PROTEUS® Series
Metering Pumps

DATA SHEET

Manual, Enhanced, and Communications Models

The PROTEUS® metering pump is a mechanically actuated diaphragm pump driven by advanced variable speed technology to provide the most accurate and reliable performance in the industry. This proven technology is easy to maintain and will provide years of maximum up-time service. Available in three control configurations, Manual, Enhanced, and Communications Models, the PROTEUS® pump fits seamlessly into the process control requirements of every application. The Manual model is the entry level model with two digital inputs, the Enhanced model provides a full range of capabilities, and the Communications model offers Profibus DP or Modbus RTU communication protocols for 2-way communication. All models come standard with a color backlit display, multi-language options and remote operation options. The PROTEUS® metering pump provides everything you need for complete control of your process.

Applications

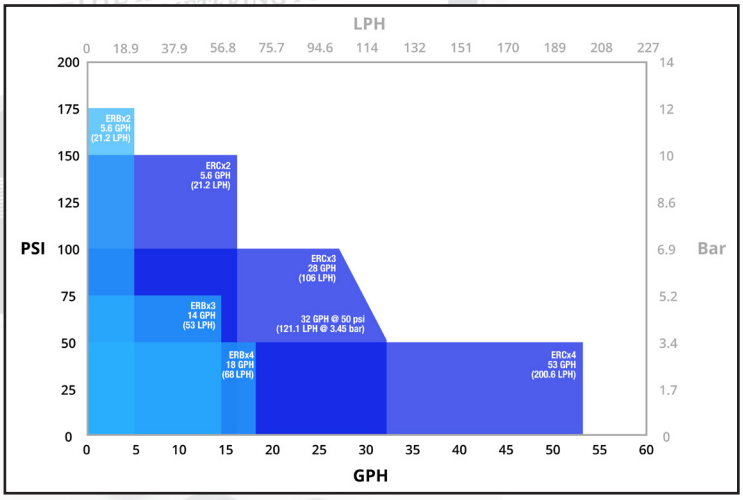
Whatever your application, the PROTEUS metering pump can provide the performance you need. Designed for the specific requirements of municipal and industrial water and waste treatment, the PROTEUS pump is suitable for a wide range of applications.

- Water treatment
- Waste water treatment
- General industry
- Agricultural
- Chemical
- Oil & gas
- Power generation
- Pulp & paper
- Textiles
- Other (contact your local authorized representative)

Performance Specifications

Turndown Ratio:	**Up to 1000:1**
Steady State Accuracy:	**+/- 1.0%**
Repetitive Accuracy:	**+/- 3.0%**
Linearity:	**+/- 3.0%**
Duty Rating:	**Continuous**

Certified to NSF/ANSI 61 & 372



Features and Benefits

- Intuitive user interface with backlit color display makes setup and customization simple.
- Wide range of control and input/output options to meet the demanding needs of most applications.
- Universal power supply providing maximum flexibility to power your pump: 100-240V, 50/60 Hz
- Multi-language navigation (English, French, Spanish, Portuguese and Chinese) for convenient operation anywhere in the field.
- Innovative drive system creates superior +/- 1% steady state accuracy over 1000:1 turndown ratio for greater flexibility of handling difficult chemicals.
- Optional liquid-end materials to maximize the life of the pump in challenging environments: polypropylene, PVDF, and 316L Stainless Steel.
- Mechanically actuated diaphragms for simple maintenance and reliable operation.
- Rugged construction with NEMA 4X/IP 65 housing and protective cover for the harshest environments.

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OUTPUT CODE 2 — 5.6 GPH (21.2 LPH); 175 psi (12 bar)

Drive End	Note: Cordsets from the accessories table may be required for the customer to connect to desired input/output.			151 SPM Max.
Control	**Description**	**Cordset Included**	**Part Number**	
ERB12	Manual Control	-	-	See Note
ERB22	Enhanced Control	4 Pin Cordset	54711	
ERB32	Enhanced Control with ProfiBus	4 Pin, 5 Pin Cordset	54711, 55199	
ERB42	Enhanced Control with ModBus	4 Pin, 5 Pin Cordset	54711, 55199	

Power Code	**Voltage**	**Plug**
1	110/240V	110 - 120 VAC 1 Phase US Plug
2	220/240V	220 - 240 VAC 1 Phase US Plug
3	220/240V	220 - 240 VAC 1 Phase DIN Plug
5	220/240V	220 - 240 VAC 1 Phase UK Plug
6	220/240V	220 - 240 VAC 1 Phase Australia / New Zealand Plug

