

BD-60 Forged Fluid End Triplex Plunger Pump

SPECIFICATIONS:

Max. Plunger Size, in. (mm):
2.500 (63.5)

Stroke Length, in. (mm):
3.000 (76.2)

Rated BHP at 500 rpm (kW):
68 (51)

Rated plunger load, pounds (N):
5,425 (24,132)

Maximum discharge working pressure: psi(kPa):

- "L" model: 1,965 (13,548)
- "M" model: 4,421 (30,482)
- "H" model: 6,907 (47,624)

Crankshaft extension, in.(mm):
Diameter: 2.500 (63.5)
Length: 4.375 (111.1)
Key (width x depth): 5/8 X 5/8 (15.9 X 15.9)

Oil Capacity, gallons (L):
Crankcase: 2.25 (8.5)

Weight, pump w/ wood skids pounds (Kg):

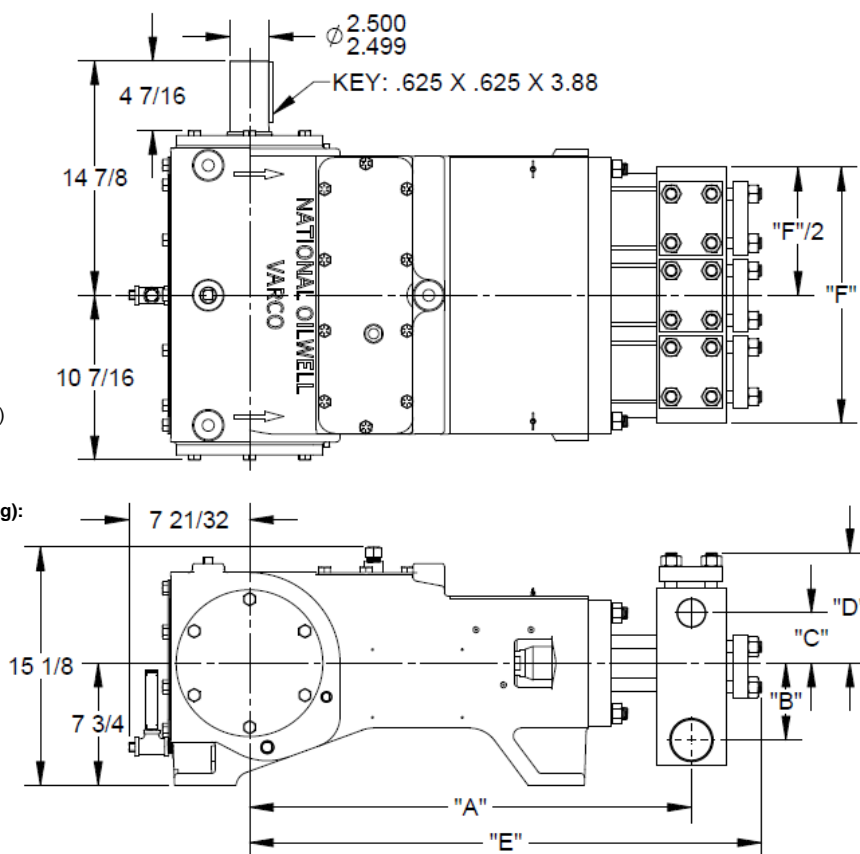
- "L": 855 (388)
- "M": 825 (374)
- "H": 805 (365)

Standard Materials Fluid End:

- Carbon Steel
- Stainless Steel

Crankshaft Options:

- Right Hand Drive
- Left Hand Drive
- Right Hand Drive w/ Aux
- Left Hand Drive w/ Aux
- Double Extended



Pump Model	Fluid End Connections		Dimensions in inches (mm)					
	Discharge Connection	Suction Connection	A	B	C	D	E	F
BD-60L	2" NPT	3" NPT	28-5/16 (719)	5-15/32 (139)	3-21/32 (93)	7-21/32 (194)	32-7/8 (835)	16-7/8 (429)
BD-60M	1-1/2" NPT	2-1/2" NPT	28-1/16 (713)	4-7/8 (124)	3-3/16 (81)	7 (178)	32-1/2 (826)	16-1/4 (413)
BD-60H	1-1/4" NPT	2" NPT	28-1/16 (713)	4-5/32 (106)	2-15/32 (63)	6-17/32 (166)	32-7/8 (835)	15-1/2 (394)

