

SE Hydraulic
Engineering

HYDROREX 



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10D REX SERIES DIGITAL HYDROSTATIC UNIT

THE PROFESSIONAL STYLE



P
U
M
P
S

www.hydrorex.com
www.pressureshop.com



12" Touchscreen PC (weatherproof)

Pressure Gauge

Air Regulated Gauge

Air Regulator

Air Control Valve

Liquid Valve

Air inlet 1/2" FNPT

Air inlet Pressure

Elec. Power Plug 110V / 220V

Liquid Inlet 1/2" FNPT

Protection Cover

Wifi Antenna

Dual USB Data

Power on/off Bottom

Release / Bleed Pressure Port

Output Pressure Port

Isolation / Hold Valve

Release /Bleed Valve

ON/OFF

USB-DATA

WIFI



10D REX SERIES

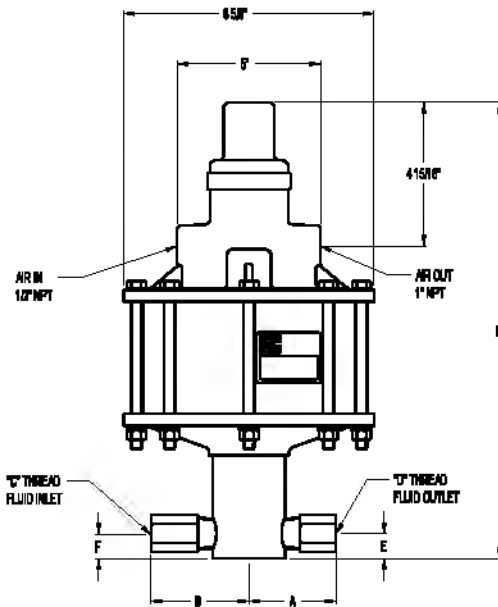
"The Digital & Portable Hydrostatic Test Unit" is the most common standard digitalized testing equipment.

LOW, MEDIUM & HIGH PRESSURE: Is a pneumatic drive system, thirteen models are available with pressures up to 65,000 psig. ideal for testing in small confined spaces and remote locations. Designed for liquids pressure on all industries including Oil & Gas for use with any liquid such water, glycol, hydraulic, oils and more.

Made in USA with highest quality components for low operational cost.

When operating from 0 to rated hydraulic pressure, air consumption will be approximately 18-56 scfm of free air at 100 psi output. At lower air pressures and higher hydraulic pressures air consumption will be reduced proportionately to flow rates indicated.

The 10D-REX Series "Dry Lube" pump does not require an air line lubricator



For pressure, flow rates and ports size for each model, please download the model datasheet below the product on the web www.hydrorex.com

Components: USA Brands, Parker, Swagelok, SC Hydraulic, ESI Technologies

- Structure: Heavy duty 1-1/4" Square tubing stainless steel
- Stainless Steel control plates
- All Stainless steel, valves, tubing, fittings & hardware
- Requires 80 – 100 psi air pressure to operate

Dimensions: 28" Length, 26" High, 20" Width

Weight: 122 Lbs

Shipping Pallet Dimensions: 30"L x 36" H x 24" W

Shipping Weight: 180 Lbs

HS Code: 8413.50.50.00



Measurements & Approximate Air to Hydraulic Pressure

Pressure Ratio	10D Series Model	Hydraulic Piston Diameter (in)	Hydraulic Piston Area (in ²)	Volume per Stroke (in ³)	Air Pressure (PSI)									
					10	20	30	40	50	60	70	80	90	100
5	10D-515	2.3	4.430	5.540	30	75	130	175	220	320	370	410	460	500
10	10D-109	1.625	2.070	2.590	85	185	285	390	490	590	690	795	900	1000
20	10D-219	1.438	1.620	4.050	165	425	650	875	1075	1300	1550	1750	1950	2150
														2700
35	10D-365	1.125	0.994	2.490	250	625	1025	1400	1800	2150	2500	2850	3250	3600
55	10D-603	0.875	0.601	1.500	450	1050	1700	2275	2900	3500	4100	4650	5200	6000
95	10D-102	0.688	0.371	0.928	750	1750	2800	3700	4750	5900	6875	7700	8750	10000
145	10D-151	0.563	0.249	0.623	1100	2600	4200	5550	7100	8500	10000	11500	12950	14400
180	10D-181	0.500	0.196	0.490	1500	3200	5200	7100	9000	10800	12500	14500	16300	18000
240	10D-201	0.438	0.150	0.375	1900	4400	6900	9100	11600	14000	15400	17800	19300	20000
240	10D-251	0.438	0.150	0.375	1900	4400	6900	9100	11600	14000	16400	18800	21300	23700
330 **	10D-306 **	0.375	0.110	0.275	3000	6000	9500	12600	16000	19100	22300	25600	29000	32300
460 **	10D-454 **	0.313	0.077	0.193	4000	8800	13700	18000	22500	27000	31500	36500	41400	45800
740 **	10D-6002 **	0.250	0.049	0.123	8000	15000	23000	29700	37200	45000	52500	59200	66500	***
740 **	10D-685 **	0.250	0.049	0.123	8000	15000	23000	29700	37200	45000	52500	59200	68000	***



Digital Chart Recorder

Introducing the world's first Digital Chart Recorder with a 0.15% accuracy in multiple pressure ranges with customizable test reports in a lightweight hydrostatic unit weatherproof.