Liquid End	**Head**	**Seat**	**Balls**	**Check Valve Body**	**Max Turndown Ratio**	**RPM Kit Standard**	**RPM Kit DN15 Conn.**
Standard Plastic							
A44AC	PP	TFE/P	Ceramic	PVDF	1000:1	RPM54771	RPM54772
A44A1	PP	TFE/P	316L	PVDF	1000:1	RPM54778	RPM54779
A44AT	PP	TFE/P	PTFE	PVDF	1000:1	RPM56409	RPM56410
A74TC	PVDF	PTFE	Ceramic	PVDF	200:1	RPM54773	RPM54774
A74AT	PVDF	TFE/P	PTFE	PVDF	1000:1	RPM56409	RPM56410
Standard Metallic							
A1411	316L	316L	316L	316L	1000:1	see below	
Slurry							
S1414	316L	316L	440C	316L	1000:1	RPM54776	
High Viscosity	**PE Tubing limited to 150 psi (10.3) Bar**						
V44T1	PP	PTFE	316L	PP	1000:1	RPM54777	

Standard Plastic	**Diaphragm**	**O-Rings**	**Fittings**	**Connections**	**Tubing Kit**	**RPM Kit**
A7T1	PTFE/PVDF	TFE/P	PVDF	Imperial Tube	1	-
A7PN	PTFE/PVDF	TFE/P	PVDF	1/2" NPT/BSP	-	-
A7M2	PTFE/PVDF	TFE/P	PVDF	Metric Tube	2	-
A2FN	PTFE/PVDF	TFE/P	PVDF/PVC	DN 15 Female	-	see above
A7DN (PVDF heads only)	PTFE/PVDF	TFE/P	PVDF	DN 15 Male	-	see above
Standard Metallic						
A1PN	PTFE/316L	TFE/P	316L	1/2" FNPT	-	RPM56407
V1PN	PTFE/316L	FKM	316L	1/2" FNPT	-	RPM54775
Slurry						
V1PN	PTFE/316L	FKM	316L	1/2" FNPT	-	-
High Viscosity						
N4T3	PTFE/PVDF	-	PP	Imperial Tube	3	-

ERB12	1	A44AC	A7T1

OUTPUT CODE 3 — 14.0 GPH (53.0 LPH); 75 psi (5 bar)

Drive End	Note: Cordsets from the accessories table may be required for the customer to connect to desired input/output.			162 SPM Max.
Control	**Description**	**Cordset Included**	**Part Number**	
ERB13	Manual Control	-	-	See Note
ERB23	Enhanced Control	4 Pin Cordset	54711	
ERB33	Enhanced Control with ProfiBus	4 Pin, 5 Pin Cordset	54711, 55199	
ERB43	Enhanced Control with ModBus	4 Pin, 5 Pin Cordset	54711, 55199	

Power Code	**Voltage**	**Plug**
1	110/240V	110 - 120 VAC 1 Phase US Plug
2	220/240V	220 - 240 VAC 1 Phase US Plug
3	220/240V	220 - 240 VAC 1 Phase DIN Plug
5	220/240V	220 - 240 VAC 1 Phase UK Plug
6	220/240V	220 - 240 VAC 1 Phase Australia / New Zealand Plug

Liquid End	**Head**	**Seat**	**Balls**	**Check Valve Body**	**Max Turndown Ratio**	**RPM Kit Standard**	**RPM Kit DN15 Conn.**
Standard Plastic							
A44AC	PP	TFE/P	Ceramic	PVDF	1000:1	RPM54771	RPM54772
A44A1	PP	TFE/P	316L	PVDF	1000:1	RPM54778	RPM54779
A44AT	PP	TFE/P	PTFE	PVDF	1000:1	RPM56409	RPM56410
A74TC	PVDF	PTFE	Ceramic	PVDF	200:1	RPM54773	RPM54774
A74AT	PVDF	TFE/P	PTFE	PVDF	1000:1	RPM56409	RPM56410
Standard Metallic							
A1411	316L	316L	316L	316L	1000:1	see below	
Slurry							
S1414	316L	316L	440C	316L	1000:1	RPM54776	
High Viscosity							
V44T1	PP	PTFE	316L	PP	1000:1	RPM54777	

