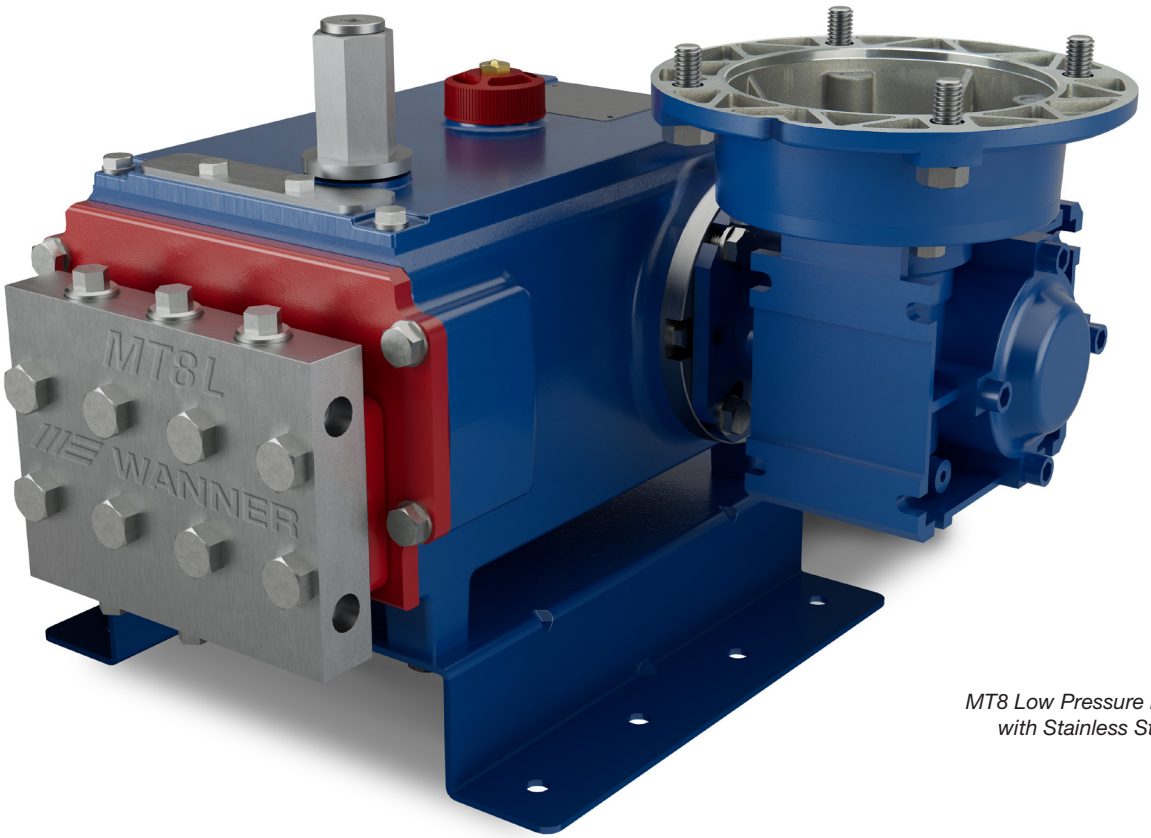
MT8 PRO SERIES
LOW PRESSURE METERING

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

WANNER™ HYDRA-CELL® PRO
METERING PUMP SOLUTIONS



API 675
UK CA CE

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 (±1%), linearity (±3%), and repeatability (±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.

Maximum Flow at Designated Pressure

for Pumps with Gearbox Reducer

For Synchronous Speed, Self-cooled Motors

Litres per Hour (L/hr) Maximum Flow at Designated Pressure

All Pumps in Litres per Hour (L/hr)			Pump rpm	Gear Ratio	Motor rpm
24 bar	34 bar	103 bar			
2.57	2.45	2.22	25	60:1	1500
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	
15.44	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					

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 0.227 L/hr (0.06 gph). Please contact the factory for assistance.

