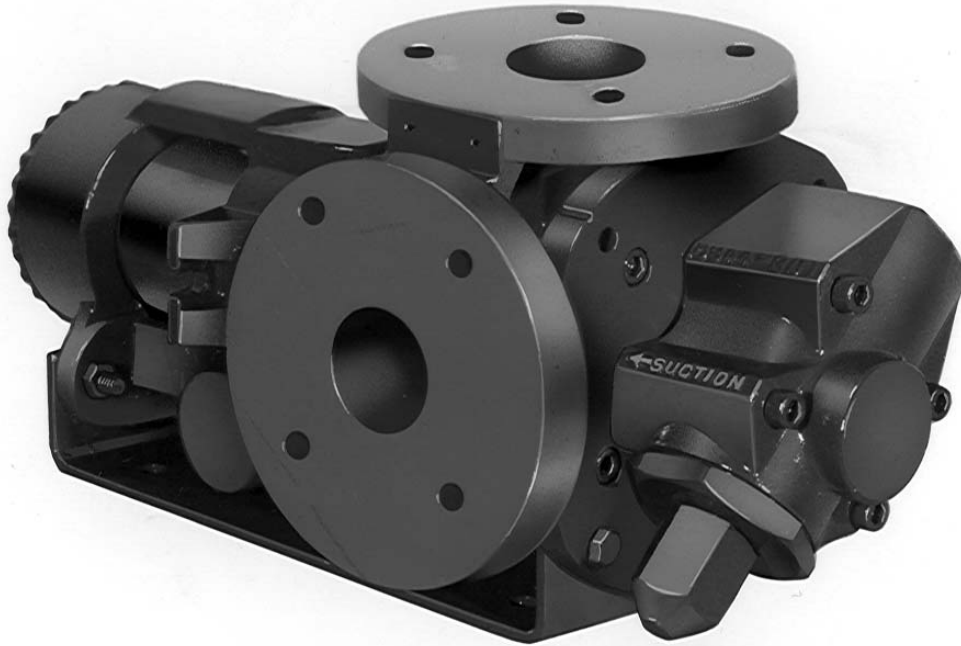


GHS SERIES Flexible Seal HEAVY DUTY STANDARD STEEL ROTARY GEAR PUMP

This heavy duty series pump is ideal for refining, petrochemical and applications requiring extra strength or shock resistance. The steel construction conforms to ASTM designation A216 Grade WCB. Superior rotor shaft support and an integral, maintenance-free radial/thrust bearing, reduce deflection and wear.



The GHS steel series is designed for applications in the operating ranges noted below. These units are available with head and backhead jackets for temperature control, carbon graphite bushings for low viscosity liquids, silicon carbide bushings for wear resistance, and numerous shaft seal options described on the following pages.

FEATURES

400 PSI CAPABILITY
BALL BEARING THRUST CONTROL
ROTOR END CLEARANCE EXTERNALLY ADJUSTABLE
HIGH STRENGTH, COMPUTER PROFILED GEARING FOR QUIET OPERATION
MULTIPLE PORT POSITIONS
FLEXIBLE SEAL DESIGN ALLOWS FOR A VARIETY OF INDUSTRIAL STANDARD SEALS OR PACKING
INTERNAL SEAL VENT

OPERATING RANGE

CAPACITY (GPM) : (3 TO 295)
 [LPM] : [11 TO 1116]

PRESSURE (PSI) : [0 TO 300]
 [BAR] : [0 TO 21]

VISCOSITY (SSU) : (28 TO 2,000,000)
 [cSt] : [1 TO 440,000]

TEMPERATURE (F) : (-20° TO 675°)
 [C] : [-29° TO 358°]

APPLICATIONS

USE WITH ANY CLEAN LIQUID COMPATIBLE WITH IRON/STEEL

- ★ BOOSTER SERVICE
- ★ CIRCULATING
- ★ FILTERING
- ★ LUBRICATING
- ★ TRANSFERRING

EXTERIOR	BACKHD	ROTOR & IDLER	HOUSING PORTS	BUSHING	IDLER PIN	SHAFT	SHAFT SEALING		ROTA-TION	INTERNAL RELIEF VALVE	
							MECH. SEAL ●	PACKING ■		MATERIAL	SETTING
STEEL ③	DUCTILE IRON	HIGH STRENGTH IRON	150# FLG GHC 180° GHS 90°	BRONZE	HARD STEEL	STEEL	VITON	CARBON FIBER	C.W.	STEEL	75 PSI [5 BAR]