Standard Plastic	**Diaphragm**	**O-Rings**	**Fittings**	**Connections**	**Tubing Kit**	**RPM Kit**
A7T1	PTFE/PVDF	TFE/P	PVDF	Imperial Tube	1	-
A7PN	PTFE/PVDF	TFE/P	PVDF	1/2" NPT/BSP	-	-
A7M2	PTFE/PVDF	TFE/P	PVDF	Metric Tube	2	-
A2FN	PTFE/PVDF	TFE/P	PVDF/PVC	DN15 Female	-	see above
A7DN PVDF heads only	PTFE/PVDF	TFE/P	PVDF	DN15 Male	-	see above
Standard Metallic						
A1PN	PTFE/316L	TFE/P	316L	1/2" FNPT	-	RPM56407
V1PN	PTFE/316L	FKM	316L	1/2" FNPT	-	RPM54775
Slurry						
V1PN	PTFE/316L	FKM	316L	1/2" FNPT	-	-
High Viscosity						
N4T3	PTFE/PVDF	-	PP	Imperial Tube	3	-

ERB13	1	A44AC	A7T1

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OUTPUT CODE 4 — 18.0 GPH (68.1 LPH); 50 psi (3.5 bar)

Drive End	Note: Cordsets from the accessories table may be required for the customer to connect to desired input/output.			144 SPM Max.
Control	**Description**	**Cordset Included**	**Part Number**	
ERB14	Manual Control	-	-	See Note
ERB24	Enhanced Control	4 Pin Cordset	54711	
ERB34	Enhanced Control with ProfiBus	4 Pin, 5 Pin Cordset	54711, 55199	
ERB44	Enhanced Control with ModBus	4 Pin, 5 Pin Cordset	54711, 55199	

Power Code	Voltage	Plug
1	110/240V	110 - 120 VAC 1 Phase US Plug
2	220/240V	220 - 240 VAC 1 Phase US Plug
3	220/240V	220 - 240 VAC 1 Phase DIN Plug
5	220/240V	220 - 240 VAC 1 Phase UK Plug
6	220/240V	220 - 240 VAC 1 Phase Australia / New Zealand Plug

Liquid End	Head	Seat	Balls	Check Valve Body	Diaphragm	Max Turndown Ratio	RPM Kit
Standard PP							
A46VC	PP	FKM	Ceramic	PP	PTFE	500:1	RPM54780
A46V1	PP	FKM	316L	PP	PTFE	500:1	RPM54784
A46AC	PP	TFE/P	Ceramic	PP	PTFE	500:1	RPM56405
A46A1	PP	TFE/P	316L	PP	PTFE	500:1	RPM56406
Standard PVDF							
A76VC	PVDF	FKM	Ceramic	PVDF	PTFE	500:1	RPM54780
A76AT	PVDF	TFE/P	PTFE	PVDF	PTFE	500:1	RPM56411
A76AC	PVDF	TFE/P	Ceramic	PVDF	PTFE	500:1	RPM56405
Standard Metallic							
A1611	316L	316L	316L	316L	PTFE	1000:1	see below
Slurry							
S1614	316L	316L	440C	316L	PTFE	1000:1	RPM54783
High Viscosity							
V46T1	PVC	PTFE	316L	PP	PTFE	1000:1	RPM54782

Standard PP	O-Rings	Fittings	Connections	Tubing Kit	RPM Kit
N4PN	-	PP	1/2" NPT/BSP	-	-
N4TN	-	PP	Imperial Tube	-	-
N2FN	-	PP/PVC	DN15 Female	-	-
Standard PVDF	-				
N2FN	-	PVDF/PVC	DN15 Female	-	-
N7PN	-	PVDF	1/2" NPT/BSP	-	-
N7TN	-	PVDF	Imperial Tube	-	-
Standard Metallic					
A1PN	TFE/P	316L	1/2" FNPT	-	RPM56408
V1PN	FKM	316L	1/2" FNPT	-	RPM54781
Slurry					
V1PN	FKM	316L	1/2" FNPT	-	-
High Viscosity					
N4P4	-	PP	1/2" NPT/BSP	4	-
N4T4	-	PP	Imperial Tube	4	-

ERB14	1	A46AC	N4PN

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OUTPUT CODE 2 — 16 GPH (60.6 LPH); 150 psi (10.3 bar)

Drive End — Note: Cordsets from the accessories table may be required for the customer to connect to desired input/output. — **198 SPM Max.**

Control	Description	Cordset Included	Part Number	
ERC12	Manual Control	-	-	See Note
ERC22	Enhanced Control	4 Pin Cordset	54711	
ERC32	Enhanced Control with ProfiBus	4 Pin, 5 Pin Cordset	54711, 55199	
ERC42	Enhanced Control with ModBus	4 Pin, 5 Pin Cordset	54711, 55199	

Power Code	Voltage	Plug
1	110/240V	110 - 120 VAC 1 Phase US Plug
2	220/240V	220 - 240 VAC 1 Phase US Plug
3	220/240V	220 - 240 VAC 1 Phase DIN Plug
5	220/240V	220 - 240 VAC 1 Phase UK Plug
6	220/240V	220 - 240 VAC 1 Phase Australia / New Zealand Plug

