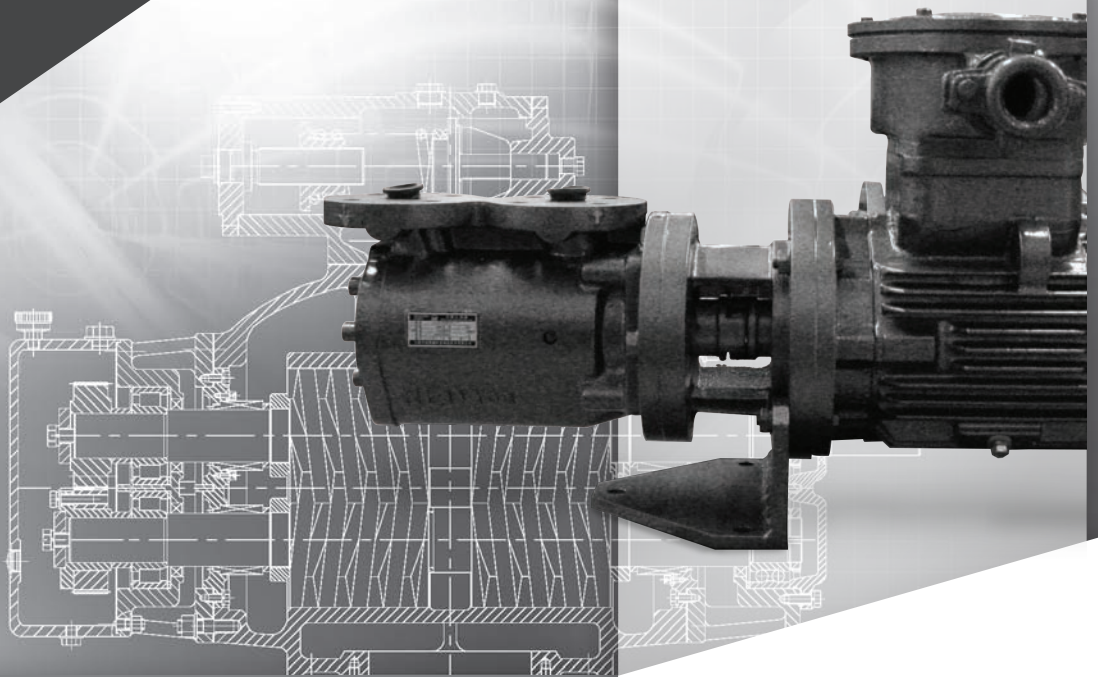


**Blackmer**<sup>®</sup>

# Design Manual

3PF SERIES  
Triple-Screw Pumps



Where Innovation Flows



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Blackmer People are Technologically Oriented



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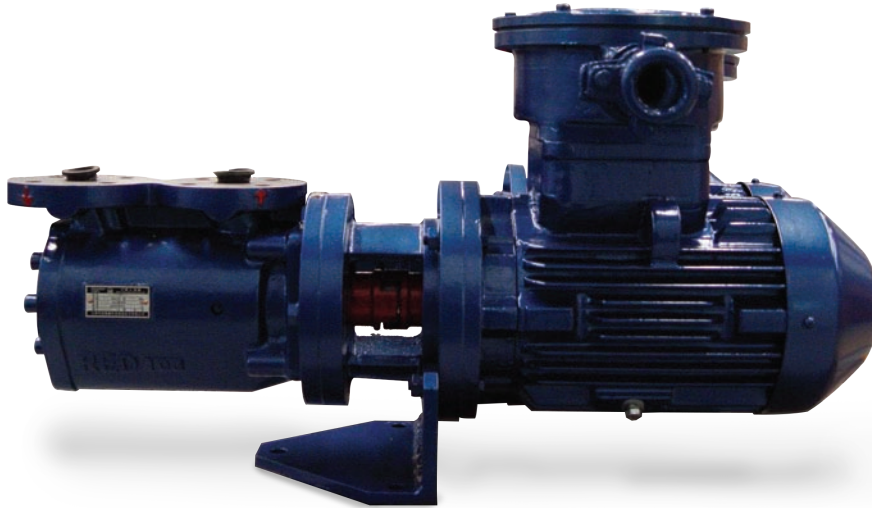
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3PF Series Triple-Screw Pumps are used to handle various non-corrosive lubricating liquids without solid contents.

<b>Flow rate:</b> 2 - 130 L/min (0.53 - 34.3 gpm)	<b>Temperature:</b> $\leq 150^{\circ}\text{C}$ (302°F)
<b>Pressure:</b> 1.0 - 40.0 Bar (14.5 - 580 psi)	<b>Viscosity:</b> 3 - 750 mm <sup>2</sup> /s

## SECTION 2

**APPLICATIONS**

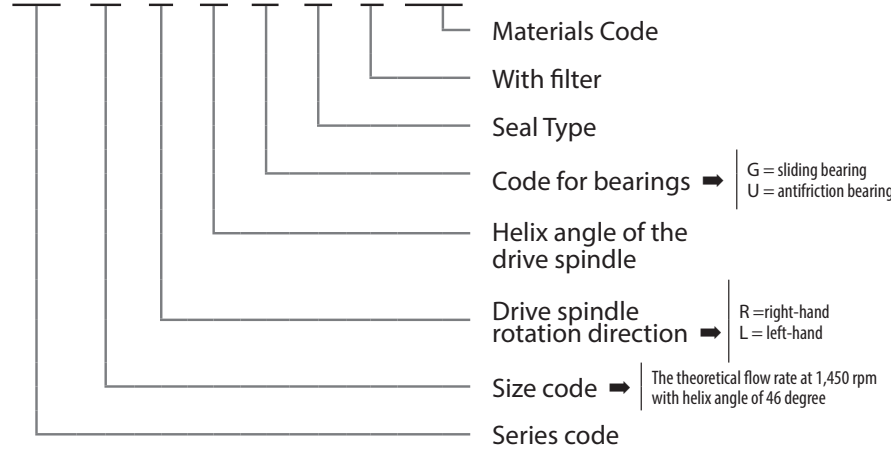
- Transportation and boost in fuel system and fuel furnace
- Transportation and dispensing in oil delivery system
- Transferring lubricating oil in industrial applications
- Hydraulic pump for hydraulic transmitting system

## SECTION 3

**STRUCTURAL FEATURES**

1. Secondary screws are driven by hydraulic forces. Torque from the friction of the media is transferred and applied on the surface of secondary screws; therefore, no wearing occurs on the surface. The axial forces on the secondary screws are applied to back cover.
  2. The balancing piston balances the axial force on the surface of the drive screw.
  3. The internal pressure valve for over-load protection ensures system safety.
  4. A constant sealed chamber is formed between the teeth of the drive and secondary screws to move the liquid to the discharge port with consistent speed. Therefore, there is no pulsation during transportation and no propulsion since the sealed chamber remains volumetrically constant.
  5. The sealing chamber contains mechanical seals. The sealing chamber is connected to suction chamber via reflex hole; therefore, the mechanical seal is not affected by the discharge pressure.
-

**3PF 20 R 38 G 10 F - W2**



**Materials**

Code	Casing		
	GB	DIN	ANSI
W1	HT250	GG25	Class 35B
W2	HT250	GG25	Class 35B
W3	QT400-18	GGG-40	60-40-18 F32800
W5	QT400-18	GGG-40	60-40-18 F32800
W21	HT250	GG25	Class 35B
W23	QT400-18	GGG-40	60-40-18 F32800
Code	Liner		
	GB	DIN	ANSI
W1	<b>QT450-10</b>	<b>GGG-45 0.7045</b>	<b>65-45-12</b>
W2	<b>ZL109</b>	-	<b>A03360/A03361</b>
W3	<b>ZL109</b>	-	<b>A03360/A03361</b>
W5	<b>QT450-10</b>	<b>GGG-45 0.7045</b>	<b>65-45-12</b>
W21	<b>ZQSn5-5-5</b>	<b>G-CuSn5ZnPb 2.1096.01</b>	<b>C83600</b>
W23	<b>ZQSn5-5-5</b>	<b>G-CuSn5ZnPb 2.1096.01</b>	<b>C83600</b>

SECTION 5

**NPSH TABLE**

**50Hz - 60Hz**

**US STANDARD**

Size	Speed (r/min)																			
	950/1150					1450/1750					2900					3500				
	Viscosity (mm <sup>2</sup> /s)																			
	3-40	75	150	380	750	3-40	75	150	380	750	3-40	75	150	380	750	3-40	75	150	380	750
NPSHr (ft)																				
20-38	8.2	9.2	9.5	9.8	10.5	8.2	9.2	9.5	10.2	10.8	8.2	9.8	10.5	11.5	12.5	8.5	10.2	11.2	12.1	13.1
20-46	8.2	9.2	9.5	10.2	10.8	8.2	9.5	10.2	10.8	11.5	8.9	10.5	11.5	12.8	13.8	9.5	11.2	12.5	13.4	14.8
20-56	8.2	9.5	9.8	10.8	11.5	8.2	10.2	10.8	11.8	12.8	10.5	12.5	13.4	14.8	16.1	11.5	13.4	14.8	16.4	18.0
40-38	8.2	9.2	9.5	10.2	10.8	8.2	9.5	10.2	10.8	11.5	12.1	10.5	11.5	12.5	13.4	9.2	11.2	12.1	13.1	14.4
40-46	8.2	9.2	9.8	10.5	11.2	8.5	9.8	10.8	11.5	12.5	9.8	11.8	13.1	14.1	15.4	10.8	13.1	14.1	15.4	17.1
40-54	8.2	9.8	10.5	11.2	11.8	8.9	10.8	11.8	12.8	13.8	11.8	14.1	15.4	16.7	18.4	13.4	15.7	17.4	19.0	21.0

**50Hz - 60Hz**

**METRIC**

Size	Speed (r/min)																			
	950/1150					1450/1750					2900					3500				
	Viscosity (mm <sup>2</sup> /s)																			
	3-40	75	150	380	750	3-40	75	150	380	750	3-40	75	150	380	750	3-40	75	150	380	750
NPSHr (m)																				
20-38	2.5	2.8	2.9	3.0	3.2	2.5	2.8	2.9	3.1	3.3	2.5	3.0	3.2	3.5	3.8	2.6	3.1	3.4	3.7	4.0
20-46	2.5	2.8	2.9	3.1	3.3	2.5	2.9	3.1	3.3	3.5	2.7	3.2	3.5	3.9	4.2	2.9	3.4	3.8	4.1	4.5
20-56	2.5	2.9	3.0	3.3	3.5	2.5	3.1	3.3	3.6	3.9	3.2	3.8	4.1	4.5	4.9	3.5	4.1	4.5	5.0	5.5
40-38	2.5	2.8	2.9	3.1	3.3	2.5	2.9	3.1	3.3	3.5	3.7	3.2	3.5	3.8	4.1	2.8	3.4	3.7	4.0	4.4
40-46	2.5	2.8	3.0	3.2	3.4	2.6	3.0	3.3	3.5	3.8	3.0	3.6	4.0	4.3	4.7	3.3	4.0	4.3	4.7	5.2
40-54	2.5	3.0	3.2	3.4	3.6	2.7	3.3	3.6	3.9	4.2	3.6	4.3	4.7	5.1	5.6	4.1	4.8	5.3	5.8	6.4

Blackmer reserves the right to change the data in the table without prior notice.



