

Q155 Series Low Pressure Models Q155E, Q155F & Q155H

Maximum Flow Rate: 157 gpm (595 l/min) 5383 BPD
Maximum Pressure: 2100 psi (145 bar)

Hydra-Cell[®]
Seal-less Pumps



**Available
to Meet
API 674!**

*Q155 Series low-pressure model with
Stainless Steel pump head.*

- Seal-less design separates the power end from the process fluid end, eliminating leaks, hazards, and the expense associated with seals and packing.
- Low NPSH requirements allow for operation with a vacuum condition on the suction - positive suction pressure is not necessary.
- Can operate with a closed or blocked suction line and run dry indefinitely without damage, eliminating downtime and repair costs.
- Unique diaphragm design handles more abrasives with less wear than gear, screw or plunger pumps.
- Hydraulically balanced diaphragms to handle high pressures with low stress.
- Lower energy costs than centrifugal pumps and other pump technologies.
- Rugged construction for long life with minimal maintenance.
- Compact design and double-ended shaft provide a variety of installation options.

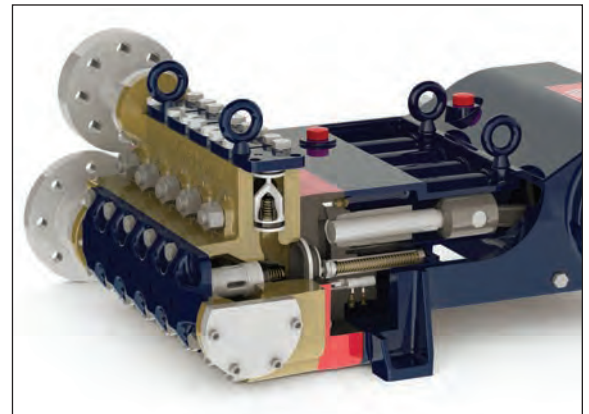
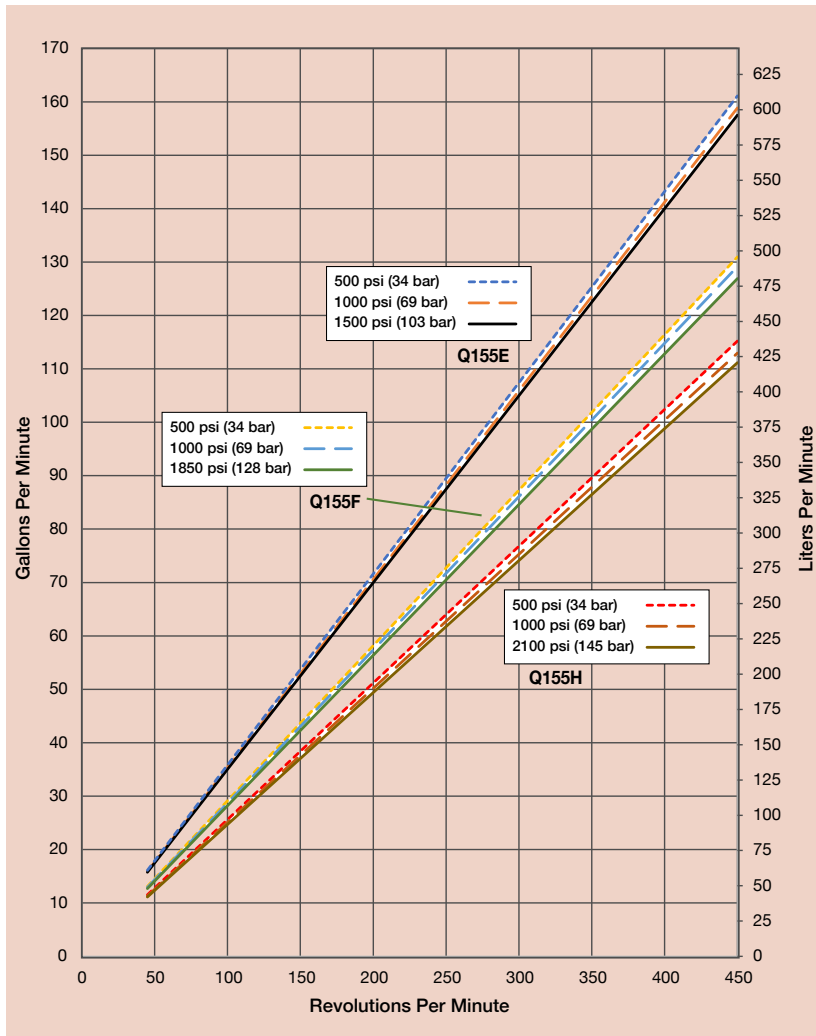
Q155 Low Pressure Performance