Liquid End	Head	Seat	Balls	Check Valve Body	Max Turndown Ratio	RPM Kit Standard	RPM Kit DN15 Conn.
Standard Plastic							
A44A1	PP	TFE/P	316L	PVDF	1000:1	RPM54778	RPM54779
A44AC	PP	TFE/P	Ceramic	PVDF	1000:1	RPM54771	RPM54772
A44AT	PP	TFE/P	PTFE	PVDF	1000:1	RPM56409	RPM56410
A74AT	PVDF	TFE/P	PTFE	PVDF	1000:1	RPM56419	RPM56410
A74TC	PVDF	PTFE	Ceramic	PVDF	200:1	RPM54773	RPM54774
Standard Metallic							
A1411	316L	316L	316L	316L	1000:1	see below	
Slurry							
S1414	316L	316L	440C	316L	1000:1	see below	
High Viscosity							
V44T1	PP	PTFE	316L	PP	1000:1	see below	

Standard Plastic	Diaphragm	O-Rings	Fittings	Connections	Tubing Kit	RPM Kit
A2FN	PTFE/PVDF	TFE/P	PVDF/PVC	DN 15 Female	-	-
A7M2	PTFE/PVDF	TFE/P	PVDF	Metric Tube	2	-
A7PN	PTFE/PVDF	TFE/P	PVDF	1/2" NPT/BSP	-	-
A7T1	PTFE/PVDF	TFE/P	PVDF	Imperial Tube	1	-
A7DN (PVDF heads only)	PTFE/PVDF	TFE/P	PVDF	DN 15 Male	-	-
Standard Metallic						
A1PN	PTFE/316L	TFE/P	316L	1/2" FNPT	-	RPM56407
V1PN	PTFE/316L	FKM	316L	1/2" FNPT	-	RPM54775
Slurry						
V1PN	PTFE/316L	FKM	316L	1/2" FNPT	-	RPM54776
High Viscosity						
N4T3	PTFE/PVDF	-	PP	Imperial Tube	3	RPM54777

ERC12	1	A44AC	A7T1

OUTPUT CODE 3 — 28 GPH (106 LPH); 100 psi (6.9 bar) - 32 GPH (121 LPH); 50 psi (3.5 bar)

Drive End — Note: Cordsets from the accessories table may be required for the customer to connect to desired input/output. — **200 SPM Max.**

Control	Description	Cordset Included	Part Number	
ERC13	Manual Control	-	-	See Note
ERC23	Enhanced Control	4 Pin Cordset	54711	
ERC33	Enhanced Control with ProfiBus	4 Pin, 5 Pin Cordset	54711, 55199	
ERC43	Enhanced Control with ModBus	4 Pin, 5 Pin Cordset	54711, 55199	

Power Code	Voltage	Plug
1	110/120V	110 - 120 VAC 1 Phase US Plug
2	220/240V	220 - 240 VAC 1 Phase US Plug
3	220/240V	220 - 240 VAC 1 Phase DIN Plug
5	220/240V	220 - 240 VAC 1 Phase UK Plug
6	220/240V	220 - 240 VAC 1 Phase Australia / New Zealand Plug

Liquid End	Head	Seat	Balls	Check Valve Body	Max Turndown Ratio	RPM Kit
Standard PP						
A46A1	PP	TFE/P	316L	PP	500:1	RPM56406
A46AC	PP	TFE/P	Ceramic	PP	500:1	RPM56405
A46V1	PP	FKM	316L	PP	500:1	RPM54784
A46VC	PP	FKM	Ceramic	PP	500:1	RPM54780
Standard PVDF						
A76AC	PVDF	TFE/P	Ceramic	PVDF	500:1	RPM56405
A76AT	PVDF	TFE/P	PTFE	PVDF	500:1	RPM56411
A76VC	PVDF	FKM	Ceramic	PVDF	500:1	RPM54780
Standard Metallic						
A1611	316L	316L	316L	316L	1000:1	see below
Slurry						
S1614	316L	316L	440C	316L	1000:1	RPM54783
High Viscosity						
V46T1	PP	PTFE	316L	PP	1000:1	RPM54782

Standard PP	Diaphragm	O-Rings	Fittings	Connections	Tubing Kit	RPM Kit
N4PN	PTFE	-	PP	1/2" MNPT	-	-
N2FN	PTFE	-	PP/PVC	DN15 Female	-	-
Standard PVDF						
N2FN	PTFE	-	PP/PVC	DN15 Female	-	-
N7PN	PTFE	-	PVDF	1/2" MNPT	-	-
Standard Metallic						
A1PN	PTFE	TFE/P	316L	1/2" FNPT	-	RPM56408
V1PN	PTFE	FKM	316L	1/2" FNPT	-	RPM54781
Slurry						
V1PN	PTFE	FKM	316L	1/2" FNPT	-	-
High Viscosity						
N4P4	PTFE	-	PP	1/2" MNPT	4	-