## U.S. STANDARD

Speed n=950 r/min

Size	Pressure PSI	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP
20-38	72.5	1.98	0.16	2.22	0.16	2.32	0.16	2.46	0.16	2.51	0.19	2.53	0.23	2.59	0.28	2.59	0.36
	145	1.48	0.28	1.85	0.28	2.06	0.28	2.32	0.28	2.40	0.30	2.48	0.34	2.53	0.40	2.56	0.47
	217.5	1.00	0.39	1.53	0.39	1.85	0.39	2.19	0.39	2.32	0.40	2.40	0.44	2.48	0.51	2.53	0.58
	290	0.55	0.50	1.24	0.50	1.61	0.50	2.06	0.50	2.22	0.52	2.35	0.55	2.46	0.62	2.51	0.68
	362.5			0.95	0.60	1.40	0.60	1.95	0.60	2.14	0.63	2.30	0.66	2.43	0.72	2.48	0.80
	435			0.66	0.71	1.19	0.71	1.82	0.71	2.06	0.74	2.24	0.78	2.38	0.83	2.46	0.91
	507.5					1.00	0.83	1.72	0.83	1.98	0.84	2.16	0.89	2.35	0.95	2.43	1.02
	580					0.79	0.94	1.61	0.94	1.90	0.95	2.11	0.99	2.30	1.06	2.40	1.13
20-46	72.5	2.69	0.20	2.96	0.20	3.09	0.20	3.27	0.20	3.33	0.23	3.38	0.25	3.41	0.32	3.43	0.39
	145	2.06	0.35	2.53	0.35	2.80	0.35	3.09	0.35	3.19	0.36	3.27	0.40	3.35	0.47	3.41	0.54
	217.5	1.48	0.50	2.14	0.50	2.51	0.50	2.93	0.50	3.09	0.51	3.19	0.55	3.30	0.62	3.35	0.68
	290	0.92	0.64	1.77	0.64	2.24	0.64	2.77	0.64	2.98	0.66	3.14	0.70	3.27	0.76	3.33	0.83
	362.5			1.43	0.78	1.98	0.78	2.64	0.78	2.88	0.80	3.06	0.84	3.22	0.90	3.30	0.98
	435			1.08	0.93	1.72	0.93	2.48	0.93	2.77	0.95	2.98	0.98	3.17	1.05	3.25	1.11
	507.5					1.48	1.07	2.35	1.07	2.69	1.10	2.90	1.13	3.14	1.19	3.22	1.26
	580					1.24	1.22	2.22	1.22	2.59	1.23	2.85	1.27	3.09	1.34	3.19	1.41
20-56	72.5	3.85	0.25	4.20	0.25	4.38	0.25	4.59	0.25	4.67	0.28	4.73	0.32	4.78	0.38	4.80	0.46
	145	3.04	0.46	3.64	0.46	3.99	0.46	4.36	0.46	4.51	0.48	4.62	0.52	4.70	0.58	4.75	0.66
	217.5	2.30	0.67	3.14	0.67	3.62	0.67	4.17	0.67	4.36	0.68	4.51	0.72	4.65	0.79	4.70	0.86
	290	1.58	0.87	2.67	0.87	3.27	0.87	3.96	0.87	4.22	0.89	4.41	0.93	4.59	0.99	4.67	1.06
	362.5					2.93	1.07	3.78	1.07	4.09	1.09	4.33	1.13	4.51	1.19	4.62	1.26
	435					2.61	1.27	3.59	1.27	3.96	1.29	4.22	1.33	4.46	1.39	4.59	1.46
	507.5							3.41	1.48	3.83	1.50	4.14	1.53	4.41	1.60	4.54	1.66
	580							3.25	1.68	3.72	1.70	4.04	1.73	4.36	1.80	4.51	1.86
40-38	72.5	4.46	0.31	4.78	0.31	4.96	0.31	5.17	0.31	5.25	0.34	5.31	0.38	5.36	0.47	5.39	0.56
	145	3.67	0.54	4.28	0.54	4.59	0.54	4.96	0.54	5.10	0.56	5.20	0.60	5.28	0.70	5.33	0.79
	217.5	2.96	0.75	3.78	0.75	4.22	0.75	4.75	0.75	4.96	0.79	5.10	0.83	5.23	0.93	5.28	1.02
	290	2.27	0.98	3.33	0.98	3.91	0.98	4.57	0.98	4.83	1.01	5.02	1.06	5.17	1.14	5.25	1.23
	362.5	1.61	1.21	2.88	1.21	3.56	1.21	4.38	1.21	4.70	1.23	4.91	1.27	5.12	1.37	5.20	1.46
	435			2.46	1.43	3.25	1.43	4.22	1.43	4.57	1.46	4.83	1.50	5.04	1.60	5.15	1.69
	507.5			2.03	1.66	2.96	1.66	4.04	1.66	4.46	1.69	4.75	1.73	4.99	1.82	5.12	1.92
	580			1.64	1.89	2.67	1.89	3.88	1.89	4.33	1.92	4.65	1.96	4.94	2.05	5.10	2.15
40-46	72.5	6.05	0.38	6.44	0.38	6.68	0.38	6.92	0.38	7.02	0.40	7.10	0.46	7.15	0.55	7.18	0.63
	145	5.10	0.68	5.81	0.68	6.20	0.68	6.65	0.68	6.84	0.71	6.97	0.75	7.08	0.84	7.13	0.94
	217.5	4.20	0.98	5.23	0.98	5.76	0.98	6.42	0.98	6.65	1.01	6.84	1.06	7.00	1.14	7.08	1.23
	290	3.35	1.29	4.65	1.29	5.36	1.29	6.18	1.29	6.49	1.31	6.73	1.35	6.92	1.45	7.02	1.54
	362.5			4.12	1.58	4.96	1.58	5.97	1.58	6.34	1.61	6.60	1.66	6.84	1.74	6.97	1.84
	435			3.59	1.89	4.57	1.89	5.76	1.89	6.20	1.92	6.49	1.96	6.78	2.05	6.92	2.15
	507.5					4.20	2.19	5.54	2.19	6.05	2.21	6.39	2.27	6.71	2.35	6.86	2.44
	580					3.83	2.49	5.33	2.49	5.89	2.52	6.28	2.56	6.65	2.66	6.81	2.75
40-54	72.5	8.24	0.48	8.74	0.48	9.00	0.48	9.32	0.48	9.45	0.51	9.53	0.55	9.61	0.64	9.66	0.74
	145	7.02	0.89	7.92	0.89	8.42	0.89	9.00	0.89	9.21	0.91	9.37	0.97	9.50	1.05	9.58	1.14
	217.5	5.91	1.29	7.18	1.29	7.87	1.29	8.69	1.29	9.00	1.33	9.21	1.37	9.42	1.46	9.50	1.56
	290	4.86	1.70	6.47	1.70	7.37	1.70	8.40	1.70	8.79	1.73	9.08	1.77	9.32	1.86	9.45	1.96
	362.5					6.86	2.11	8.13	2.11	8.61	2.13	8.92	2.17	9.24	2.13	9.37	2.36
	435					6.39	2.51	7.87	2.51	8.40	2.53	8.79	2.57	9.16	2.67	9.32	2.76
	507.5							7.60	0.00	8.21	2.94	8.66	2.99	9.08	3.07	9.27	3.16
	580							7.34	0.00	8.03	3.35	8.53	3.39	8.98	3.49	9.21	3.58

Values in the grey area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

Speed n=950 r/min

METRIC

Size	Pressure ΔP Bar	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW
20-38	5.0	7.5	0.12	8.39	0.12	8.79	0.12	9.29	0.12	9.49	0.14	9.59	0.17	9.79	0.21	9.79	0.27
	10.0	5.6	0.21	7	0.21	7.79	0.21	8.79	0.21	9.09	0.22	9.39	0.25	9.59	0.3	9.69	0.35
	15.0	3.8	0.29	5.8	0.29	7	0.29	8.29	0.29	8.79	0.3	9.09	0.33	9.39	0.38	9.59	0.43
	20.0	2.1	0.37	4.7	0.37	6.1	0.37	7.79	0.37	8.39	0.39	8.89	0.41	9.29	0.46	9.49	0.51
	25.0			3.6	0.45	5.3	0.45	7.4	0.45	8.09	0.47	8.69	0.49	9.19	0.54	9.39	0.6
	30.0			2.5	0.53	4.5	0.53	6.9	0.53	7.79	0.55	8.49	0.58	8.99	0.62	9.29	0.68
	35.0					3.8	0.62	6.5	0.62	7.5	0.63	8.19	0.66	8.89	0.71	9.19	0.76
	40.0					3	0.7	6.1	0.7	7.2	0.71	7.99	0.74	8.69	0.79	9.09	0.84
20-46	5.0	10.2	0.15	11.2	0.15	11.7	0.15	12.4	0.15	12.6	0.17	12.8	0.19	12.9	0.24	13	0.29
	10.0	7.79	0.26	9.59	0.26	10.6	0.26	11.7	0.26	12.1	0.27	12.4	0.3	12.7	0.35	12.9	0.4
	15.0	5.6	0.37	8.09	0.37	9.49	0.37	11.1	0.37	11.7	0.38	12.1	0.41	12.5	0.46	12.7	0.51
	20.0	3.5	0.48	6.7	0.48	8.49	0.48	10.5	0.48	11.3	0.49	11.9	0.52	12.4	0.57	12.6	0.62
	25.0			5.4	0.58	7.5	0.58	9.99	0.58	10.9	0.6	11.6	0.63	12.2	0.67	12.5	0.73
	30.0			4.1	0.69	6.5	0.69	9.39	0.69	10.5	0.71	11.3	0.73	12	0.78	12.3	0.83
	35.0					5.6	0.8	8.89	0.8	10.2	0.82	11	0.84	11.9	0.89	12.2	0.94
	40.0					4.7	0.91	8.39	0.91	9.79	0.92	10.8	0.95	11.7	1	12.1	1.05
20-56	5.0	14.6	0.19	15.9	0.19	16.6	0.19	17.4	0.19	17.7	0.21	17.9	0.24	18.1	0.28	18.2	0.34
	10.0	11.5	0.34	13.8	0.34	15.1	0.34	16.5	0.34	17.1	0.36	17.5	0.39	17.8	0.43	18	0.49
	15.0	8.69	0.5	11.9	0.5	13.7	0.5	15.8	0.5	16.5	0.51	17.1	0.54	17.6	0.59	17.8	0.64
	20.0	6	0.65	10.1	0.65	12.4	0.65	15	0.65	16	0.66	16.7	0.69	17.4	0.74	17.7	0.79
	25.0					11.1	0.8	14.3	0.8	15.5	0.81	16.4	0.84	17.1	0.89	17.5	0.94
	30.0					9.89	0.95	13.6	0.95	15	0.96	16	0.99	16.9	1.04	17.4	1.09
	35.0							12.9	1.1	14.5	1.12	15.7	1.14	16.7	1.19	17.2	1.24
	40.0							12.3	1.25	14.1	1.27	15.3	1.29	16.5	1.34	17.1	1.39
40-38	5.0	16.9	0.23	18.1	0.23	18.8	0.23	19.6	0.23	19.9	0.25	20.1	0.28	20.3	0.35	20.4	0.42
	10.0	13.9	0.4	16.2	0.4	17.4	0.4	18.8	0.4	19.3	0.42	19.7	0.45	20	0.52	20.2	0.59
	15.0	11.2	0.56	14.3	0.56	16	0.56	18	0.56	18.8	0.59	19.3	0.62	19.8	0.69	20	0.76
	20.0	8.59	0.73	12.6	0.73	14.8	0.73	17.3	0.73	18.3	0.75	19	0.79	19.6	0.85	19.9	0.92
	25.0	6.1	0.9	10.9	0.9	13.5	0.9	16.6	0.9	17.8	0.92	18.6	0.95	19.4	1.02	19.7	1.09
	30.0			9.29	1.07	12.3	1.07	16	1.07	17.3	1.09	18.3	1.12	19.1	1.19	19.5	1.26
	35.0			7.69	1.24	11.2	1.24	15.3	1.24	16.9	1.26	18	1.29	18.9	1.36	19.4	1.43
	40.0			6.2	1.41	10.1	1.41	14.7	1.41	16.4	1.43	17.6	1.46	18.7	1.53	19.3	1.6
40-46	5.0	22.9	0.28	24.4	0.28	25.3	0.28	26.2	0.28	26.6	0.3	26.9	0.34	27.1	0.41	27.2	0.47
	10.0	19.3	0.51	22	0.51	23.5	0.51	25.2	0.51	25.9	0.53	26.4	0.56	26.8	0.63	27	0.7
	15.0	15.9	0.73	19.8	0.73	21.8	0.73	24.3	0.73	25.2	0.75	25.9	0.79	26.5	0.85	26.8	0.92
	20.0	12.7	0.96	17.6	0.96	20.3	0.96	23.4	0.96	24.6	0.98	25.5	1.01	26.2	1.08	26.6	1.15
	25.0			15.6	1.18	18.8	1.18	22.6	1.18	24	1.2	25	1.24	25.9	1.3	26.4	1.37
	30.0			13.6	1.41	17.3	1.41	21.8	1.41	23.5	1.43	24.6	1.46	25.7	1.53	26.2	1.6
	35.0					15.9	1.63	21	1.63	22.9	1.65	24.2	1.69	25.4	1.75	26	1.82
	40.0					14.5	1.86	20.2	1.86	22.3	1.88	23.8	1.91	25.2	1.98	25.8	2.05
40-54	5.0	31.2	0.36	33.1	0.36	34.1	0.36	35.3	0.36	35.8	0.38	36.1	0.41	36.4	0.48	36.6	0.55
	10.0	26.6	0.66	30	0.66	31.9	0.66	34.1	0.66	34.9	0.68	35.5	0.72	36	0.78	36.3	0.85
	15.0	22.4	0.96	27.2	0.96	29.8	0.96	32.9	0.96	34.1	0.99	34.9	1.02	35.7	1.09	36	1.16
	20.0	18.4	1.27	24.5	1.27	27.9	1.27	31.8	1.27	33.3	1.29	34.4	1.32	35.3	1.39	35.8	1.46
	25.0					26	1.57	30.8	1.57	32.6	1.59	33.8	1.62	35	1.59	35.5	1.76
	30.0					24.2	1.87	29.8	1.87	31.8	1.89	33.3	1.92	34.7	1.99	35.3	2.06
	35.0							28.8	0	31.1	2.19	32.8	2.23	34.4	2.29	35.1	2.36
	40.0							27.8	0	30.4	2.5	32.3	2.53	34	2.6	34.9	2.67

Values in the blue area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.



