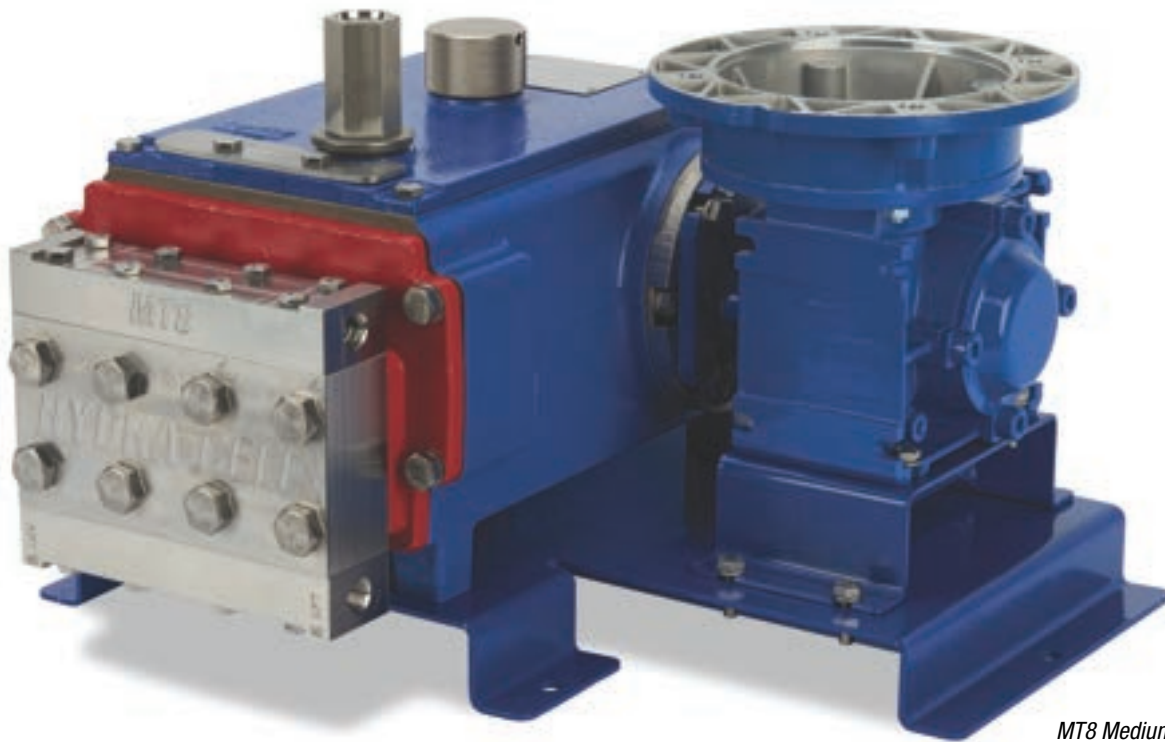


# MT8 PRO SERIES

## MEDIUM PRESSURE METERING

Maximum Flow Rate: 30.28 L/hr (8.00 US gph)  
Minimum Flow Rate: 0.227 L/hr (0.06 US gph)  
Maximum Pressure: 241 bar (3500 psi) for Metallic Pump Heads  
24 bar (350 psi) for Non-metallic Pump Heads

### **WANNER™** HYDRA-CELL® PRO METERING PUMP SOLUTIONS



*MT8 Medium 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 – 0 to max flow – for accurate metering performance.
- Multiple diaphragms deliver a very low-pulse flow, eliminating pulsation dampers 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 Medium Pressure | Performance

## Maximum Flow at Designated Pressure

for Pumps with Gearbox Reducer

### For Synchronous Speed, Self-cooled Motors

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

All Pumps (L/hr)				Pump rpm	Gear Ratio	Motor rpm
34 bar	103 bar	172 bar	241 bar			
1.49	1.35	1.22	1.10	15	100:1	1500
1.85	1.68	1.51	1.35	18.75	80:1	
2.45	2.22	2.00	1.79	25	60:1	
3.03	2.75	2.51	2.25	30	50:1	
3.71	3.44	3.11	2.80	37.5	40:1	
5.03	4.53	4.13	3.71	50	30:1	
7.29	6.64	6.07	5.45	75	20:1	
14.69	13.43	12.11	10.82	150	10:1	
19.42	17.53	15.97	14.08	200	7.5:1	
28.66	25.81	23.09	20.60	300	5:1	