Replace outdated mechanical chart recorders with today's technology at an affordable price. No more paper, pens, or batteries!

The esi digital chart recorder offers a rugged design against harsh environments with the ease of a Window's operating system. The esi utilizes a digital pressure transducer and has been designed to measure, analyze and record pressure directly on the mobile tablet without the need for costly I/O interface boards. It allows the user to measure up to 16 pressure & temperature inputs simultaneously and create customized test reports.

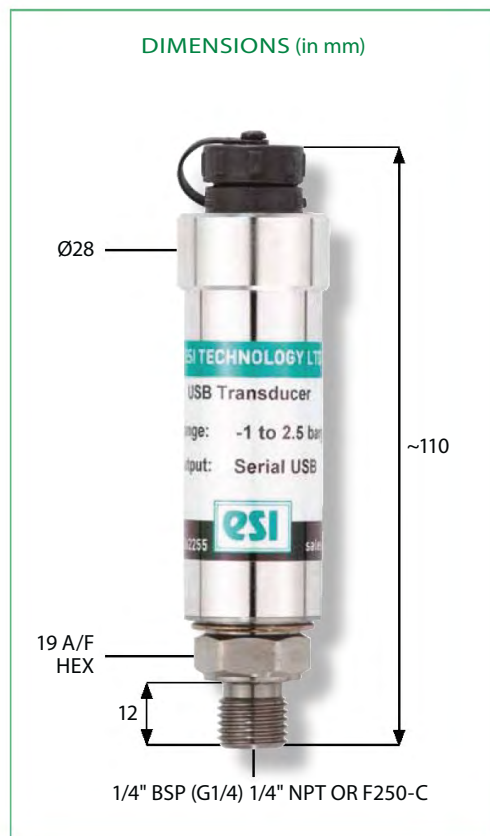
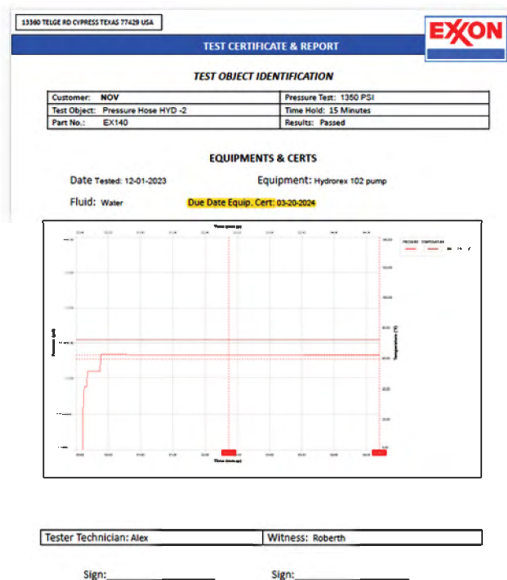
Multiples languages supported (7 Languages)

English, Spanish, French, German, Italian, Portugues and Chinese.

Features and Benefits

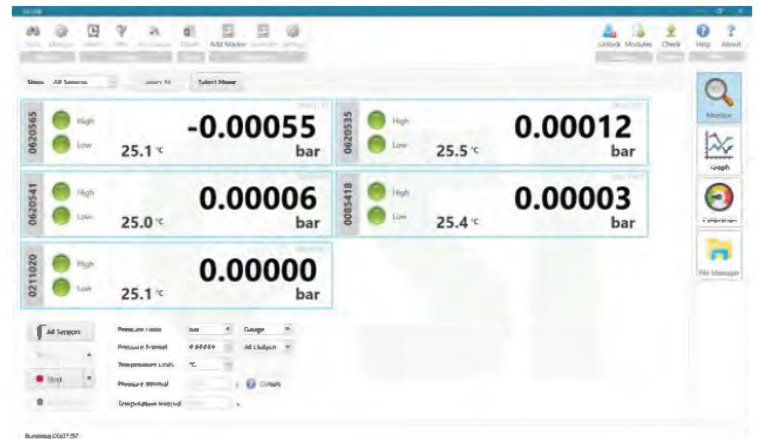
- Records and graphs pressure from vacuum to 68,000 PSI. Multiple Pressure ranges available.
- The esi allows the user to measure up to 16 pressure and temperature inputs simultaneously and create customized test reports.
- Easy setup, configuration and reporting. The software interface allows for real-time pressure and temperature recording using a 12" anti-glare touchscreen tablet.
- Easy Software Interface for Real-Time Pressure & Temperature Monitoring & Reporting
- Digital test report shareable via USB and wireless
- Multiples Languages: English, Spanish, German, Chinese Italian, Portugues, French.
- 110 V Female Connection for standard Shop Power (220-240V to 110-120V voltage convert device available with over 150 country style plugs)