Capacities

Model	Max. Input rpm	Plunger Dia.		Max. Flow Capacities			Max. Pressure Ratings Discharge		Max. Pressure Ratings Inlet	
		Inches	mm	gpm	l/min	BPD	psi	bar	psi	bar
Q155E	450	2.500	64	157	595	5383	1500	103	500	34
Q155F	450	2.250	57	127	490	4354	1850	128	500	34
Q155H	450	2.125	54	111	421	3806	2100	145	500	34

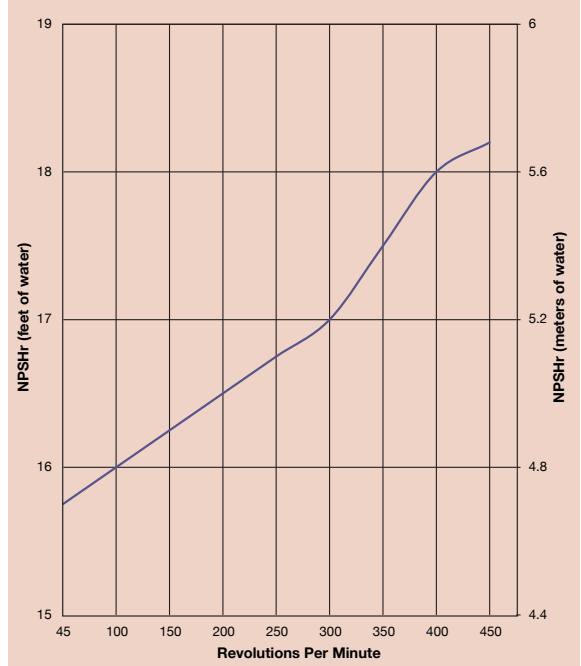
Consult factory when operating below 45 rpm.

Maximum Flow at Designated Pressure



Hydra-Cell Q155 is a positive displacement, multiple-diaphragm pump featuring a seal-less design that provides full containment of the pumping chamber. This means there are no VOC emissions when operating Hydra-Cell and no packing or dynamic seals that pose environmental issues from leakage.

Net Positive Suction Head (NPSHr)



Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

Q155 Low Pressure Specifications

Flow Capacities

Model	Pressure psi (bar)	rpm	gpm	l/min	BPD
Q155E	1500 (103)	450	157	595	5383
Q155F	1850 (128)	450	127	490	4354
Q155H	2100 (145)	450	111	421	3806

Delivery

	Pressure psi (bar)	gal/rev	liters/rev
Q155E	500 (34)	0.358	1.354
	1000 (69)	0.353	1.338
	1500 (103)	0.350	1.323
Q155F	500 (34)	0.291	1.102
	1000 (69)	0.287	1.085
	1850 (128)	0.282	1.068
Q155H	500 (34)	0.256	0.967
	1000 (69)	0.251	0.951
	2100 (145)	0.247	0.936

rpm

Maximum:	450
Maximum API 674:	375
Minimum:	45 (Consult factory for speeds less than 45 rpm.)

Maximum Discharge Pressure

Metallic Heads:	Q155E	1500 psi (103 bar)
	Q155F	1850 psi (128 bar)
	Q155H	2100 psi (145 bar)

Maximum Inlet Pressure

500 psi (34 bar)

Operating Temperature

Maximum:	180 °F (82.2 °C)
Minimum:	40 °F (4.4 °C)

Consult factory for temperatures outside this range.

Maximum Solids Size

800 microns

Input Shaft

Left or Right Side

Inlet Ports

Weld-On: 4" / SCH. 40
4" NPT, 4" Class 300 RF ANSI Flange

Discharge Ports

Weld-On: 3" / SCH. 80
3" NPT, 3" Class 900 RF ANSI Flange

Plunger Stroke Length

3-1/2 inch (88.9 mm)

Shaft Diameter

3 inch (76.2 mm)

Shaft Rotation

Uni-directional (See rotation arrow.)

Oil Capacity

32 US quarts (30.3 liters) - blank back cover
34 US quarts (32.2 liters) - oil level back cover
See page 5 for oil selection and specification.

Weight

Metallic Heads: 1700 lbs. (771 kg)

Calculating Required Horsepower (kW)*

$$\frac{\text{gpm} \times \text{psi}}{1,460} = \text{electric motor hp}^*$$

$$\frac{\text{lpm} \times \text{bar}}{511} = \text{electric motor kW}^*$$

* hp (kW) is required application power.

