

Q155 Series Low Pressure

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



API 674



WANNER
Hydra-Cell[®]
Seal-less Pump Technology



Q155 Series low pressure model with
Stainless Steel pump head.

Available
to Meet
API 674

- Seal-less design eliminates 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, and there is no need for a booster or charge pump.
- Patented Diaphragm Positioning Control (DPC) protects the diaphragms against a closed or blocked suction line.
- Can run dry indefinitely without damage, eliminating downtime and repair costs.
(Note: Intentional dry running not permitted in ATEX zones.)
- 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.
- Significantly lower energy costs than centrifugal pumps.
- Rugged construction for long life with minimal maintenance.
- Compact design and double-ended shaft provide a variety of installation options.

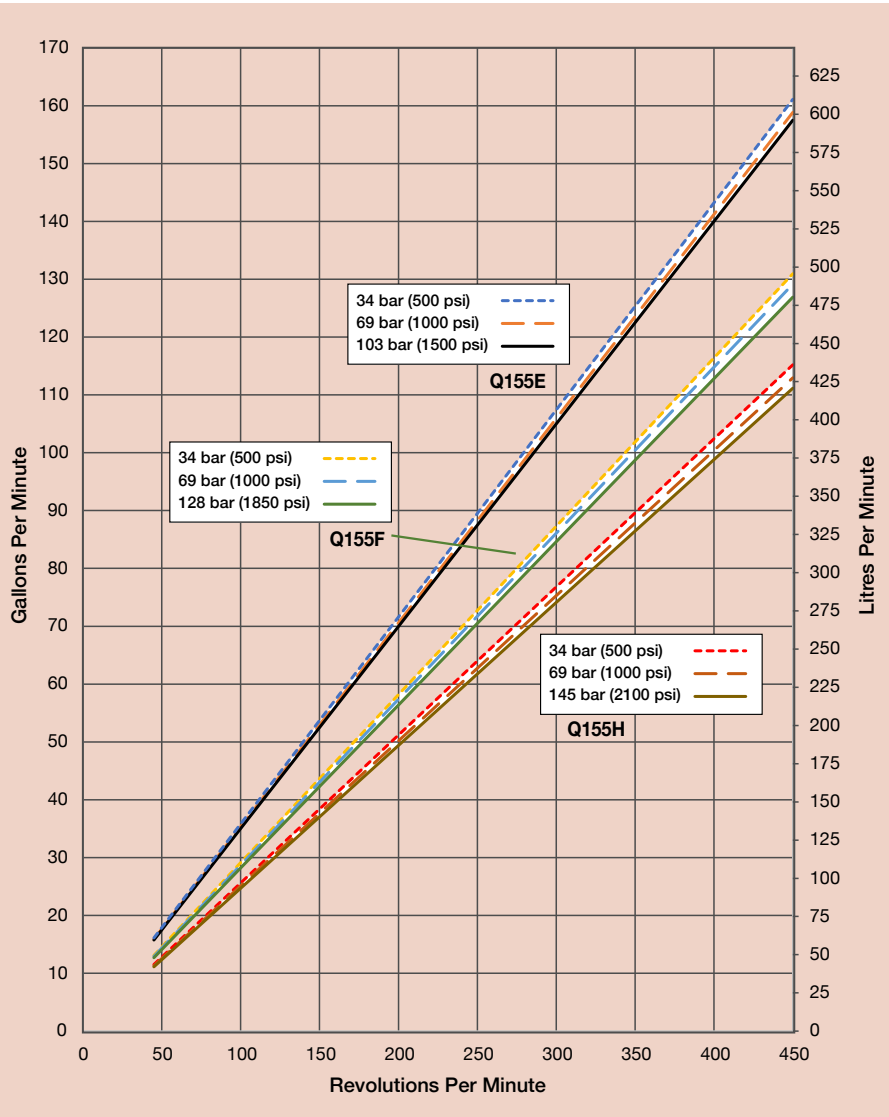
QI55 Low Pressure Performance

Capacities

Model	Max. Input rpm	Plunger Dia. Inches mm		Max. Flow Capacities gpm l/min BPD			Max. Pressure Ratings		Inlet	
							Discharge			
							psi	bar	psi	bar
QI55E	450	2.500	64	157	595	5383	1500	103	500	34
QI55F	450	2.250	57	127	490	4354	1850	128	500	34
QI55H	450	2.125	54	111	421	3806	2100	145	500	34

Consult factory when operating below 45 rpm.