* *Flow rates above 30.28 lph are not guaranteed to meet API 675 Performance Standards. To reach a flow rate of 30.28 lph with a 5:1 gear box and 1500 rpm motor, the VFD will need to be programmed for operation above 50 Hz.*

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

For 10:1 Turndown, Self-cooled Motors

Litres per Hour (L/hr) Maximum Flow at Designated Pressure

All Pumps in Litres per Hour		Pump rpm	Gear Ratio	Motor rpm
34 bar	103 bar			
2.45	2.22	25	60:1	1500
3.03	2.75	30	50:1	
3.71	3.44	37.5	40:1	
5.03	4.53	50	30:1	
7.29	6.64	75	20:1	
14.69	13.43	150	10:1	
19.42	17.53	200	7.5:1	
28.66*	25.81*	300	5:1	
Required Motor kW:		**0.18**	**0.25**	

Notes:

1. *The motor kW are based on ambient temperature conditions up to 25˚C. For ambient temperatures above 25˚C, Force-cooled motors may be required. Please contact Wanner International.*
2. *Contact factory for performance specifications.*
3. *Based on using IE3 motors.*
4. *Maximum continuous motor speed is 1500 RPM at full pressure.*
5. *For intermittent or reduced pressure duties, please contact Wanner International.*

Manual Adjustment Controller

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

34 bar		103 bar		Pump rpm	Gearbox Ratio	Variable Gearbox Model Number	Required Motor Size & Frame
Min	Max	Min	Max				
0.23	2.01	0.23	1.82	20	30:1	MEC1-63B14	0.18kW / IEC 63 / B14 / 4-Pole
	2.92		2.66	30	20:1		
	5.88		5.38	60	10:1		
	7.78		7.02	80	7.5:1		
	11.67		10.53	120	5:1		
	/		/			MEC3-71B14	0.25kW / IEC 71 / B14 / 4-Pole
	30.32		30.32	472	**		0.37kW / IEC 71 / B14 / 4-Pole

