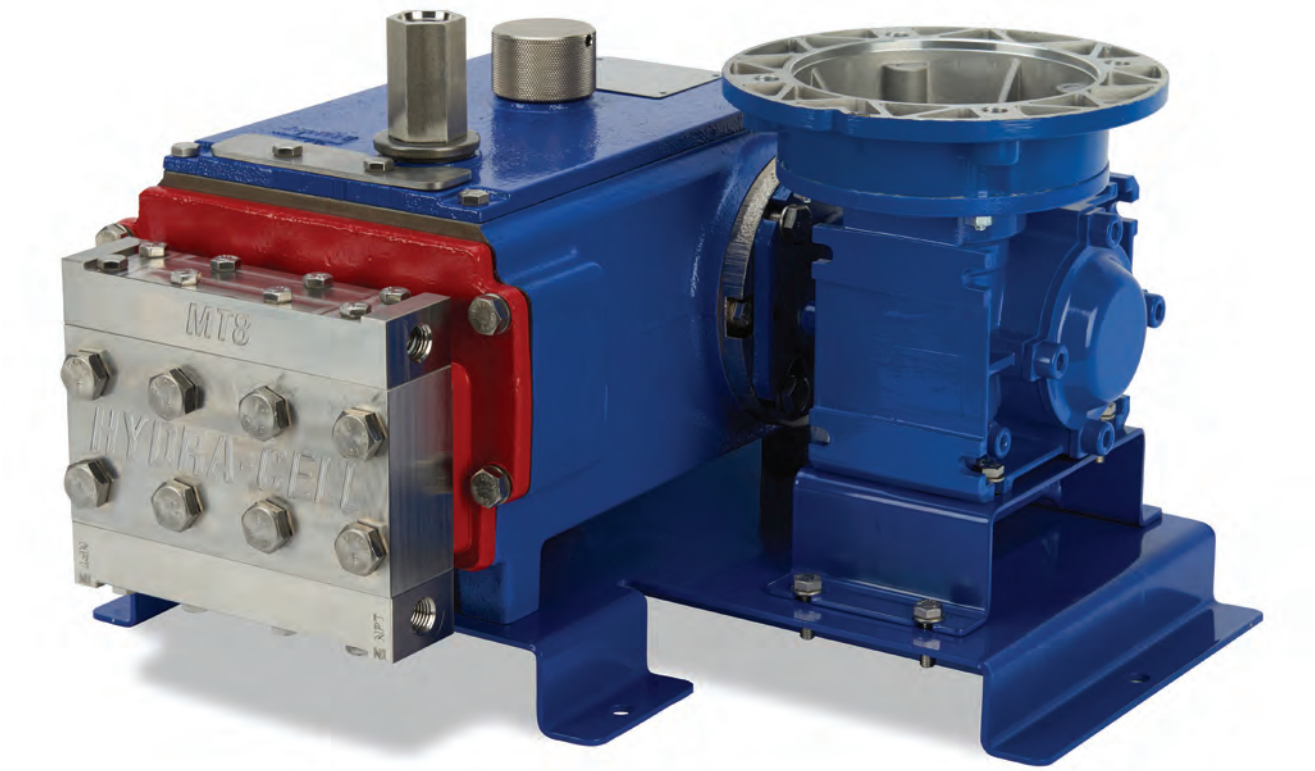
Hydra-Cell® METERING SOLUTIONS™

MT8 Pump

API 675

CE

Maximum Flow Rate: 30.28 L/hr (8.00 gph)
Minimum Flow Rate: 0.227 L/hr (0.06 gph)
Maximum Pressure: 241 bar (3500 psi)



MT8 with Stainless Steel pump head

Hydra-Cell Metering Solutions pumps exceed API 675 performance standards for Steady-State Accuracy (±1%), Linearity (±3%), and Repeatability (±3%).