ERC13	1	A46VC	N4PN

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OUTPUT CODE 4 — 53 GPH (200.6 LPH); 60 psi (4.1 bar)

Drive End Note: Cordsets from the accessories table may be required for the customer to connect to desired input/output. **184 SPM Max.**

Control	Description	Cordset Included	Part Number	
ERC14	Manual Control	-	-	See Note
ERC24	Enhanced Control	4 Pin Cordset	54711	
ERC34	Enhanced Control with ProfiBus	4 Pin, 5 Pin Cordset	54711, 55199	
ERC44	Enhanced Control with ModBus	4 Pin, 5 Pin Cordset	54711, 55199	

Power Code	Voltage	Plug
1	110/120V	110 - 120 VAC 1 Phase US Plug
2	220/240V	220 - 240 VAC 1 Phase US Plug
3	220/240V	220 - 240 VAC 1 Phase DIN Plug
5	220/240V	220 - 240 VAC 1 Phase UK Plug
6	220/240V	220 - 240 VAC 1 Phase Australia / New Zealand Plug

Liquid End	Head	Seat	Balls	Check Valve Body	Max Turndown Ratio	RPM Kit
Standard PP						
A46A1	PP	TFE/P	316L	PVDF	500:1	RPM56406
A46AC	PP	TFE/P	Ceramic	PVDF	500:1	RPM56405
A46V1	PP	FKM	316L	PVDF	500:1	RPM54784
A46VC	PP	FKM	Ceramic	PVDF	500:1	RPM54780
Standard PVDF						
A76AC	PVDF	TFE/P	Ceramic	PVDF	500:1	RPM56405
A76AT	PVDF	TFE/P	PTFE	PVDF	500:1	RPM56411
A76VC	PVDF	FKM	Ceramic	PVDF	500:1	RPM54780
Standard Metallic						
A1611	316L	316L	316L	316L	1000:1	see below
Slurry						
S1614	316L	316L	440C	316L	1000:1	RPM54783
High Viscosity						
V46T1	PP	PTFE	316L	PP	1000:1	RPM54782

Standard PP	Diaphragm	O-Rings	Fittings	Connections	Tubing Kit	RPM Kit
N7NN	PTFE	-	PVDF	3/4" MNPT	-	-
N2GN	PTFE	-	PVDF/PVC	DN20 Female	-	-
Standard PVDF						
N7NN	PTFE	-	PVDF	3/4" MNPT	-	-
N2GN	PTFE	-	PVDF/PVC	DN20 Female	-	-
Standard Metallic						
A1NN	PTFE	TFE/P	316L	3/4" FNPT	-	RPM56408
V1NN	PTFE	FKM	316L	3/4" FNPT	-	RPM54781
Slurry						
V1NN	PTFE	FKM	316L	3/4" FNPT	-	-
High Viscosity						
N4N5	PTFE	-	PP	3/4" MNPT	5	-

ERC14	1	A46VC	N7NN

Tubing Kits (included in select pump configurations)

Tubing Kit 1
- Injection Valve
- Foot Valve
- 1 Weight (Suction Tubing)
- 16' PE Tube 3/8"
- 20" Reinforced PVC Hose 1/4" x 1/2"

Tubing Kit 2
- Injection Valve
- Foot Valve
- 1 Weight (Suction Tubing)
- Metric Ferrules 6x12mm
- 6m Reinforced PVC Hose 6x12mm

Tubing Kit 3
- Injection Valve
- 2m Reinforced PVC hose 15x23mm (Suction)
- 3m PE Tube 1/2" (Discharge)
- 1 Suction hose fitting (1/2" FNPT x 15x23 hose) & 2 hose clamps

Tubing Kit 4
- 2m Reinforced PVC hose 15x23mm (Suction)
- 1 Suction hose fitting (1/2" FNPT x 15x23 hose) & 2 hose clamps

Tubing Kit 5
- 6.5ft Reinforced PVC hose 0.75" x 1.031" (Suction)
- 1 Suction hose fitting (3/4" MNPT x 0.75" x 1.031" hose) & 2 hose clamps

