

Q155 PRO SERIES MEDIUM PRESSURE

Maximum Flow Rate: 78 gpm (295 l/min) 2674 BPD
Maximum Pressure: 3500 psi (241 bar)

WANNER™ HYDRA-CELL® PRO
SEAL-LESS PUMP TECHNOLOGIES



AVAILABLE
TO MEET
API
674



Q155 Pro Series medium-pressure model with
Nickel Aluminum Bronze (NAB) pump head.

Positive displacement, multiple-diaphragm pumps with seal-less design that provides full containment of the pumping chamber.

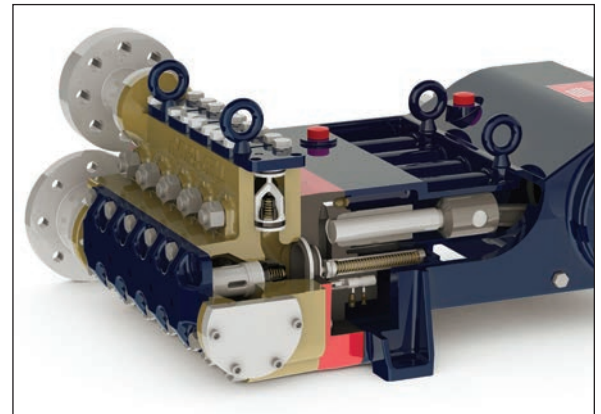
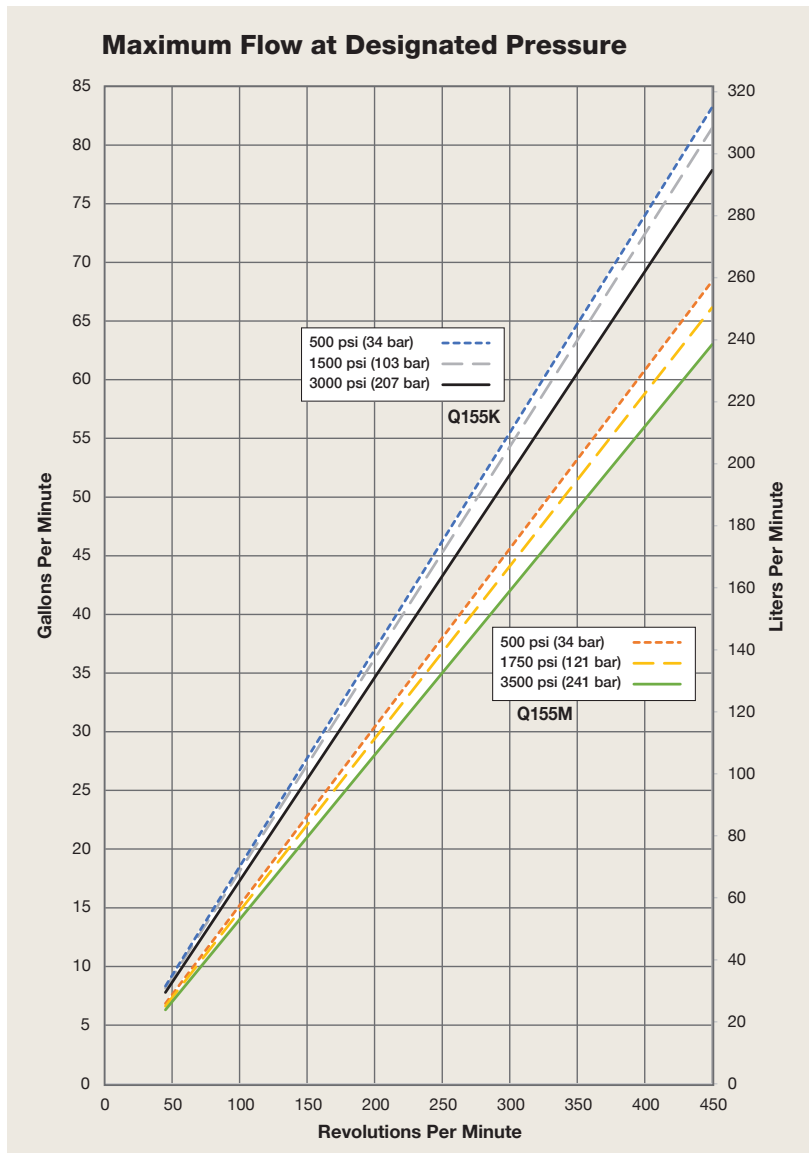
- Seal-less design separates the power end from the process fluid end, eliminating leaks, hazards, and the expense associated with seals and packing.
- Low NPSH requirements allow for operation with a vacuum condition on the suction - positive suction pressure is not necessary.
- Can operate with a closed 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 Pro Medium Pressure | Performance

