

MT8 PRO SERIES

LOW PRESSURE METERING

Maximum Flow Rate: 8.00 gph (30.28 lph)
 Minimum Flow Rate: 0.06 gph (0.227 lph)
 Maximum Pressure: 1500 psi (103 bar) for Metallic Pump Heads

WANNER™ HYDRA-CELL® PRO METERING PUMP SOLUTIONS



*MT8 Low Pressure Metering Pump
 with Stainless Steel pump head*

A higher standard of metering performance and energy efficiency.

- Integrates **Wanner Hydra-Cell® Pro** seal-less pump technologies for the highest levels of volumetric and energy efficiencies across the full turndown – from 100% to 1% of rated flow – for accurate metering performance.
- Multiple diaphragms deliver a very low-pulse flow, eliminating pulsation dampeners and pipe strain in most applications, with reduced acceleration head losses and a wider process window.
- Patented ADPC (Advanced Diaphragm Position Control) protects diaphragms under closed or restricted inlet conditions.
- Exceeds API 675 standards for steady-state accuracy ($\pm 1\%$), linearity ($\pm 3\%$), and repeatability ($\pm 3\%$) over a wide adjustable range.
- Hydraulic oil management system replenishes on every back stroke, ensuring superior accuracy and reliable operation at low- and high-suction pressures.
- Valve set design and material options reliably handle a wide range of viscosities and shear sensitivities, plus corrosive liquids, abrasives, slurries and suspended solids.
- Pumped liquid is 100% contained, preventing degradation and contamination.
- Reduced ownership costs in acquisition, operation, service, maintenance and energy use – with a 20+ year design life.



MT8 Pro Low Pressure | Performance

Maximum Flow at Designated Pressure for Pumps with Gearbox Reducers

For Synchronous Speed, Self-cooled Motors

All Pumps in Gallons/Hour (gph)			Pump rpm	Gear Ratio	Motor rpm
350 psi	500 psi	1500 psi			
0.48	0.47	0.43	18	100:1	1800
0.59	0.59	0.53	22.5	80:1	
0.78	0.78	0.70	30	60:1	
0.97	0.96	0.87	36	50:1	
1.19	1.18	1.09	45	40:1	
1.61	1.59	1.44	60	30:1	
2.34	2.31	2.11	90	20:1	
4.71	4.66	4.26	180	10:1	
6.22	6.16	5.56	240	7.5:1	
8.00*	8.00*	8.00*	360	5:1	

Required Motor hp: 1/2

Please Note: Systems vary. The MT8 pump must be calibrated once installed to ensure optimum performance. The API 675 Performance Standard is achievable for flow rates as low as 0.06 gph (0.227 L/hr). Please contact the factory for assistance.

All Pumps in Litres/Hour (L/hr)			Pump rpm	Gear Ratio	Motor rpm
24 bar	34 bar	103 bar			
1.57	1.49	1.35	15	100:1	1500
1.95	1.85	1.68	18.75	80:1	
2.57	2.45	2.22	25	60:1	
3.18	3.03	2.75	30	50:1	
3.90	3.71	3.44	37.5	40:1	
5.28	5.03	4.53	50	30:1	
7.66	7.29	6.64	75	20:1	
15.43	14.69	13.43	150	10:1	
20.39	19.42	17.53	200	7.5:1	
30.09*	28.66*	25.81*	300	5:1	

Required Motor kW: 0.37

* Flow rates above 8 gph not guaranteed to meet API 675 Performance Standards; therefore, pump speed should be limited to 315 rpm at 350 psi and 352 rpm at 1500 psi when using a 5:1 gear reducer and 1800 rpm motor.

** Please consult factory for higher ratio gearboxes and flows below 0.06 gph (2.2 L/hr).

Maximum Flow at Designated Pressure for Pumps with Manual Variable Speed Gearbox

All Min/Max flow rates in Gallons per Hour (gph)

Manual Dial Setting	All Pumps 350 psi		Metallic Pump Heads Only				Motor rpm
	Flow Rate	rpm	500 psi Flow Rate	500 psi rpm	1500 psi Flow Rate	1500 psi rpm	
1	1.85	70	1.85	71	1.62	70	1800
2	3.67	144	3.64	144	3.62	143	
3	5.56	213	5.51	214	4.90	213	
4	7.26	280	7.16	281	6.36	278	
5					7.75	343	

Required Motor hp: 1/2

All Min/Max flow rates in Litres per Hour (L/hr)