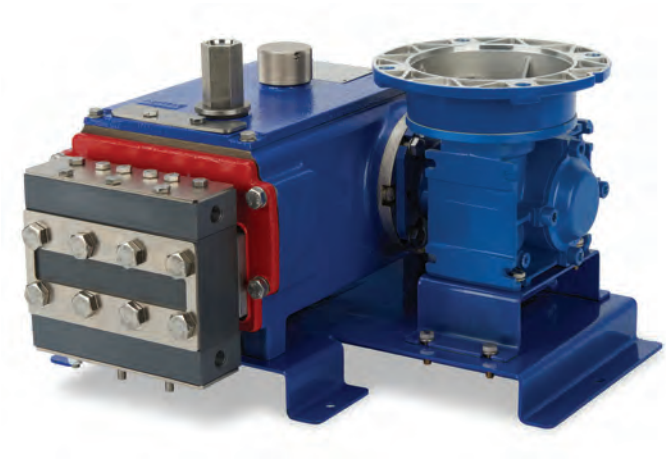
Triplex Metering Pump with Virtually Pulse-free Linear Flow

- Multiple-diaphragm design provides virtually pulse-free, linear flow without the need for expensive pulsation dampeners.
- Designed for low flow rates at high pressures.
- Can run dry indefinitely.
- Will operate without damage to the pump in the event of a blocked suction line.
- Handles a variety of processing fluids.
- Electronic flow control increases accuracy and reliability.
- The integral relief valve protects the pump from over pressurisation on the discharge side.
- Rugged construction.
- Smaller footprint saves valuable space.
- Duplexing option doubles capacity and equipment savings.
- One pump covers a wide range of flows and pressures - reducing inventory requirements with fast, simple field conversion.
- Hydraulically-actuated, balanced diaphragms provide superior performance across the entire pressure range.
- Seal-less design means no seals, cups, or packing to leak or replace.
- The replenishment valve system in every piston ensures optimum actuating oil on every stroke for continuous accuracy and protects the pump from damage in the event of a blocked suction line.

Wanner International Ltd.