# PERFORMANCE DATA SHEET

▶ 3PF SERIES

TRIPLE-SCREW PUMP DESIGN MANUAL

## U.S. STANDARD

Speed n=1150 r/min

Size	Pressure PSI	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP
20-38	72.5	2.51	0.20	2.75	0.20	2.85	0.20	2.98	0.20	3.04	0.23	3.09	0.28	3.12	0.36	3.12	0.46
	145	2.01	0.34	2.40	0.34	2.59	0.34	2.85	0.34	2.93	0.36	3.01	0.42	3.06	0.50	3.09	0.59
	217.5	1.53	0.47	2.06	0.47	2.38	0.47	2.72	0.47	2.85	0.50	2.93	0.55	3.01	0.63	3.06	0.72
	290	1.08	0.60	1.77	0.60	2.14	0.60	2.59	0.60	2.77	0.63	2.88	0.67	2.98	0.76	3.04	0.86
	362.5	0.63	0.74	1.48	0.74	1.93	0.74	2.48	0.74	2.67	0.76	2.82	0.80	2.96	0.90	3.01	0.99
	435			1.19	0.87	1.72	0.87	2.35	0.87	2.59	0.90	2.77	0.94	2.90	1.02	2.98	1.11
	507.5			0.92	0.99	1.53	0.99	2.24	0.99	2.51	1.02	2.69	1.07	2.88	1.15	2.96	1.25
	580			0.66	1.13	1.32	1.13	2.14	1.13	2.43	1.15	2.64	1.21	2.82	1.29	2.93	1.38
20-46	72.5	3.41	0.25	3.64	0.25	3.80	0.25	3.96	0.25	4.04	0.28	4.07	0.32	4.12	0.40	4.14	0.50
	145	2.77	0.43	3.22	0.43	3.48	0.43	3.80	0.43	3.91	0.46	3.99	0.50	4.07	0.58	4.09	0.67
	217.5	2.16	0.60	2.85	0.60	3.19	0.60	3.64	0.60	3.80	0.63	3.91	0.67	4.01	0.75	4.07	0.84
	290	1.61	0.76	2.48	0.76	2.93	0.76	3.48	0.76	3.70	0.80	3.83	0.84	3.96	0.93	4.01	1.02
	362.5	1.08	0.94	2.11	0.94	2.67	0.94	3.33	0.94	3.59	0.98	3.75	1.02	3.91	1.10	3.99	1.19
	435			1.77	1.11	2.43	1.11	3.19	1.11	3.48	1.15	3.70	1.19	3.88	1.27	3.96	1.37
	507.5					2.16	1.29	3.06	1.29	3.38	1.33	3.62	1.37	3.83	1.45	3.93	1.54
	580					1.93	1.46	2.93	1.46	3.30	1.49	3.54	1.54	3.78	1.62	3.91	1.72
20-56	72.5	4.83	0.32	5.17	0.32	5.36	0.32	5.57	0.32	5.65	0.35	5.70	0.39	5.76	0.48	5.78	0.58
	145	4.01	0.56	4.62	0.56	4.96	0.56	5.33	0.56	5.49	0.59	5.60	0.63	5.68	0.72	5.73	0.82
	217.5	3.27	0.80	4.12	0.80	4.59	0.80	5.15	0.80	5.33	0.83	5.49	0.89	5.62	0.97	5.68	1.06
	290	2.56	1.05	3.64	1.05	4.25	1.05	4.94	1.05	5.20	1.07	5.39	1.13	5.57	1.21	5.65	1.30
	362.5					3.91	1.29	4.75	1.29	5.07	1.31	5.31	1.37	5.49	1.45	5.57	1.54
	435					3.59	1.53	4.57	1.53	4.94	1.56	5.20	1.61	5.44	1.69	5.57	1.78
	507.5					4.38	1.77	4.80	1.77	4.80	1.80	5.12	1.85	5.39	1.93	5.52	2.02
	580					4.22	2.02	4.70	2.02	4.70	2.05	5.02	2.09	5.33	2.17	5.49	2.27
40-38	72.5	5.54	0.38	5.89	0.38	6.05	0.38	6.26	0.38	6.34	0.42	6.39	0.47	6.44	0.59	6.47	0.71
	145	4.78	0.64	5.36	0.64	5.68	0.64	6.05	0.64	6.18	0.68	6.28	0.74	6.39	0.86	6.42	0.98
	217.5	4.04	0.91	4.88	0.91	5.31	0.91	5.86	0.91	6.05	0.95	6.18	1.01	6.31	1.13	6.36	1.25
	290	3.35	1.19	4.41	1.19	4.99	1.19	5.65	1.19	5.91	1.22	6.10	1.29	6.26	1.41	6.34	1.53
	362.5	2.69	1.46	3.96	1.46	4.67	1.46	5.44	1.46	5.78	1.50	5.99	1.56	6.20	1.68	6.28	1.80
	435	2.06	1.73	3.54	1.73	4.36	1.73	5.31	1.73	5.65	1.77	5.91	1.82	6.15	1.94	6.26	2.07
	507.5	1.43	2.00	3.12	2.00	4.04	2.00	5.12	2.00	5.54	2.04	5.83	2.09	6.10	2.21	6.20	2.33
	580			2.72	2.28	3.75	2.28	4.96	2.28	5.41	2.31	5.76	2.37	6.05	2.49	6.18	2.61
40-46	72.5	7.50	0.47	7.89	0.47	8.13	0.47	8.37	0.47	8.47	0.50	8.55	0.56	8.61	0.68	8.89	0.80
	145	6.55	0.83	7.26	0.83	7.66	0.83	8.10	0.83	8.29	0.86	8.42	0.79	8.53	1.05	8.58	1.17
	217.5	5.65	1.19	6.68	1.19	7.21	1.19	7.87	1.19	8.10	1.22	8.29	1.29	8.45	1.41	8.53	1.53
	290	4.80	1.56	6.10	1.56	6.81	1.56	7.63	1.56	7.95	1.58	8.18	1.65	8.37	1.77	8.47	1.89
	362.5	3.99	1.92	5.57	1.92	6.42	1.92	7.42	1.92	7.79	1.94	8.05	2.01	8.32	2.13	8.42	2.25
	435	3.19	2.28	5.04	2.28	6.02	2.28	7.21	2.28	7.66	2.31	7.95	2.37	8.24	2.49	8.37	2.61
	507.5					5.65	2.64	7.00	2.64	7.50	2.67	7.84	2.74	8.16	2.86	8.32	2.98
	580					5.28	3.00	6.78	3.00	7.34	3.03	7.74	3.10	8.10	3.22	8.29	3.34
40-54	72.5	10.19	0.59	10.69	0.59	10.96	0.59	11.27	0.59	11.40	0.63	11.48	0.68	11.56	0.80	11.59	0.93
	145	8.98	1.07	9.87	1.07	10.38	1.07	10.96	1.07	11.17	1.11	11.33	1.17	11.46	1.29	11.54	1.41
	217.5	7.87	1.56	9.13	1.56	9.82	1.56	10.64	1.56	10.96	1.60	11.17	1.65	11.38	1.77	11.46	1.89
	290	6.81	2.05	8.42	2.05	9.32	2.05	10.35	2.05	10.74	2.08	11.04	2.15	11.27	2.27	11.40	2.39
	362.5					8.82	2.53	10.08	2.53	10.56	2.57	10.88	2.63	11.19	2.75	11.33	2.87
	435					8.34	3.02	9.79	3.02	10.35	3.06	10.74	3.11	11.11	3.23	11.27	3.35
	507.5							9.53	3.50	10.16	3.54	10.61	3.59	11.01	3.71	11.22	3.84
	580							9.29	4.00	9.98	4.02	10.48	4.09	10.93	4.21	11.17	4.33

Values in the grey area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.



Speed n=1150 r/min

METRIC

Size	Pressure ΔP Bar	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW
20-38	5.0	9.49	0.15	10.4	0.15	10.8	0.15	11.3	0.15	11.5	0.17	11.7	0.21	11.8	0.27	11.8	0.34
	10.0	7.6	0.25	9.09	0.25	9.79	0.25	10.8	0.25	11.1	0.27	11.4	0.31	11.6	0.37	11.7	0.44
	15.0	5.8	0.35	7.79	0.35	8.99	0.35	10.3	0.35	10.8	0.37	11.1	0.41	11.4	0.47	11.6	0.54
	20.0	4.1	0.45	6.7	0.45	8.09	0.45	9.79	0.45	10.5	0.47	10.9	0.5	11.3	0.57	11.5	0.64
	25.0	2.4	0.55	5.6	0.55	7.3	0.55	9.39	0.55	10.1	0.57	10.7	0.6	11.2	0.67	11.4	0.74
	30.0			4.5	0.65	6.5	0.65	8.89	0.65	9.79	0.67	10.5	0.7	11	0.76	11.3	0.83
	40.0			3.5	0.74	5.8	0.74	8.49	0.74	9.49	0.76	10.2	0.8	10.9	0.86	11.2	0.93
20-46	5.0	12.9	0.19	13.8	0.19	14.4	0.19	15	0.19	15.3	0.21	15.4	0.24	15.6	0.3	15.7	0.37
	10.0	10.5	0.32	12.2	0.32	13.2	0.32	14.4	0.32	14.8	0.34	15.1	0.37	15.4	0.43	15.5	0.5
	15.0	8.19	0.45	10.8	0.45	12.1	0.45	13.8	0.45	14.4	0.47	14.8	0.5	15.2	0.56	15.4	0.63
	20.0	6.1	0.57	9.39	0.57	11.1	0.57	13.2	0.57	14	0.6	14.5	0.63	15	0.69	15.2	0.76
	25.0	4.1	0.7	7.99	0.7	10.1	0.7	12.6	0.7	13.6	0.73	14.2	0.76	14.8	0.82	15.1	0.89
	30.0			6.7	0.83	9.19	0.83	12.1	0.83	13.2	0.86	14	0.89	14.7	0.95	15	1.02
	40.0					8.19	0.96	11.6	0.96	12.8	0.99	13.7	1.02	14.5	1.08	14.9	1.15
20-56	5.0	18.3	0.24	19.6	0.24	20.3	0.24	21.1	0.24	21.4	0.26	21.6	0.29	21.8	0.36	21.9	0.43
	10.0	15.2	0.42	17.5	0.42	18.8	0.42	20.2	0.42	20.8	0.44	21.2	0.47	21.5	0.54	21.7	0.61
	15.0	12.4	0.6	15.6	0.6	17.4	0.6	19.5	0.6	20.2	0.62	20.8	0.66	21.3	0.72	21.5	0.79
	20.0	9.69	0.78	13.8	0.78	16.1	0.78	18.7	0.78	19.7	0.8	20.4	0.84	21.1	0.9	21.4	0.97
	25.0					14.8	0.96	18	0.96	19.2	0.98	20.1	1.02	20.8	1.08	21.1	1.15
	30.0					13.6	1.14	17.3	1.14	18.7	1.16	19.7	1.2	20.6	1.26	21.1	1.33
	40.0							16.6	1.32	18.2	1.34	19.4	1.38	20.4	1.44	20.9	1.51
40-38	5.0	21	0.28	22.3	0.28	22.9	0.28	23.7	0.28	24	0.31	24.2	0.35	24.4	0.44	24.5	0.53
	10.0	18.1	0.48	20.3	0.48	21.5	0.48	22.9	0.48	23.4	0.51	23.8	0.55	24.2	0.64	24.3	0.73
	15.0	15.3	0.68	18.5	0.68	20.1	0.68	22.2	0.68	22.9	0.71	23.4	0.75	23.9	0.84	24.1	0.93
	20.0	12.7	0.89	16.7	0.89	18.9	0.89	21.4	0.89	22.4	0.91	23.1	0.96	23.7	1.05	24	1.14
	25.0	10.2	1.09	15	1.09	17.7	1.09	20.6	1.09	21.9	1.12	22.7	1.16	23.5	1.25	23.8	1.34
	30.0	7.79	1.29	13.4	1.29	16.5	1.29	20.1	1.29	21.4	1.32	22.4	1.36	23.3	1.45	23.7	1.54
	40.0	5.4	1.49	11.8	1.49	15.3	1.49	19.4	1.49	21	1.52	22.1	1.56	23.1	1.65	23.5	1.74
40-46	5.0	28.4	0.35	29.9	0.35	30.8	0.35	31.7	0.35	32.1	0.37	32.4	0.42	32.6	0.51	33.7	0.6
	10.0	24.8	0.62	27.5	0.62	29	0.62	30.7	0.62	31.4	0.64	31.9	0.59	32.3	0.78	32.5	0.87
	15.0	21.4	0.89	25.3	0.89	27.3	0.89	29.8	0.89	30.7	0.91	31.4	0.96	32	1.05	32.3	1.14
	20.0	18.2	1.16	23.1	1.16	25.8	1.16	28.9	1.16	30.1	1.18	31	1.23	31.7	1.32	32.1	1.41
	25.0	15.1	1.43	21.1	1.43	24.3	1.43	28.1	1.43	29.5	1.45	30.5	1.5	31.5	1.59	31.9	1.68
	30.0	12.1	1.7	19.1	1.7	22.8	1.7	27.3	1.7	29	1.72	30.1	1.77	31.2	1.86	31.7	1.95
	40.0					21.4	1.97	26.5	1.97	28.4	1.99	29.7	2.04	30.9	2.13	31.5	2.22
40-54	5.0	38.6	0.44	40.5	0.44	41.5	0.44	42.7	0.44	43.2	0.47	43.5	0.51	43.8	0.6	43.9	0.69
	10.0	34	0.8	37.4	0.8	39.3	0.8	41.5	0.8	42.3	0.83	42.9	0.87	43.4	0.96	43.7	1.05
	15.0	29.8	1.16	34.6	1.16	37.2	1.16	40.3	1.16	41.5	1.19	42.3	1.23	43.1	1.32	43.4	1.41
	20.0	25.8	1.53	31.9	1.53	35.3	1.53	39.2	1.53	40.7	1.55	41.8	1.6	42.7	1.69	43.2	1.78
	25.0					33.4	1.89	38.2	1.89	40	1.92	41.2	1.96	42.4	2.05	42.9	2.14
	30.0					31.6	2.25	37.1	2.25	39.2	2.28	40.7	2.32	42.1	2.41	42.7	2.5
	40.0							36.1	2.61	38.5	2.64	40.2	2.68	41.7	2.77	42.5	2.86