Example





Monitoring screen graph view



Monitoring screen multiples sensors

The transducer adjustable sample rate enables dynamic pressures to be measured with up to 21 bit resolution at user selectable speeds up to 1,000 Hz. For real-time analysis, data transferred to the PC is achieved without loss of accuracy or bandwidth. Data can be displayed in graphical or tabular form, with a choice of pressure units and fully adjustable scales. Data can be saved to a file or exported to Excel/PDF. The unique Silicon-on-Sapphire sensor technology provides outstanding performance and gives excellent stability over a wide temperature range. Excellent measurement accuracy provides high resolution with a precision greater than 1 in 10,000.

TYPE	PRESSURES AVAILABLE
Sensor Technology:	Silicone-on-Sapphire
Windows Tablet	12.1" Display with Touchscreen Interface
Standard Pressure Ranges:	<ul style="list-style-type: none"> • 0 to 500 PSI • 0 to 1,000 PSI • 0 to 2,000 PSI • 0 to 3,000 PSI • 0 to 10,000 PSI • 0 to 15,000 PSI • 0 to 20,000 PSI • 0 to 30,000 PSI • 0 to 40,000 PSI • 0 to 50,000 PSI • 0 to 60,000 PSI • 0 to 70,000 PSI
Overpressure Safety:	2x up to 6,000 PSI; 1.5x for 15,000 PSI; 1.1x for 21,500 PSI; 1.5x for 30,000 PSI; 1.25x for 60,000 PSI+
Other Pressure Ranges:	PSI, bar, mBar, MPa, Pa, mH ₂ O, mmHg, atm, kg/cm ² , kPa
Accuracy NLHR:	≤ ± 0.15% of span BFSL
Temperature Ranges:	°F or °C
Operating Ambient Temperature:	32°F to +115°F
Storage Temperature:	-4°F to +140°F
Temperature Effects:	±1.5 %FS total error band for -14°F to +176°F. Typical thermal zero and span coefficients ±0.015 %FS/ °C
Pressure Media:	All fluids compatible with Stainless Steel (1/4" NPT) or Titanium Alloy (1/4" HPF)
Wetted Parts:	1/4" NPT – Stainless Steel 316 1/4" HPF – Titanium Alloy
Pressure Connection:	1/2" NPT, 1/4" NPT or 1/4" High Pressure Female (1/4" HPF) / F250C



Genspec Standard GS4200-USB and
Genspec DYNAMIC GD4200-USB
 Digital Pressure Transdu