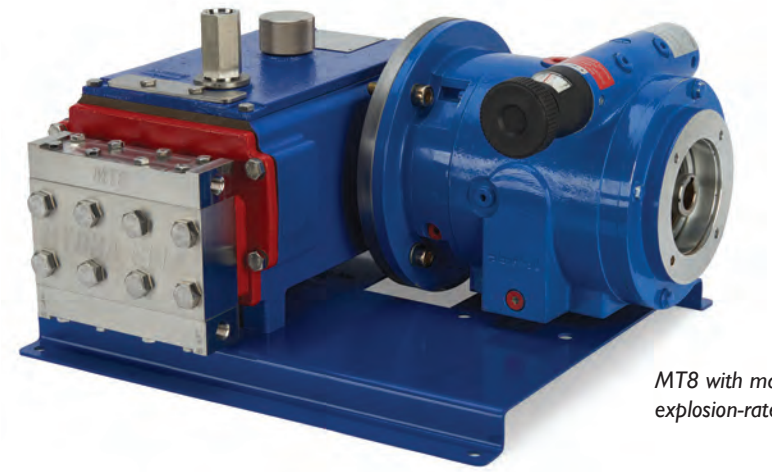
www.Hydra-Cell.eu

MT8 Materials and Configurations

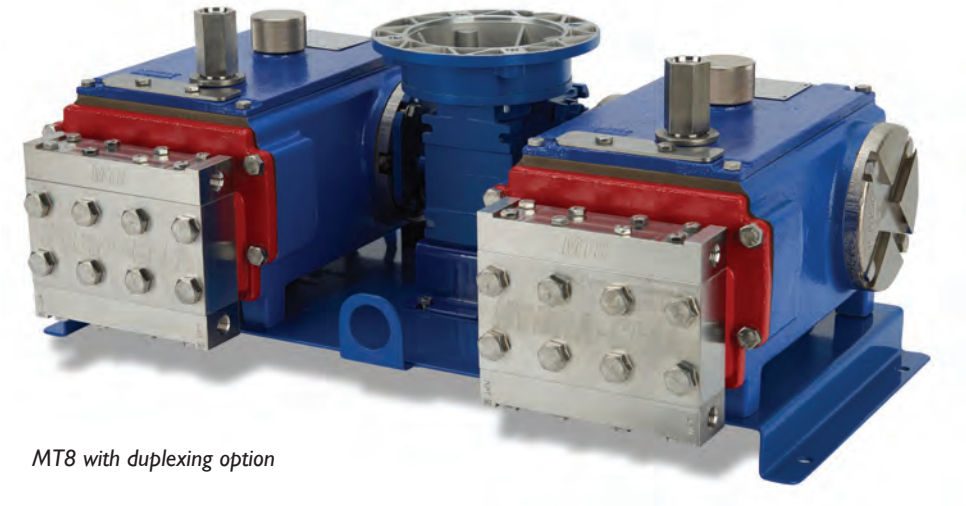


MT8 with PVC pump head

MT8 with PVDF pump head



MT8 with manual variable speed gearbox for use in explosion-rated zones



MT8 with duplexing option

Two MT8 pumps run at the same flow rate with only one gearbox and one motor. This "duplexing" option doubles capacity with a smaller footprint and lower investment cost than conventional metering pumps. Two different chemicals can be metered in a 1:1 ratio.

MT8 Pump

Performance Flow Capacities and Pressure Ratings

For Synchronous Speed, Self-cooled Motors

L/hr Maximum Flow at Designated Pressure

All Pumps (L/hr) 34 bar	103 bar	172 bar	241 bar	Pump RPM	Gear Ratio	Motor RPM
1.49	1.36	1.23	1.08	15	100:1	1500
1.85	1.68	1.52	1.35	18.75	80:1	
2.45	2.22	2.01	1.79	25	60:1	
3.03	2.75	2.51	2.26	30	50:1	
3.72	3.44	3.11	2.81	37.5	40:1	
5.03	4.54	4.13	3.72	50	30:1	
7.30	6.65	6.08	5.46	75	20:1	
14.71	13.44	12.13	10.83	150	10:1	
19.44	17.55	15.99	14.10	200	7.5:1	
29.16	26.33	23.12	20.63	300	5:1	

Required Motor kW

0.37

For 10:1 Turndown, Self-cooled Motors

L/hr Maximum Flow at Designated Pressure

All Pumps (L/hr) 34 bar	103 bar	172 bar	241 bar	Pump RPM	Gear Ratio	Motor RPM
1.49	1.36	1.23	1.08	15	100:1	1500
1.85	1.68	1.52	1.35	18.75	80:1	
2.45	2.22	2.01	1.79	25	60:1	
3.03	2.75	2.51	2.26	30	50:1	
3.72	3.44	3.11	2.81	37.5	40:1	
5.03	4.54	4.13	3.72	50	30:1	
7.30	6.65	6.08	5.46	75	20:1	
14.71	13.44	12.13	10.83	150	10:1	
19.44	17.55	15.99	14.10	200	7.5:1	
29.16	26.33	23.12	20.63	300	5:1	

Required Motor kW

0.18 | 0.25 | 0.37 | 0.55

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 IE2 motors.
4. Maximum continuous motor speed is 1500 RPM at full pressure.
5. For intermittent or reduced pressure duties, please contact Wanner International.
6. Flow rates above 30.28 L/hr are not guaranteed to meet API 675 Performance Standards. To reach a flow rate of 30.28 L/hr with a 5:1 gear box and 1500 RPM motor, the VFD will need to be programmed for operation above 50 Hz.

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. Please contact the factory for assistance.

See Page 6 for Electronic Flow Rate Controller.