Values in the blue area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

### U.S. STANDARD

Speed  $n=1450$  r/min

Size	Pressure PSI	Viscosity (mm <sup>2</sup> /s)																
		3		6		12		40		75		150		380		750		
		Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	
20-38	72.5	3.38	0.28	3.59	0.28	3.72	0.28	3.85	0.28	3.91	0.32	3.93	0.39	3.96	0.51	3.99	0.64	
	145	2.88	0.44	3.25	0.44	3.46	0.44	3.72	0.44	3.80	0.48	3.88	0.55	3.93	0.67	3.96	0.80	
	217.5	2.40	0.62	2.93	0.62	3.22	0.62	3.59	0.62	3.72	0.66	3.80	0.72	3.88	0.84	3.93	0.98	
	290	1.93	0.78	2.64	0.78	3.01	0.78	3.46	0.78	3.62	0.82	3.75	0.89	3.85	1.01	3.91	1.14	
	362.5	1.50	0.95	2.35	0.95	2.80	0.95	3.33	0.95	3.54	0.99	3.67	1.06	3.80	1.18	3.88	1.31	
	435	1.08	1.11	2.06	1.11	2.59	1.11	3.22	1.11	3.46	1.15	3.62	1.22	3.78	1.34	3.85	1.48	
	507.5			1.80	1.29	2.38	1.29	3.12	1.29	3.38	1.33	3.56	1.39	3.75	1.52	3.83	1.65	
	580			1.50	1.45	2.19	1.45	3.01	1.45	3.30	1.49	3.51	1.56	3.70	1.68	3.80	1.81	
20-46	72.5	4.54	0.34	4.80	0.34	4.94	0.34	5.10	0.34	5.17	0.38	5.20	0.44	5.25	0.56	5.28	0.70	
	145	3.91	0.55	4.38	0.55	4.62	0.55	4.94	0.55	5.04	0.59	5.12	0.66	5.20	0.78	5.23	0.91	
	217.5	3.33	0.78	3.99	0.78	4.36	0.78	4.78	0.78	4.94	0.82	5.04	0.89	5.15	1.01	5.20	1.14	
	290	2.77	0.99	3.62	0.99	4.07	0.99	4.62	0.99	4.83	1.03	4.96	1.10	5.10	1.22	5.17	1.35	
	362.5	2.22	1.22	3.25	1.22	3.80	1.22	4.49	1.22	4.73	1.26	4.88	1.33	5.07	1.45	5.12	1.58	
	435	1.72	1.43	2.90	1.43	3.56	1.43	4.33	1.43	4.62	1.48	4.83	1.54	5.02	1.66	5.10	1.80	
	507.5			2.56	1.66	3.33	1.66	4.20	1.66	4.51	1.70	4.75	1.77	4.96	1.89	5.07	2.02	
	580			2.24	1.88	3.06	1.88	4.07	1.88	4.44	1.92	4.70	1.98	4.94	2.11	5.04	2.24	
20-56	72.5	6.42	0.42	6.76	0.42	6.94	0.42	7.15	0.42	7.23	0.46	7.29	0.52	7.34	0.64	7.37	0.78	
	145	5.60	0.72	6.20	0.72	6.55	0.72	6.94	0.72	7.08	0.76	7.18	0.83	7.29	0.95	7.31	1.09	
	217.5	4.86	1.03	5.70	1.03	6.18	1.03	6.73	1.03	6.94	1.07	7.08	1.14	7.21	1.26	7.29	1.39	
	290	4.14	1.34	5.23	1.34	5.83	1.34	6.52	1.34	6.78	1.38	6.97	1.45	7.15	1.57	7.23	1.70	
	362.5			4.78	1.65	5.49	1.65	6.34	1.65	6.65	1.69	6.89	1.76	7.10	1.88	7.18	2.01	
	435			4.33	1.96	5.17	1.96	6.15	1.96	6.52	2.00	6.78	2.07	7.05	2.19	7.15	2.32	
	507.5							5.99	2.27	6.42	2.31	6.71	2.37	6.97	2.49	7.10	2.63	
	580							5.81	2.57	6.28	2.61	6.63	2.68	6.92	2.80	7.08	2.94	
40-38	72.5	7.34	0.50	7.66	0.50	7.84	0.50	8.03	0.50	8.10	0.55	8.18	0.63	8.21	0.80	8.24	0.98	
	145	6.55	0.83	7.13	0.83	7.44	0.83	7.81	0.83	7.97	0.89	8.05	0.97	8.16	1.14	8.18	1.31	
	217.5	5.83	1.18	6.65	1.18	7.10	1.18	7.63	1.18	7.81	1.23	7.97	1.31	8.10	1.49	8.16	1.66	
	290	5.15	1.53	6.20	1.53	6.76	1.53	7.44	1.53	7.68	1.58	7.87	1.66	8.03	1.84	8.10	2.01	
	362.5	4.46	1.88	5.76	1.88	6.44	1.88	7.26	1.88	7.55	1.93	7.79	2.01	7.97	2.19	8.08	2.36	
	435	3.83	2.21	5.33	2.21	6.12	2.21	7.08	2.21	7.44	2.27	7.68	2.35	7.92	2.52	8.03	2.70	
	507.5	3.19	2.56	4.91	2.56	5.83	2.56	6.92	2.56	7.31	2.61	7.60	2.70	7.87	2.87	8.00	3.04	
	580	2.59	2.91	4.49	2.91	5.52	2.91	6.73	2.91	7.21	2.96	7.52	3.04	7.81	3.22	7.95	3.39	
40-46	72.5	9.87	0.60	10.27	0.60	10.48	0.60	10.74	0.60	10.85	0.66	10.90	0.74	10.98	0.91	11.01	1.09	
	145	8.92	1.07	9.64	1.07	10.03	1.07	10.48	1.07	10.67	1.13	10.77	1.21	10.90	1.38	10.96	1.56	
	217.5	8.03	1.53	9.03	1.53	9.58	1.53	10.24	1.53	10.48	1.58	10.67	1.66	10.82	1.84	10.88	2.01	
	290	7.18	1.98	8.47	1.98	9.19	1.98	10.01	1.98	10.32	2.04	10.53	2.12	10.74	2.29	10.85	2.47	
	362.5	6.36	2.45	7.92	2.45	8.79	2.45	9.79	2.45	10.16	2.51	10.43	2.59	10.67	2.76	10.80	2.94	
	435	5.57	2.91	7.39	2.91	8.40	2.91	9.58	2.91	10.01	2.96	10.32	3.04	10.61	3.22	10.74	3.39	
	507.5			6.89	3.37	8.03	3.37	9.37	3.37	9.87	3.42	10.22	3.50	10.53	3.67	10.69	3.85	
	580			6.39	3.84	7.66	3.84	9.16	3.84	9.72	3.89	10.11	3.97	10.48	4.14	10.64	4.32	
40-54	72.5	13.38	0.76	13.86	0.76	14.15	0.76	14.47	0.76	14.60	0.82	14.68	0.90	14.76	1.07	14.78	1.25	
	145	12.17	1.38	13.07	1.38	13.54	1.38	14.12	1.38	14.36	1.43	14.49	1.52	14.65	1.69	14.70	1.86	
	217.5	11.04	2.00	12.33	2.00	13.02	2.00	13.83	2.00	14.12	2.05	14.36	2.13	14.55	2.31	14.65	2.48	
	290	9.98	2.61	11.62	2.61	12.49	2.61	13.54	2.61	13.94	2.67	14.07	2.75	14.47	2.92	14.57	3.10	
	362.5			10.93	3.23	11.99	3.23	13.25	3.23	13.73	3.29	14.12	3.37	14.36	3.54	14.52	3.71	
	435			10.27	3.86	11.51	3.86	12.99	3.86	13.54	3.92	13.94	4.00	14.28	4.17	14.47	4.34	
	507.5							4.48	12.72	4.48	13.36	4.53	13.81	4.61	14.20	4.79	14.39	4.96
	580							5.10	12.46	5.10	13.17	5.15	13.68	5.23	14.12	5.40	14.34	5.58

Values in the grey area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

Speed n=1450 r/min

METRIC

Size	Pressure ΔP Bar	Viscosity (mm <sup>2</sup> /s)																
		3		6		12		40		75		150		380		750		
		Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	
20-38	5.0	12.8	0.21	13.6	0.21	14.1	0.21	14.6	0.21	14.8	0.24	14.9	0.29	15	0.38	15.1	0.48	
	10.0	10.9	0.33	12.3	0.33	13.1	0.33	14.1	0.33	14.4	0.36	14.7	0.41	14.9	0.5	15	0.6	
	15.0	9.09	0.46	11.1	0.46	12.2	0.46	13.6	0.46	14.1	0.49	14.4	0.54	14.7	0.63	14.9	0.73	
	20.0	7.3	0.58	9.99	0.58	11.4	0.58	13.1	0.58	13.7	0.61	14.2	0.66	14.6	0.75	14.8	0.85	
	25.0	5.7	0.71	8.89	0.71	10.6	0.71	12.6	0.71	13.4	0.74	13.9	0.79	14.4	0.88	14.7	0.98	
	30.0	4.1	0.83	7.79	0.83	9.79	0.83	12.2	0.83	13.1	0.86	13.7	0.91	14.3	1	14.6	1.1	
	35.0			6.8	0.96	8.99	0.96	11.8	0.96	12.8	0.99	13.5	1.04	14.2	1.13	14.5	1.23	
	40.0			5.7	1.08	8.29	1.08	11.4	1.08	12.5	1.11	13.3	1.16	14	1.25	14.4	1.35	
20-46	5.0	17.2	0.25	18.2	0.25	18.7	0.25	19.3	0.25	19.6	0.28	19.7	0.33	19.9	0.42	20	0.52	
	10.0	14.8	0.41	16.6	0.41	17.5	0.41	18.7	0.41	19.1	0.44	19.4	0.49	19.7	0.58	19.8	0.68	
	15.0	12.6	0.58	15.1	0.58	16.5	0.58	18.1	0.58	18.7	0.61	19.1	0.66	19.5	0.75	19.7	0.85	
	20.0	10.5	0.74	13.7	0.74	15.4	0.74	17.5	0.74	18.3	0.77	18.8	0.82	19.3	0.91	19.6	1.01	
	25.0	8.39	0.91	12.3	0.91	14.4	0.91	17	0.91	17.9	0.94	18.5	0.99	19.2	1.08	19.4	1.18	
	30.0	6.5	1.07	11	1.07	13.5	1.07	16.4	1.07	17.5	1.1	18.3	1.15	19	1.24	19.3	1.34	
	35.0			9.69	1.24	12.6	1.24	15.9	1.24	17.1	1.27	18	1.32	18.8	1.41	19.2	1.51	
	40.0			8.49	1.4	11.6	1.4	15.4	1.4	16.8	1.43	17.8	1.48	18.7	1.57	19.1	1.67	
20-56	5.0	24.3	0.31	25.6	0.31	26.3	0.31	27.1	0.31	27.4	0.34	27.6	0.39	27.8	0.48	27.9	0.58	
	10.0	21.2	0.54	23.5	0.54	24.8	0.54	26.3	0.54	26.8	0.57	27.2	0.62	27.6	0.71	27.7	0.81	
	15.0	18.4	0.77	21.6	0.77	23.4	0.77	25.5	0.77	26.3	0.8	26.8	0.85	27.3	0.94	27.6	1.04	
	20.0	15.7	1	19.8	1	22.1	1	24.7	1	25.7	1.03	26.4	1.08	27.1	1.17	27.4	1.27	
	25.0			18.1	1.23	20.8	1.23	24	1.23	25.2	1.26	26.1	1.31	26.9	1.4	27.2	1.5	
	30.0			16.4	1.46	19.6	1.46	23.3	1.46	24.7	1.49	25.7	1.54	26.7	1.63	27.1	1.73	
	35.0							22.7	1.69	24.3	1.72	25.4	1.77	26.4	1.86	26.9	1.96	
	40.0							22	1.92	23.8	1.95	25.1	2	26.2	2.09	26.8	2.19	
40-38	5.0	27.8	0.37	29	0.37	29.7	0.37	30.4	0.37	30.7	0.41	31	0.47	31.1	0.6	31.2	0.73	
	10.0	24.8	0.62	27	0.62	28.2	0.62	29.6	0.62	30.2	0.66	30.5	0.72	30.9	0.85	31	0.98	
	15.0	22.1	0.88	25.2	0.88	26.9	0.88	28.9	0.88	29.6	0.92	30.2	0.98	30.7	1.11	30.9	1.24	
	20.0	19.5	1.14	23.5	1.14	25.6	1.14	28.2	1.14	29.1	1.18	29.8	1.24	30.4	1.37	30.7	1.5	
	25.0	16.9	1.4	21.8	1.4	24.4	1.4	27.5	1.4	28.6	1.44	29.5	1.5	30.2	1.63	30.6	1.76	
	30.0	14.5	1.65	20.2	1.65	23.2	1.65	26.8	1.65	28.2	1.69	29.1	1.75	30	1.88	30.4	2.01	
	35.0	12.1	1.91	18.6	1.91	22.1	1.91	26.2	1.91	27.7	1.95	28.8	2.01	29.8	2.14	30.3	2.27	
	40.0	9.79	2.17	17	2.17	20.9	2.17	25.5	2.17	27.3	2.21	28.5	2.27	29.6	2.4	30.1	2.53	
40-46	5.0	37.4	0.45	38.9	0.45	39.7	0.45	40.7	0.45	41.1	0.49	41.3	0.55	41.6	0.68	41.7	0.81	
	10.0	33.8	0.8	36.5	0.8	38	0.8	39.7	0.8	40.4	0.84	40.8	0.9	41.3	1.03	41.5	1.16	
	15.0	30.4	1.14	34.2	1.14	36.3	1.14	38.8	1.14	39.7	1.18	40.4	1.24	41	1.37	41.2	1.5	
	20.0	27.2	1.48	32.1	1.48	34.8	1.48	37.9	1.48	39.1	1.52	39.9	1.58	40.7	1.71	41.1	1.84	
	25.0	24.1	1.83	30	1.83	33.3	1.83	37.1	1.83	38.5	1.87	39.5	1.93	40.4	2.06	40.9	2.19	
	30.0	21.1	2.17	28	2.17	31.8	2.17	36.3	2.17	37.9	2.21	39.1	2.27	40.2	2.4	40.7	2.53	
	35.0			26.1	2.51	30.4	2.51	35.5	2.51	37.4	2.55	38.7	2.61	39.9	2.74	40.5	2.87	
	40.0			24.2	2.86	29	2.86	34.7	2.86	36.8	2.9	38.3	2.96	39.7	3.09	40.3	3.22	
40-54	5.0	50.7	0.57	52.5	0.57	53.6	0.57	54.8	0.57	55.3	0.61	55.6	0.67	55.9	0.8	56	0.93	
	10.0	46.1	1.03	49.5	1.03	51.3	1.03	53.5	1.03	54.4	1.07	54.9	1.13	55.5	1.26	55.7	1.39	
	15.0	41.8	1.49	46.7	1.49	49.3	1.49	52.4	1.49	53.5	1.53	54.4	1.59	55.1	1.72	55.5	1.85	
	20.0	37.8	1.95	44	1.95	47.3	1.95	51.3	1.95	52.8	1.99	53.3	2.05	54.8	2.18	55.2	2.31	
	25.0			41.4	2.41	45.4	2.41	50.2	2.41	52	2.45	53.5	2.51	54.4	2.64	55	2.77	
	30.0			38.9	2.88	43.6	2.88	49.2	2.88	51.3	2.92	52.8	2.98	54.1	3.11	54.8	3.24	
	35.0							3.34	48.2	3.34	50.6	3.38	52.3	3.44	53.8	3.57	54.5	3.7
	40.0							3.8	47.2	3.8	49.9	3.84	51.8	3.9	53.5	4.03	54.3	4.16