Standard Models

G H C 3 JG 32 - B
G H S 3 JG 32 - B
 | | | | | | | | | | | |
 GEAR DUTY DESIGN PORT SIZE HYDRAULIC SEAL STYLE

MODEL NUMBER		NOM. CAPACITY - SPEED				MAXIMUM				SHIPPING DATA		
		MAXIMUM		ALTERNATIVE		DIFF. PRESSURE - PSI [BAR]			TEMP	Wt.	Vol.	
		GPM [LPM]	RPM 60 Hz [50 HZ]	GPM [LPM]	RPM 60 Hz [50 HZ]	BELOW 38 SSU [4 cSt]	38 TO 100 SSU [21 cSt]	100 TO 250,000 SSU [55,000 cSt]	°F [°C]	LBS [KG]	CU. FT.	
GHC	GHS											
GHC 1 DC32-B ① ● †		9 [28]		6 [19]						39 [17,7]	0.6	
GHC 1 DE32-B ① ● †		11 [35]		7 [22]						39 [17,7]	0.6	
GHC 1-1/2 GC32-B ● †	GHS 1-1/2 GC32-B ● † GHS 1-1/2 GC38-B ■ †	16 [50]	1750 [1460]	10 [32]	1150 [960]			300 [21]	GHC ● 350 [177]	71 [32,2]	2.9	
GHC 1-1/2 GF32-B ● †	GHS 1-1/2 GF32-B ● † GHS 1-1/2 GF38-B ■ †	23 [73]		15 [47]							71 [32,2]	2.9
GHC 1-1/2 GH32-B ● †	GHS 1-1/2 GH32-B ● † GHS 1-1/2 GH38-B ■ †	31 [98]		20 [63]							71 [32,2]	2.9
GHC 1-1/2 GJ32-B ② ● †	GHS 1-1/2 GJ32-B ② ● † GHS 1-1/2 GJ38-B ② ■ †	38 [120]		25 [79]				100 [7]		150 [10]	200 [14]	400 [204]
GHC 3 JG32-B ● †	GHS 3 JG32-B ● † GHS 3 JG38-B ■ †	40 [126]		30 [95]					500 [260]	154 [69,8]	5.3	
GHC 3 JJ32-B ● †	GHS 3 JJ32-B ● † GHS 3 JJ38-B ■ †	56 [177]	1150 [960]	36 [114]	870 [725]			300 [21]		154 [69,8]	5.3	
GHC 3 JL32-B ● †	GHS 3 JL32-B ● † GHS 3 JL38-B ■ †	77 [243]		58 [183]						154 [69,8]	5.3	
GHC 3 JP32-B ② ● †	GHS 3 JP32-B ② ● † GHS 3 JP38-B ② ■ †	107 [338]		81 [256]						200 [14]		154 [69,8]

STANDARD MODELS
CONTINUED

NOTE: RECOMMENDED PORT SIZES ARE SHOWN IN **BOLDFACE**. EXAMPLE: **GHC 3 JG32-B, GHS 3 JG32-B**

- MECHANICAL SEAL
- LIPSEAL/PACKING
- † PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

- ① 3450 [2875] RPM PERMISSIBLE TO 1,000 SSU [220 cSt] AND 100 PSI [7 BAR]
- ② PUMP LIMITED TO 200 PSI MAXIMUM PRESSURE.
- ③ REFER TO REFERENCE SECTION FOR SPECIFIC CONSTRUCTION DETAILS.