Mechanical Adjustment Controller for ATEX/Explosive Areas

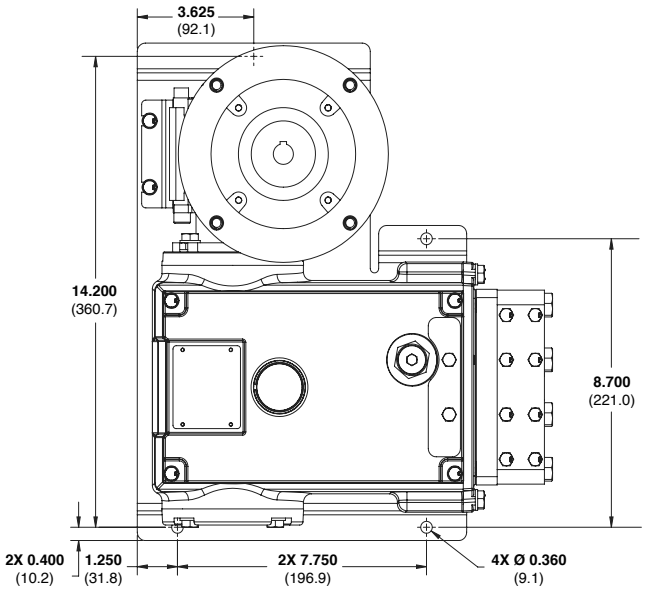
All Min/Max flow rates in litres/hour

34 bar Min	34 bar Max	103 bar Min	103 bar Max	172 bar Min	172 bar Max	241 bar Min	241 bar Max	Pump RPM	Gearbox Ratio	Model Number	Required Motor Size & Frame
0.23	2.01	0.23	1.82	0.23	1.65	0.23	1.49	20	30:1	MEC1 - 63B14	0.18kW / IEC 63 / B14 / 4-Pole
	2.92		2.66		2.43		2.18	30	20:1		
	5.88		5.38		4.85		4.33	60	10:1		
	7.78		7.02		6.40		5.64	80	7.5:1		
	11.67		10.53		9.25		/	120	5:1		
	/		/		/		8.25			MEC3 - 71B14	0.25kW / IEC 71 / B14 / 4-Pole
	30.32		30.32		/		/	472	*		0.37kW / IEC 71 / B14 / 4-Pole
	/		/		30.32		30.32			MEC5 - 80B14*	0.75kW / IEC 80 / B14 / 4-Pole

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

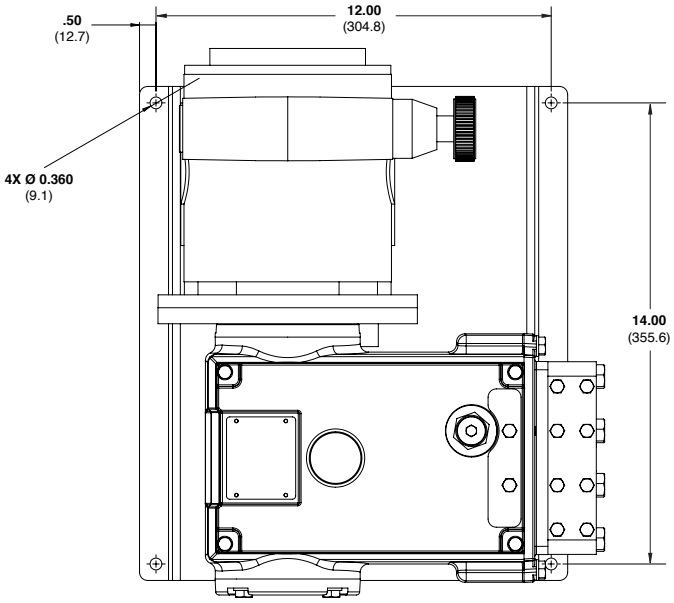
Representative Drawings Inches (mm)