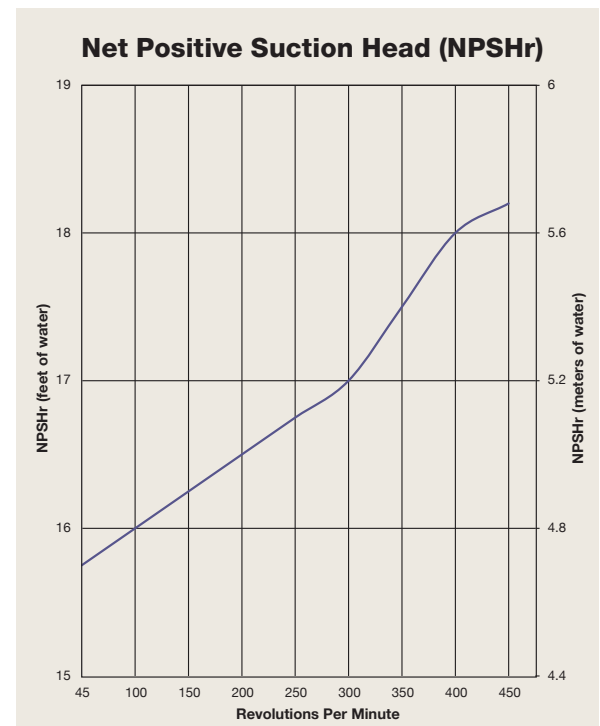
Capacities

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
Q155K	450	1.750	44	78	295	2674	3000	207	500	34
Q155M	450	1.625	41	63	238	2160	3500	241	500	34

Consult factory when operating below 45 rpm



Hydra-Cell Pro 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.



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

Q155 Pro Medium Pressure | Specifications

Flow Capacities

Model	Pressure psi (bar)	rpm	gpm	l/min	BPD
Q155K	3000 (207)	450	78	295	2674
Q155M	3500 (241)	450	63	238	2160

Delivery

	Pressure psi (bar)	gal/rev	liters/rev
Q155K	500 (34)	0.185	0.700
	1500 (103)	0.181	0.685
	3000 (207)	0.173	0.654
Q155M	500 (34)	0.152	0.575
	1750 (121)	0.147	0.556
	3500 (241)	0.140	0.530

rpm

Maximum:	450
Maximum API 674:	375
Minimum:	45

Consult factory for speeds less than 45 rpm.

Maximum Discharge Pressure

Metallic Heads:	Q155K	3000 psi (207 bar)
	Q155M	3500 psi (241 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: 2" / SCH. 160
2" NPT, 2" Class 2500 RTJ 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.

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.

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Weight

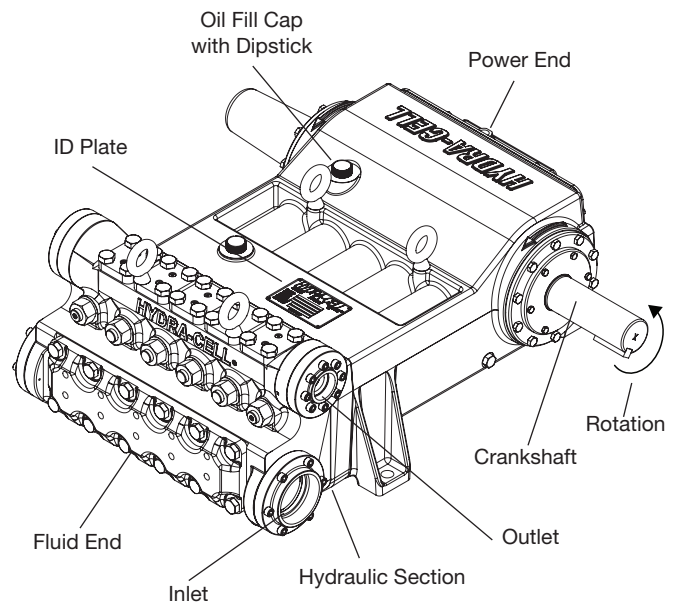
Metallic Heads: 1700 lbs. (771 kg)

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 EPDM
Diaphragm Follower Screw:	316 Stainless Steel
Valve Spring Retainer:	Polypropylene PVDF 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