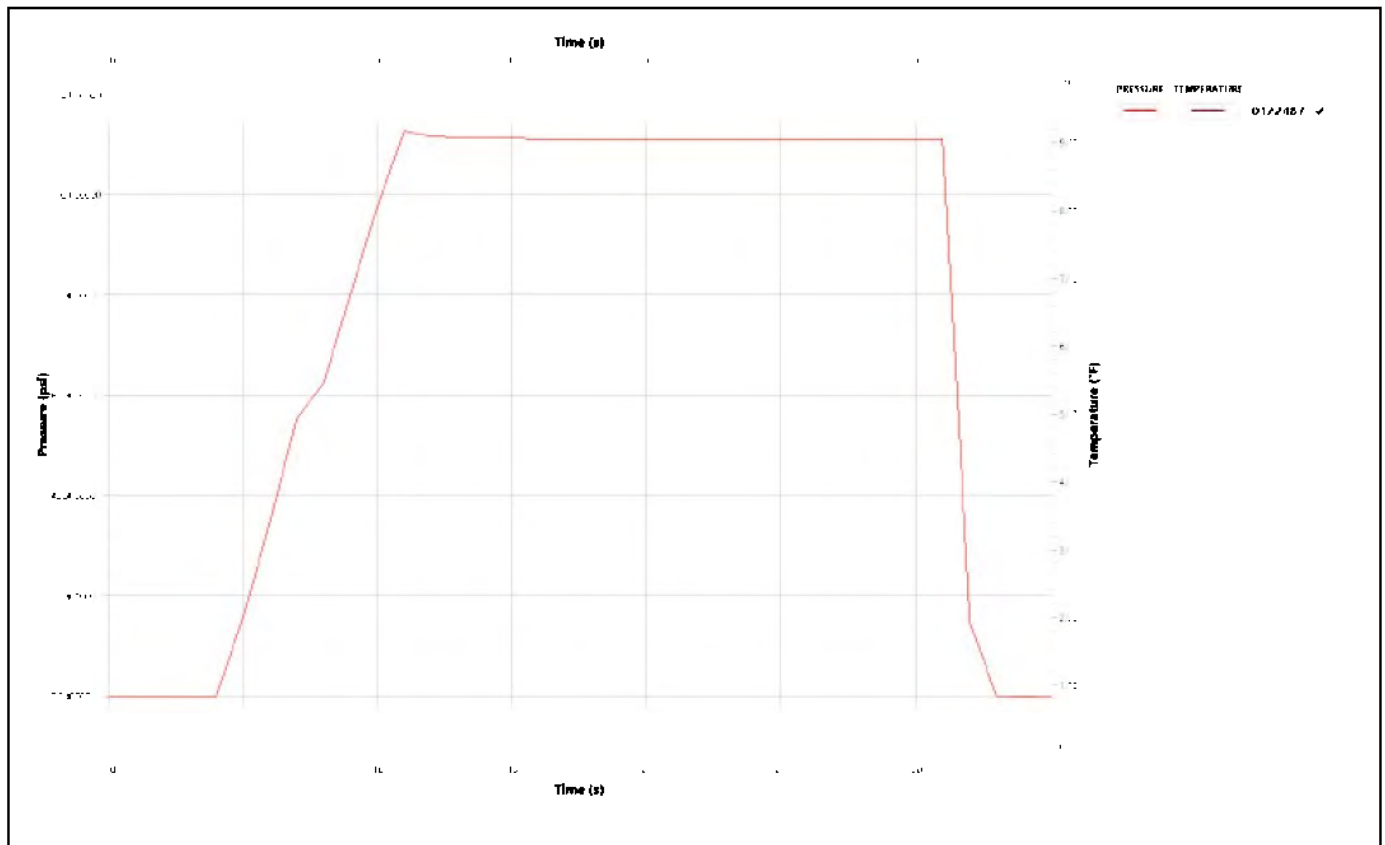
Test Certificate

Test Object Identification

Customer:	INSERT_CustomField_1	Time Hold:	INSERT_CustomField_4
Test Object:	INSERT_CustomField_2	Test Pressure:	INSERT_CustomField_5
Test Date:	INSERT_CustomField_3	Part No.:	INSERT_CustomField_6

Certification Information

Used Cal. Device:	ESI- Digital Recorder	Test Source:	INSERT_CustomField_7
Serial No:	INSERT_Sensor1_Serial	Equip. Cal. Date:	INSERT_CustomField_8



Temperature serves as indication only

Test Technician: INSERT_CustomField_9

Signature: _____

Test Witness: _____

Signature: _____

MANUFACTURER'S OPERATING INSTRUCTIONS

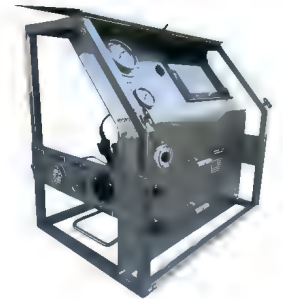
SERIES

• Serie 10D-REX •

PNEUMATIC HYDROSTATIC TEST PUMPS

Prior to testing any high pressure line, please check all connections, hoses and fittings to assure that they are properly tightened and in good working order. No frays, tears, or cuts.
REQUIRED: Air compressor capable of 60-100 PSI.

Liquids: Water, Hydraulic, Oils, Glycol and many more.



CONNECTING THE PUMP

1. Connect your output pressure hose. Position the Test Pump within 8 feet of test environment.
2. Connect the air line from your shop compressor to the inlet port on the unit.

NOTE: AIR FILTER SHOULD BE DRAINED OF ANY WATER OR DIRT PARTICLES BEFORE, AND AFTER USE. Drain valve is located on the bottom of the filter body. (this filter is located inside the unit at the air inlet port)

OPERATING THE PUMP

1. Open your liquid inlet ball valve
2. Open the release/bleed valve on the control panel or in your test line to bleed off excess air.
3. Start your air shop compressor.
4. Once the compressor has reached operating pressure 100 psi (This will give maximum operating output) open the air ball valve slowly, which will allow the air to flow to the regulator. (located at the bottom of the control panel)
5. Adjust the air regulator, Pull up on the black knob and turn clockwise to increase pressure, or counter-clockwise to decrease pressure. Once the inlet air pressure is set, push down on the knob to lock it in place.
6. Start turning regulator clockwise, pressure will begin building as soon as air flows.
When desired test pressure has been met, close the outlet needle valve to isolate test environment.
To turn off pump while testing, turn regulator counter clockwise and decrease or stop air flow, or disconnect air compressor supply. If a pressure drop is indicated, check the following:

- a. Output hose connection at pump.
- b. Output hose connection at test line.
- c. Leaking test line or air in the test environment.