Required Motor kW: 0.18 0.25 0.37

### For 10:1 Turndown, Self-cooled Motors

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

All Pumps (L/hr)				Pump rpm	Gear Ratio	Motor rpm
34 bar	103 bar	172 bar	241 bar			
1.49	1.35	1.22	1.10	15	100:1	1500
1.85	1.68	1.51	1.35	18.75	80:1	
2.45	2.22	2.00	1.79	25	60:1	
3.03	2.75	2.51	2.25	30	50:1	
3.71	3.44	3.11	2.80	37.5	40:1	
5.03	4.53	4.13	3.71	50	30:1	
7.29	6.64	6.07	5.45	75	20:1	
14.69	13.43	12.11	10.82	150	10:1	
19.42	17.53	15.97	14.08	200	7.5:1	
28.66	25.81	23.09	20.60	300	5:1	

Required Motor kW: 0.18 0.25 0.37 0.55

**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 US gph). Please contact Wanner 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 Wanner for higher ratio gearboxes and flows below 2.2 L/hr.

### 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 Wanner 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.

## Safe Area Manual Adjustment Controller Options

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

34 bar		103 bar		172 bar		241 bar		Pump rpm	Gearbox Ratio	Required Motor Size and Frame	Variable Gearbox Model Number To Order As Accessory
Min	Max	Min	Max	Min	Max	Min	Max				
0.23	2.01	0.23	1.82	0.23	1.65	0.23	1.49	20	30:1	0.18kW / IEC 63 / B14 / 4-Pole	MEC1-63 B14
	2.92		2.66		2.53		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	120	5:1	0.55 kW / IEC 80/ B14 / 4-pole	MEC5-80B14
	30.32		30.32		30.32		30.32	472	N/A	0.55 kW / IEC 80/ B14 / 4-pole	**

\*\* for MT8 direct coupled to manual adjustment controller without gearbox; supplied with the unit when digit 14-15 option "MA" or "MX" selected.

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

# MT8 Pro Medium Pressure | Features & Specifications

## Pump Features

- Patented ADPC – Advanced diaphragm position control. Protects the diaphragms from adverse suction conditions.
- Dry lift, self-priming; can run dry indefinitely without damage to the pump.
- Wide, controllable flow range Independent of discharge pressure, from 0 to Max pump rpm.
- 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

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



MT8 with PVC pump head.



MT8 with PVDF pump head.



MT8 with Stainless Steel pump head and manual variable speed gearbox.