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MODEL NUMBER		NOM. CAPACITY - SPEED				MAXIMUM			SHIPPING DATA		
		MAXIMUM		ALTERNATIVE		DIFF. PRESSURE - PSI [BAR]			TEMP.	Wt.	Vol.
		GPM	RPM	GPM	RPM	BELOW	38 TO	100 TO	° F	LBS	CU.
GHC	GHS	[LPM]	60 Hz	[LPM]	60 Hz	38 SSU	100 SSU	250,000 SSU	[° C]	[KG]	FT.
			[50 HZ]		[50 HZ]	[4 cSt]	[21 cSt]	[55,000 cSt]			
	GHS 2 NK32-B ● † GHS 2 NK38-B ■ †	99 [375]		60 [189]				300 [21]		200	5.3
										[90,7]	
	GHS 3 NK32-B ● † GHS 3 NK38-B ■ †	132 [500]	960 [960]	80 [252]	580 [480]					200	5.3
										[90,7]	
	GHS 2 NM32-B ● † GHS 2 NM38-B ■ †	165 [624]		99 [312]						200	5.3
										[90,7]	
	GHS 3 NP32-B ① ● † GHS 3 NP38-B ① ■ †	172 [542]	720 [600]	115 [362]	480 [400]	100 [7]	150 [10]	300 [21]	GHS ● 400 [204]	302	10.7
										[136,9]	
	GHS 3 RM32-B ● † GHS 3 RM38-B ■ †	215 [678]		143 [451]						302	10.7
										[136,9]	
	GHS 4 RM32-B ● † GHS 4 RM38-B ■ †	255 [804]		170 [536]						302	10.7
										[136,9]	
	GHS 2-1/2 RP32-B ● † GHS 2-1/2 RP38-B ■ †	295 [930]		196 [618]						302	10.7
										[136,9]	
	GHS 3 RP32-B ● † GHS 3 RP38-B ■ †	255 [804]		170 [536]						302	10.7
										[136,9]	
	GHS 4 RP32-B ● † GHS 4 RP38-B ■ †	295 [930]		196 [618]						302	10.7
										[136,9]	
	GHS 3 RR32-B ● † GHS 3 RR38-B ■ †	295 [930]		196 [618]						302	10.7
										[136,9]	
	GHS 4 RR32-B ● † GHS 4 RR38-B ■ †	295 [930]		196 [618]						302	10.7
										[136,9]	
	GHS 3 RS32-B ① ● † GHS 3 RS38-B ① ■ †	295 [930]		196 [618]						302	10.7
										[136,9]	
	GHS 4 RS32-B ① ● † GHS 4 RS38-B ① ■ †	295 [930]		196 [618]						302	10.7
										[136,9]	

STANDARD MODELS CONTINUED

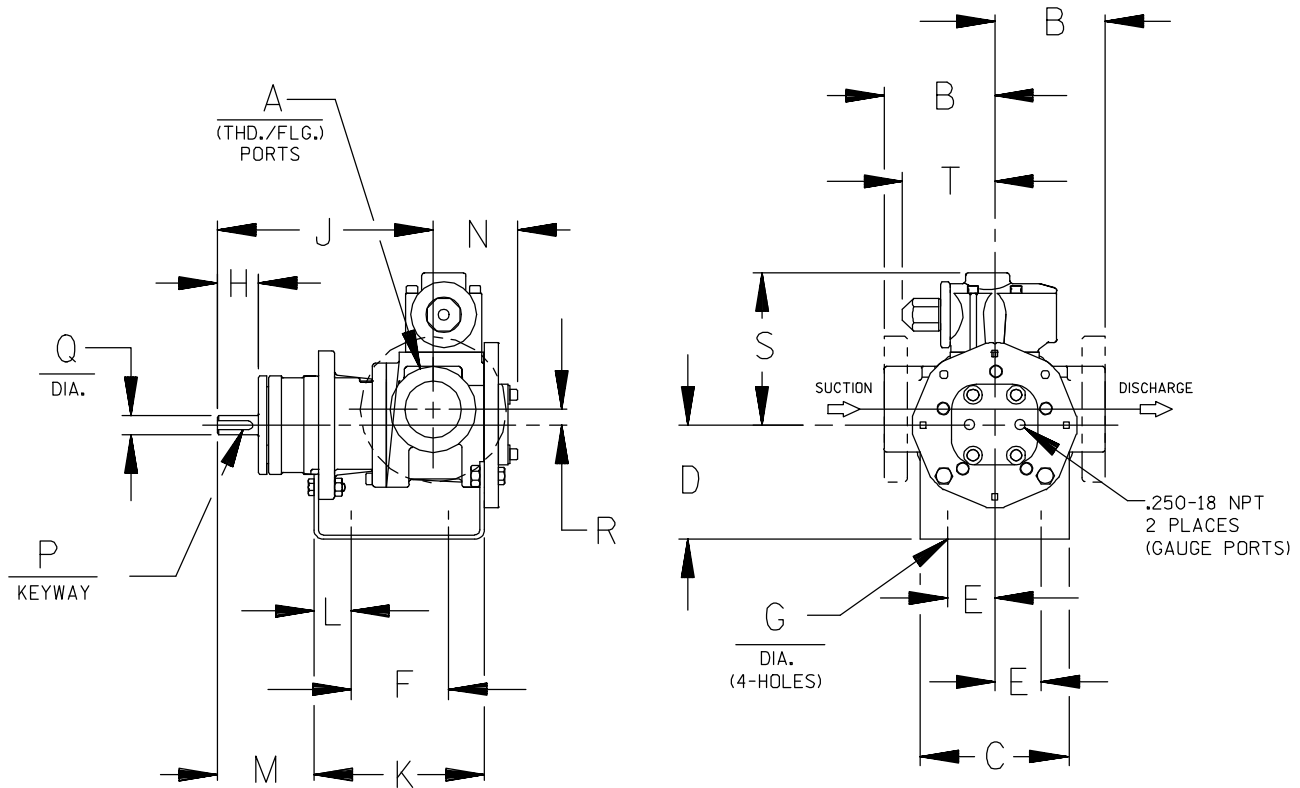
- MECHANICAL SEAL
- LIPSEAL/PACKING
- † PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