Values in the blue area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

### U.S. STANDARD

Speed n=1750 r/min

Size	Pressure PSI	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP
20-38	72.5	4.20	0.35	4.41	0.35	4.51	0.35	4.65	0.35	4.73	0.39	4.75	0.48	4.78	0.64	4.80	0.82
	145	3.67	0.55	4.07	0.55	4.28	0.55	4.51	0.55	4.62	0.59	4.65	0.68	4.73	0.84	4.75	1.02
	217.5	3.19	0.75	3.75	0.75	4.04	0.75	4.38	0.75	4.51	0.79	4.62	0.89	4.70	1.05	4.73	1.22
	290	2.75	0.95	3.43	0.95	3.83	0.95	4.28	0.95	4.44	0.99	4.54	1.09	4.65	1.25	4.70	1.42
	362.5	2.30	1.15	3.14	1.15	3.62	1.15	4.14	1.15	4.36	1.19	4.49	1.29	4.62	1.45	4.67	1.62
	435	1.87	1.35	2.88	1.35	3.41	1.35	4.04	1.35	4.28	1.39	4.44	1.49	4.57	1.65	4.65	1.82
	507.5	1.48	1.56	2.59	1.56	3.19	1.56	3.91	1.56	4.17	1.60	4.38	1.69	4.54	1.85	4.62	2.02
	580	1.08	1.76	2.32	1.76	3.01	1.76	3.80	1.76	4.12	1.80	4.33	1.89	4.51	2.05	4.59	2.23
20-46	72.5	5.60	0.40	5.86	0.40	5.99	0.40	6.18	0.40	6.23	0.46	6.28	0.55	6.31	0.71	6.34	0.89
	145	4.96	0.67	5.44	0.67	5.70	0.67	5.99	0.67	6.12	0.72	6.20	0.82	6.26	0.97	6.31	1.15
	217.5	4.38	0.94	5.04	0.94	5.41	0.94	5.83	0.94	5.99	0.99	6.12	1.07	6.20	1.23	6.26	1.41
	290	3.83	1.21	4.67	1.21	5.15	1.21	5.68	1.21	5.89	1.26	6.05	1.34	6.18	1.50	6.23	1.68
	362.5	3.30	1.48	4.33	1.48	4.88	1.48	5.54	1.48	5.78	1.53	5.97	1.61	6.12	1.77	6.20	1.94
	435	2.77	1.73	3.99	1.73	4.62	1.73	5.41	1.73	5.68	1.78	5.89	1.88	6.07	2.04	6.18	2.21
	507.5			3.64	2.00	4.38	2.00	5.25	2.00	5.60	2.05	5.81	2.15	6.05	2.31	6.12	2.48
	580			3.30	2.27	4.14	2.27	5.12	2.27	5.49	2.32	5.76	2.41	5.99	2.56	6.10	2.74
20-56	72.5	7.92	0.51	8.24	0.51	8.42	0.51	8.63	0.51	8.74	0.56	8.79	0.66	8.84	0.82	8.87	0.99
	145	7.10	0.89	7.71	0.89	8.03	0.89	8.42	0.89	8.58	0.94	8.66	1.02	8.76	1.18	8.82	1.35
	217.5	6.34	1.25	7.21	1.25	7.66	1.25	8.21	1.25	8.42	1.30	8.58	1.39	8.71	1.56	8.76	1.73
	290	5.62	1.62	6.73	1.62	7.31	1.62	8.03	1.62	8.29	1.68	8.47	1.77	8.63	1.92	8.71	2.11
	362.5			6.26	2.00	7.00	2.00	7.84	2.00	8.16	2.05	8.37	2.13	8.58	2.29	8.69	2.47
	435			5.83	2.36	6.65	2.36	7.66	2.36	8.03	2.41	8.29	2.51	8.53	2.67	8.63	2.84
	507.5							7.47	2.74	7.89	2.79	8.18	2.88	8.47	3.03	8.61	3.22
	580							7.31	3.11	7.76	3.16	8.10	3.25	8.42	3.41	8.55	3.58
40-38	72.5	9.00	0.60	9.32	0.60	9.50	0.60	9.69	0.60	9.77	0.68	9.85	0.78	9.87	1.02	9.90	1.25
	145	8.21	1.02	8.79	1.02	9.11	1.02	9.48	1.02	9.64	1.09	9.72	1.19	9.82	1.42	9.85	1.66
	217.5	7.50	1.43	8.32	1.43	8.76	1.43	9.29	1.43	9.48	1.50	9.64	1.61	9.77	1.84	9.82	2.07
	290	6.81	1.85	7.87	1.85	8.42	1.85	9.11	1.85	9.35	1.92	9.53	2.02	9.69	2.25	9.77	2.48
	362.5	6.12	2.27	7.42	2.27	8.10	2.27	8.92	2.27	9.21	2.33	9.45	2.44	9.64	2.67	9.74	2.90
	435	5.49	2.68	7.00	2.68	7.79	2.68	8.74	2.68	9.11	2.75	9.35	2.86	9.58	3.08	9.69	3.31
	507.5	4.86	3.10	6.57	3.10	7.50	3.10	8.58	3.10	8.98	3.16	9.27	3.27	9.53	3.50	9.66	3.73
	580	4.25	3.51	6.15	3.51	7.18	3.51	8.40	3.51	8.87	3.58	9.19	3.69	9.48	3.92	9.61	4.14
40-46	72.5	12.09	0.75	12.49	0.75	12.70	0.75	12.96	0.75	13.07	0.82	13.12	0.93	13.20	1.15	13.23	1.38
	145	11.14	1.30	11.85	1.30	12.25	1.26	12.70	1.30	12.88	1.37	12.99	1.48	13.12	1.70	13.17	1.93
	217.5	10.24	1.85	11.25	1.85	11.80	1.85	12.46	1.85	12.70	1.92	12.88	2.02	13.04	2.25	13.09	2.48
	290	9.40	2.40	10.69	2.40	11.40	2.40	12.22	2.40	12.54	2.47	12.75	2.57	12.96	2.80	13.07	3.04
	362.5	8.58	2.95	10.14	2.95	11.01	2.95	12.01	2.95	12.38	3.03	12.65	3.14	12.88	3.37	13.02	3.59
	435	7.79	3.51	9.61	3.51	10.61	3.51	11.80	3.51	12.22	3.58	12.54	3.69	12.83	3.92	12.96	4.14
	507.5			9.11	4.06	10.24	4.06	11.59	4.06	12.09	4.13	12.43	4.24	12.75	4.47	12.91	4.69
	580			8.61	4.61	9.87	4.61	11.38	4.61	11.93	4.68	12.33	4.79	12.70	5.02	12.86	5.24
40-54	72.5	16.34	0.94	16.84	0.94	17.13	0.94	17.45	0.94	17.56	1.01	17.66	1.11	17.71	1.34	17.77	1.57
	145	15.15	1.68	16.05	1.68	16.53	1.68	17.11	1.68	17.32	1.74	17.48	1.85	17.64	2.08	17.69	2.31
	217.5	14.02	2.41	15.31	2.41	16.00	2.41	16.82	2.41	17.11	2.49	17.32	2.60	17.53	2.83	17.61	3.06
	290	12.96	3.16	14.60	3.16	15.47	3.16	16.53	3.16	16.90	3.23	17.19	3.34	17.42	3.57	17.56	3.80
	362.5			13.91	3.90	14.97	3.90	16.24	3.90	16.71	3.97	17.05	4.08	17.34	4.30	17.50	4.53
	435			13.25	4.64	14.49	4.64	15.97	4.64	16.53	4.72	16.90	4.81	17.27	5.06	17.42	5.28
	507.5							15.71	5.39	16.34	5.46	16.76	5.57	17.19	5.79	17.37	6.02
	580							15.44	6.13	16.16	6.20	16.66	6.30	17.11	6.53	17.32	6.76

Values in the grey area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

Speed n=1750 r/min

METRIC

Size	Pressure ΔP Bar	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW
20-38	5.0	15.9	0.26	16.7	0.26	17.1	0.26	17.6	0.26	17.9	0.29	18.0	0.36	18.1	0.48	18.2	0.61
	10.0	13.9	0.41	15.4	0.41	16.2	0.41	17.1	0.41	17.5	0.44	17.6	0.51	17.9	0.63	18.0	0.76
	15.0	12.1	0.56	14.2	0.56	15.3	0.56	16.6	0.56	17.1	0.59	17.5	0.66	17.8	0.78	17.9	0.91
	20.0	10.4	0.71	13.0	0.71	14.5	0.71	16.2	0.71	16.8	0.74	17.2	0.81	17.6	0.93	17.8	1.06
	25.0	8.7	0.86	11.9	0.86	13.7	0.86	15.7	0.86	16.5	0.89	17.0	0.96	17.5	1.08	17.7	1.21
	30.0	7.1	1.01	10.9	1.01	12.9	1.01	15.3	1.01	16.2	1.04	16.8	1.11	17.3	1.23	17.6	1.36
	35.0	5.6	1.16	9.8	1.16	12.1	1.16	14.8	1.16	15.8	1.19	16.6	1.26	17.2	1.38	17.5	1.51
	40.0	4.1	1.31	8.8	1.31	11.4	1.31	14.4	1.31	15.6	1.34	16.4	1.41	17.1	1.53	17.4	1.66
20-46	5.0	21.2	0.30	22.2	0.30	22.7	0.30	23.4	0.30	23.6	0.34	23.8	0.41	23.9	0.53	24.0	0.66
	10.0	18.8	0.50	20.6	0.50	21.6	0.50	22.7	0.50	23.2	0.54	23.5	0.61	23.7	0.72	23.9	0.86
	15.0	16.6	0.70	19.1	0.70	20.5	0.70	22.1	0.70	22.7	0.74	23.2	0.80	23.5	0.92	23.7	1.05
	20.0	14.5	0.90	17.7	0.90	19.5	0.90	21.5	0.90	22.3	0.94	22.9	1.00	23.4	1.12	23.6	1.25
	25.0	12.5	1.10	16.4	1.10	18.5	1.10	21.0	1.10	21.9	1.14	22.6	1.20	23.2	1.32	23.5	1.45
	30.0	10.5	1.29	15.1	1.29	17.5	1.29	20.5	1.29	21.5	1.33	22.3	1.40	23.0	1.52	23.4	1.65
	35.0			13.8	1.49	16.6	1.49	19.9	1.49	21.2	1.53	22.0	1.60	22.9	1.72	23.2	1.85
	40.0			12.5	1.69	15.7	1.69	19.4	1.69	20.8	1.73	21.8	1.80	22.7	1.91	23.1	2.04
20-56	5.0	30.0	0.38	31.2	0.38	31.9	0.38	32.7	0.38	33.1	0.42	33.3	0.49	33.5	0.61	33.6	0.74
	10.0	26.9	0.66	29.2	0.66	30.4	0.66	31.9	0.66	32.5	0.70	32.8	0.76	33.2	0.88	33.4	1.01
	15.0	24.0	0.93	27.3	0.93	29.0	0.93	31.1	0.93	31.9	0.97	32.5	1.04	33.0	1.16	33.2	1.29
	20.0	21.3	1.21	25.5	1.21	27.7	1.21	30.4	1.21	31.4	1.25	32.1	1.32	32.7	1.43	33.0	1.57
	25.0			23.7	1.49	26.5	1.49	29.7	1.49	30.9	1.53	31.7	1.59	32.5	1.71	32.9	1.84
	30.0			22.1	1.76	25.2	1.76	29.0	1.76	30.4	1.80	31.4	1.87	32.3	1.99	32.7	2.12
	35.0							28.3	2.04	29.9	2.08	31.0	2.15	32.1	2.26	32.6	2.40
	40.0							27.7	2.32	29.4	2.36	30.7	2.42	31.9	2.54	32.4	2.67
40-38	5.0	34.1	0.45	35.3	0.45	36.0	0.45	36.7	0.45	37.0	0.51	37.3	0.58	37.4	0.76	37.5	0.93
	10.0	31.1	0.76	33.3	0.76	34.5	0.76	35.9	0.76	36.5	0.81	36.8	0.89	37.2	1.06	37.3	1.24
	15.0	28.4	1.07	31.5	1.07	33.2	1.07	35.2	1.07	35.9	1.12	36.5	1.20	37.0	1.37	37.2	1.54
	20.0	25.8	1.38	29.8	1.38	31.9	1.38	34.5	1.38	35.4	1.43	36.1	1.51	36.7	1.68	37.0	1.85
	25.0	23.2	1.69	28.1	1.69	30.7	1.69	33.8	1.69	34.9	1.74	35.8	1.82	36.5	1.99	36.9	2.16
	30.0	20.8	2.00	26.5	2.00	29.5	2.00	33.1	2.00	34.5	2.05	35.4	2.13	36.3	2.30	36.7	2.47
	35.0	18.4	2.31	24.9	2.31	28.4	2.31	32.5	2.31	34.0	2.36	35.1	2.44	36.1	2.61	36.6	2.78
	40.0	16.1	2.62	23.3	2.62	27.2	2.62	31.8	2.62	33.6	2.67	34.8	2.75	35.9	2.92	36.4	3.09
40-46	5.0	45.8	0.56	47.3	0.56	48.1	0.56	49.1	0.56	49.5	0.61	49.7	0.69	50.0	0.86	50.1	1.03
	10.0	42.2	0.97	44.9	0.97	46.4	0.94	48.1	0.97	48.8	1.02	49.2	1.10	49.7	1.27	49.9	1.44
	15.0	38.8	1.38	42.6	1.38	44.7	1.38	47.2	1.38	48.1	1.43	48.8	1.51	49.4	1.68	49.6	1.85
	20.0	35.6	1.79	40.5	1.79	43.2	1.79	46.3	1.79	47.5	1.84	48.3	1.92	49.1	2.09	49.5	2.27
	25.0	32.5	2.20	38.4	2.20	41.7	2.20	45.5	2.20	46.9	2.26	47.9	2.34	48.8	2.51	49.3	2.68
	30.0	29.5	2.62	36.4	2.62	40.2	2.62	44.7	2.62	46.3	2.67	47.5	2.75	48.6	2.92	49.1	3.09
	35.0			34.5	3.03	38.8	3.03	43.9	3.03	45.8	3.08	47.1	3.16	48.3	3.33	48.9	3.50
	40.0			32.6	3.44	37.4	3.44	43.1	3.44	45.2	3.49	46.7	3.57	48.1	3.74	48.7	3.91
40-54	5.0	61.9	0.70	63.8	0.70	64.9	0.70	66.1	0.70	66.5	0.75	66.9	0.83	67.1	1.00	67.3	1.17
	10.0	57.4	1.25	60.8	1.25	62.6	1.25	64.8	1.25	65.6	1.30	66.2	1.38	66.8	1.55	67.0	1.72
	15.0	53.1	1.80	58.0	1.80	60.6	1.80	63.7	1.80	64.8	1.86	65.6	1.94	66.4	2.11	66.7	2.28
	20.0	49.1	2.36	55.3	2.36	58.6	2.36	62.6	2.36	64.0	2.41	65.1	2.49	66.0	2.66	66.5	2.83
	25.0			52.7	2.91	56.7	2.91	61.5	2.91	63.3	2.96	64.6	3.04	65.7	3.21	66.3	3.38
	30.0			50.2	3.46	54.9	3.46	60.5	3.46	62.6	3.52	64.0	3.59	65.4	3.77	66.0	3.94
	35.0							59.5	4.02	61.9	4.07	63.5	4.15	65.1	4.32	65.8	4.49
	40.0							58.5	4.57	61.2	4.62	63.1	4.70	64.8	4.87	65.6	5.04

Values in the blue area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.