Manual Dial Setting	All Pumps 24 bar		Metallic Pump Heads Only				Motor rpm
	Flow Rate	rpm	34 bar Flow Rate	34 bar rpm	103 bar Flow Rate	103 bar rpm	
1	5.99	60	5.98	61	5.24	60	1500
2	11.53	121	11.39	121	10.21	120	
3	17.62	179	17.21	179	15.46	178	
4	23.04	234	22.64	235	20.31	233	
5	28.22	288	27.86	289	24.97	286	

Required Motor kW: 0.37

Manual Dial Setting to achieve Maximum Flow Rate at pressures shown above

4.45	4.50	5.17	rpm
8.00	310	8.00	315
		8.00	354

Required Motor hp: 1/2

5.42	5.50	7.00	rpm
30.28	310	30.28	315
		30.28	355

Required Motor kW: 0.37

- Minimum flow rate of 0.06 gph (0.227 L/hr) can be achieved at a Manual Dial setting of 0.1.
- Flow rates above 8 gph (30.28 L/hr) are not guaranteed to meet API 675 Performance Standards.
- Only use motors 1/2 hp (0.37 kW) with turndown ratios to match the appropriate range of application.

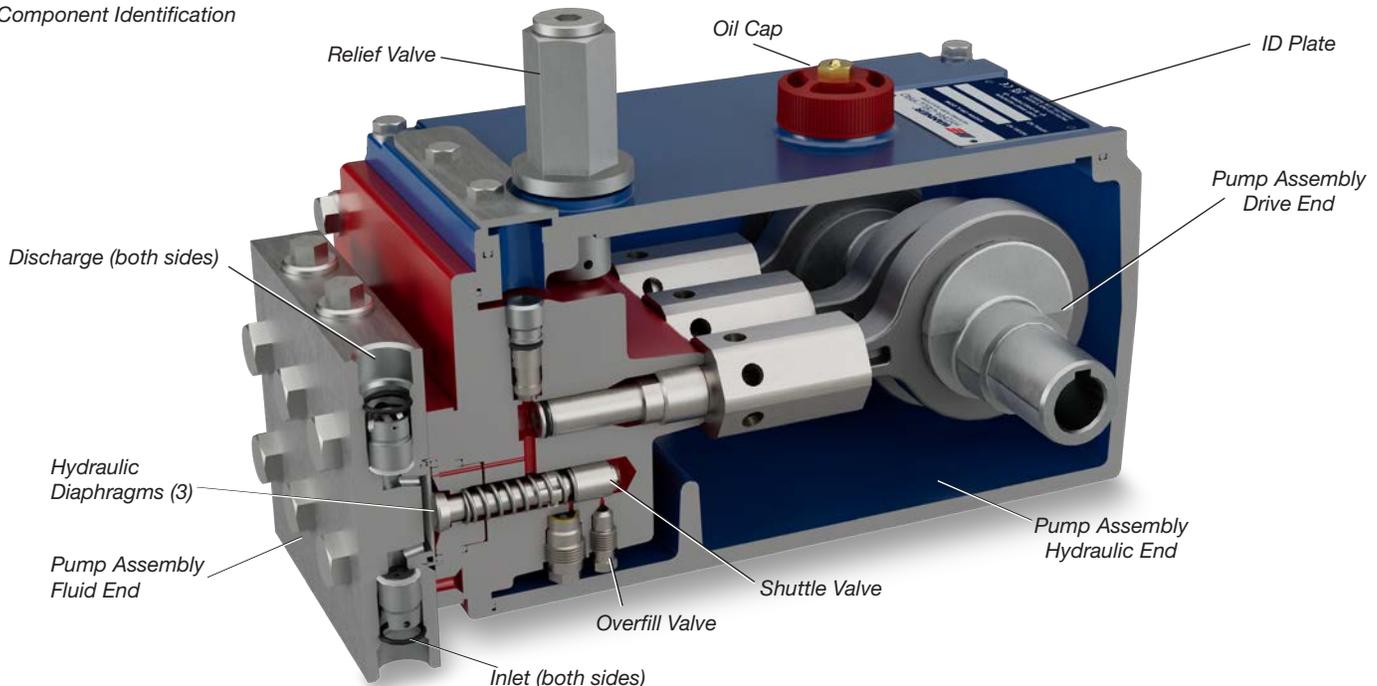
Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

MT8 Pro Low Pressure | Features & Specifications

Pump Features

- Patented ADPC – Advanced diaphragm position control. Protects the diaphragms from adverse suction conditions.
- Can run dry indefinitely without damage to the pump.
- Wide, controllable flow range independent of discharge pressure maintains linearity – from 100% to 1% of rated flow.
- Easy pump control eliminates mechanical actuators.
- Patented hydraulic replenishment systems replenishes on every diaphragm back stroke ensuring accurate consistent displacement on every forward stroke.
- Low shear pumping action.
- Internal pressure relief valve to protect the pump.
- Constant diaphragm stroke length ensures accurate control of flow rate with turn downs higher than 10:1
- Many materials of construction, easy change of parts makes pump repurposing easy.
- Compact design with oil management system and multiple diaphragms in a single pump head – reduces size and weight.
- Simple servicing, no special tools or equipment needed.
- Robust 20+ year service life with minimal maintenance.