Attention!

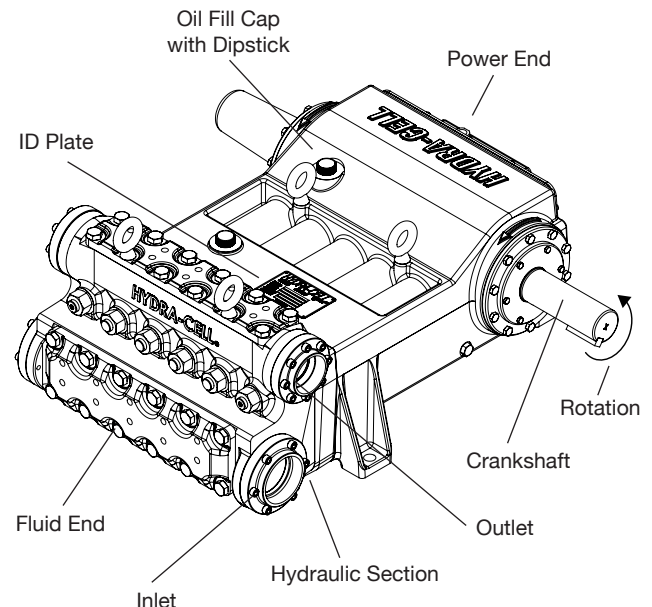
When sizing motors with variable speed drives (VFD): It is very important to select a motor and a VFD rated for constant torque inverter duty service and that the motor is rated to meet the torque requirements of the pump throughout desired speed range.

Fluid End Materials

Manifold:	Nickel Aluminum Bronze (NAB)	
	Duplex Alloy 2205 Stainless Steel	
	316L Stainless Steel CF3M	
	Hastelloy CX2M	
Diaphragm/Elastomers:	FKM	
	Buna-N	
	Aflas	
Diaphragm Follower Screw:	316 Stainless Steel	
	Valve Spring Retainer:	316 SST
	Hastelloy C	
Check Valve Spring:	Elgiloy	
	Hastelloy C	
Valve Disc/Seat:	Tungsten Carbide	
	17-4 Stainless Steel	
	Nitronic 50	
	Hastelloy C	
Diaphragm Follower Screw:	316 Stainless Steel	
Outlet Valve Retainer:	316 Stainless Steel	
Plug-Outlet Valve Port:	316 Stainless Steel	
Inlet Valve Retainer:	316 Stainless Steel	

Power End Materials

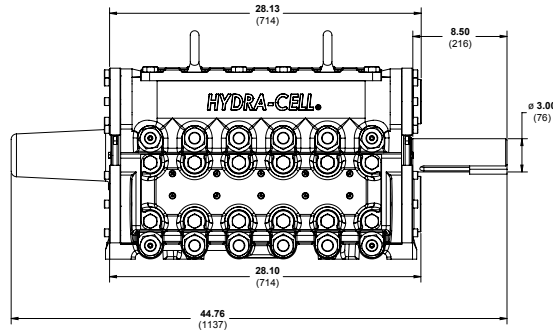
Crankshaft:	Forged Q&T Alloy Steel
Connecting Rods:	Ductile Iron
Crossheads:	12L14 Steel
Crankcase:	Ductile Iron
Bearings:	Spherical Roller/Bronze Journal (outer mains)
	Steel Backed Babbitt (crankpin)
	Bronze (wristpin, center mains)



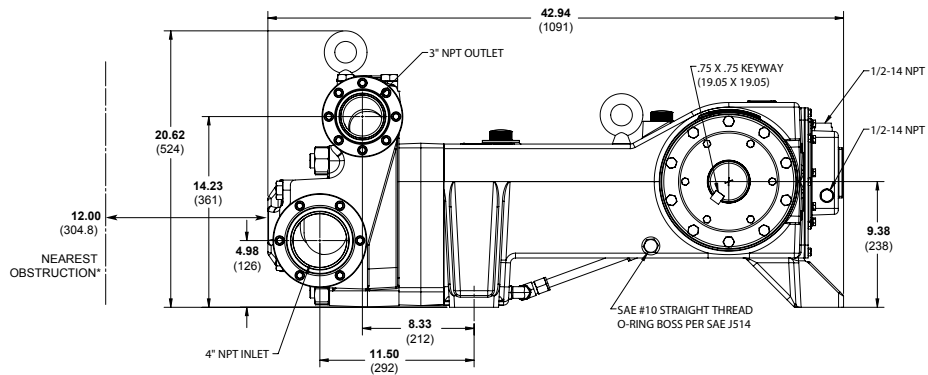
QI55 Low Pressure Drawings

Threaded Version Inches (mm)