BD-60 Forged Fluid End Triplex Plunger Pump

Performance Data:

Pump	English Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM	
	Plunger Dia. In.	Plunger Area Sq. In.	BPD per RPM	GPM per RPM	Max Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
BD-60L (2-1/2")	2.500	4.9087	6.5571	0.1912	1,105	656	19.1	1,311	38.2	1,967	57.4	2,295	66.9	2,623	76.5	3,279	95.6
	2.375	4.4301	5.9178	0.1726	1,225	592	17.3	1,184	34.5	1,775	51.8	2,071	60.4	2,367	69.0	2,959	86.3
	2.250	3.9761	5.3113	0.1549	1,364	531	15.5	1,062	31.0	1,593	46.5	1,859	54.2	2,125	62.0	2,656	77.5
	2.125	3.5466	4.7375	0.1382	1,530	474	13.8	948	27.6	1,421	41.5	1,658	48.4	1,895	55.3	2,369	69.1
	2.000	3.1416	4.1966	0.1224	1,727	420	12.2	839	24.5	1,259	36.7	1,469	42.8	1,679	49.0	2,098	61.2
	1.875	2.7612	3.6884	0.1076	1,965	369	10.8	738	21.5	1,107	32.3	1,291	37.7	1,475	43.0	1,844	53.8
BD-60M (1-3/4")	1.750	2.4053	3.2130	0.0937	2,255	321	9.4	643	18.7	964	28.1	1,125	32.8	1,285	37.5	1,606	46.9
	1.625	2.0739	2.7704	0.0808	2,616	277	8.1	554	16.2	831	24.2	970	28.3	1,108	32.3	1,385	40.4
	1.500	1.7671	2.3606	0.0688	3,070	236	6.9	472	13.8	708	20.7	826	24.1	944	27.5	1,180	34.4
	1.375	1.4849	1.9835	0.0579	3,653	198	5.8	397	11.6	595	17.4	694	20.2	793	23.1	992	28.9
	1.250	1.2272	1.6393	0.0478	4,421	164	4.8	328	9.6	492	14.3	574	16.7	656	19.1	820	23.9
BD-60H (1-1/8")	1.125	0.9940	1.3278	0.0387	5,458	133	3.9	266	7.7	398	11.6	465	13.6	531	15.5	664	19.4
	1.000	0.7854	1.0491	0.0306	6,907	105	3.1	210	6.1	315	9.2	367	10.7	420	12.2	525	15.3
Brake Horsepower Required						14		27		41		48		55		68	

