

Motors

Motors provide the rotary action that engages the shaft of a Hydra-Cell pump or operates the gear reducer on a Hydra-Cell Metering Solutions pump. A motor for a specific pump is selected based on the horsepower (hp), revolutions per minute (rpm), and turndown ratio required for the application (performance criteria) in gallons per minute (gpm) or liters per minute (l/min).

Selection Process

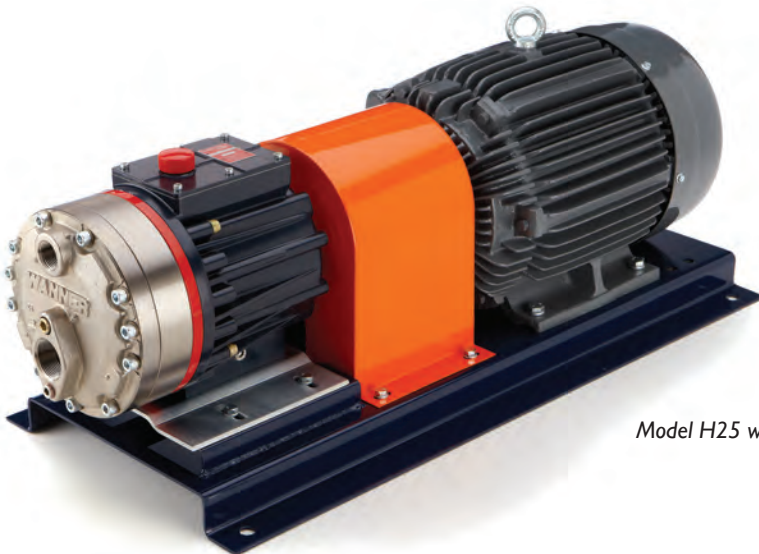
1. On the pump model (e.g. M03, D10, H25) "Performance" page for your pump, locate the Maximum Flow at Designated Pressure (gpm or l/min) for your application.
2. On the pump model "Specifications" page for your pump, locate the formula for Calculating Required Power (hp or kW) and plug in the rpm, gpm (or l/min) and psi (or bar).
3. Using the motor selection charts in this section (based on required hp and corresponding motor frame for your model) match the required rpm (1200 or 1800) with the correct turndown ratio for your pump.



Model M03 with C-face motor



Model H25 with C-face motor and direct-drive adapter



Model H25 with motor and coupling guard

Note: Contact factory for hazardous-location motors.

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Motors, NEMA 56C Frame, Footed, 1 Phase

HP	RPM	Frame	Part Number	Enclosure	Voltage/Hz	Shipping Weight (lbs.)
1/2	1800	56C	M50TE18F1P56CLO	TEFC	115-230/60	23
3/4	1800	56C	M75TE18F1P56CLO	TEFC	115-230/60	30
1	1800	56HC	M100TE18F1P56CLO	TEFC	115-230/60	31
1-1/2	1800	56HC	M150TE18F1P56CLO	TEFC	115-230/60	40

Motors, NEMA 56C Frame, Footed, 3 Phase

HP	RPM	Frame	Part Number	Turndown Ratio (CT)	Enclosure	Voltage/Hz	Shipping Weight (lbs.)
1/2	1800	56C	M50TE18F3P56CA3	10:1	TEFC	230-460/60	35
	1800	56C	M50TN18F3P56CA5	1000:1*	TENV	230-460/60	24
	1200	56C	M50TE12F3P56CA3	10:1	TEFC	230-460/60	42
3/4	1800	56C	M75TE18F3P56CA3	10:1	TEFC	230-460/60	35
	1200	56C	M75TE12F3P56CA3	10:1	TEFC	230-460/60	42
1	1800	56C	M100TE183P56C	0	TEFC	230-460/60	28
	1800	56C	M100TE18F3P56CA3	10:1	TEFC	230-460/60	29
	1800	56C	M100TN18F3P56CA5	1000:1*	TENV	230-460/60	41
	1200	56C	M100TE123P56C	10:1	TEFC	230-460/60	42
1-1/2	1800	56C	M150TE18F3P56CA3	10:1	TEFC	230-460/60	48
	1800	56C	M150WD18F3P56CA5	1000:1*	TENV	230-460/60	34
2	1800	56C	M200TE18F3P56CA2	4:1	TEFC	230-460/60	45
	1800	56C	M200TE18F3P56CA3	10:1	TEFC	230-460/60	49

* If operating under 6HZ (greater than 10:1 turndown), consult factory.