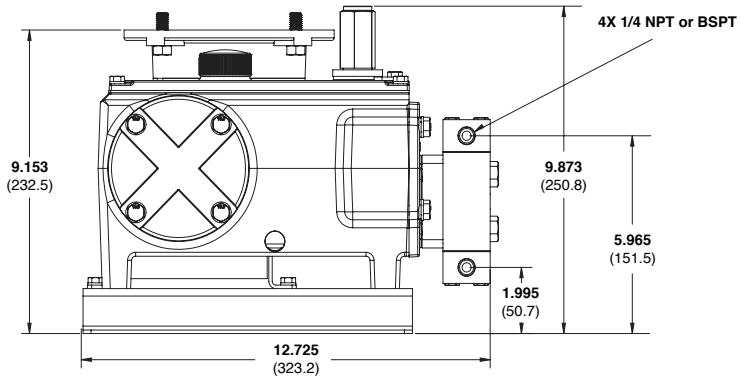
Metallic Pump Heads

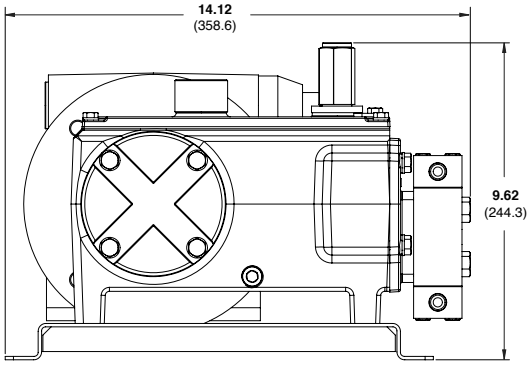


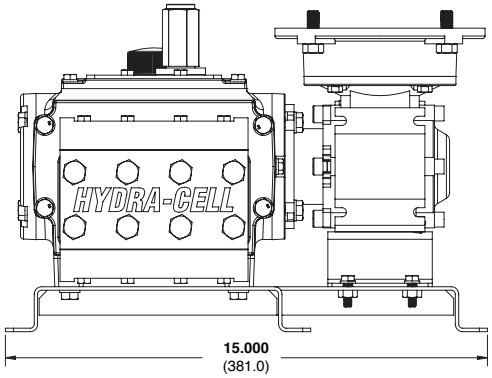
MOUNTING HOLE DIMENSIONS

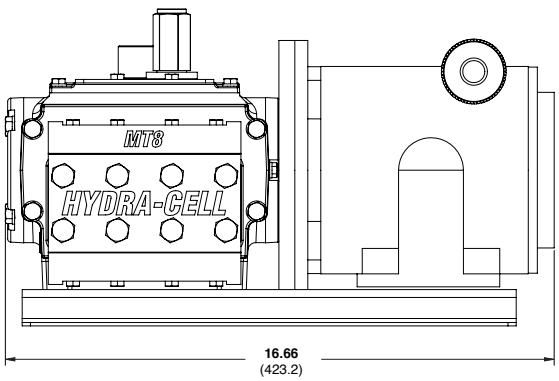
Metallic Heads with Manual Adjustment











MT8 Pump

Hydra-Cell METERING SOLUTIONS™

How to Order

A complete pump order number contains 16 digits based on the specified pump materials listed below.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
M	T	0	8				J	N							

Pump Model Size (Digits 1-2)

MT	Metering Triplex Pumps

Pump Capacity (Digits 3-4)

08	0.227 - 30.28 L/hr (0.06 - 8.00 gph)

Pump Version (Digit 5)

N	NPT Ports
M	BSPT Ports

Pump Head (Digits 6-7)

SN	316 SST
TN	Hastelloy C
AN	Alloy 20
VN	PVC
MN	PVDF

Diaphragm (Digit 8)

J	PTFE

Leak Detection Style (Digit 9)

N	No leak detection

CV Ball/Seat (Digits 10-11)

SS	316 SST / 316 SST
TT	Hastelloy C / Hastelloy C
AA	Alloy 20 / Alloy 20

Oil (Digit 12)