Pump	Metric Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM	
	Plunger Dia. cm	Plunger Area cm ²	M ³ /Hr per RPM	L/Sec. Per RPM	Max Press. kPa	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.
BD-60L (2-1/2")	64	31.6692	0.0433	0.0121	7,620	4.33	1.21	8.66	2.41	12.98	3.62	15.15	4.22	17.31	4.83	21.64	6.03
	60	28.5814	0.0391	0.0109	8,443	3.91	1.09	7.81	2.18	11.72	3.27	13.67	3.81	15.62	4.36	19.53	5.44
	57	25.6520	0.0351	0.0098	9,407	3.51	0.98	7.01	1.95	10.52	2.93	12.27	3.42	14.02	3.91	17.53	4.89
	54	22.8810	0.0313	0.0087	10,547	3.13	0.87	6.25	1.74	9.38	2.62	10.94	3.05	12.51	3.49	15.63	4.36
	51	20.2683	0.0277	0.0077	11,906	2.77	0.77	5.54	1.54	8.31	2.32	9.69	2.70	11.08	3.09	13.85	3.86
	48	17.8139	0.0243	0.0068	13,546	2.43	0.68	4.87	1.36	7.30	2.04	8.52	2.38	9.74	2.71	12.17	3.39
BD-60M (1-3/4")	44	15.5179	0.0212	0.0059	15,551	2.12	0.59	4.24	1.18	6.36	1.77	7.42	2.07	8.48	2.36	10.60	2.96
	41	13.3802	0.0183	0.0051	18,035	1.83	0.51	3.66	1.02	5.49	1.53	6.40	1.78	7.31	2.04	9.14	2.55
	8	11.4009	0.0156	0.0043	21,166	1.56	0.43	3.12	0.87	4.67	1.30	5.45	1.52	6.23	1.74	7.79	2.17
	35	9.5799	0.0131	0.0036	25,190	1.31	0.36	2.62	0.73	3.93	1.09	4.58	1.28	5.24	1.46	6.55	1.82
BD-60H (1-1/8")	32	7.9173	0.0108	0.0030	30,480	1.08	0.30	2.16	0.60	3.25	0.90	3.79	1.06	4.33	1.21	5.41	1.51
	29	6.4130	0.0088	0.0024	37,629	0.88	0.24	1.75	0.49	2.63	0.73	3.07	0.86	3.51	0.98	4.38	1.22
BD-60H (1-1/8")	25	5.0671	0.0069	0.0019	47,624	0.69	0.19	1.38	0.39	2.08	0.58	2.42	0.68	2.77	0.77	3.46	0.97
	Kilowatts Required						10		20		31		36		41		51

Volumetric Rate based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% mechanical Efficiency.

Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% Mechanical Efficiency. For Operation below 100 RPM, an auxiliary lubrication system is required. Not all plunger sizes are shown. Contact National Oilwell Varco for additional information.

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Authorized Distributor:



6750 S 57th W Ave

Tulsa, OK 74131

Phone: 918-447-4600

BD-60UH Forged Fluid End Triplex Plunger Pump

SPECIFICATIONS:

Max. Plunger Size, in. (mm):
0.875 (22.2)

Stroke Length, in. (mm):
3.000 (76.2)

Rated BHP at 500 rpm (kW):

- Continuous Duty: 68 (51)
- Intermittent Duty: 88 (66)

Rated plunger load, pounds (N):

- Continuous Duty: 5,425 (24,132)
- Intermittent Duty: 7,000 (31,138)

Maximum discharge working pressure: psi(kPa):

- Continuous Duty: 17,683 (121,918)
- Intermittent Duty: 20,000 (137,895)

Crankshaft extension, in.(mm):
Diameter: 2.500 (63.5)
Length: 4.375 (111.1)
Key (width x depth): 5/8 X 5/8 (15.9 X 15.9)

Oil Capacity, gallons (L):
Crankcase: 2.25 (8.5)

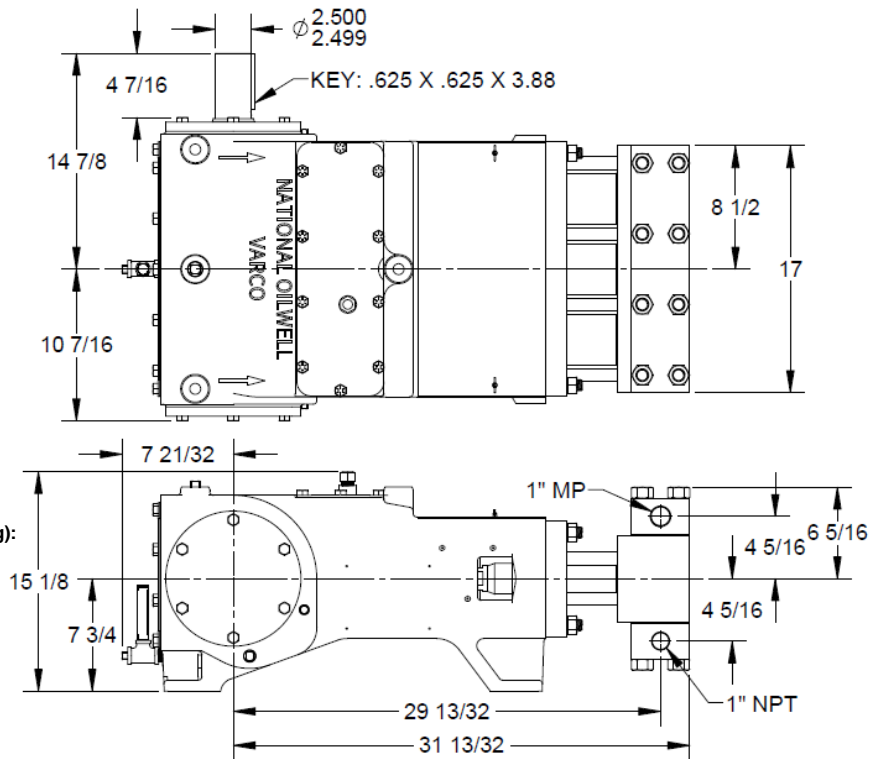
Weight, pump w/ wood skids pounds (Kg):
820 (372)