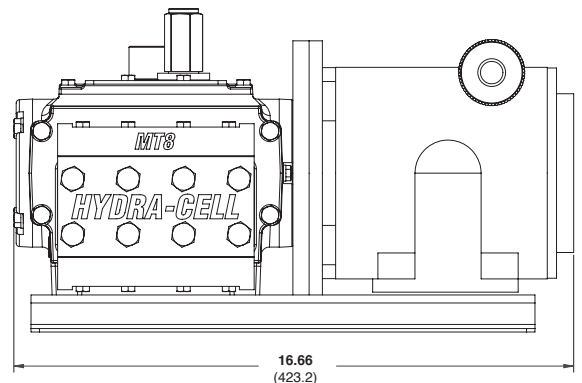
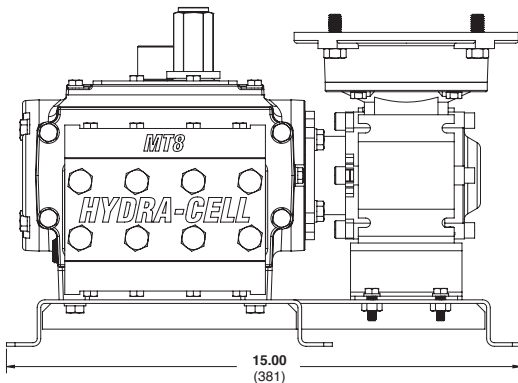
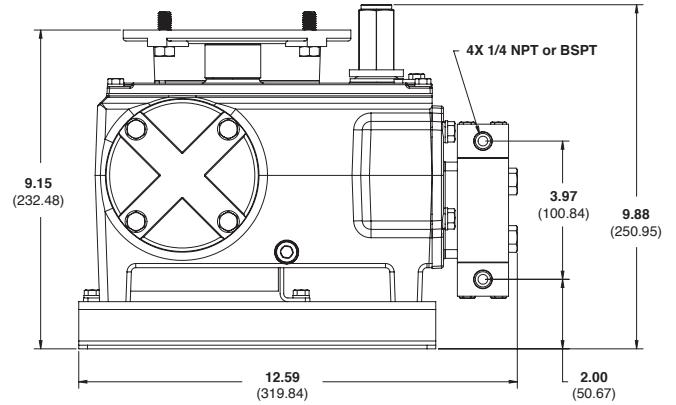
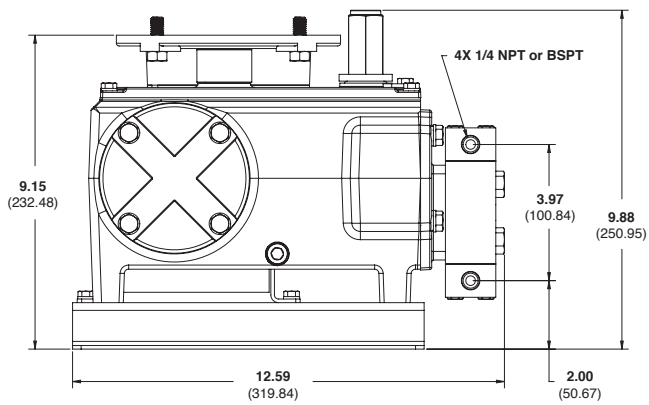
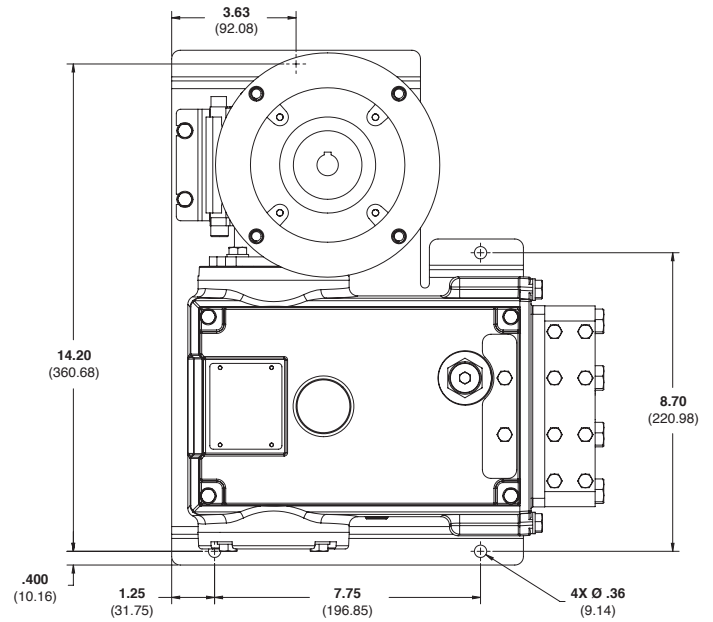
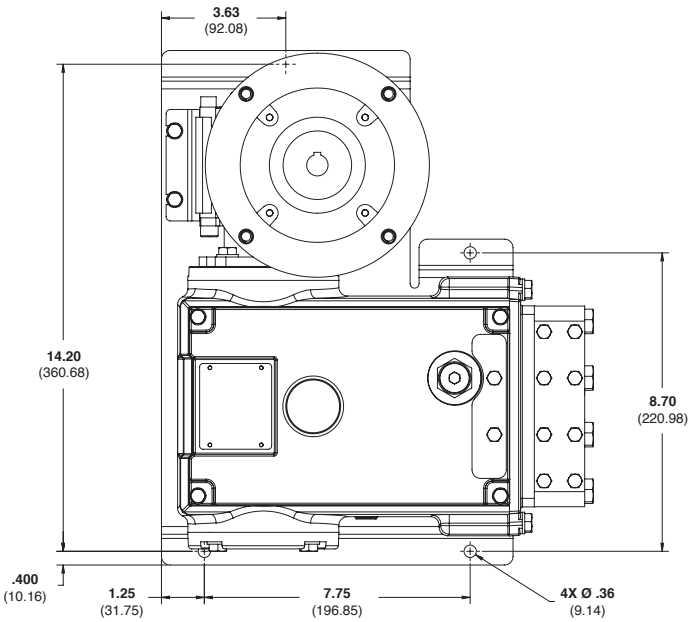
Due to the Wanner Engineering Continuous Improvement Program, specifications and other data are subject to change.