Motors, Hazardous-duty Location, Explosion Proof, NEMA 56C Frame, Footed, 3 Phase

- Class I and II, Groups C, D, F & G
- CSA certified
- UL Listed
- Continuous duty at 104°F (40°C) ambient
- Consult the National Electric Code and your local regulations for proper selection of motors in hazardous locations.

HP	RPM	Frame	Part Number	Turndown Ratio (CT)*	Enclosure	Voltage/Hz	Shipping Weight (lbs.)
1/4	1800	56C	M25EX18F3P56CA5	1000:1	TENV	230-460/60	26
1/2	1800	56C	M50EX18F3P56CA5	1000:1	TENV	230-460/60	31
3/4	1800	56C	M75EX18F3P56CA5	1000:1	TENV	230-460/60	38
1	1800	56C	M100EX18F3P56CA5	1000:1	TENV	230-460/60	43

* If operating under 6HZ (greater than 10:1 turndown), consult factory.

Motors

Motors, C-Face, Footed, 3 Phase

- Totally enclosed fan-cooled (TEFC), continuous-duty, 230/460 V, 60 Hz, 3-phase, 1.15 S.F.
- Cast Iron construction
- 10:1 rated motors are NEMA Premium Efficiency
- Class “F” insulation with Class “B” rise
- 50 Hz Data on Nameplate - 190/380V at 1.0 S.F.
- UL Recognized with CE mark on label.

HP	RPM	Frame	Part Number	Turndown Ratio (CT)	Shipping Weight (lbs.)
1	1800	143TC	M100TE18F3P143TCA3	10:1	50
	1200	145TC	M100TE12F3P145TCA3	10:1	92
1-1/2	1800	145TC	M150TE18F3P145TCA3	10:1	80
	1200	182TC	M150TE12F3P182TCA3	10:1	122
2	1800	145TC	M200TE18F3P145TCA3	10:1	85
	1200	184TC	M200TE12F3P184TCA3	10:1	134
3	1800	182TC	M300TE18F3P182TCA3	10:1	137
	1200	213TC	M300TE12F3P213TCA3	10:1	166
5	1800	184TC	M500TE18F3P184TCA3	10:1	135
	1200	215TC	M500TE12F3P215TCA3	10:1	212
7-1/2	1800	213TC	M750TE18F3P213TCA3	10:1	202
	1200	254TC	M750TE12F3P254TCA3	10:1	317
10	1800	215TC	M1000TE18F3P215TCA3	10:1	221
	1200	256TC	M1000TE12F3P256TCA3	10:1	342
15	1800	254TC	M1500TE18F3P254TCA3	10:1	318
	1200	284TC	M1500TE12F3P284TCA3	10:1	532
20	1800	256TC	M2000TE18F3P256TCA3	10:1	397
	1200	286TC	M2000TE12F3P286TCA3	10:1	522
25	1800	284TC	M2500TE18F3P284TCA3	10:1	512
	1200	324TC	M2500TE12F3P324TCA3	10:1	747
30	1800	286TC	M3000TE18F3P286TCA3	10:1	547
	1200	326TC	M3000TE12F3P326TCA3	10:1	777

Motors, Footed, 3 Phase

- Totally enclosed fan-cooled (TEFC), continuous-duty, 230/460 V, 60 Hz, 3 phase, 1.15 S.F.
- Cast Iron construction
- 10:1 rated motors are NEMA Premium Efficiency
- Class “F” insulation with Class “B” rise
- 50 Hz Data on Nameplate - 190/380V at 1.0 S.F.
- UL Recognized with CE mark on label.