Front View

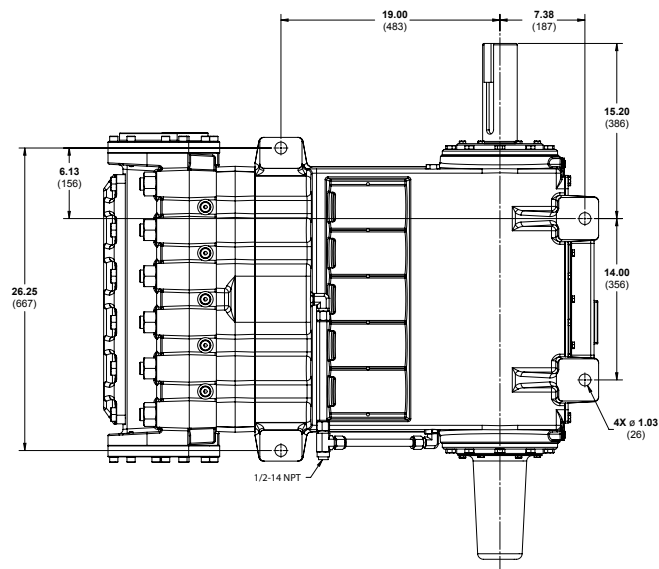


Side View



*Contact factory for obstruction distances closer than 12 inches (304.8 mm).

Bottom View



Note: Dimensions are for reference only. Contact factory for certified drawings.

Q155 Low Pressure **How to Order**

Ordering Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Q	1	5	5										

A complete Q155 Series Low Pressure Model contains 14 digits including 10 customer-specified design and materials options, for example: Q155ERDGHFETAC.

Low Pressure

Digit	Order Code	Description
1-4	Q155	Pump Configuration Shaft-driven
5	E	Performance Max. 157 gpm (595 l/min) 5383 BPD @ 1500 psi (103 bar)
	F	Max. 127 gpm (490 l/min) 4354 BPD @ 1850 psi (128 bar)
	H	Max. 111 gpm (421 l/min) 3806 BPD @ 2100 psi (145 bar)
6	A	Pump Head Version NPT Ports (Steel)
	C	Weld Neck (Steel)
	D	Weld Neck (316L Stainless Steel)
	E	Weld Neck (Hastelloy)
	F	Weld Neck (Duplex Alloy 2205 Stainless Steel)
	G	ANSI Flanged Ports (Duplex Alloy 2205 Stainless Steel)
	R	ANSI Flanged Ports (Steel)
	S	ANSI Flanged Ports (316L Stainless Steel)
	T	ANSI Flanged Ports (Hastelloy)
7	D	Pump Head Material Nickel Aluminum Bronze (NAB)
	G	Duplex Alloy 2205 Stainless Steel
	S	316 Stainless Steel CF3M
	T	Hastelloy CX2M
8	A	Diaphragm & O-ring Material Aflas
	E	EPDM (requires EPDM-compatible oil - Digit 13 oil code D)
	G	FKM
	T	Buna-N
9	D	Valve Seat Material Tungsten Carbide*
	H	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
10	D	Valve Material Tungsten Carbide*
	F	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
11	E	Valve Springs Elgiloy
	T	Hastelloy C

*Tungsten Carbide valve seat and disc are a matched set and must be purchased together.

Digit	Order Code	Description
12	S	Valve Spring Retainers 316 SST
	T	Hastelloy C
13	A	Hydra-Oil 10W30 standard-duty oil
	B	40-wt. oil
	D	EPDM-compatible oil
	E	Food-contact oil
	H	15W50 high-temp severe-duty synthetic oil
14	C	Oil Level Monitor Cover Float switch, normally closed (recommended)
	O	Float switch, normally open
	S	Float switch, Class I, Div. 1, Groups A, B, C, D, normally closed
	T	Float switch, Class I, Div. 1, Groups A, B, C, D, normally open
	W	Float switch, ATEX/IECEX, 4-20 mA analog output (qualification required)
	X	Float switch, ATEX/IECEX, discrete output (qualification required)
	Y	No switch, flat back cover

Note: The Oil Level Monitor Cover is an assembly that replaces the previous back cover on Q155 Series pumps. It contains a float switch assembly that can trigger an alarm or shutdown when pre-defined levels of high or low oil are reached. It may also be ordered without a float switch cover.

Hydra-Cell[®]

Seal-less Pumps

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