# MT8 Pro Medium Pressure | Representative Drawings

## Metallic Pump Heads Inches (mm)

**MT8 Medium Pressure with Fixed-Ratio Gear Reducers**

**MT8 Medium Pressure with Manual-Adjust Gear Reducers**



**Note:** Dimensions are for reference only. Contact Wanner for certified drawings.

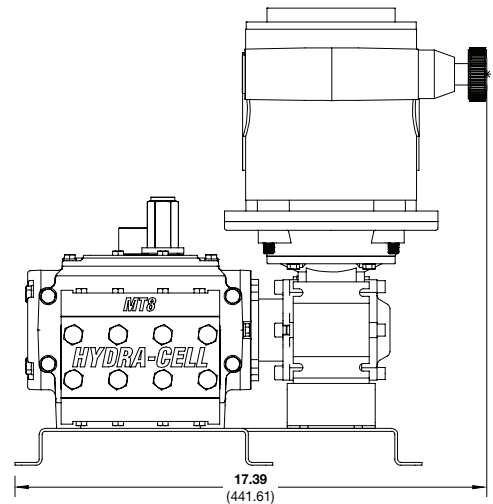
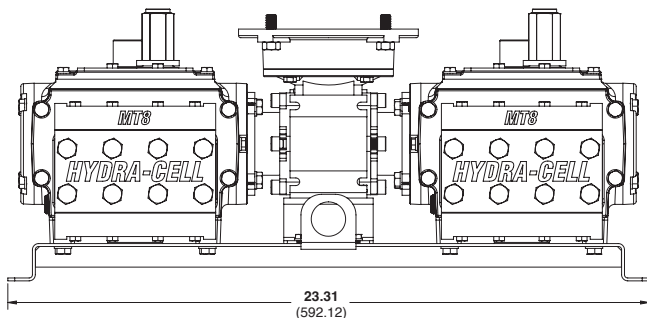
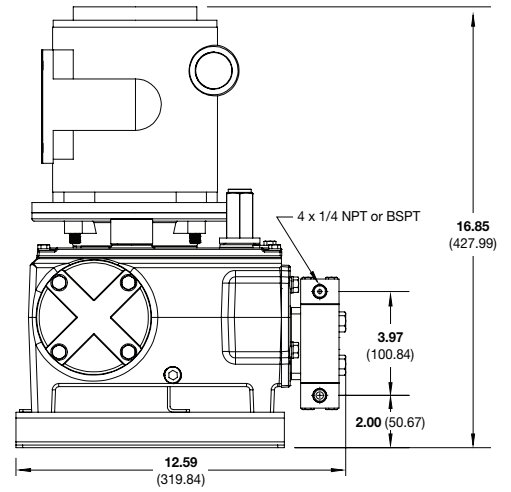
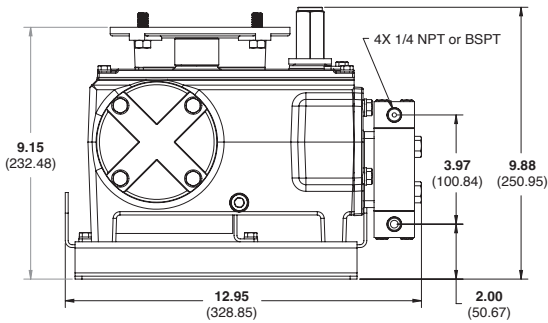
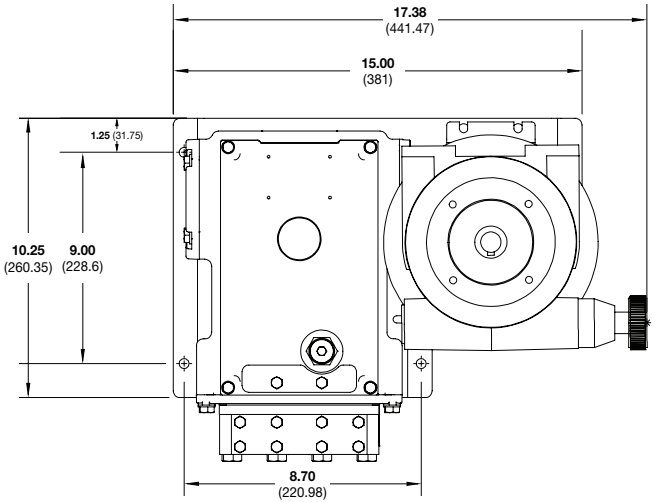
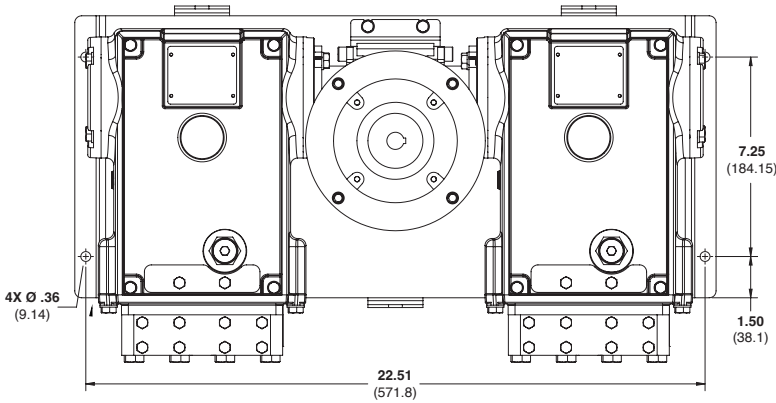
# MT8 Pro Medium Pressure | Representative Drawings