Standard Materials Fluid End:

- Carbon Steel
- Stainless Steel

Crankshaft Options:

- Right Hand Drive
- Left Hand Drive
- Right Hand Drive w/ Aux
- Left Hand Drive w/ Aux
- Double Extended



BD-60UH Forged Fluid End Triplex Plunger Pump

Performance Data:

Continuous Duty:

Pump	English Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM	
	Plunger Dia. In.	Plunger Area Sq. In.	BPD per RPM	GPM per RPM	Max Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
BD-60U	.875	0.6013	0.8032	0.0234	9,022	80	2.3	161	4.7	241	7.0	281	8.2	321	9.4	402	11.7
	.813	0.5191	0.6934	0.0202	10,450	69	2.0	139	4.0	208	6.1	243	7.1	277	8.1	347	10.1
	.750	0.4418	0.5901	0.0172	12,280	59	1.7	118	3.4	177	5.2	207	6.0	236	6.9	295	8.6
	.688	0.3718	0.4966	0.0145	14,593	50	1.4	99	2.9	149	4.3	174	5.1	199	5.8	248	7.2
	.625	0.3068	0.4098	0.0120	17,683	41	1.2	82	2.4	123	3.6	143	4.2	164	4.8	205	6.0
Brake Horsepower Required						13		27		41		48		55		68	

Pump	Metric Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM	
	Plunger Dia. cm	Plunger Area cm ²	M ³ /Hr per RPM	L/Sec. Per RPM	Max Press. kPa	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.
BD-60U	22	3.8795	0.0053	0.0015	62,203	0.53	0.15	1.06	0.30	1.59	0.44	1.86	0.52	2.12	0.59	2.65	0.74
	21	3.3492	0.0046	0.0013	72,052	0.46	0.13	0.92	0.26	1.37	0.38	1.60	0.45	1.83	0.51	2.29	0.64
	19	2.8502	0.0039	0.0011	84,666	0.39	0.11	0.78	0.22	1.17	0.33	1.36	0.38	1.56	0.43	1.95	0.54
	17	2.3985	0.0033	0.0009	100,613	0.33	0.09	0.66	0.18	0.98	0.27	1.15	0.32	1.31	0.37	1.64	0.46
	16	1.9793	0.0027	0.0008	121,918	0.27	0.08	0.54	0.15	0.81	0.23	0.95	0.26	1.08	0.30	1.35	0.38
Kilowatts Required						10		20		31		36		41		51	

Intermittent Duty:

Pump	English Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM	
	Plunger Dia. In.	Plunger Area Sq. In.	BPD per RPM	GPM per RPM	Max Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM
BD-60U	.875	0.6013	0.8032	0.0234	11,641	80	2.3	161	4.7	241	7.0	281	8.2	321	9.4	402	11.7
	.813	0.5191	0.6934	0.0202	13,484	69	2.0	139	4.0	208	6.1	243	7.1	277	8.1	347	10.1
	.750	0.4418	0.5901	0.0172	15,845	59	1.7	118	3.4	177	5.2	207	6.0	236	6.9	295	8.6
	.688	0.3718	0.4966	0.0145	18,829	50	1.4	99	2.9	149	4.3	174	5.1	199	5.8	248	7.2
	.625	0.3068	0.4098	0.0120	20,000	41	1.2	82	2.4	123	3.6	143	4.2	164	4.8	205	6.0
Brake Horsepower Required						17		35		53		62		71		88	