*** For MT8 direct coupled to manual adjustment controller, without gearbox.*

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

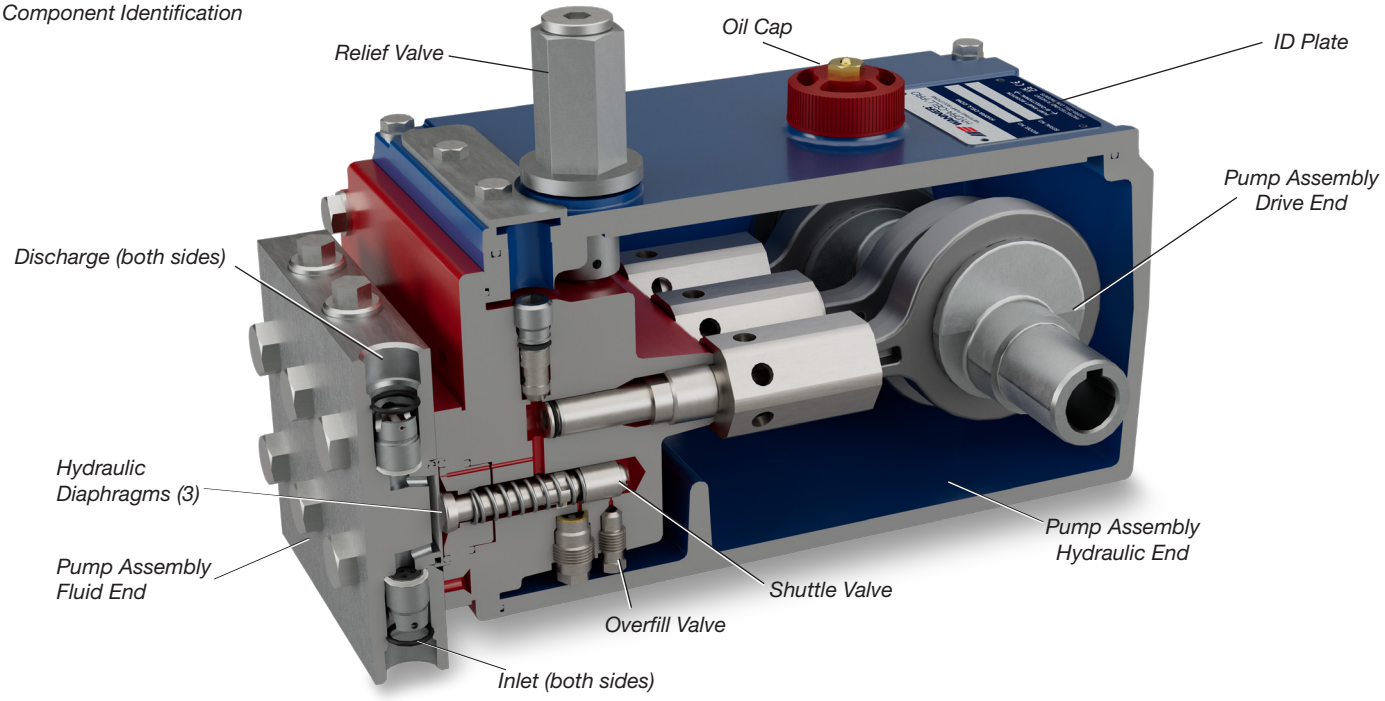
Pump Features

- 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.

Pump Data

Diaphragms per Liquid End	3
Flow Control	Electronic variable speed drive
Maximum Discharge Pressure	
Metallic Heads:	103 bar (1500 psi)
Maximum Inlet Pressure	
Metallic Heads:	34 bar (500 psi)
Operating Temperatures (min./max.)	
Metallic Heads:	4.4˚C (40˚F) to 121˚C (250˚F)
Consult factory for temperatures outside this range	
Inlet Port	1/4 inch NPT or BSPT
Diaphragm Material Temperatures (min./max.)	
	4.4˚C (40˚F) to 121˚C (250˚F)
Discharge Port	1/4 inch NPT or BSPT
Maximum Solids Size	200 microns
Shaft Rotation	Bi-directional
Oil Capacity	1.7 litres (1.75 US quarts)
Suction Lift Capability	6.1 meters (20 feet)
Weight (less motor)	
Metallic Heads:	36 kg (80 lbs.)

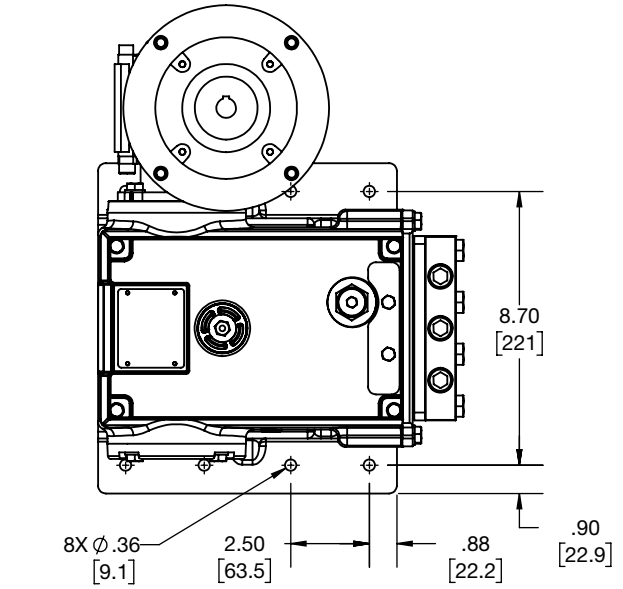
MT8 Low Pressure Component Identification