# PERFORMANCE DATA SHEET

▶ 3PF SERIES

TRIPLE-SCREW PUMP DESIGN MANUAL

## U.S. STANDARD

Speed n=2900 r/min

Size	Pressure PSI	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP
20-38	72.5	7.42	0.64	7.63	0.64	7.76	0.64	7.89	0.64	7.95	0.75	7.97	0.94	8.00	1.29	8.03	1.66
	145	6.92	0.98	7.29	0.98	7.50	0.98	7.76	0.98	7.84	1.09	7.92	1.27	7.97	1.62	8.00	2.00
	217.5	6.44	1.31	6.97	1.31	7.26	1.31	7.63	1.31	7.76	1.42	7.84	1.61	7.92	1.96	7.97	2.33
	290	5.97	1.65	6.68	1.65	7.05	1.65	7.50	1.65	7.66	1.76	7.79	1.94	7.89	2.29	7.95	2.67
	362.5	5.54	1.98	6.39	1.98	6.84	1.98	7.37	1.98	7.58	2.09	7.71	2.28	7.84	2.63	7.92	3.00
	435	5.12	2.32	6.10	2.32	6.63	2.32	7.26	2.32	7.50	2.43	7.66	2.61	7.81	2.96	7.89	3.34
	507.5	4.70	2.66	5.83	2.66	6.42	2.66	7.15	2.66	7.42	2.76	7.60	2.95	7.79	3.30	7.87	3.67
	580	4.30	2.99	5.54	2.99	6.23	2.99	7.05	2.99	7.34	3.10	7.55	3.29	7.74	3.63	7.84	4.01
20-46	72.5	9.87	0.75	10.14	0.75	10.27	0.75	10.43	0.75	10.51	0.86	10.53	1.05	10.59	1.39	10.61	1.77
	145	9.24	1.19	9.72	1.19	9.95	1.19	10.27	1.19	10.38	1.30	10.45	1.49	10.53	1.84	10.56	2.17
	217.5	8.66	1.64	9.32	1.64	9.69	1.64	10.11	1.64	10.27	1.74	10.38	1.93	10.48	2.28	10.38	2.66
	290	8.10	2.08	8.95	2.08	9.40	2.08	9.95	2.08	10.16	2.19	10.30	2.37	10.43	2.72	10.51	3.10
	362.5	7.55	2.52	8.58	2.52	9.13	2.52	9.82	2.52	10.06	2.63	10.22	2.82	10.40	3.16	10.45	3.54
	435	7.05	2.96	8.24	2.96	8.90	2.96	9.66	2.96	9.95	3.07	10.16	3.26	10.35	3.61	10.43	3.98
	507.5	6.55	3.41	7.89	3.41	8.66	3.41	9.53	3.41	9.85	3.51	10.08	3.70	10.30	4.05	10.40	4.43
	580	6.05	3.85	7.58	3.85	8.40	3.85	9.40	3.85	9.77	3.96	10.03	4.14	10.27	4.49	10.38	4.87
20-56	72.5	13.86	0.93	14.20	0.93	14.39	0.93	14.60	0.93	14.68	1.03	14.73	1.22	14.78	1.57	14.81	1.94
	145	13.04	1.54	13.65	1.54	13.99	1.54	14.39	1.54	14.52	1.65	14.63	1.84	14.73	2.19	14.76	2.56
	217.5	12.30	2.16	13.15	2.16	13.62	2.16	14.18	2.16	14.39	2.27	14.52	2.47	14.65	2.80	14.73	3.18
	290	11.59	2.78	12.67	2.78	13.28	2.78	13.97	2.78	14.23	2.88	14.41	3.08	14.60	3.42	14.68	3.80
	362.5	10.90	3.39	12.22	3.39	12.94	3.39	13.78	3.39	14.10	3.51	14.34	3.70	14.55	4.04	14.63	4.41
	435	10.22	4.01	11.77	4.01	12.62	4.01	13.60	4.01	13.97	4.13	14.23	4.32	14.49	4.65	14.60	5.04
	507.5			11.35	4.63	12.30	4.63	13.44	4.63	13.86	4.75	14.15	4.93	14.41	5.27	14.55	5.66
	580			10.93	5.24	11.99	5.24	13.25	5.24	13.73	5.36	14.07	5.55	14.36	5.89	14.52	6.28
40-38	72.5	15.66	1.11	15.97	1.11	16.16	1.11	16.34	1.11	16.42	1.26	16.50	1.49	16.53	1.98	16.55	2.47
	145	14.86	1.80	15.44	1.80	15.76	1.80	16.13	1.80	16.29	1.94	16.37	2.17	16.47	2.67	16.50	3.16
	217.5	14.15	2.49	14.97	2.49	15.42	2.49	15.95	2.49	16.13	2.64	16.29	2.87	16.42	3.37	16.47	3.85
	290	13.46	3.18	14.52	3.18	15.07	3.18	15.76	3.18	16.00	3.33	16.18	3.55	16.34	4.05	16.42	4.55
	362.5	12.78	3.88	14.07	3.88	14.76	3.88	15.58	3.88	15.87	4.02	16.10	4.25	16.29	4.75	16.39	5.23
	435	12.14	4.56	13.65	4.56	14.44	4.56	15.39	4.56	15.76	4.71	16.00	4.93	16.24	5.43	16.34	5.93
	507.5	11.51	5.26	13.23	5.26	14.15	5.26	15.23	5.26	15.63	5.40	15.92	5.63	16.18	6.13	16.32	6.61
	580	10.90	5.94	12.80	5.94	13.83	5.94	15.05	5.94	15.52	6.09	15.84	6.32	16.13	6.81	16.26	7.31
40-46	72.5	20.96	1.34	21.36	1.34	21.57	1.34	21.83	1.34	21.94	1.49	21.99	1.72	22.07	2.21	22.10	2.71
	145	20.01	2.25	20.72	2.25	21.12	2.25	21.57	2.25	21.75	2.41	21.86	2.64	21.99	3.12	22.04	3.62
	217.5	19.11	3.18	20.12	3.18	20.67	3.18	21.33	3.18	21.57	3.33	21.75	3.55	21.91	4.05	21.96	4.55
	290	18.27	4.10	19.56	4.10	20.28	4.10	21.09	4.10	21.41	4.25	21.62	4.48	21.83	4.98	21.94	5.47
	362.5	17.45	5.02	19.01	5.02	19.88	5.02	20.88	5.02	21.25	5.18	21.52	5.40	21.75	5.89	21.89	6.38
	435	16.66	5.94	18.48	5.94	19.48	5.94	20.67	5.94	21.09	6.09	21.41	6.32	21.70	6.81	21.83	7.31
	507.5	15.89	6.87	17.98	6.87	19.11	6.87	20.46	6.87	20.96	7.01	21.30	7.24	21.62	7.74	21.78	8.22
	580	15.13	7.78	17.48	7.78	18.74	7.78	20.25	7.78	20.80	7.94	21.20	8.17	21.57	8.65	21.73	9.15
40-54	72.5	28.27	1.65	28.75	1.65	29.04	1.65	29.36	1.65	29.49	1.81	29.57	2.04	29.65	2.52	29.67	3.02
	145	27.06	2.88	27.96	2.88	28.43	2.88	29.01	2.88	29.25	3.04	29.38	3.27	29.54	3.77	29.59	4.25
	217.5	25.92	4.13	27.22	4.13	27.90	4.13	28.72	4.13	29.01	4.28	29.25	4.51	29.44	5.00	29.54	5.48
	290	24.87	5.36	26.51	5.36	27.38	5.36	28.43	5.36	28.83	5.51	29.09	5.74	29.36	6.24	29.46	6.73
	362.5	23.87	6.60	25.82	6.60	26.88	6.60	28.14	6.60	28.62	6.75	28.96	6.97	29.25	7.47	29.41	7.97
	435	22.86	7.83	25.16	7.83	26.40	7.83	27.88	7.83	28.43	7.99	28.83	8.21	29.17	8.70	29.36	9.20
	507.5			24.53	9.07	25.92	9.07	27.61	9.07	28.25	9.23	28.70	9.45	29.09	9.94	29.28	10.43
	580			23.89	10.31	25.48	10.31	27.35	10.31	28.06	10.46	28.56	10.69	29.01	11.18	29.22	11.67

Values in the grey area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

Speed n=2900 r/min

METRIC

Size	Pressure ΔP Bar	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW
20-38	5.0	28.1	0.48	28.9	0.48	29.4	0.48	29.9	0.48	30.1	0.56	30.2	0.7	30.3	0.96	30.4	1.24
	10.0	26.2	0.73	27.6	0.73	28.4	0.73	29.4	0.73	29.7	0.81	30	0.95	30.2	1.21	30.3	1.49
	15.0	24.4	0.98	26.4	0.98	27.5	0.98	28.9	0.98	29.4	1.06	29.7	1.2	30	1.46	30.2	1.74
	20.0	22.6	1.23	25.3	1.23	26.7	1.23	28.4	1.23	29	1.31	29.5	1.45	29.9	1.71	30.1	1.99
	25.0	21	1.48	24.2	1.48	25.9	1.48	27.9	1.48	28.7	1.56	29.2	1.7	29.7	1.96	30	2.24
	30.0	19.4	1.73	23.1	1.73	25.1	1.73	27.5	1.73	28.4	1.81	29	1.95	29.6	2.21	29.9	2.49
	35.0	17.8	1.98	22.1	1.98	24.3	1.98	27.1	1.98	28.1	2.06	28.8	2.2	29.5	2.46	29.8	2.74
	40.0	16.3	2.23	21	2.23	23.6	2.23	26.7	2.23	27.8	2.31	28.6	2.45	29.3	2.71	29.7	2.99
20-46	5.0	37.4	0.56	38.4	0.56	38.9	0.56	39.5	0.56	39.8	0.64	39.9	0.78	40.1	1.04	40.2	1.32
	10.0	35	0.89	36.8	0.89	37.7	0.89	38.9	0.89	39.3	0.97	39.6	1.11	39.9	1.37	40	1.62
	15.0	32.8	1.22	35.3	1.22	36.7	1.22	38.3	1.22	38.9	1.3	39.3	1.44	39.7	1.7	39.3	1.98
	20.0	30.7	1.55	33.9	1.55	35.6	1.55	37.7	1.55	38.5	1.63	39	1.77	39.5	2.03	39.8	2.31
	25.0	28.6	1.88	32.5	1.88	34.6	1.88	37.2	1.88	38.1	1.96	38.7	2.1	39.4	2.36	39.6	2.64
	30.0	26.7	2.21	31.2	2.21	33.7	2.21	36.6	2.21	37.7	2.29	38.5	2.43	39.2	2.69	39.5	2.97
	35.0	24.8	2.54	29.9	2.54	32.8	2.54	36.1	2.54	37.3	2.62	38.2	2.76	39	3.02	39.4	3.3
	40.0	22.9	2.87	28.7	2.87	31.8	2.87	35.6	2.87	37	2.95	38	3.09	38.9	3.35	39.3	3.63
20-56	5.0	52.5	0.69	53.8	0.69	54.5	0.69	55.3	0.69	55.6	0.77	55.8	0.91	56	1.17	56.1	1.45
	10.0	49.4	1.15	51.7	1.15	53	1.15	54.5	1.15	55	1.23	55.4	1.37	55.8	1.63	55.9	1.91
	15.0	46.6	1.61	49.8	1.61	51.6	1.61	53.7	1.61	54.5	1.69	55	1.84	55.5	2.09	55.8	2.37
	20.0	43.9	2.07	48	2.07	50.3	2.07	52.9	2.07	53.9	2.15	54.6	2.3	55.3	2.55	55.6	2.83
	25.0	41.3	2.53	46.3	2.53	49	2.53	52.2	2.53	53.4	2.62	54.3	2.76	55.1	3.01	55.4	3.29
	30.0	38.7	2.99	44.6	2.99	47.8	2.99	51.5	2.99	52.9	3.08	53.9	3.22	54.9	3.47	55.3	3.76
	35.0			43	3.45	46.6	3.45	50.9	3.45	52.5	3.54	53.6	3.68	54.6	3.93	55.1	4.22
	40.0			41.4	3.91	45.4	3.91	50.2	3.91	52	4	53.3	4.14	54.4	4.39	55	4.68
40-38	5.0	59.3	0.83	60.5	0.83	61.2	0.83	61.9	0.83	62.2	0.94	62.5	1.11	62.6	1.48	62.7	1.84
	10.0	56.3	1.34	58.5	1.34	59.7	1.34	61.1	1.34	61.7	1.45	62	1.62	62.4	1.99	62.5	2.36
	15.0	53.6	1.86	56.7	1.86	58.4	1.86	60.4	1.86	61.1	1.97	61.7	2.14	62.2	2.51	62.4	2.87
	20.0	51	2.37	55	2.37	57.1	2.37	59.7	2.37	60.6	2.48	61.3	2.65	61.9	3.02	62.2	3.39
	25.0	48.4	2.89	53.3	2.89	55.9	2.89	59	2.89	60.1	3	61	3.17	61.7	3.54	62.1	3.9
	30.0	46	3.4	51.7	3.4	54.7	3.4	58.3	3.4	59.7	3.51	60.6	3.68	61.5	4.05	61.9	4.42
	35.0	43.6	3.92	50.1	3.92	53.6	3.92	57.7	3.92	59.2	4.03	60.3	4.2	61.3	4.57	61.8	4.93
	40.0	41.3	4.43	48.5	4.43	52.4	4.43	57	4.43	58.8	4.54	60	4.71	61.1	5.08	61.6	5.45
40-46	5.0	79.3	1	80.8	1	81.6	1	82.6	1	83	1.11	83.2	1.28	83.5	1.65	83.6	2.02
	10.0	75.8	1.68	78.4	1.68	79.9	1.68	81.6	1.68	82.3	1.8	82.7	1.97	83.2	2.33	83.4	2.7
	15.0	72.4	2.37	76.2	2.37	78.2	2.37	80.7	2.37	81.6	2.48	82.3	2.65	82.9	3.02	83.1	3.39
	20.0	69.2	3.06	74.1	3.06	76.7	3.06	79.8	3.06	81	3.17	81.8	3.34	82.6	3.71	83	4.08
	25.0	66.1	3.74	72	3.74	75.3	3.74	79	3.74	80.4	3.86	81.4	4.03	82.3	4.39	82.8	4.76
	30.0	63.1	4.43	70	4.43	73.8	4.43	78.2	4.43	79.8	4.54	81	4.71	82.1	5.08	82.6	5.45
	35.0	60.2	5.12	68.1	5.12	72.4	5.12	77.4	5.12	79.3	5.23	80.6	5.4	81.8	5.77	82.4	6.13
	40.0	57.3	5.8	66.2	5.8	71	5.8	76.7	5.8	78.7	5.92	80.2	6.09	81.6	6.45	82.2	6.82
40-54	5.0	107	1.23	109	1.23	110	1.23	111	1.23	112	1.35	112	1.52	112	1.88	112	2.25
	10.0	102	2.15	106	2.15	108	2.15	110	2.15	111	2.27	111	2.44	112	2.81	112	3.17
	15.0	98.1	3.08	103	3.08	106	3.08	109	3.08	110	3.19	111	3.36	111	3.73	112	4.09
	20.0	94.1	4	100	4	104	4	108	4	109	4.11	110	4.28	111	4.65	112	5.02
	25.0	90.3	4.92	97.7	4.92	102	4.92	107	4.92	108	5.03	110	5.2	111	5.57	111	5.94
	30.0	86.5	5.84	95.2	5.84	99.9	5.84	106	5.84	108	5.96	109	6.12	110	6.49	111	6.86
	35.0			92.8	6.76	98.1	6.76	105	6.76	107	6.88	109	7.05	110	7.41	111	7.78
	40.0			90.4	7.69	96.4	7.69	104	7.69	106	7.8	108	7.97	110	8.34	111	8.7