MT8 Low Pressure
Component Identification



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

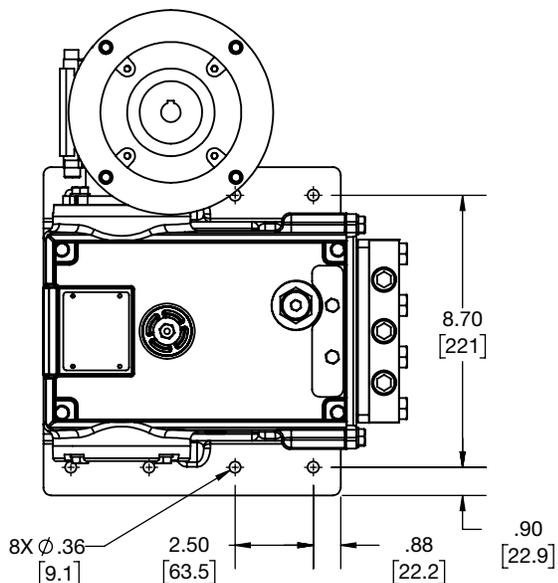
Pump Data

Diaphragms per Liquid End	3
Steady State Accuracy	±1%
Linearity	±3%
Repeatability	±3%
Flow Control	Electronic variable speed drive
Maximum Discharge Pressure	
Metallic Heads:	1500 psi (103 bar)
Maximum Inlet Pressure	
Metallic Heads:	500 psi (34 bar)
Operating Temperatures (min./max.)	
Metallic Heads:	40°F (4.4°C) to 250°F (121°C)*
*Consult factory for correct component selection for temperatures from 160°F (71°C) to 250°F (121°C).	
Inlet Port	1/4 inch NPT or BSPT
Diaphragm Material Temperatures (min./max.)	
40°F (4.4°C) to 250°F (121°C)	
Discharge Port	1/4 inch NPT or BSPT
Maximum Solids Size	200 microns
Shaft Rotation	Bi-directional
Oil Capacity	1.75 quarts (1.7 liters)
Suction Lift Capability	20 feet (6.1 meters)
Weight (less motor)	
Metallic Heads:	80 lbs. (36 kg)