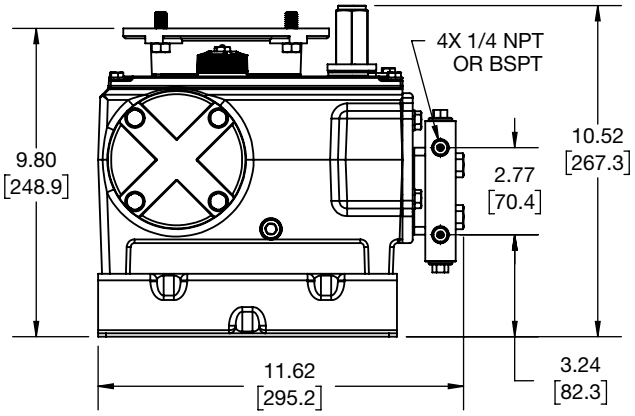


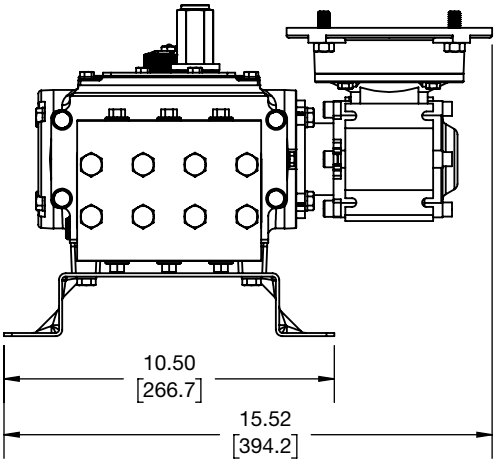
Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

Metallic Pump Heads Inches (mm)

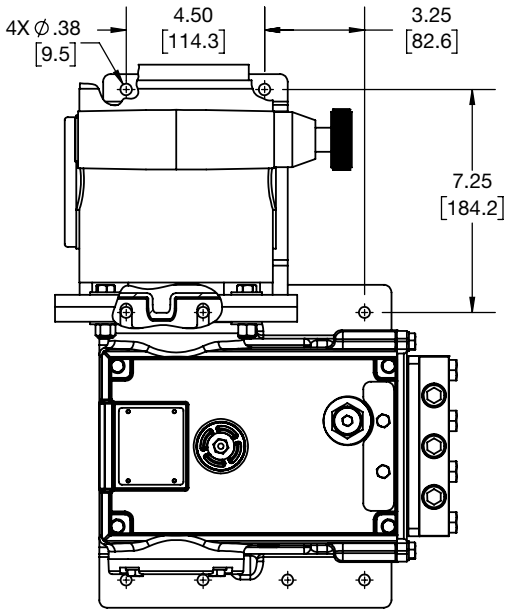
MT8 Low Pressure with Fixed-Ratio Gear Reducers