## Metallic Heads Inches (mm)

### MT8 Medium Pressure Duplexing Option

Two MT8 Medium 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.

### MT8 Medium Pressure with Variable Gear Box Mounted on Fixed Ratio Gear Box



**Note:** Dimensions are for reference only. Contact Wanner 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



## 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

# MT8 Pro Medium Pressure | How to Order

## Ordering Information

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

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

Digit	Order Code	Description
1-2	MT	<b>Pump Model Size</b> Triplex Metering Pumps
3-4		<b>Pump Capacity</b>
	08	0.227 - 30.28 L/hr (0.06 - 8.00 US gph)
	8D	MT8 Duplex 0.454 - 60.56 L/ph (0.12 - 16 US gph)
5		<b>Pump Version</b>
	N	NPT Ports
	M	BSPT Ports
6-7		<b>Pump Head</b>
	SN	316 SST
	TN	Hastelloy C
	AN	Alloy 20
	VN	PVC
	MN	PVDF
8		<b>Diaphragm</b>
	J	PTFE (FDA-compliant wetted PTFE materials available on request - consult Wanner International)
	K	PTFE with FKM O-rings
9		<b>Leak Detection Style</b>
	N	No leak detection
10-11		<b>CV Ball/Seat</b>
	SS	316 SST / 316 SS
	TT	Hastelloy C / Hastelloy C
	AA	Alloy 20 / Alloy 20
12		<b>Hydraulic End Oil</b>
	B	EPDM oil (NSF H1 accredited)
	G	5W30 (Synthetic oil)
	K	Food-contact oil (NSF H1 accredited)

Digit	Order Code	Description
13		<b>Motor Flange Size</b>
	A	NEMA 56C
	B	NEMA 143/145TC
	C	IEC 63 B5
	D	IEC 71 B5
	E	IEC 80 B5
	H	NEMA 56C (MA only)
	J	NEMA 143/145TC (MA only)
	M	IEC 80 B14 (MA only)
	X	No motor flange
14-15		<b>Gearbox Ratio</b>
	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
	X	No Gearbox
		Manual adjustment controller available for fixed-ratio gearboxes to be ordered as an accessory:
	MA	Specify H or J flange for this option
	MX	Specify M flange for this option
16		<b>Baseplate</b>
	C	Carbon Steel (Epoxy painted)
	S	SST
	M	Carbon Steel (Epoxy painted) Manual adjustment
	T	SST Manual adjustment
17		<b>Model</b>
	M	Medium Pressure 241 bar (3500 psi) for Metallic Pump Heads 24 bar (350 psi) for Non-metallic Pump Heads



### MT8 Medium 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 Medium 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 Medium 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 MEC5-80B14 variable gearbox as an extra line item as required.

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