① PUMP LIMITED TO 200 PSI MAXIMUM PRESSURE.

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APPLICATION RECOMMENDATIONS:		
APPLICATION	OPTIONS REQUIRED (Select One From Each Row)	OPERATING LIMITATIONS
GHS ONLY HIGH TEMPERATURE	25U, 25V, OR 25W 35J – 35M (AS REQ'D) 40M, 40W 61H, OR 65Q 70K	TEMPERATURE: 675° F MAX. PRESSURE: 200 PSI MAX.
ASPHALT	35J–35M (AS REQ'D) 40M, 40W, 40G 41R, 41W 65S 70, 70K, 71K	TEMPERATURE: 500° MAX.
JACKETED	40G, 40J, 40K, 40W, 41U, 41W	LIMIT JACKET PRESSURE TO 150 PSIG

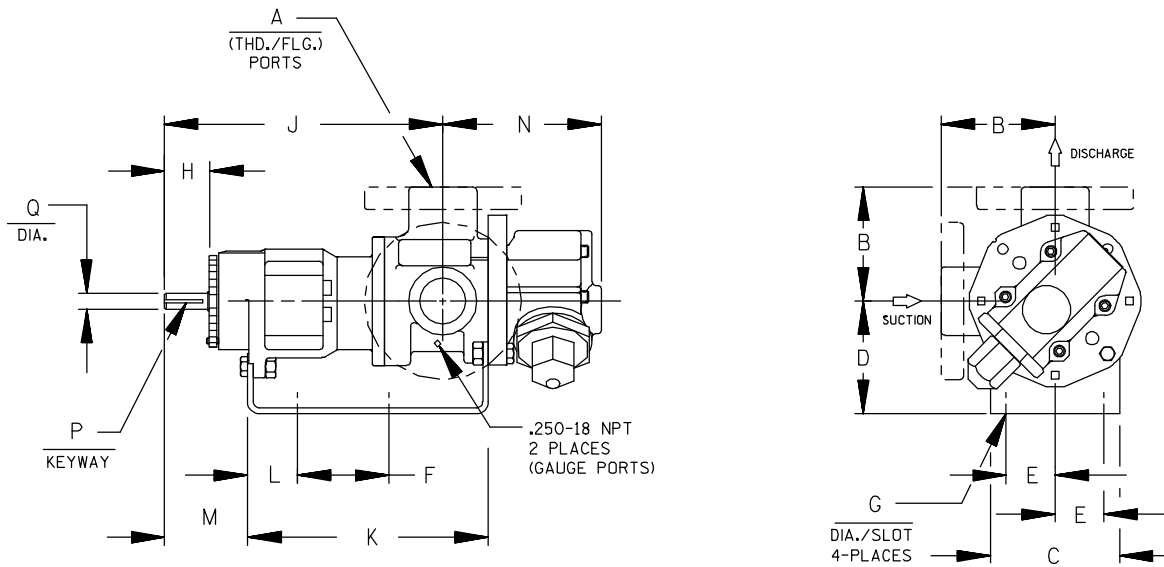
NOTE: PROPER PUMP APPLICATION REQUIRES CONSIDERATION OF ADDITIONAL FACTORS. PLEASE REVIEW APPLICATION GUIDE IN SECTION 500 OR CONSULT THE FACTORY.