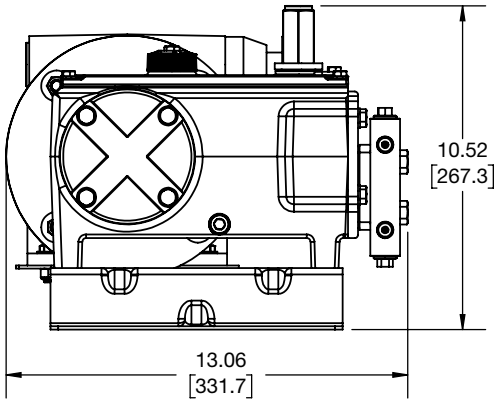


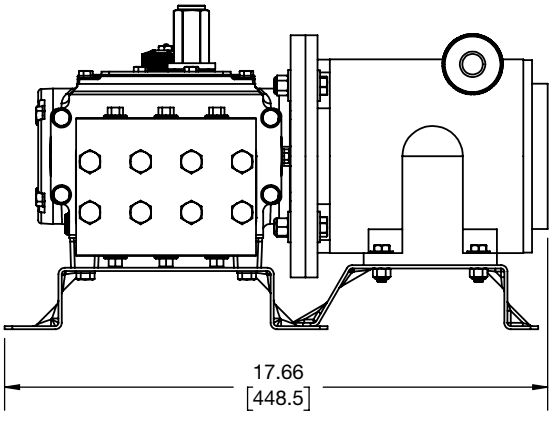




MT8 Low Pressure with Manual-Adjust Gear Reducers



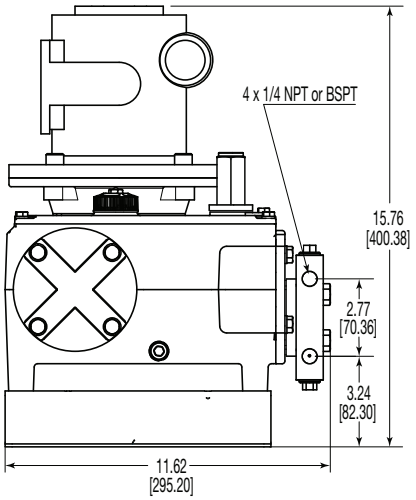


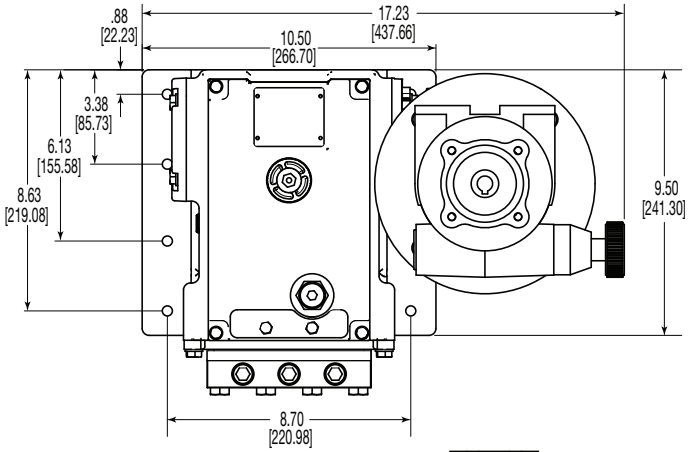


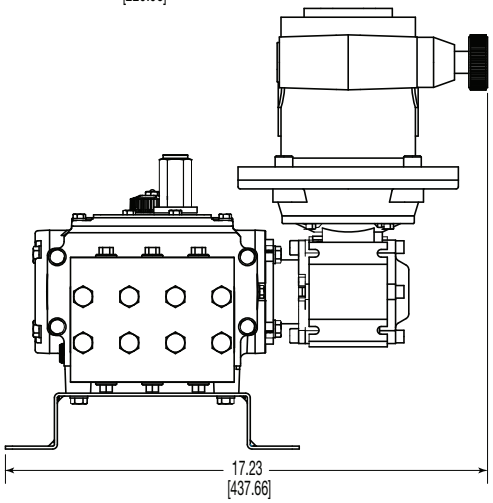
Note: Dimensions are for reference only. Contact factory for certified drawings.

Metallic Pump Heads Inches (mm)