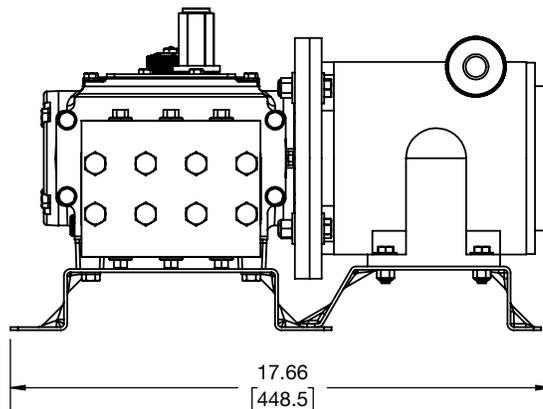
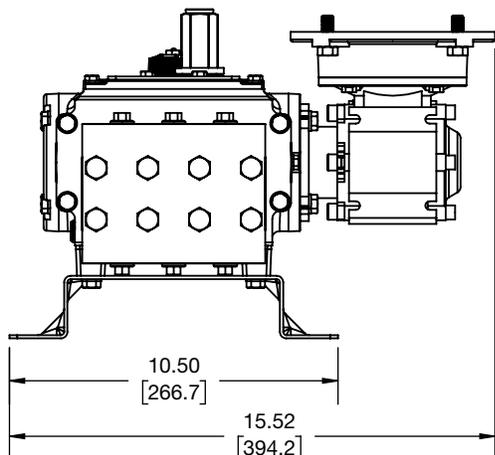
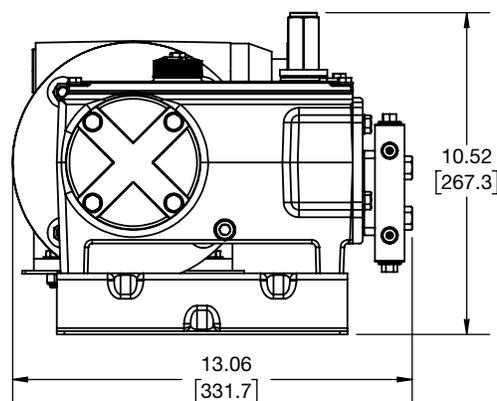
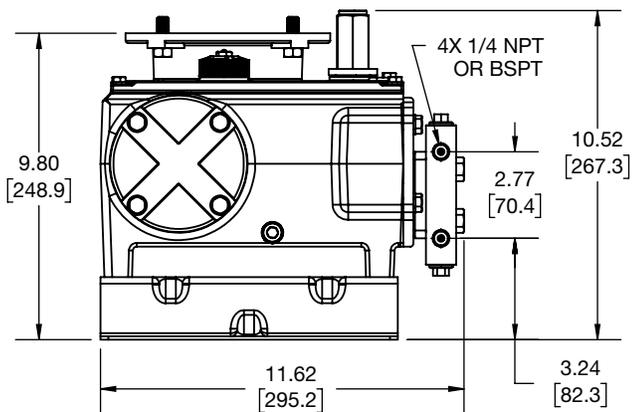
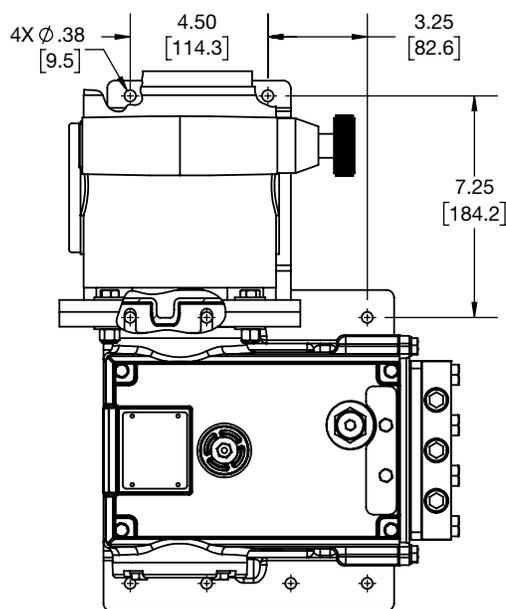
MT8 Pro Low Pressure | Representative Drawings

Metallic Pump Heads Inches (mm)

MT8 Low Pressure with Fixed-Ratio Gear Reducers



MT8 Low Pressure with Manual-Adjust Gear Reducers



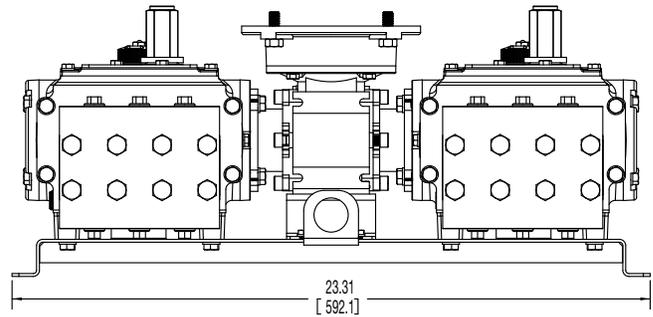
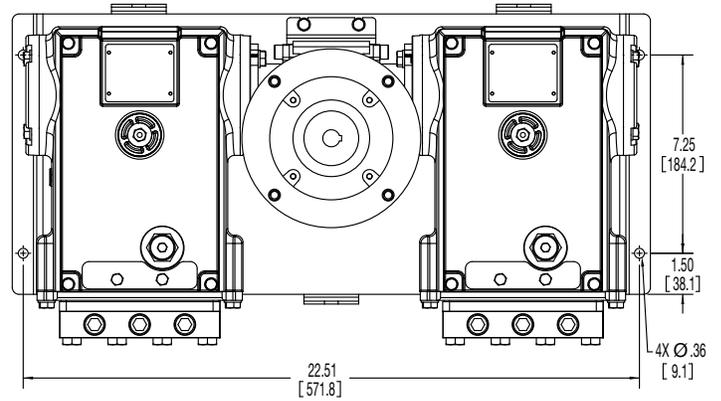
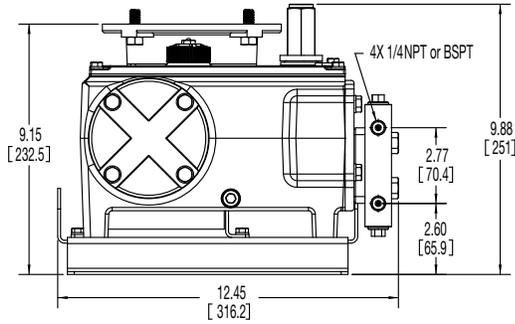
Note: Dimensions are for reference only. Contact factory for certified drawings.