Output Code ERBx2, ERBx3, ERCx2

Imperial Connections Part Number	Imperial Connections Description	Metric Connections Part Number	Metric Connections Description
PP Head, 316 SS Balls			
58982	Injection Valve, PTFE	58982	Injection Valve, PTFE
58987	Foot Valve, Mixed	58987	Foot Valve, Mixed
59008	Connection Kit, 0.375 and 0.25 x 0.5	59009	Connection Kit, 6x12
	Tubing Kit, includes:		Tubing Kit, includes:
10342-10	3/8" TUBE x 10 FT	36181-6M	8mm TUBE X 6m
54342-20	1/4" x 1/2" HOSE x 20 FT	70121-6M	6x12mm HOSE X 6m
PP Head, Ceramic Balls			
58983	Injection Valve, Mixed	58983	Injection Valve, Mixed
58985	Foot Valve, Aflas	58985	Foot Valve, Aflas
59008	Connection Kit, 0.375 and 0.25 x 0.5	59009	Connection Kit, 6x12
	Tubing Kit, includes:		Tubing Kit, includes:
10342-10	3/8" TUBE X 10 FT	36181-6M	8mm TUBE X 6m
54342-20	1/4" x 1/2" HOSE x 20 FT	70121-6M	6x12mm HOSE X 6m
PVDF Head, Ceramic Balls			
58983	Injection Valve, Mixed	58983	Injection Valve, Mixed
58986	Foot Valve, PTFE	58986	Foot Valve, PTFE
59008	Connection Kit, 0.375 and 0.25 x 0.5	59009	Connection Kit, 6x12
	Tubing Kit, includes:		Tubing Kit, includes:
10342-10	3/8" TUBE X 10 FT	36181-6M	8mm TUBE X 6m
54342-20	1/4" x 1/2" HOSE x 20 FT	70121-6M	6x12mm HOSE X 6m
		High Viscosity	
		58984	Injection Valve, HV
		59010	Connection Kit, Hose Clamp
		59013	Tubing Kit, HV

Output Code ERBx4 (all kits), ERCx3 (NPT Connections only)

Imperial Connections Part No	Imperial Connections Description	Metric Connections Part No	Metric Connections Description
PP Head			
26758	Injection Valve, 0.5" Tube, PP, PTFE, Cer	26710	Injection Valve, NPT, PP, PTFE, Cer
25154	Foot Valve, 0.5" Tube, PP, PTFE, Cer	26015	Foot Valve, NPT, PP, PTFE, Cer
77384	Connection Kit, 0.5" Tubing		
PVDF Head			
33481	Injec. Valve, 0.5" Tube, PVDF, PTFE, Cer	38270	Injec. Valve, NPT, PVDF, PTFE, Cer
33480	Foot Valve, 0.5" Tube, PVDF, PTFE, Cer	38271	Foot Valve, NPT, PVDF, PTFE, Cer
77384	Connection Kit, 0.5" Tubing		
High Viscocity			
56912	Inject. Valve 0.5" MNPT, PVDF, PTFE, Cer		

Input/Output Cordsets

Part No.	Description	Application Notes
48414	CORDSET, 5 PIN, 2 M / 6.6 FT	(J2) Digital output
49035	CORDSET, 6 PIN, 2 M / 6.6 FT	(J1 & J4) Digital input & Analog output
54711	CORDSET, 4 PIN, 2 M / 6.6 FT	(J3) Analog input
55199	CORDSET, 5 PIN, 2 M / 6.6 FT	(C) ProfiBus/ModBus Communicaton

Extension Cable Assembles - 5 Pin

Part No.	Description
50503-6	Extension Cable, 6 M / 19.7 Ft
50503-15	Extension Cable, 15 M / 49.2 Ft

Extension Cable Assembles - 6 Pin

Part No.	Description
50684-6	Extension Cable, 6 M / 19.7 Ft
50684-30	Extension Cable, 30 M / 98.4 Ft

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Electronic control by model

	Control Version		
	Manual model	Enhanced model	Communications model
User Interface			
Four Color Backlit graphical display	●	●	●
Flow rate or volume display (GPH, L/hr)	●	●	●
Capacity setting display	●	●	●
Start/Stop button	●	●	●
Mode/Select button	●	●	●
Full capacity (100%) button	●	●	●
Prime button	●	●	●
Active operation mode indication on display	●	●	●
Active alarm indication on display	●	●	●
Calibration status indication on display	●	●	●
Operation Modes			
Manual (Internal)	●	●	●
Analog [0/4-20 mA] (External)		●	●
Pulse [volume/pulse] (External)		●	●
Batch (External)		●	●
Cycle Timer (Internal)		●	●
Timed event (Internal)		●	●
Control Input			
Programmable digital contacts	1	4	4
User 1		●	●
User 2		●	●
User 3		●	●
Single level float switch	●	●	●
Dual low level float switch		●	●
Pulse control		●	●
Remote start/stop	●	●	●
Remote internal/external mode selection		●	●
Programmable analog inputs	0	2	2
Pacing		●	●
Tank level		●	●
Control Protocol			
Modbus RTU*			●
Profibus DP*			●

* Must order pump configured for your control protocol (See section table).