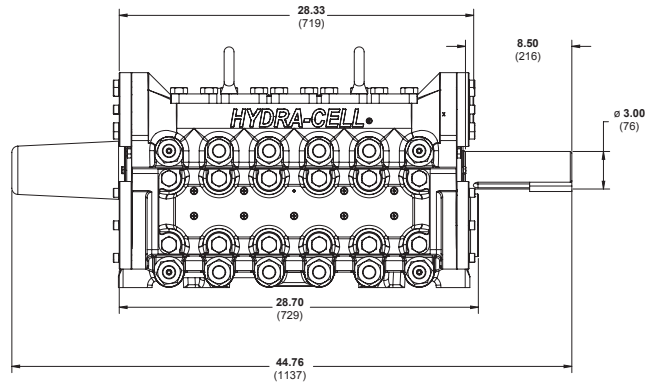
Crankshaft:	Forged Q&T Alloy Steel
Connecting Rods:	Ductile Iron
Crossheads:	12L14 Steel
Crankcase:	Ductile Iron
Bearings:	Spherical Roller/Bronze Journal (outer mains) Steel Backed Babbitt (crankpin) Bronze (wristpin, center mains)



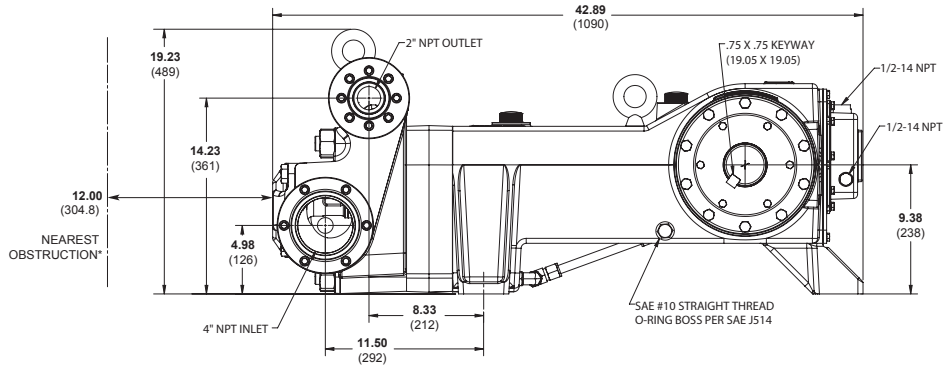
Q155 Pro Medium Pressure | Drawings

Threaded Version Inches (mm)

Front View

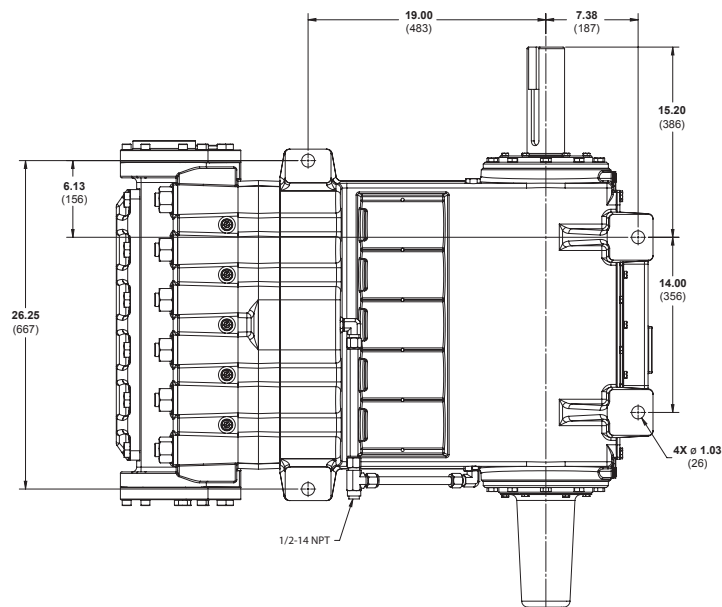


Side View



*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 Pro Medium Pressure | How to Order

Ordering Information

A complete Q155 Pro Series Medium Pressure Model contains 14 digits including 10 customer-specified design and materials options, for example: Q155MRSTDDESEC.