Values in the blue area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

### U.S. STANDARD

Speed  $n=3500$  r/min

Size	Pressure PSI	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP	Flow GPM	Power HP
20-38	72.5	8.82	0.78	9.03	0.78	9.13	0.78	9.29	0.78	9.35	0.93	9.37	1.17	9.40	1.60	9.42	2.08
	145	8.29	1.17	8.69	1.17	8.90	1.17	9.13	1.17	9.24	1.31	9.29	1.56	9.37	1.98	9.40	2.47
	217.5	7.81	1.57	8.37	1.57	8.66	1.57	9.00	1.57	9.13	1.70	9.24	1.94	9.32	2.39	9.37	2.87
	290	7.37	1.96	8.05	1.96	8.45	1.96	8.90	1.96	9.06	2.11	9.16	2.35	9.27	2.78	9.35	3.26
	362.5	6.94	2.35	7.76	2.35	8.24	2.35	8.76	2.35	8.98	2.49	9.11	2.74	9.24	3.16	9.32	3.65
	435	6.52	2.75	7.50	2.75	8.03	2.75	8.66	2.75	8.90	2.88	9.06	3.12	9.21	3.57	9.29	4.05
	507.5	6.10	3.14	7.21	3.14	7.81	3.14	8.55	3.14	8.82	3.29	9.00	3.53	9.16	3.96	9.27	4.44
	580	5.70	3.53	6.94	3.53	7.63	3.53	8.42	3.53	8.74	3.67	8.95	3.92	9.13	4.34	9.24	4.83
20-46	72.5	11.70	0.90	11.96	0.90	12.12	0.90	12.28	0.90	12.33	1.05	12.38	1.29	12.43	1.72	12.43	2.20
	145	11.06	1.42	11.54	1.42	11.80	1.42	12.12	1.42	12.22	1.57	12.30	1.81	12.38	2.24	12.41	2.72
	217.5	10.48	1.94	11.17	1.94	11.51	1.94	11.93	1.94	12.12	2.09	12.22	2.33	12.33	2.76	12.38	3.25
	290	9.93	2.47	10.77	2.47	11.25	2.47	11.80	2.47	11.99	2.60	12.14	2.84	12.28	3.29	12.33	3.77
	362.5	9.40	2.98	10.43	2.98	10.98	2.98	11.64	2.98	11.91	3.12	12.06	3.37	12.22	3.80	12.30	4.28
	435	8.87	3.50	10.08	3.50	10.74	3.50	11.51	3.50	11.80	3.65	11.99	3.89	12.20	4.32	12.28	4.80
	507.5	8.37	4.02	9.74	4.02	10.48	4.02	11.38	4.02	11.70	4.16	11.93	4.40	12.14	4.84	12.25	5.32
	580	7.87	4.53	9.42	4.53	10.24	4.53	11.22	4.53	11.59	4.68	11.85	4.92	12.09	5.35	12.20	5.83
20-56	72.5	16.42	1.11	16.76	1.11	16.95	1.11	17.16	1.11	17.24	1.26	17.32	1.49	17.37	1.93	17.37	2.41
	145	15.63	1.84	16.24	1.84	16.55	1.84	16.95	1.84	17.08	1.98	17.19	2.23	17.29	2.66	17.34	3.14
	217.5	14.86	2.56	15.73	2.56	16.18	2.56	16.74	2.56	16.95	2.71	17.08	2.95	17.21	3.38	17.29	3.86
	290	14.15	3.29	15.26	3.29	15.84	3.29	16.55	3.29	16.82	3.43	17.00	3.67	17.16	4.10	17.24	4.59
	362.5	13.46	4.01	14.78	4.01	15.50	4.01	16.37	4.01	16.68	4.16	16.90	4.40	17.11	4.83	17.21	5.31
	435	12.80	4.73	14.36	4.73	15.18	4.73	16.18	4.73	16.55	4.88	16.82	5.12	17.05	5.55	17.16	6.03
	507.5			13.91	5.46	14.86	5.46	16.00	5.46	16.42	5.61	16.71	5.85	17.00	6.28	17.13	6.76
	580			13.49	6.18	14.55	6.18	15.81	6.18	16.29	6.33	16.63	6.57	16.95	7.00	17.08	7.48
40-38	72.5	18.51	1.34	18.85	1.34	19.01	1.34	19.22	1.34	19.30	1.53	19.35	1.82	19.40	2.44	19.43	3.07
	145	17.74	2.15	18.32	2.15	18.64	2.15	19.01	2.15	19.14	2.35	19.25	2.63	19.32	3.26	19.38	3.88
	217.5	17.00	2.96	17.85	2.96	18.27	2.96	18.80	2.96	19.01	3.15	19.14	3.43	19.27	4.06	19.32	4.69
	290	16.32	3.77	17.37	3.77	17.95	3.77	18.61	3.77	18.88	3.96	19.06	4.25	19.22	4.88	19.30	5.50
	362.5	15.66	4.57	16.92	4.57	17.64	4.57	18.45	4.57	18.74	4.77	18.96	5.06	19.17	5.69	19.25	6.32
	435	15.02	5.39	16.50	5.39	17.32	5.39	18.27	5.39	18.61	5.58	18.88	5.87	19.11	6.49	19.22	7.12
	507.5	14.39	6.20	16.08	6.20	17.00	6.20	18.08	6.20	18.51	6.38	18.80	6.68	19.06	7.31	19.17	7.93
	580	13.78	7.00	15.68	7.00	16.71	7.00	17.93	7.00	18.37	7.20	18.72	7.48	19.01	8.11	19.14	8.74
40-46	72.5	24.79	1.61	25.19	1.61	25.40	1.61	25.66	1.61	25.77	1.80	25.82	2.09	25.87	2.72	25.92	3.34
	145	23.81	2.68	24.55	2.68	24.92	2.68	25.40	2.68	25.58	2.88	25.69	3.16	25.79	3.80	25.85	4.43
	217.5	22.94	3.77	23.94	3.77	24.50	3.77	25.16	3.77	25.40	3.96	25.58	4.25	25.71	4.88	25.79	5.50
	290	22.10	4.84	23.39	4.84	24.08	4.84	24.92	4.84	25.24	5.04	25.45	5.32	25.66	5.95	25.74	6.58
	362.5	21.28	5.93	22.84	5.93	23.68	5.93	24.71	5.93	25.08	6.11	25.34	6.41	25.58	7.04	25.69	7.66
	435	20.49	7.00	22.31	7.00	23.31	7.00	24.47	7.00	24.92	7.20	25.24	7.48	25.53	8.11	25.66	8.74
	507.5	19.72	8.09	21.81	8.09	22.94	8.09	24.26	8.09	24.79	8.27	25.13	8.57	25.45	9.19	25.61	9.82
	580	18.96	9.16	21.30	9.16	22.57	9.16	24.08	9.16	24.63	9.36	25.03	9.64	25.40	10.27	25.56	10.90
40-54	72.5	33.40	1.98	33.90	1.98	34.16	1.98	34.48	1.98	34.61	2.17	34.69	2.45	34.77	3.08	34.82	3.71
	145	32.18	3.43	33.08	3.43	33.58	3.43	34.16	3.43	34.37	3.62	34.53	3.92	34.66	4.53	34.74	5.16
	217.5	31.07	4.88	32.34	4.88	33.03	4.88	33.84	4.88	34.16	5.07	34.37	5.36	34.58	5.98	34.66	6.61
	290	30.02	6.33	31.63	6.33	32.52	6.33	33.55	6.33	33.95	6.52	34.24	6.81	34.48	7.43	34.61	8.06
	362.5	28.99	7.78	30.97	7.78	32.02	7.78	33.29	7.78	33.77	7.97	34.08	8.26	34.40	8.88	34.53	9.51
	435	27.98	9.23	30.28	9.23	31.55	9.23	33.03	9.23	33.55	9.41	33.95	9.71	34.32	10.34	34.48	10.96
	507.5			29.65	10.67	31.07	10.67	32.76	10.67	33.37	10.86	33.82	11.16	34.24	11.79	34.43	12.40
	580			29.01	12.12	30.60	12.12	32.50	12.12	33.18	12.31	33.69	12.61	34.14	13.24	34.37	13.85

Values in the grey area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

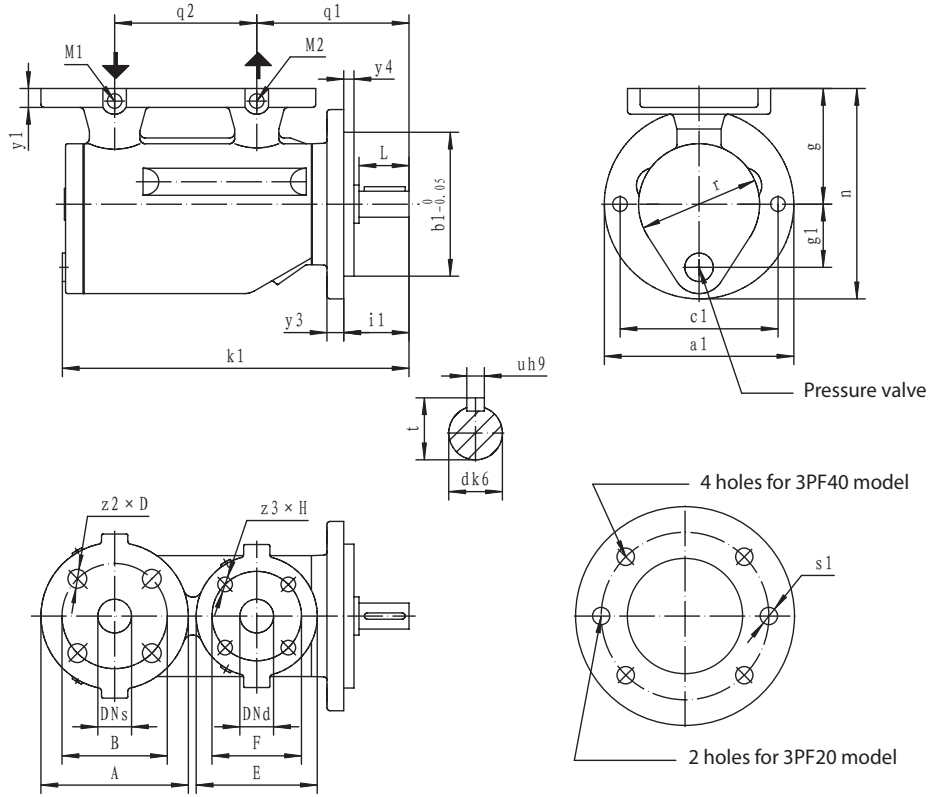
Speed n=3500 r/min

METRIC

Size	Pressure ΔP Bar	Viscosity (mm <sup>2</sup> /s)															
		3		6		12		40		75		150		380		750	
		Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW	Flow L/min	Power kW
20-38	5.0	33.4	0.58	34.2	0.58	34.6	0.58	35.2	0.58	35.4	0.69	35.5	0.87	35.6	1.19	35.7	1.55
	10.0	31.4	0.87	32.9	0.87	33.7	0.87	34.6	0.87	35	0.98	35.2	1.16	35.5	1.48	35.6	1.84
	15.0	29.6	1.17	31.7	1.17	32.8	1.17	34.1	1.17	34.6	1.27	35	1.45	35.3	1.78	35.5	2.14
	20.0	27.9	1.46	30.5	1.46	32	1.46	33.7	1.46	34.3	1.57	34.7	1.75	35.1	2.07	35.4	2.43
	25.0	26.3	1.75	29.4	1.75	31.2	1.75	33.2	1.75	34	1.86	34.5	2.04	35	2.36	35.3	2.72
	30.0	24.7	2.05	28.4	2.05	30.4	2.05	32.8	2.05	33.7	2.15	34.3	2.33	34.9	2.66	35.2	3.02
	35.0	23.1	2.34	27.3	2.34	29.6	2.34	32.4	2.34	33.4	2.45	34.1	2.63	34.7	2.95	35.1	3.31
	40.0	21.6	2.63	26.3	2.63	28.9	2.63	31.9	2.63	33.1	2.74	33.9	2.92	34.6	3.24	35	3.6
20-46	5.0	44.3	0.67	45.3	0.67	45.9	0.67	46.5	0.67	46.7	0.78	46.9	0.96	47.1	1.28	47.1	1.64
	10.0	41.9	1.06	43.7	1.06	44.7	1.06	45.9	1.06	46.3	1.17	46.6	1.35	46.9	1.67	47	2.03
	15.0	39.7	1.45	42.3	1.45	43.6	1.45	45.2	1.45	45.9	1.56	46.3	1.74	46.7	2.06	46.9	2.42
	20.0	37.6	1.84	40.8	1.84	42.6	1.84	44.7	1.84	45.4	1.94	46	2.12	46.5	2.45	46.7	2.81
	25.0	35.6	2.22	39.5	2.22	41.6	2.22	44.1	2.22	45.1	2.33	45.7	2.51	46.3	2.83	46.6	3.19
	30.0	33.6	2.61	38.2	2.61	40.7	2.61	43.6	2.61	44.7	2.72	45.4	2.9	46.2	3.22	46.5	3.58
	35.0	31.7	3	36.9	3	39.7	3	43.1	3	44.3	3.1	45.2	3.28	46	3.61	46.4	3.97
	40.0	29.8	3.38	35.7	3.38	38.8	3.38	42.5	3.38	43.9	3.49	44.9	3.67	45.8	3.99	46.2	4.35
20-56	5.0	62.2	0.83	63.5	0.83	64.2	0.83	65	0.83	65.3	0.94	65.6	1.11	65.8	1.44	65.8	1.8
	10.0	59.2	1.37	61.5	1.37	62.7	1.37	64.2	1.37	64.7	1.48	65.1	1.66	65.5	1.98	65.7	2.34
	15.0	56.3	1.91	59.6	1.91	61.3	1.91	63.4	1.91	64.2	2.02	64.7	2.2	65.2	2.52	65.5	2.88
	20.0	53.6	2.45	57.8	2.45	60	2.45	62.7	2.45	63.7	2.56	64.4	2.74	65	3.06	65.3	3.42
	25.0	51	2.99	56	2.99	58.7	2.99	62	2.99	63.2	3.1	64	3.28	64.8	3.6	65.2	3.96
	30.0	48.5	3.53	54.4	3.53	57.5	3.53	61.3	3.53	62.7	3.64	63.7	3.82	64.6	4.14	65	4.5
	35.0			52.7	4.07	56.3	4.07	60.6	4.07	62.2	4.18	63.3	4.36	64.4	4.68	64.9	5.04
	40.0			51.1	4.61	55.1	4.61	59.9	4.61	61.7	4.72	63	4.9	64.2	5.22	64.7	5.58
40-38	5.0	70.1	1	71.4	1	72	1	72.8	1	73.1	1.14	73.3	1.36	73.5	1.82	73.6	2.29
	10.0	67.2	1.6	69.4	1.6	70.6	1.6	72	1.6	72.5	1.75	72.9	1.96	73.2	2.43	73.4	2.89
	15.0	64.4	2.21	67.6	2.21	69.2	2.21	71.2	2.21	72	2.35	72.5	2.56	73	3.03	73.2	3.5
	20.0	61.8	2.81	65.8	2.81	68	2.81	70.5	2.81	71.5	2.95	72.2	3.17	72.8	3.64	73.1	4.1
	25.0	59.3	3.41	64.1	3.41	66.8	3.41	69.9	3.41	71	3.56	71.8	3.77	72.6	4.24	72.9	4.71
	30.0	56.9	4.02	62.5	4.02	65.6	4.02	69.2	4.02	70.5	4.16	71.5	4.38	72.4	4.84	72.8	5.31
	35.0	54.5	4.62	60.9	4.62	64.4	4.62	68.5	4.62	70.1	4.76	71.2	4.98	72.2	5.45	72.6	5.91
	40.0	52.2	5.22	59.4	5.22	63.3	5.22	67.9	5.22	69.6	5.37	70.9	5.58	72	6.05	72.5	6.52
40-46	5.0	93.8	1.2	95.3	1.2	96.1	1.2	97.1	1.2	97.5	1.34	97.7	1.56	97.9	2.03	98.1	2.49
	10.0	90.1	2	92.9	2	94.3	2	96.1	2	96.8	2.15	97.2	2.36	97.6	2.83	97.8	3.3
	15.0	86.8	2.81	90.6	2.81	92.7	2.81	95.2	2.81	96.1	2.95	96.8	3.17	97.3	3.64	97.6	4.1
	20.0	83.6	3.61	88.5	3.61	91.1	3.61	94.3	3.61	95.5	3.76	96.3	3.97	97.1	4.44	97.4	4.91
	25.0	80.5	4.42	86.4	4.42	89.6	4.42	93.5	4.42	94.9	4.56	95.9	4.78	96.8	5.25	97.2	5.71
	30.0	77.5	5.22	84.4	5.22	88.2	5.22	92.6	5.22	94.3	5.37	95.5	5.58	96.6	6.05	97.1	6.52
	35.0	74.7	6.03	82.5	6.03	86.8	6.03	91.8	6.03	93.8	6.17	95.1	6.39	96.3	6.85	96.9	7.32
	40.0	71.8	6.83	80.6	6.83	85.4	6.83	91.1	6.83	93.2	6.98	94.7	7.19	96.1	7.66	96.7	8.13
40-54	5.0	126	1.48	128	1.48	129	1.48	131	1.48	131	1.62	131	1.83	132	2.3	132	2.77
	10.0	122	2.56	125	2.56	127	2.56	129	2.56	130	2.7	131	2.92	131	3.38	132	3.85
	15.0	118	3.64	122	3.64	125	3.64	128	3.64	129	3.78	130	4	131	4.46	131	4.93
	20.0	114	4.72	120	4.72	123	4.72	127	4.72	129	4.86	130	5.08	131	5.54	131	6.01
	25.0	110	5.8	117	5.8	121	5.8	126	5.8	128	5.94	129	6.16	130	6.62	131	7.09
	30.0	106	6.88	115	6.88	119	6.88	125	6.88	127	7.02	129	7.24	130	7.71	131	8.17
	35.0			112	7.96	118	7.96	124	7.96	126	8.1	128	8.32	130	8.79	130	9.25
	40.0			110	9.04	116	9.04	123	9.04	126	9.18	128	9.4	129	9.87	130	10.3