Pump	Metric Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM	
	Plunger Dia. cm	Plunger Area cm ²	M ³ /Hr per RPM	L/Sec. Per RPM	Max Press. kPa	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.
BD-60U	22	3.8795	0.0053	0.0015	80,262	0.53	0.15	1.06	0.30	1.59	0.44	1.86	0.52	2.12	0.59	2.65	0.74
	21	3.3492	0.0046	0.0013	92,971	0.46	0.13	0.92	0.26	1.37	0.38	1.60	0.45	1.83	0.51	2.29	0.64
	19	2.8502	0.0039	0.0011	109,246	0.39	0.11	0.78	0.22	1.17	0.33	1.36	0.38	1.56	0.43	1.95	0.54
	17	2.3985	0.0033	0.0009	129,823	0.33	0.09	0.66	0.18	0.98	0.27	1.15	0.32	1.31	0.37	1.64	0.46
	16	1.9793	0.0027	0.0008	137,895	0.27	0.08	0.54	0.15	0.81	0.23	0.95	0.26	1.08	0.30	1.35	0.38
Kilowatts Required						13		26		40		46		53		66	

Volumetric Rate based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% mechanical Efficiency.

Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% Mechanical Efficiency. For Operation below 100 RPM, an auxiliary lubrication system is required. Not all plunger sizes are shown. Contact National Oilwell Varco for additional information.

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Authorized Distributor:



6750 S 57th W Ave

Tulsa, OK 74131

Phone: 918-447-4600

BD-60 Cast Fluid End Triplex Plunger Pump

SPECIFICATIONS:

Max. Plunger Size, in. (mm):
3.000 (76.2)

Stroke Length, in. (mm):
3.000 (76.2)

Rated BHP at 500 rpm (kW):
68 (51)

Rated plunger load, pounds (N):
5,425 (24,132)

Maximum discharge working pressure:

psi(kPa):

- "LCF" model: 1,364 (9,407)
- "MCF" model: 3,070 (22,166)

Crankshaft extension, in.(mm):

Diameter: 2.500 (63.5)

Length: 4.375 (111.1)

Key (width x depth): 5/8 X 5/8 (15.9 X 15.9)

Oil Capacity, gallons (L):

Crankcase: 2.25 (8.5)

Weight, pump w/ wood skids pounds (Kg):

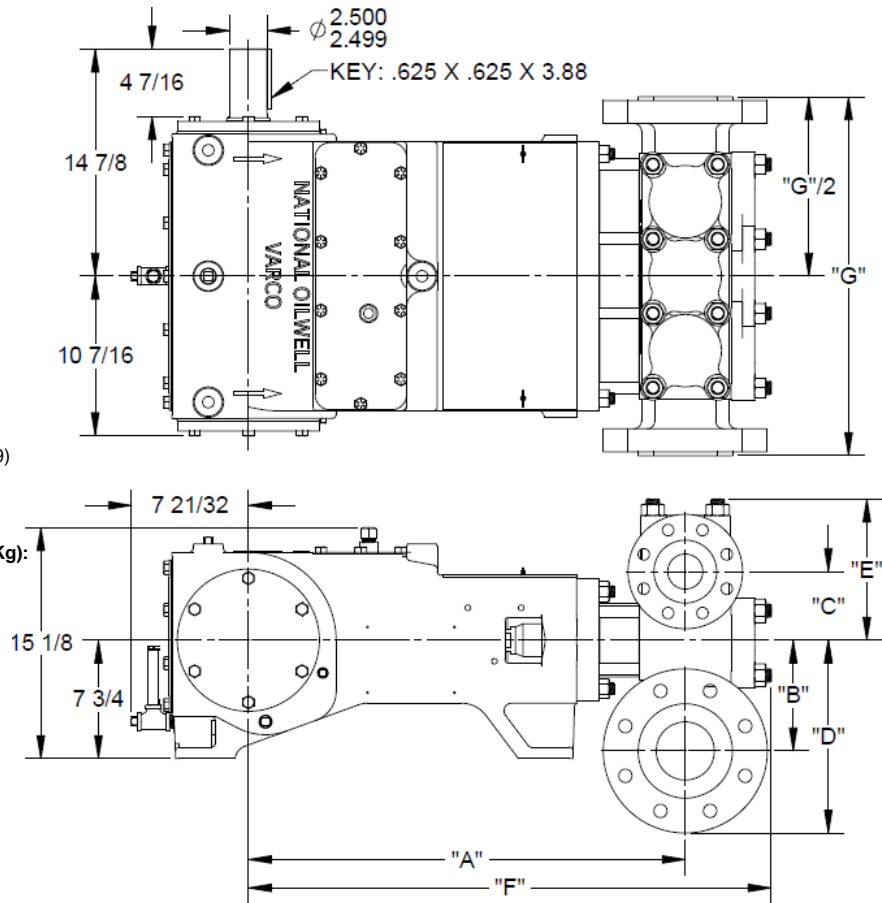
- "LCF": 890 (404)
- "MCF": 845 (384)