MT8 Pro Low Pressure | Representative Drawings

Metallic Heads with Duplexing Option Inches (mm)

MT8 Low Pressure Duplexing Option

Two MT8 Low Pressure pumps can be run with only one gearbox and one motor. This “duplexing” option doubles capacity with a smaller footprint and lower investment cost than conventional metering pumps.



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

Metering and Dosing Control Options

Electronic Flow Rate Adjustment for Local and Remote Control

- IP66 Standard
- Various flow rate adjustments options including:
 - On-board potentiometer(s) for manual flow rate control
 - On-board keypad controller with flow rate display
 - Removable, hand-held key-pad controller for authorized personnel only



On-board keypad control



Hand-held keypad control

Manual Flow Rate Adjustment for Local Control

- Linear fine adjustment scale on hand-wheel
- High reliability due to frictionless design
- Option to fit a mechanical lock to prevent unauthorized flow rate change



Accessories, Options & Services

Consult Wanner for complete details about available accessories and options as well as special services.

- Duplex Models
- Different Gearbox Ratios
- Oil Cooler Systems
- Actuating Oils
- Magnetic Drain Plug
- Motors (Standard/Hazardous-duty)
- Controllers
- SmartDrive Motor-Controller
- Calibration Cylinders
- Back Pressure Valves
- Pressure Relief Valves
- API 675 Performance Test Certificate
- System Components, Priming Kits and Plugs
- Replacement Part Kits and Tool Kits
- Customization Services

MT8 Pro Low Pressure | How to Order

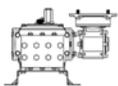
Ordering Information

A complete MT8 Series Low Pressure Model Number contains 17 digits including 9 customer-specified design and materials options, for example: MT08NSNJNSSGA00CL.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
M	T				S	N		N	S	S						L

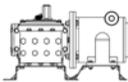
Digit	Order Code	Description
1-2	MT	Pump Model Size Triplex Metering Pumps
3-4	08 8D	Pump Capacity 0.06 – 8.00 gph (0.227 – 30.28 lph) MT8 Duplex 0.06 – 8.00 gph (0.227 – 30.28 L/hr) per pump
5	N M	Pump Version NPT Ports BSPT Ports
6-7	SN	Pump Head 316 SST – No leak detection
8	J K	Diaphragm PTFE PTFE with FKM O-rings
9	N	Leak Detection Style No leak detection
10-11	SS	CV Ball/Seat 316 SST / 316 SST
12	B G K	Hydraulic End Oil EPDM oil (NSF H1 accredited) 5W30 (Synthetic oil) Food-contact oil (NSF H1 accredited)

Digit	Order Code	Description
13	A B C D E H M	Motor Flange Size NEMA 56C NEMA 143/145TC IEC 63 B5 IEC 71 B5 IEC 80 B5 NEMA 56C (MA only) IEC 80 B14 (MX only)
14-15	00 80 60 50 40 30 20 10 07 05	Gearbox Ratio 100:1 80:1 60:1 50:1 40:1 30:1 20:1 10:1 7.5:1 5:1
Manual adjustment controller available for fixed-ratio gearboxes to be ordered as an accessory:		
	MA MX	Specify H flange for this option Specify M flange for this option
16	C S D E M T	Baseplate Carbon Steel (Epoxy painted) SST Carbon Steel (Epoxy painted) Duplex SST Duplex Carbon Steel (Epoxy painted) Manual adjustment SST Manual adjustment
17	L	Model Low Pressure 1500 psi (103 bar) Max Discharge



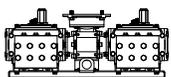
MT8 Low Pressure with fixed ratio gearbox:

Select configuration from digits 1-17, do not select “MA” or “MX” (digits 14-15), select “C” or “S” (digit 16).



MT8 Low Pressure with manual adjust gear reducer:

Select configuration as required digits 1-17, select “MA” or “MX” (digits 14-15) and “M” or “T” (Digit 16).



MT8 Low Pressure with duplexing option:

Select configuration as required digits 1-17, select “8D” (digits 3-4) and “D” or “E” (digit 16).

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