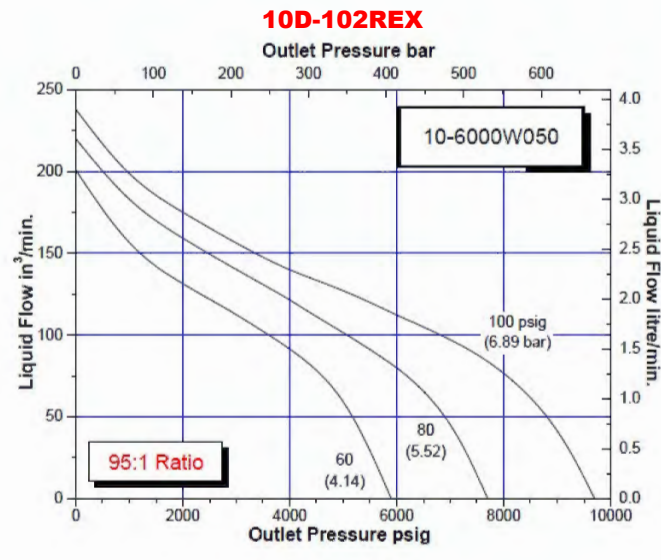
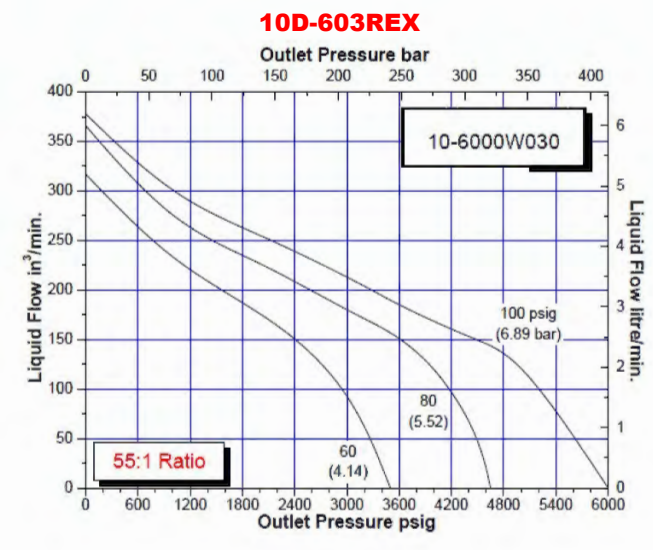
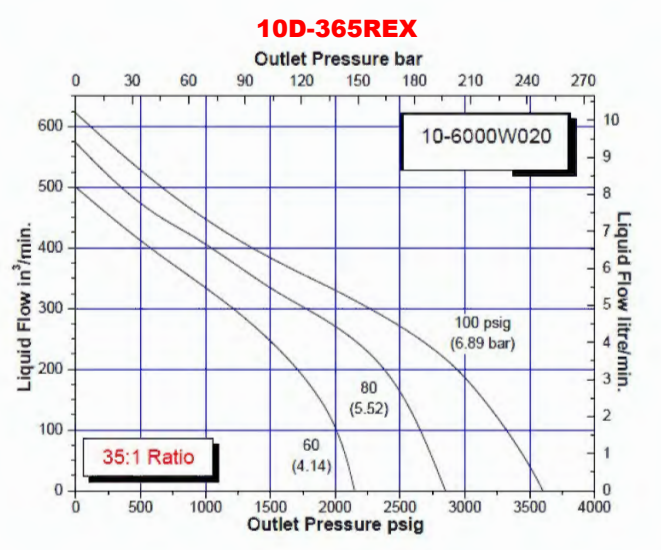
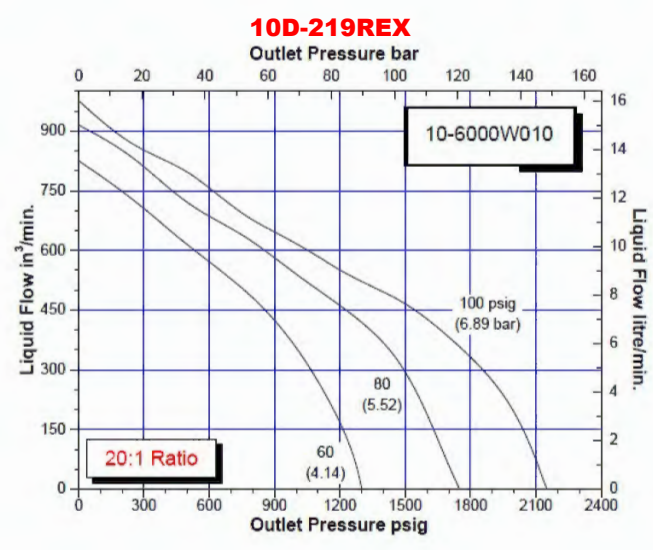
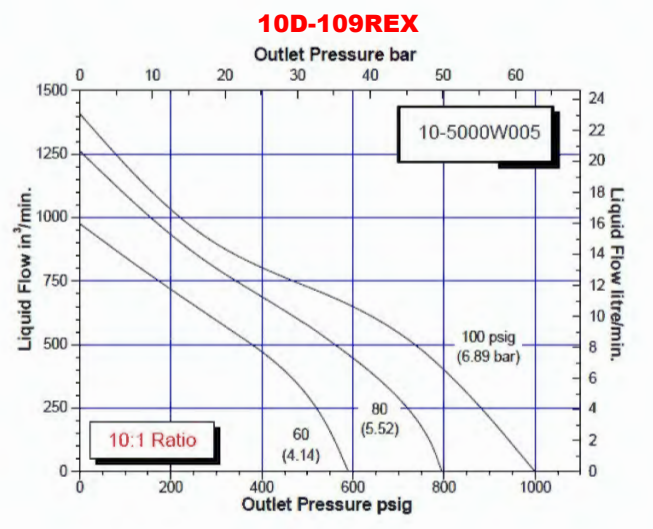
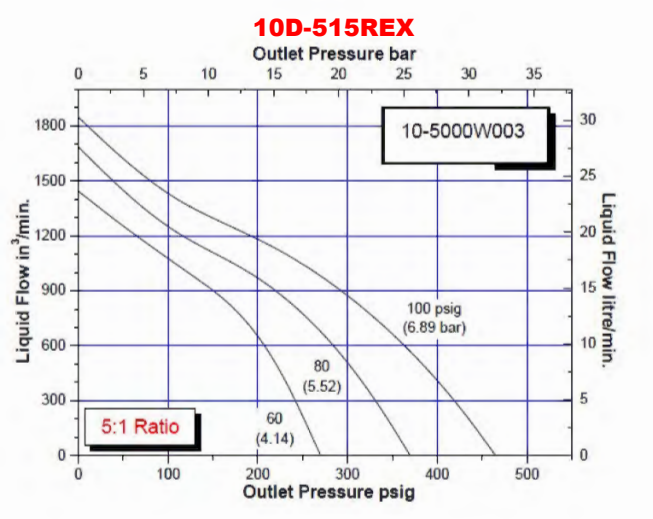
7. When you are done with the hydrostatic pressure test run, release the pressure open slowly the needle valve on control plate (bleed/return).