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

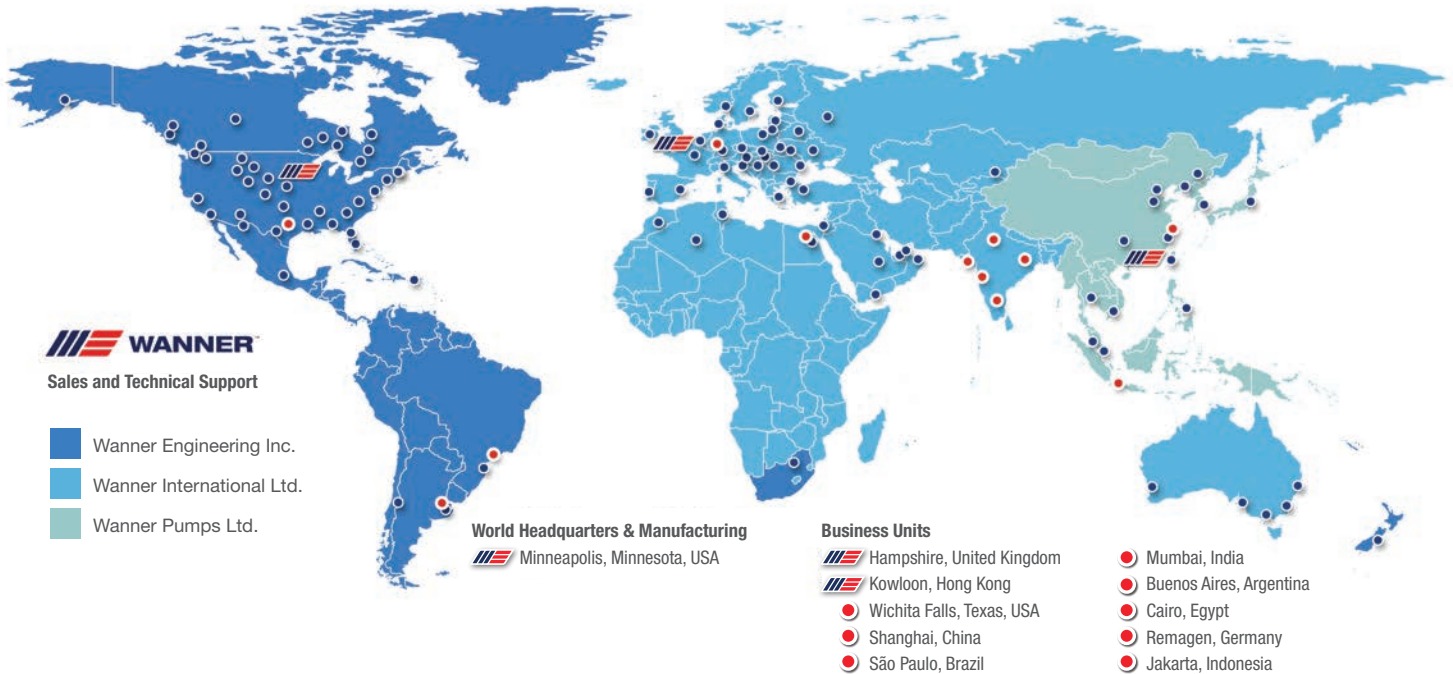
Medium Pressure

Digit	Order Code	Description
1-4	Q155	Pump Configuration Shaft-driven
5	K	Performance Max. 78 gpm (295 l/min) 2674 BPD @ 3000 psi (207 bar)
	M	Max. 63 gpm (238 l/min) 2160 BPD @ 3500 psi (241 bar)
6		Pump Head Version
	A	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)
	T	ANSI Flanged Ports (Hastelloy)
7		Pump Head Material
	D	Nickel Aluminum Bronze (NAB)
	G	Duplex Alloy 2205 Stainless Steel
	S	316 Stainless Steel CF3M
	T	Hastelloy CX2M
8		Diaphragm & O-ring Material
	A	Aflas
	E	EPDM (requires EPDM-compatible oil – Digit 13 oil code D)
	G	FKM
	T	Buna-N
9		Valve Seat Material
	D	Tungsten Carbide*
	H	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C
10		Valve Material
	D	Tungsten Carbide*
	F	17-4 Stainless Steel
	N	Nitronic 50
	T	Hastelloy C

Digit	Order Code	Description
11		Valve Springs
	E	Elgiloy
	T	Hastelloy C
* Tungsten Carbide valve seat and disc are a matched set and must be purchased together.		
12		Valve Spring Retainers
	M	PVDF
	P	Polypropylene
	S	316 SST
	T	Hastelloy C
13		Hydra-Oil
	A	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		Oil Level Monitor Cover
	C	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.

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GLOBAL SALES & TECHNICAL SUPPORT

WANNER ENGINEERING, INC.™

WORLD HEADQUARTERS & MANUFACTURING

Minneapolis, Minnesota USA
t: 612-332-5681
e: sales@wannereng.com
Hydra-Cell.com

REGIONAL OFFICE

Wichita Falls, Texas USA
t: 940-322-7111
e: sales@wannereng.com

LATIN AMERICAN OFFICE

São Paulo, Brazil
t: +55 (11) 99582-1969
e: mmagoni@wannereng.com
Hydra-Cell-Pumps.com.br

WANNER INTERNATIONAL, LTD.™

UNITED KINGDOM

8 & 9 Fleet Business Park
Sandy Lane • Church Crookham
Hampshire UK GU52 8BF

t: +44 (0) 1252 816847
e: support@wannerint.com
Hydra-Cell.co.uk

WANNER PUMPS, LTD.™

Kowloon, HONG KONG

t: +852 3428 6534
e: sales@wannerpumps.com
WannerPumps.com

Shanghai, CHINA
t: +86-21-6876 3700
e: sales@wannerpumps.com
WannerPumps.com