MT8 Low Pressure with Variable Gear Box Mounted on Fixed Ratio Gear Box



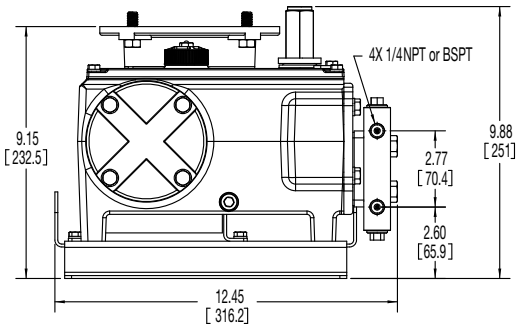


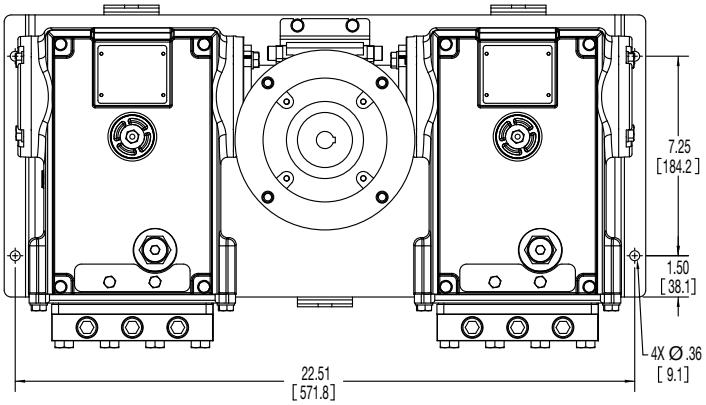


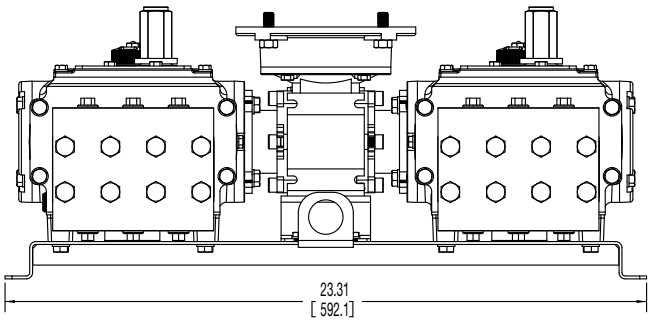
Metallic Heads with Duplexing Option Inches (mm)

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.

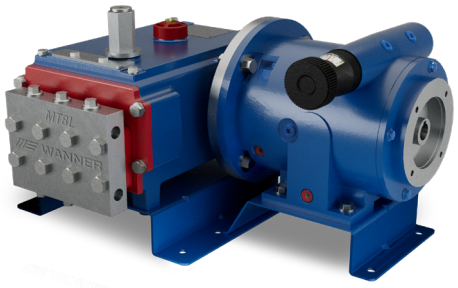
Metering and Dosing Control Options

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 authorised personnel only

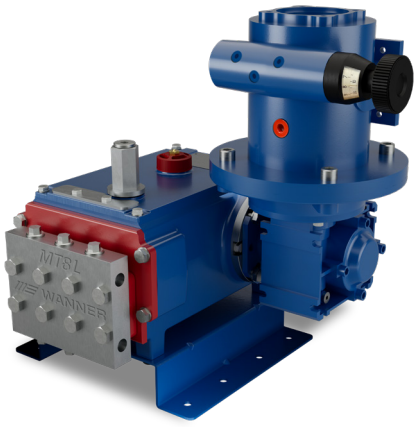
On-board keypad control

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 unauthorised flow rate change



MT8 with Variable Gearbox and Manual Flow Rate Adjustment

- For flow control exceeding API675 performance

Accessories, Options & Services

Consult Wanner International 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
- Customisation Services

Ordering Information

A complete MT8 Series Low Pressure Model Number contains 17 digits including 9 customer-specified design and materials options, for example: MT08MSNJNSSGC00CL.

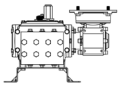
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
M	T				S	N		N	S	S						L

Digit	Order Code	Description
1-2	**MT**	**Pump Model Size** Triplex Metering Pumps
3-4		**Pump Capacity**
	08	0.06 – 8.00 gph (0.227 – 30.28 lph)
	8D	MT8 Duplex 0.06 – 8.00 gph (0.227 – 30.28 lph) per pump
5		**Pump Version**
	N	NPT Ports
	M	BSPT Ports
6-7		**Pump Head**
	SN	316 SST – No leak detection
8		**Diaphragm**
	J	PTFE
	K	PTFE with FKM O-rings
9		**Leak Detection Style**
	N	No leak detection
10-11		**CV Ball/Seat**
	SS	316 SST / 316 SS
12		**Hydraulic End Oil**
	B	EPDM oil (NSF H1 accredited)
	G	5W30 (Synthetic oil)
	K	Food-contact oil (NSF H1 accredited)
13		**Motor Flange Size**
	A	NEMA 56C
	B	NEMA 143/145TC
	C	IEC 63 B5
	D	IEC 71 B5
	E	IEC 80 B5
	H	NEMA 56C (MA only)
	M	IEC 80 B14 (MX only)

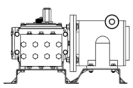
Digit	Order Code	Description
14-15		**Gearbox Ratio**
	00	100:1
	80	80:1
	60	60:1
	50	50:1
	40	40:1
	30	30:1
	20	20:1
	10	10:1
	07	7.5:1
	05	5:1

Manual adjustment controller available for fixed-ratio gearboxes to be ordered as an accessory:

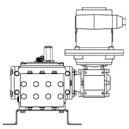
	MA	Specify H flange for this option
	MX	Specify M flange for this option
16		**Baseplate**
	C	Carbon Steel (Epoxy painted)
	S	SST
	M	Carbon Steel (Epoxy painted) Manual adjustment
	T	SST Manual adjustment
17		**Model**
	L	Low Pressure 103 bar (1500 psi) Max Discharge



MT8 Low Pressure with fixed ratio gearbox:
Select configuration from digits 1-17, do not select “MA” or “MX” (digits 14-15), do not select “M” or “T” (digit 16).