Standard Materials Fluid End:

- Alloy Steel
- Super Duplex Stainless Steel

Crankshaft Options:

- Right Hand Drive
- Left Hand Drive
- Right Hand Drive w/ Aux
- Left Hand Drive w/ Aux
- Double Extended



Pump Model	Fluid End Connections		Dimensions in inches (mm)						
	Discharge Connection	Suction Connection	A	B	C	D	E	F	G
BD-60LCF	2-1/2" FLANGE 600#-300#	4" FLANGE 600#-150#	28-5/8 (727)	7-1/4 (184)	4-1/2 (114)	12-5/8 (321)	9-1/4 (235)	34-1/4 (870)	23-1/2 (597)
BD-60MCF	2" FLANGE 1500#-300#	3" FLANGE 1500#-150#	28-1/4 (718)	6 (152)	4-1/2 (114)	11-1/4 (286)	8-7/8 (225)	33-1/2 (851)	26-3/4 (679)

BD-60 Cast Fluid End Triplex Plunger Pump

Performance Data:

Pump	English Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM		
	Plunger Dia. In.	Plunger Area Sq. In.	BPD per RPM	GPM per RPM	Max Press. PSI	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	
BD-60LCF	3.000	7.0686	9.4422	0.2754	767	944	27.5	1,888	55.1	2,833	82.6	3,305	96.4	3,777	110.2	4,721	137.7	
	2.875	6.4918	8.6718	0.2529	836	867	25.3	1,734	50.6	2,602	75.9	3,035	88.5	3,469	101.2	4,336	126.5	
	2.750	5.9396	7.9341	0.2314	913	793	23.1	1,587	46.3	2,380	69.4	2,777	81.0	3,174	92.6	3,967	115.7	
	2.625	5.4119	7.2292	0.2109	1,002	723	21.1	1,446	42.2	2,169	63.3	2,530	73.8	2,892	84.3	3,615	105.4	
	2.500	4.9087	6.5571	0.1912	1,105	656	19.1	1,311	38.2	1,967	57.4	2,295	66.9	2,623	76.5	3,279	95.6	
	2.375	4.4301	5.9178	0.1726	1,225	592	17.3	1,184	34.5	1,775	51.8	2,071	60.4	2,367	69.0	2,959	86.3	
BD-60MCF	2.250	3.9761	5.3113	0.1549	1,364	531	15.5	1,062	31.0	1,593	46.5	1,859	54.2	2,125	62.0	2,656	77.5	
	2.125	3.5466	4.7375	0.1382	1,530	474	13.8	948	27.6	1,421	41.5	1,658	48.4	1,895	55.3	2,369	69.1	
	2.000	3.1416	4.1966	0.1224	1,727	420	12.2	839	24.5	1,259	36.7	1,469	42.8	1,679	49.0	2,098	61.2	
	1.875	2.7612	3.6884	0.1076	1,965	369	10.8	738	21.5	1,107	32.3	1,291	37.7	1,475	43.0	1,844	53.8	
	1.750	2.4053	3.2130	0.0937	2,255	321	9.4	643	18.7	964	28.1	1,125	32.8	1,285	37.5	1,606	46.9	
	1.625	2.0739	2.7704	0.0808	2,616	277	8.1	554	16.2	831	24.2	970	28.3	1,108	32.3	1,385	40.4	
Brake Horsepower Required					14		27		41		48		55		68			