G	5W30 (Synthetic oil)
K	Food-contact oil

Motor Flange Size (Digit 13)

A	NEMA 56C
B	NEMA 143/145TC
C	IEC 63 B5
D	IEC 71 B5
E	IEC 80 B5
H	NEMA 56C (MA only)
L	IEC 71 B14 (MA or MX only)
M	IEC 80 B14 (MA or MX only)

Gearbox Ratio (Digits 14-15)

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
MA	Manual Adjustment (specify H, L or M flange for this option)
MX	Manual Adjustment ATEX (specify L or M flange for this option)

Note: Extra oil is required to fill the oil bowl during installation of ATEX . pumps. This oil is not included and must be ordered separately.

Baseplate (Digit 16)

C	Carbon Steel (Epoxy painted)
S	SST
M	Carbon Steel (Epoxy painted) Manual adjustment
T	SST Manual adjustment

Pump Data

Diaphragms per Liquid End	3
Flow Control	Electronic variable speed drive
Maximum Discharge Pressure	
Metallic Heads:	241 bar (3500 psi)
Non-metallic Heads:	24 bar (350 psi)
Maximum Inlet Pressure	
Metallic Heads:	34 bar (500 psi)
Non-metallic Heads:	300 psi (21 bar)
Operating Temperatures (min./max.)	
Metallic Heads:	4.4 °C (40 °F) to 121 °C (250 °F)
Non-metallic Heads:	4.4 °C (40 °F) to 60 °C (140 °F)
Consult factory for temperatures outside this range	
Inlet Port	1/4 inch BSPT or NPT
Discharge Port	1/4 inch BSPT or NPT
Maximum Solids Size	200 microns
Suction Lift Capability	6.1 meters (20 feet)
Shaft Rotation	Bi-directional
Oil Capacity	1.7 litres (1.75 US quarts)
Weight (less motor)	
Metallic Heads:	45 kg (100 lbs.)
Non-metallic Heads:	34 kg (75 lbs.)

Accessories, Options & Services

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

- Duplexing Models
- Different Gearbox Ratios
- Actuating Oils
- Magnetic Drain Plug
- Motors (Standard/Hazardous-duty)
- Controllers
- Control Freak Touch-screen Metering Controller
- SmartDrive Motor-Controller
- Calibration Cylinders
- Back Pressure Valves
- Pressure Relief Valves
- Testing Services
- System Components, Priming Kits and Plugs
- Replacement Part Kits and Tool Kits
- Pulsation Dampeners
- Customisation Services

Hydra-Cell® Metering and Dosing Control Options

Electronic Flow Rate Adjustment For Local Control

- ATEX Dust Zone 21 (Ex tb IIIC T125c Db)
- IP66 Standard
- Various flow rate adjustments options including:
  - On-board potentiometer(s)
  - On-board keypad controller with flow rate display
  - Removable, hand-held key-pad controller for authorised personnel only

Control Freak For Sophisticated Local Control

- Option available to control up to 6 x Hydra-Cell pumps with one Hydra-Cell "Control Freak"
- Multiple Variable Frequency Dive (VFD) options
- Enables programming for flow rate or totalisation
- Allows up to 10 x separate batch sequences
- Built-in Calibration mode

Mechanical 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

On-board keypad control

Hand-held keypad control

WANNER ENGINEERING - WORLD HEADQUARTERS & MANUFACTURING
Minneapolis USA
t: (612) 332-5681
e: sales@wannereng.com

WANNER PUMPS
Kowloon HONG KONG
t: +852 3428 6534
e: sales@wannerpumps.com

WANNER INTERNATIONAL
Hampshire UK
t: +44 (0) 1252 816847
e: sales@wannerint.com

WANNER ENGINEERING
Latin American Office
t: +55 (11) 4081-7098
e: sales@wannereng.com

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

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www.hydra-cell.co.uk