	Control Version		
	Manual model	Enhanced model	Communications model
Control Output			
Programmable digital contacts	0	2	2
Pump running		●	●
Pump standby/stopped [not pumping but ready]		●	●
Alarm status		●	●
User alarm status		●	●
Internal/External mode indication		●	●
Pump stopped		●	●
Stroke pulse		●	●
Timed event running		●	●
Programmable analog output	0	1	1
Flow rate [4-20 mA correlates to 0 - max capacity]		●	●
Mirror analog input 1		●	●
Mirror analog input 2		●	●
Power supply for remote device [24V] (eg. Flow sensor)	0	1	1
Operation functions			
Capacity control by motor speed variation	●	●	●
Variable stroke profile (variable discharge speed/constant suction speed)	●	●	●
Slow suction mode for viscous or degassing media	●	●	●
Calibration function (single point)	●	●	●
Prime feature (max capacity) button, timer	●	●	●
Totalizer (strokes, volume, hours motor operation, number of power cycles)	●	●	●
Keypad lock (software driven with password)	●	●	●
Clock feature (date and 12 hour time)	●	●	●
Diaphragm replacement mode (sets stroke to extended position)	●	●	●
Display firmware revision	●	●	●
Load factory defaults	●	●	●
Battery to maintain date and time settings when main power is removed	●	●	●
EEPROM nonvolatile memory (configurations saved/powers up in last used mode)	●	●	●
Internal/External input control mode configuration	●	●	●
Alarm output mask configuration (configure which events trigger alarm output relay)	●	●	●
Analog input response curve customization		●	●
Input pulse width setting		●	●
Start/Stop via remote signal	●	●	●
Pump switch off on tank empty	●	●	●
Modus RTU / Profibus DP protocol			●
StayPrime Degassing Technology	●	●	●
Alarm Log	●	●	●