If the pressure gauge remains constant, turn off air ball valve and monitor gauge for your prescribed test time. When test is complete, open the high pressure return/bleeder valve located on control panel, Bleed off the liquid pressure. Repeat the above steps for multiple lines. Be sure the air pressure gauge reads zero before disconnecting the air line from the pump.



10D REX SERIES

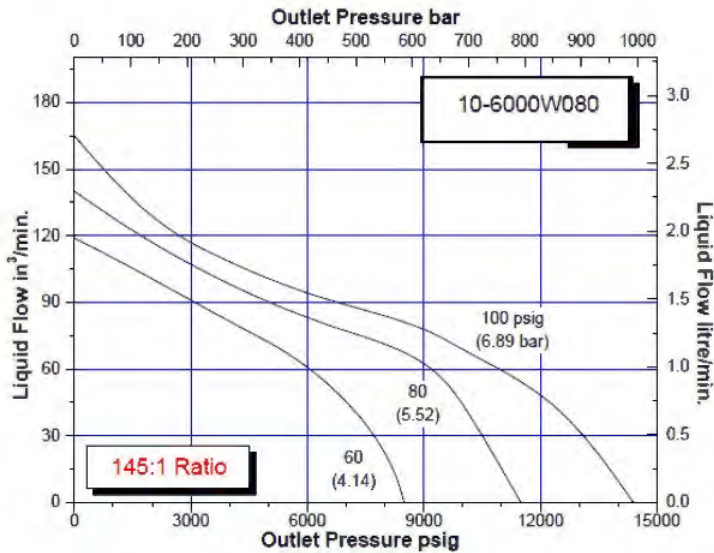
APPROXIMATE RATE OF DISCHARGE



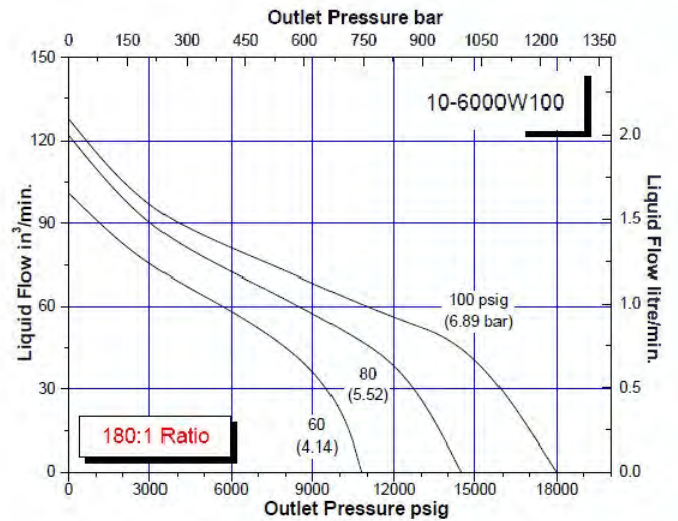
10 REX SERIES

APPROXIMATE RATE OF DISCHARGE

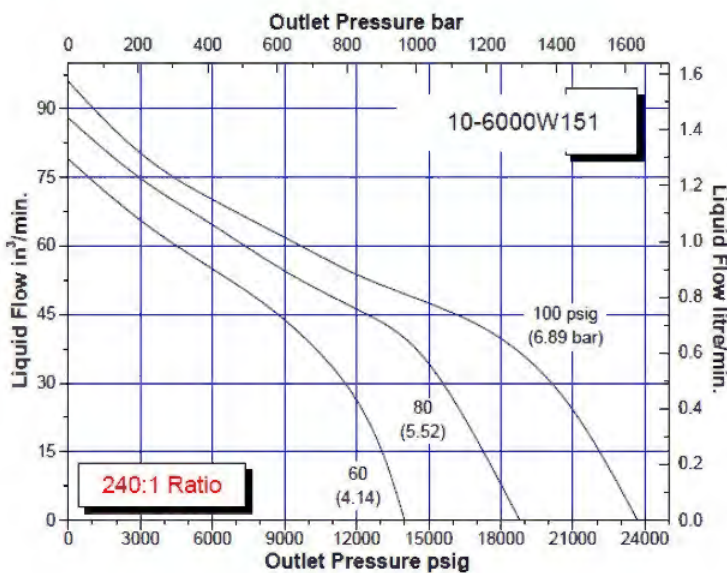
10D-151REX



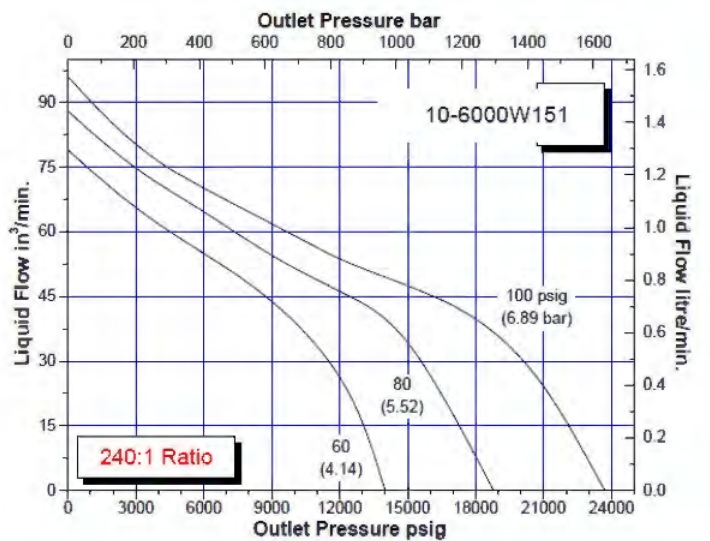
10D-181REX



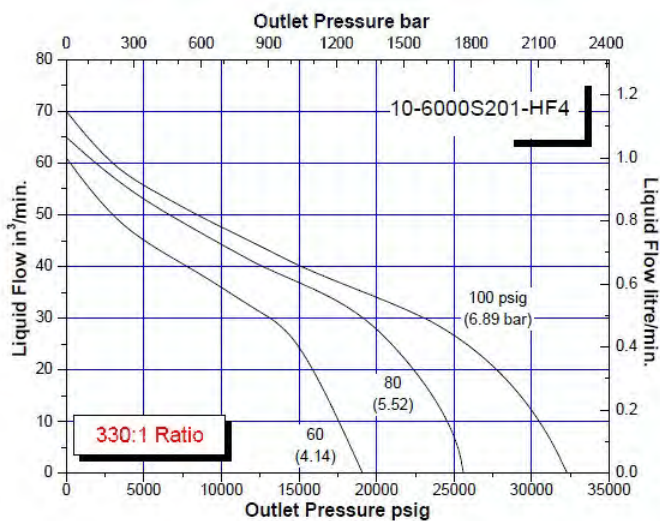
