124	P9410KAA		90	36	24
460	125	156	P9412KAA		90	36	24
460	150	180	P9415KAA		90	36	24
460	200	240	P9420KAA		90	48	30
460	250	302	P9425KAA		90	48	30
460	300	361	P9430KAA		90	48	30
460	350	414	P9435KAA		90	48	30
460	400	477	P9440KAA		90	48	30

VAC	HP	FLA	Model Number		H	W	D
					Dimensions (in.)		
AE - Includes Motor Circuit Protector, Three-Contactor Bypass, and Overload Protection							
460	5	7.6	P94055AE		36	24	10
460	7.5	11	P94080AE		36	24	10
460	10	14	P94110AE		48	24	12
460	15	21	P94160AE		48	36	20
460	20	27	P94220AE		48	36	20
460	25	34	P94270AE		48	36	20
460	30	40	P94330AE		48	36	20
460	40	52	P94400AE		48	36	20
460	50	65	P94500AE		48	36	20
460	60	77	P94600AE		60	36	20
460	75	96	P94750AE		60	36	20
460	100	124	P9410KAE		90	36	24
460	125	156	P9412KAE		90	36	24
460	150	180	P9415KAE		90	36	24
460	200	240	P9420KAE		90	48	30
460	250	302	P9425KAE		90	48	30
460	300	361	P9430KAE		90	48	30
460	350	414	P9435KAE		90	48	30
460	400	477	P9440KAE		90	48	30

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Assembly Unit Option Information & Pricing



P9 230V Assembly Unit Enclosure Options

Suffix	Description
NF	1 to 25 HP Fan & Filtered Dust-inhibiting Enclosure
	25 to 100 HP Fan & Filtered Dust-inhibiting Enclosure
	125 HP Fan & Filtered Dust-inhibiting Enclosure
N3	1 to 25 HP Fan & Filtered Enclosure for Outdoor Use
	30 to 100 HP Fan & Filtered Enclosure for Outdoor Use
	125 HP Fan & Filtered Enclosure for Outdoor Use
NC	0.75 to 7.5 HP NEMA 12 Option
	10 to 15 HP NEMA 12 Option
	20 to 50 HP NEMA 12 Option
	60 to 100 HP NEMA 12 Option
	125 HP NEMA 12 Option
N4	0.75 to 7.5 HP NEMA 4 Option
	10 to 25 HP NEMA 4 Option
	30 to 50 HP NEMA 4 Option
	60 to 100 HP NEMA 4 Option
	125 HP NEMA 4 Option

P9 460V Assembly Unit Enclosure Options

Suffix	Description
NF	1 to 50 HP Fan & Filtered Dust-inhibiting Enclosure
	60 to 200 HP Fan & Filtered Dust-inhibiting Enclosure
	250 to 400 HP Fan & Filtered Dust-inhibiting Enclosure
N3	1 to 50 HP Fan & Filtered Enclosure for Outdoor Use
	60 to 200 HP Fan & Filtered Enclosure for Outdoor Use
	250 to 400 HP Fan & Filtered Enclosure for Outdoor Use
NC	1 to 15 HP NEMA 12 Option
	20 to 30 HP NEMA 12 Option
	40 to 100 HP NEMA 12 Option
	125 to 200 HP NEMA 12 Option
	250 to 400 HP NEMA 12 Option
N4	1 to 15 HP NEMA 4 Option
	20 to 30 HP NEMA 4 Option
	40 to 100 HP NEMA 4 Option
	125 to 200 HP NEMA 4 Option