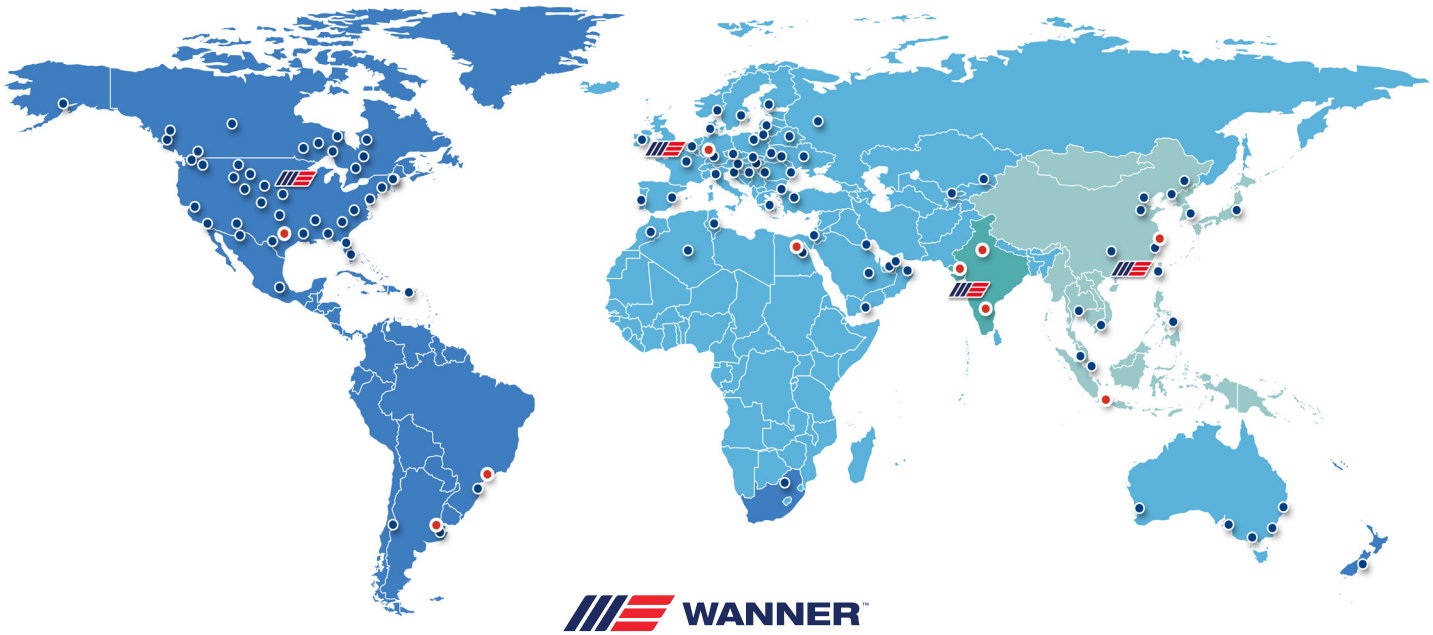


MT8 Low Pressure with manual adjust gear reducer:
Select configuration as required digits 1-17, select “MA” or “MX” (digits 14-15) and “M” or “T” (Digit 16).



MT8 Low Pressure with variable gearbox mounted on fixed ratio gearbox:
Select configuration as required digits 1-17, do not select “MA” or “MX” (digits 14-15), do not select “M” or “T” (digit 16). Reference manual adjustment controller table (page 2) order MEC1-63B14 or MEC3-71B14 variable gearbox as an extra line item as required.

Partners in over 70 countries



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