Pump	Metric Units					100 RPM		200 RPM		300 RPM		350 RPM		400 RPM		500 RPM		
	Plunger Dia. cm	Plunger Area cm ²	M ³ /Hr per RPM	L/Sec. Per RPM	Max Press. kPa	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	M ³ /Hr.	L/Sec.	
BD-60LCF	76	45.6036	0.0623	0.0174	5,292	6.23	1.74	12.46	3.47	18.70	5.21	21.81	6.08	24.93	6.95	31.16	8.69	
	73	41.8825	0.0572	0.0160	5,762	5.72	1.60	11.45	3.19	17.17	4.79	20.03	5.59	22.89	6.38	28.62	7.98	
	70	38.3197	0.0524	0.0146	6,297	5.24	1.46	10.47	2.92	15.71	4.38	18.33	5.11	20.95	5.84	26.18	7.30	
	67	34.9153	0.0477	0.0133	6,911	4.77	1.33	9.54	2.66	14.31	3.99	16.70	4.66	19.09	5.32	23.86	6.65	
	64	31.6692	0.0433	0.0121	7,620	4.33	1.21	8.66	2.41	12.98	3.62	15.15	4.22	17.31	4.83	21.64	6.03	
	60	28.5814	0.0391	0.0109	8,443	3.91	1.09	7.81	2.18	11.72	3.27	13.67	3.81	15.62	4.36	19.53	5.44	
BD-60MCF	57	25.6520	0.0351	0.0098	9,407	3.51	0.98	7.01	1.95	10.52	2.93	12.27	3.42	14.02	3.91	17.53	4.89	
	54	22.8810	0.0313	0.0087	10,547	3.13	0.87	6.25	1.74	9.38	2.62	10.94	3.05	12.51	3.49	15.63	4.36	
	51	20.2683	0.0277	0.0077	11,906	2.77	0.77	5.54	1.54	8.31	2.32	9.69	2.70	11.08	3.09	13.85	3.86	
	48	17.8139	0.0243	0.0068	13,546	2.43	0.68	4.87	1.36	7.30	2.04	8.52	2.38	9.74	2.71	12.17	3.39	
	44	15.5179	0.0212	0.0059	15,551	2.12	0.59	4.24	1.18	6.36	1.77	7.42	2.07	8.48	2.36	10.60	2.96	
	41	13.3802	0.0183	0.0051	18,035	1.83	0.51	3.66	1.02	5.49	1.53	6.40	1.78	7.31	2.04	9.14	2.55	
38	11.4009	0.0156	0.0043	21,166	1.56	0.43	3.12	0.87	4.67	1.30	5.45	1.52	6.23	1.74	7.79	2.17		
Kilowatts Required					10		20		31		36		41		51			

Volumetric Rate based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% mechanical Efficiency.

Volumetric Rate is based on 100% Volumetric Efficiency. Brake Horsepower/Kilowatts Required is based on 90% Mechanical Efficiency. For Operation below 100 RPM, an auxiliary lubrication system is required. Not all plunger sizes are shown. Contact National Oilwell Varco for additional information.

The information and data on this sheet is accurate to the best of our knowledge and belief but are intended for general information only. Applications suggested for the materials are described only to help readers make their own evaluations and decisions and are neither guarantees nor to be construed as express or implied warranties of suitability for these or other applications. National Oilwell Varco makes no warranty either express or implied beyond that stipulated in National Oilwell Varco Standard Terms and Conditions of Sale.

With flanged fluid ends, the max pressure for the flange rating supersedes the max pressure from the performance date.

Max Pressure per Flange Rating					
Rating	1500#	900#	600#	300#	150#
Max Pressure (psi)	3,525	2,113	1,409	704	200

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