10D-201REX



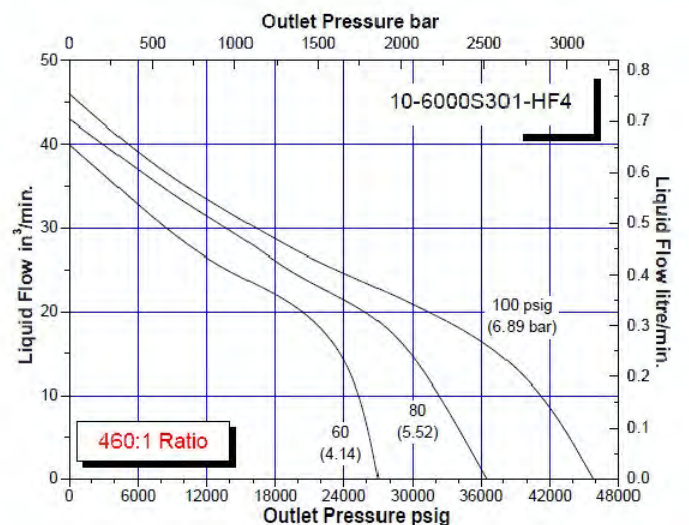
10D-251REX



10D-302REX



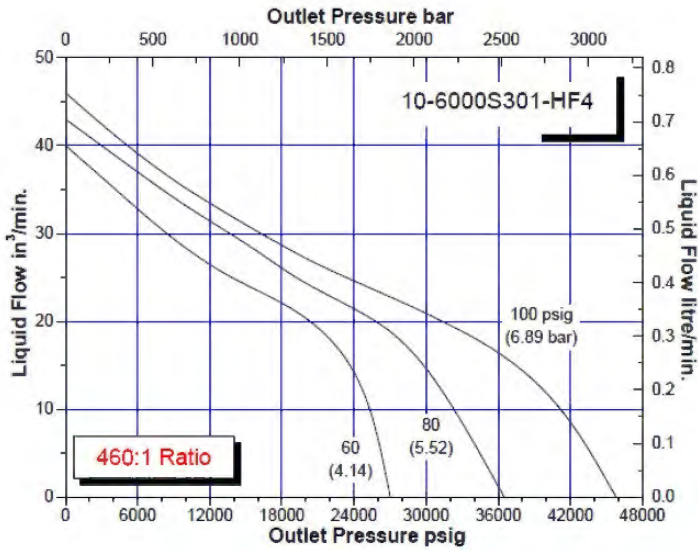
10D-404REX



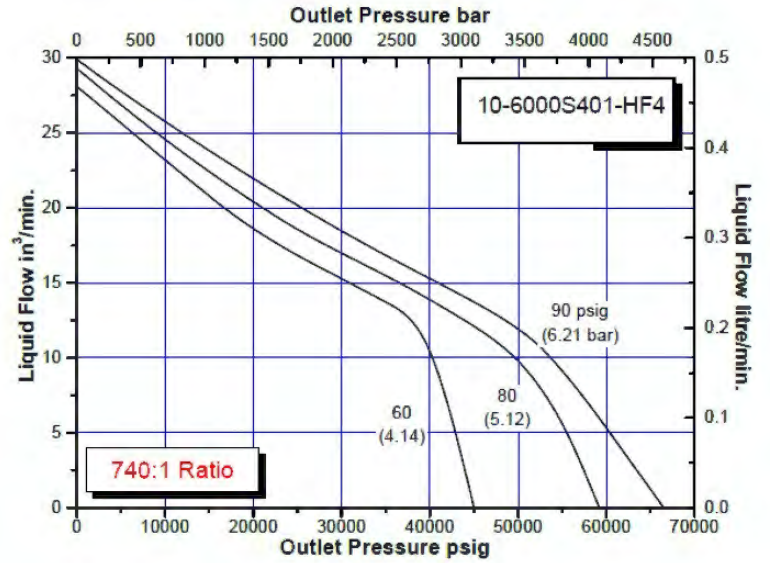
10 REX SERIES

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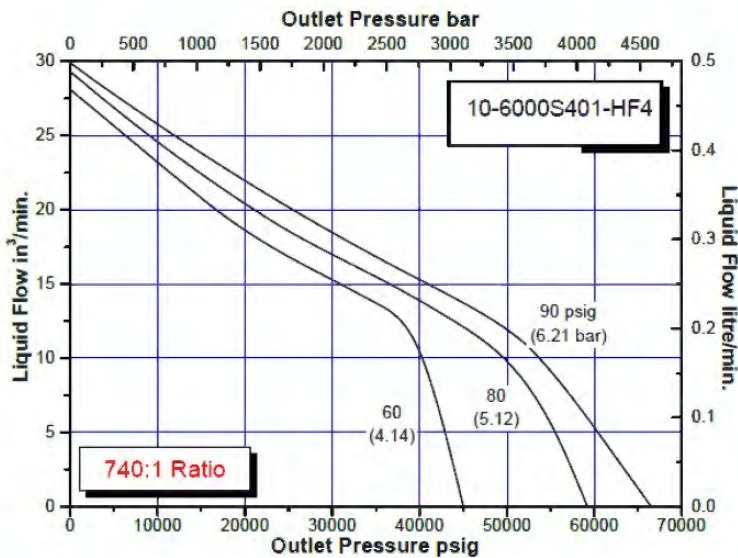
10D-454REX



10D6002REX



10D-685REX



Liquid Pump Cut-a-way