Values in the blue area of the table are not recommended. Blackmer reserves the right to change the data in the table without prior notice.

3PF model without filter



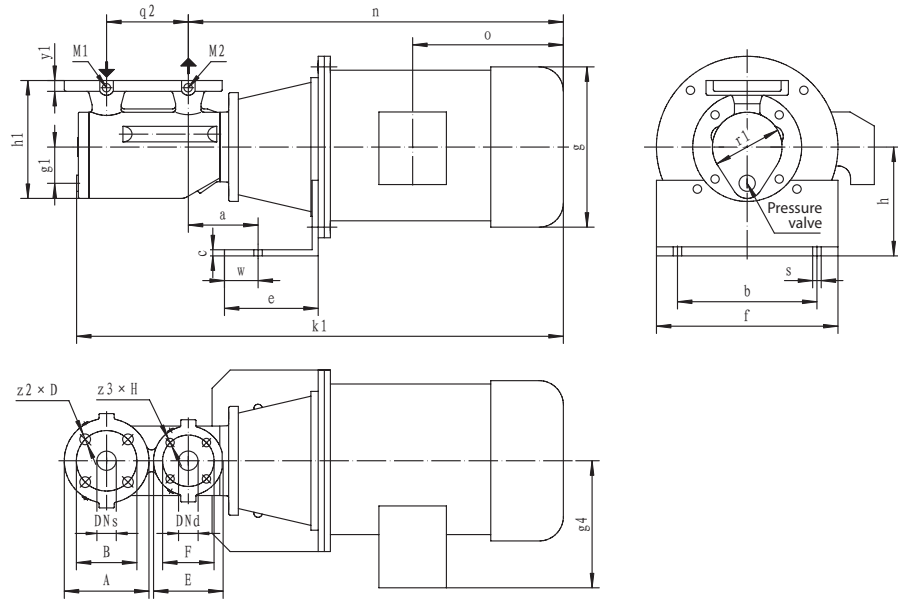
Orientation: clockwise view from shaft end

Size	Pump Size														Shaft Length			
	a1	b1	c1	g	g1	l1	k1	n	q1	q2	r	s1	y3	y4	d	l	t	u
20	175	102	146	95	56	53	280	185	130	125	110	14	18	10	19	35	21.5	6
40	180	120	150	110	60	42	308	200	125	135	115	14	16	4	19	35	21.5	6

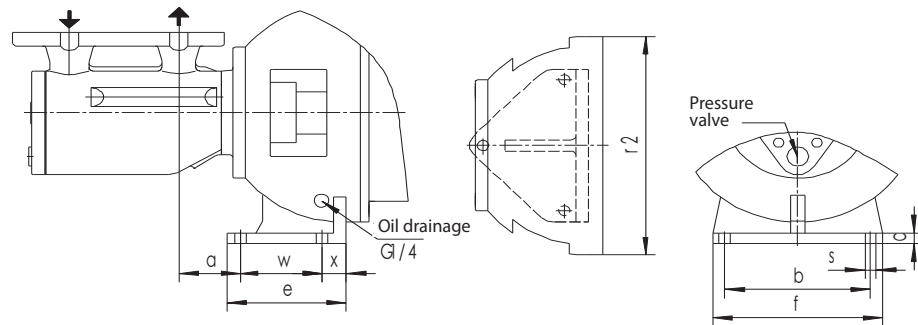
Size	Suction						Discharge						Pressure Gauge
	DNs	A	B	D	Y1	Z1	DNd	E	F	H	Y2	Z3	M1/M2
20	25	120	85	14	18	4	25	120	85	14	18	4	G1/4
40	32	140	100	18	18	4	25	115	85	14	18	4	G1/4



3PF Model installation dimensions, without filter



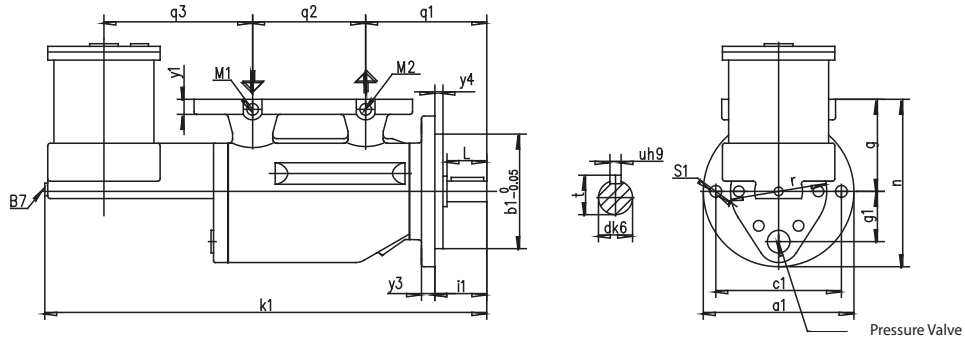
Base for Size 40 model, all other dimensions are the same as above



Size	Motor	Pump Unit Size																	Suction Flange					Discharge Flange					Pressure Gauge		
		a	b	c	e	f	g	g1	g4	h	h1	k1	n	o	q2	r1	s	w	x	y1	DNs	A	B	D	Z2	DNd	E	F	H	Z3	M1/M2
20	90S	120	160	8	100	200	186	56	136	140	235	702	422	130	125	110	14	50	18	25	120	85	14	4	25	120	85	14	4	G1/4	
	90L	120	160	8	100	200	186		136	140	235	727	447	142																	
	100L	135	200	8	100	250	200		140	160	255	786	514	169																	
	112M	135	200	8	100	250	224		152	160	255	824	535	183																	
	132S	153	250	10	120	300	220		165	170	265	889	588	195																	
40	90L	53	180	13	147	210	186	60	136	170	280	643	449	142	135	115	14	100	30	18	32	140	100	18	4	25	115	85	14	4	G1/4
	100L			210		200	140		170	280	676	490	169																		
	112M			210		224	152		170	280	697	511	183																		
	132S			210		220	165		180	290	751	565	195																		
	132M			210		260	181		180	290	808	622	233																		
	160M			250		260	181		225	310	869	686	233																		

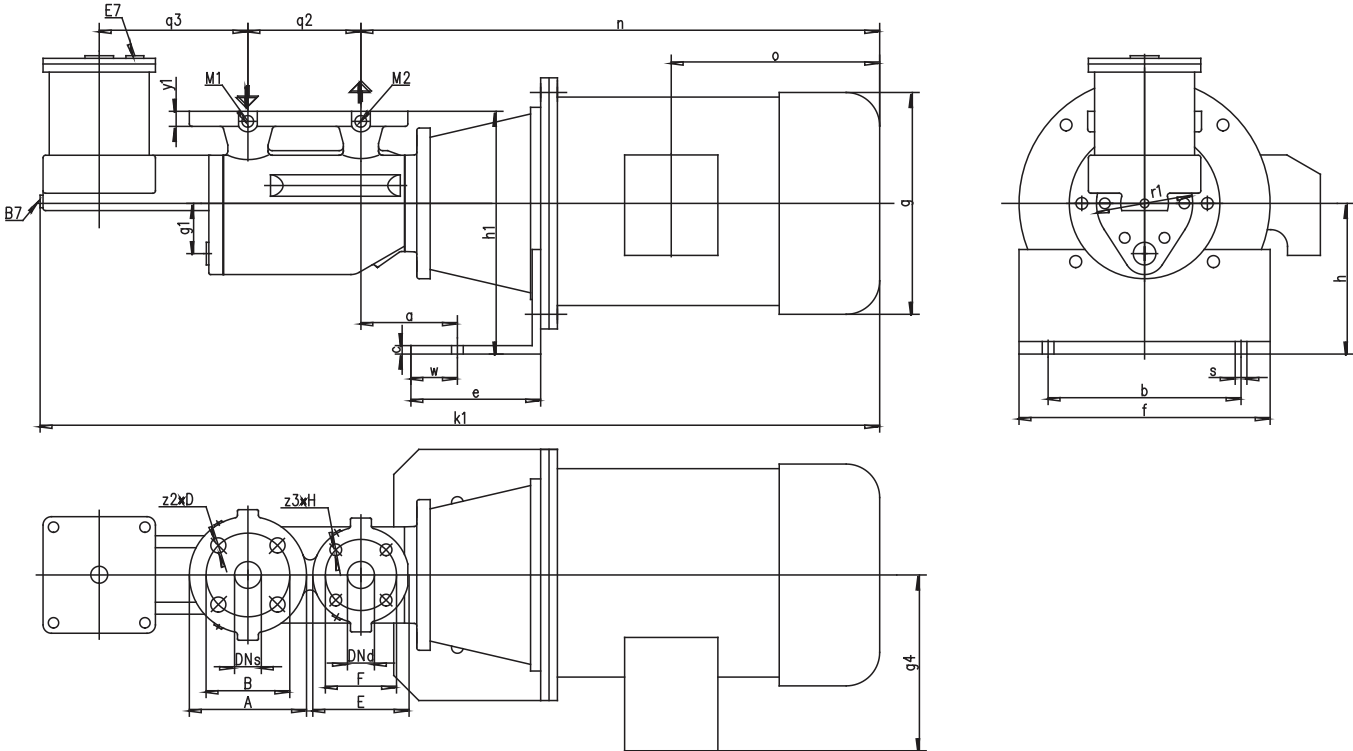
Blackmer reserves the right to change the data in the table without prior notice.

3PF20 model with filter



Size	Pump Size														Shaft Length				
	a1	b1	c1	g	g1	l1	k1	n	q1	q2	q3	r	s1	y3	y4	d	l	t	u
20	175	101.6	146	95	56	53	468	185	130	125	144	110	14	15	10	19	35	21.5	6

3PF20 model Installation dimensions, with filter



Size	Motor	Pump Unit Size Suction Flange																	
		a	b	c	e	f	g	g1	g4	h	h1	k1	n	o	q2	r1	s	w	y1
20	90S	121	160	8	100	200	186	56	136	140	235	896	422	130	125	110	14	50	18
	90L	121	160	8	100	200	186	56	136	140	235	921	447	142	125	110	14	50	18
	100L	147	200	8	100	250	200	56	140	160	255	978	514	169	125	110	14	50	18
	112M	147	200	8	100	250	224	56	152	160	255	1018	535	183	125	110	14	50	18
	132S	153	250	10	120	300	220	56	165	170	265	1084	588	195	125	110	14	60	18

Size	Suction					Discharge					Drainage	Vent	Pressure Gauge
	DN <sub>s</sub>	A	B	D	Z2	DN <sub>d</sub>	E	F	H	Z3	B7	E7	M1/M2/M3
20	25	120	85	14	4	25	120	85	14	4	G1/2	G1/4	G1/4





**NOTES**

▶ 3PF SERIES

TRIPLE-SCREW PUMPS DESIGN MANUAL

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