Maximum Flow at Designated Pressure



Note: Each pump complies with item 6.8.2 of API 674 across the full performance range.

Q155 Low Pressure Specifications

Flow Capacities

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

Delivery

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

rpm

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

Maximum Discharge Pressure

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

Maximum Inlet Pressure 34 bar (500 psi)

Operating Temperature Limits

Maximum Liquid Temperature:	82.2 °C (180 °F)
Diaphragm Material Minimum Service Temperature (Ambient & Liquid):	
Aflas	30 °C
EPDM	-20 °C
FKM	5 °C
Buna-N (HBNR)	-5 °C

Consult factory for temperatures outside of these ranges.

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	88.9 mm (3-1/2 inch)
Shaft Diameter	76.2 mm (3 inch)
Shaft Rotation	Uni-directional (See rotation arrow.)
Oil Capacity	33.1 litres (35 US quarts) See page 5 for oil selection and specification.

Weight

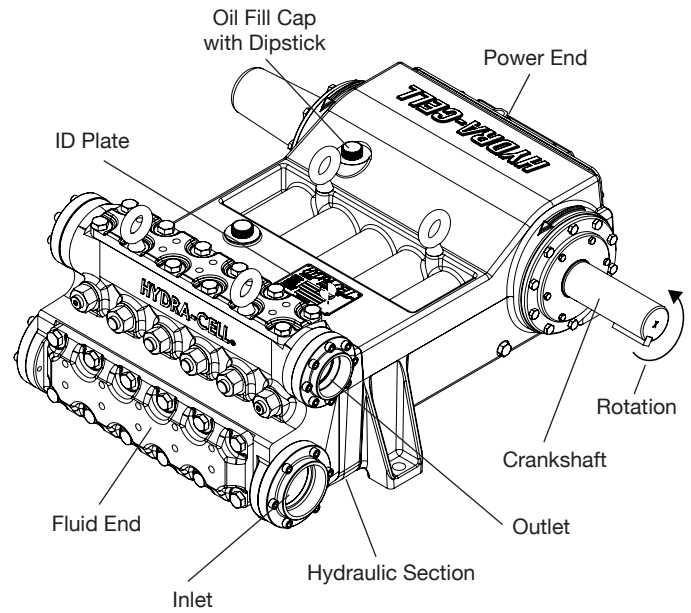
Metallic Heads:	771 kg (1700 lbs.)
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Fluid End Materials

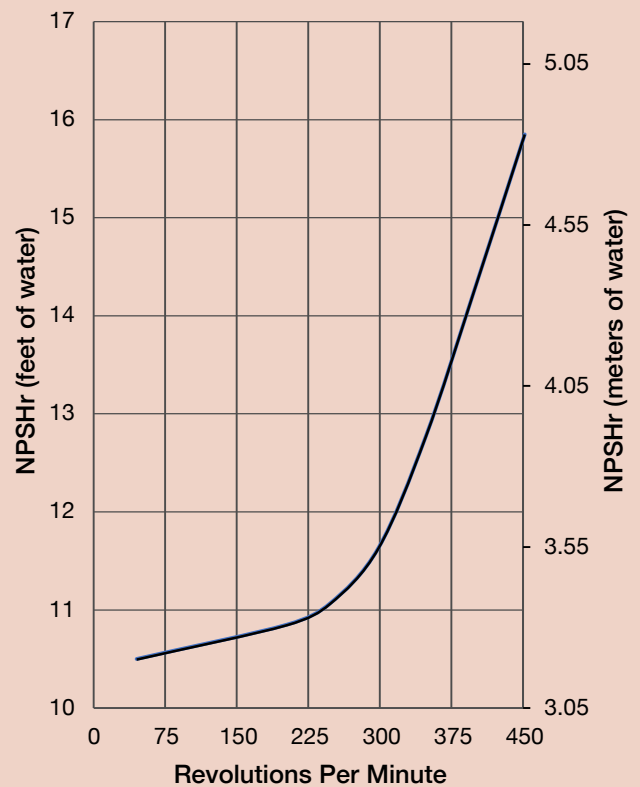
Diaphragm Follower Screw:	316 Stainless Steel
Outlet Valve Retainer:	316 Stainless Steel
Plug-Outlet Valve Port:	316 Stainless Steel
Inlet Valve Retainer:	316 Stainless Steel
See page 5 for customer-specified fluid end materials choices.	