HP	RPM	Frame	Part Number	Turndown Ratio (CT)	Shipping Weight (lbs.)
1	1800	143T	M100TE18F3P143TA3	10:1	48
	1200	145T	M100TE12F3P145TA3	10:1	90
1-1/2	1800	145T	M150TE18F3P145TA3	10:1	78
	1200	182T	M150TE12F3P182TA3	10:1	120
2	1800	145T	M200TE18F3P145TA3	10:1	90
	1200	184T	M200TE12F3P184TA3	10:1	132
3	1800	182T	M300TE18F3P182TA3	10:1	135
	1200	213T	M300TE12F3P213TA3	10:1	164
5	1800	184T	M500TE18F3P184TA3	10:1	133
	1200	215T	M500TE12F3P215TA3	10:1	210
7-1/2	1800	213T	M750TE18F3P213TA3	10:1	200
	1200	254T	M750TE12F3P254TA3	10:1	315
10	1800	215T	M1000TE18F3P215TA3	10:1	219
	1200	256T	M1000TE12F3P256TA3	10:1	340
15	1800	254T	M1500TE18F3P254TA3	10:1	316
	1200	284T	M1500TE12F3P284TA3	10:1	530
20	1800	256T	M2000TE18F3P256TA3	10:1	395
	1200	286T	M2000TE12F3P286TA3	10:1	520
25	1800	284T	M2500TE18F3P284TA3	10:1	510
	1200	324T	M2500TE12F3P324TA3	10:1	745
30	1800	286T	M3000TE18F3P286TA3	10:1	545
	1200	326T	M3000TE12F3P326TA3	10:1	775
	900	364T	M3000TE9F3P364TA3	10:1	898
40	1800	324T	M4000TE18F3P324TA3	10:1	710

Motors

Standard Features

- Totally enclosed fan cooled - Explosion Proof (IP55), continuous-duty, 230/460 V, 60 Hz, 3 phase, 1.15 S.F.
- UL and CSA Listed for Class I, Division I, Group C & D and Class II, Groups E, F, G: Temp Code T3B
- Cast Iron construction, Premium Efficiency
- UL Listed for Inverter duty (motor service factor 1.0, when operated with VFD)
- Class "F" insulation with Class "B" rise
- Contact factory if operating above 3,300-ft. elevation
- Consult the National Electric Code and your local regulations for proper selection of motors in hazardous locations.

Motors, NEMA C-Face, Hazardous-duty Location, Explosion Proof, Footed, 3 Phase

HP	RPM	Frame	Part Number	Turndown Ratio (CT)(1)	Shipping Weight (lbs.)
1	1800	143TC	M1000EX18F3P143TCA2	4:1	64
2	1800	145TC	M2000EX18F3P145TCA2	4:1	80
3	1800	182TC	M3000EX18F3P182TCA2	4:1	136
	1200	213TC	M3000EX12F3P213TCA2	4:1	240
5	1800	184TC	M5000EX18F3P184TCA2	4:1	145
	1200	215TC	M5000EX12F3P215TCA2	4:1	235
7-1/2	1800	213TC	M7500EX18F3P213TCA2	4:1	200
	1200	254TC	M7500EX12F3P254TCA2	4:1	365
10	1800	215TC	M1000EX18F3P215TCA2	4:1	265
	1200	256TC	M1000EX12F3P256TCA2	4:1	420
15	1800	254TC	M1500EX18F3P254TCA2	4:1	390
	1200	284TC	M1500EX12F3P284TCA2	4:1	575
20	1800	256TC	M2000EX18F3P256TCA2	4:1	455
	1200	286TC	M2000EX12F3P286TCA2	4:1	600

(1) Consult factory if higher turndown ratios are required.

Motors, Hazardous Duty Location, Explosion Proof, Footed, 3 Phase

HP	RPM	Frame	Part Number	Turndown Ratio (CT)(1)	Shipping Weight (lbs.)
1	1800	143T	M1000EX18F3P143TA2	4:1	64
2	1800	145T	M2000EX18F3P145TA2	4:1	80
3	1800	182T	M3000EX18F3P182TA2	4:1	136
	1200	213T	M3000EX12F3P213TA2	4:1	240
5	1800	184T	M5000EX18F3P184TA2	4:1	145
	1200	215T	M5000EX12F3P215TA2	4:1	235
7-1/2	1800	213T	M7500EX18F3P213TA2	4:1	200
	1200	254T	M7500EX12F3P254TA2	4:1	365
10	1800	215T	M1000EX18F3P215TA2	4:1	265
	1200	256T	M1000EX12F3P256TA2	4:1	420
15	1800	254T	M1500EX18F3P254TA2	4:1	390
	1200	284T	M1500EX12F3P284TA2	4:1	575
20	1800	256T	M2000EX18F3P256TA2	4:1	455
	1200	286T	M2000EX12F3P286TA2	4:1	600
25(2)	1800	284T	M2500EX18F3P284TA2	4:1	565
	1200	324T	M2500EX12F3P324TA2	4:1	825
30(2)	1200	326T	M3000EX12F3P326TA2	4:1	787
40(2)	1800	324T	M4000EX18F3P324TA2	4:1	708

(1) Consult factory if higher turndown ratios are required.

(2) Greater than 20 hp available as Group D only.