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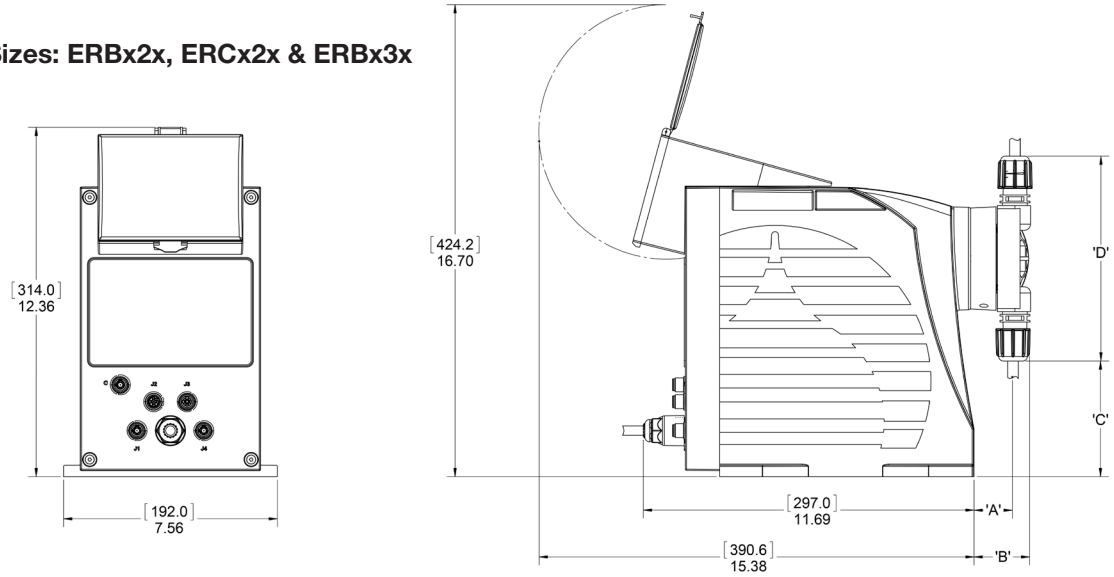
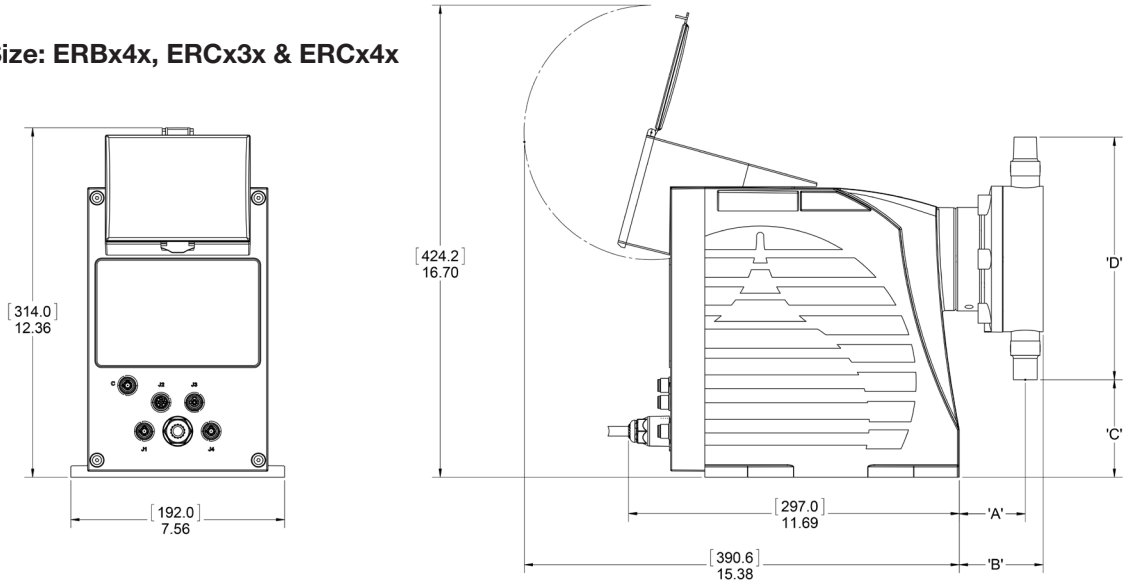
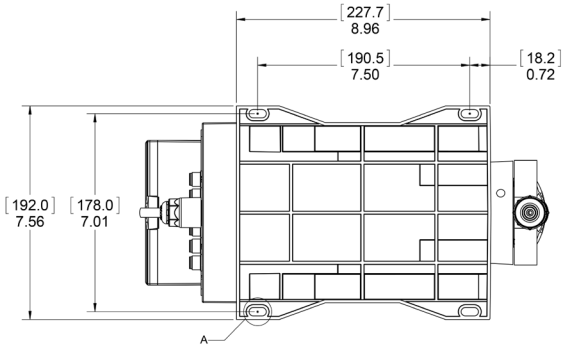
Drive Sizes: ERBx2x, ERCx2x & ERBx3x



Drive Size: ERBx4x, ERCx3x & ERCx4x



Mounting Information
(All drive sizes)



DRIVE	LIQUID END	A		B		C		D	
		INCH	[mm]	INCH	[mm]	INCH	[mm]	INCH	[mm]
ERBx4x, ERCx3x ERCx4x	"TUBE CONNECTIONS: CODE A44, A74"	1.44	36.7	2.03	51.7	4.09	103.9	7.25	184.2
	"DN PIPE CONNECTIONS: CODE A44, A74"	1.44	36.7	2.00	50.7	2.45	62.2	10.54	267.7
	"STAINLESS HEAD AND SLURRY HEAD: CODE A14, S14"	1.38	35.0	2.01	51.0	3.70	94.0	8.03	204.0
	"HIGH VISCOSITY HEAD: CODE V44"	1.61	40.8	2.30	58.3	4.32	109.8	7.63	193.7
ERBx4x ERCx3x ERCx4x	"NPT CONNECTIONS: CODE A46, A76"	2.33	59.3	2.96	75.3	3.45	87.6	8.58	218.0
	"TUBE CONNECTIONS: CODE A46, A76"	2.33	59.3	2.96	75.3	2.82	71.6	9.84	250.0
	"DN PIPE CONNECTIONS: CODE A46, A76"	2.33	59.3	3.13	79.5	2.05	52.1	11.38	289.0
	"STAINLESS HEAD AND SLURRY HEAD: CODE A16, S16"	2.42	61.4	3.28	83.4	2.98	75.6	9.49	241.0
	"HIGH VISCOSITY HEAD (NPT DISCHARGE): CODE V46"	2.33	59.3	2.95	74.9	3.73	94.8	8.30	210.8
	"HIGH VISCOSITY HEAD (TUBE DISCHARGE): CODE V46"	2.33	59.3	2.95	74.9	3.73	94.8	8.93	226.8

Note: Tube connections A46 and A76 aren't available on ERC, neither is the V46 high viscosity tube option.

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