Power End Materials

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



Net Positive Suction Head (NPSHr)



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.

Due to Wanner Engineering continuous improvement practices, performance data and specifications may change without notice.

Q155 Series Low Pressure **How to Order**

Ordering Information

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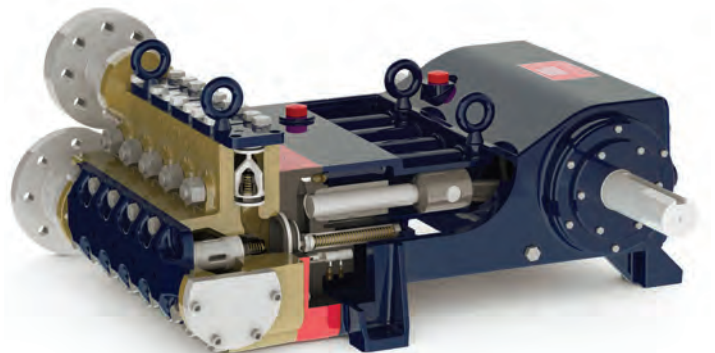
A complete Q155 Series Low Pressure Model contains 14 digits including 10 customer-specified design and materials options, for example: Q155ERSGDDDESAC.

Low Pressure

Digit	Order Code	Description
1-4	Q155	Pump Configuration Shaft-driven API 674 - Contact Wanner International
5	E F H	Performance Max. 595 l/min (157 gpm) 5383 BPD @ 103 bar (1500 psi) Max. 490 l/min (127 gpm) 4354 BPD @ 128 bar (1850 psi) Max. 421 l/min (111 gpm) 3806 BPD @ 145 bar (2100 psi)
6	A C D E F G R S T	Pump Head Version NPT Threaded Ports (Steel) Weld Neck (Steel) Weld Neck (316L Stainless Steel) Weld Neck (Hastelloy) Weld Neck (Duplex Alloy 2205 Stainless Steel) ANSI Flange Ports (Duplex Alloy 2205 Stainless Steel) ANSI Flange Ports (Steel) ANSI Flange Ports (316L Stainless Steel) ANSI Flange Ports (Hastelloy)
7	D G S T	Pump Head Material Nickel Aluminium Bronze (NAB) Duplex Alloy 2205 Stainless Steel 316 Stainless Steel CF3M Hastelloy CX2M
8	A E G T	Diaphragm & O-ring Material Aflas EPDM (requires EPDM-compatible oil - digit 13 code D) FKM Buna-N (HBNR)
9	D H N T	Valve Seat Material Tungsten Carbide* 17-4 Stainless Steel Nitronic 50 Hastelloy C
10	D F N T	Valve Material Tungsten Carbide* 17-4 Stainless Steel Nitronic 50 Hastelloy C

Digit	Order Code	Description
11	E T	Valve Springs Elgiloy Hastelloy C
12	S T	Valve Spring Retainers 316 SST Hastelloy C
13	A B D E H	Hydra-Oil 10W30 standard-duty oil 40-wt. oil EPDM-compatible oil Food-contact oil 15W50 high-temp severe-duty synthetic oil
14	C O X	Oil Level Monitor Cover Float switch, normally closed (recommended) Float switch, normally open ATEX Certified Pump 2014/34/EU Zone 1 II 2/3 G Ex h IIC T5...T4 Gb/Gc With ATEX float switch

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.



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

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WANNER

Hydra-Cell®

Partners in over 70 Countries

Standards Compliance



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