CAD FILE NO.: 16458D

MODEL NUMBERS	PUMP DIMENSIONS - INCHES [MILLIMETERS]																	
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
GHC D	1"	4.00 † [102]	4.00 [102]	3.50* [89] 4.50 [114] 5.25 [133]	1.62 [41]	3.12 [79]	.41 [10]	1.16 [30]	6.19 [157]	5.04 [128]	.76 [19]	2.62 [66]	2.74 [70]	.12 [3] x .75 [19]	.50 [13]	.62 [16]	5.19 [132]	3.58 [91]
GHC G	1-1/2"	4.00 † [102]	5.88 [149]	3.50* [89] 4.50 [114] 5.25 [133] 6.25 [159]	1.62 [41]	4.00 [102]	.41 [10]	1.62 [41]	8.50 [216]	6.71 [170]	1.06 [27]	3.82 [97]	3.35 [85]	.19 [5] x 1.25 [32]	.75 [19]	.62 [16]	6.00 [152]	3.62 [92]
GHC J	3"	6.00* [152] † 6.31 † [160]	6.88 [175]	4.50 [114] 5.25* [133] 6.25 [159] 7.00 [178] 8.00 [203]	2.88 [73]	4.25 [108]	.44 [11]	2.50 [64]	12.12 [308]	9.75 [248]	1.75 [44]	5.50 [140]	4.66 [118]	.25 [6] x 2.00 [51]	1.00 [25]	1.12 [28]	9.06 [230]	6.75 [171]

* STANDARD DIMENSION
PORTS ARE COMPATIBLE WITH 150# OR 300# ANSISTEEL FLANGES. ALL OTHER PORTS ARE TAPPED NPT
† FOR ANSIPipe. OPTIONAL [DIN FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.
NPT FOR ANSIPipe. OPTIONAL (DIN) FLANGES OR TAPPED (BSP) PORTS AVAILABLE FOR EXPORT MARKET.
‡ 90° HOUSING



CAD FILE NO.: 16669F

MODEL NUMBERS	PUMP DIMENSIONS - INCHES [MILLIMETERS]														
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
GHS G	1-1/2"	4.00 [102]	4.88 [124]	3.50* [89] 4.50 [114] 5.25 [133] 6.25 [159]	1.62 [41]	8.00 [203]	.41 [10]	1.62 [41]	12.06 [306]	10.72 [272]	1.52 [39]	3.35 [85]	5.70 [145]	.19 [5] x 1.25 [32]	.75 [19]
GHS J	3"	6.00 † [152] 6.31 [160]	6.88 [175]	5.25* [133] 6.25 [159] 7.00 [178] 8.00 [203]	2.88 [73]	10.00 [254]	.44 [11]	2.50 [64]	15.68 [398]	14.31 [363]	2.77 [70]	4.48 [114]	8.50 [216]	.25 [6] x 2.00 [51]	1.00 [25]
GHS N	2"	5.25* [133] 5.38 [137]	8.00 [203]	4.50 [114] 5.25* [133]	2.88 [73]	10.00 [254]	.44 [11]	2.58 [66]	16.37 [416]	15.14 [385]	2.69 [68]	4.56 [116]	7.59 [193]	.25 [6] x 2.00 [51]	1.12 [32]
	3"	7.19 [183]		8.72* [221]											
GHS R	2-1/2"	7.19 [183]	10.50 [267]	7.00 [178]	3.75 [95]	13.75 [349]	.52 [13]	2.25 [57]	17.87 [454]	17.36 [441]	1.80 [46]	4.70 [119]	11.31 [287]	.38 [10] x 1.88 [48]	1.44 [37]
	3"														
	4"														

* STANDARD DIMENSION

† PORTS ARE COMPATIBLE WITH 150* OR 300* ANSISTEEL FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSIPIPE. OPTIONAL (DIN) FLANGES OR TAPPED (BSP) PORTS AVAILABLE FOR EXPORT MARKET.

† 180° HOUSING

GHC/GHS

FOR GHC DRIVE OPTIONS

AND DIMENSIONS

SEE

SECTION 540

FOR GHS DRIVE OPTIONS

AND DIMENSIONS

SEE

SECTION 545

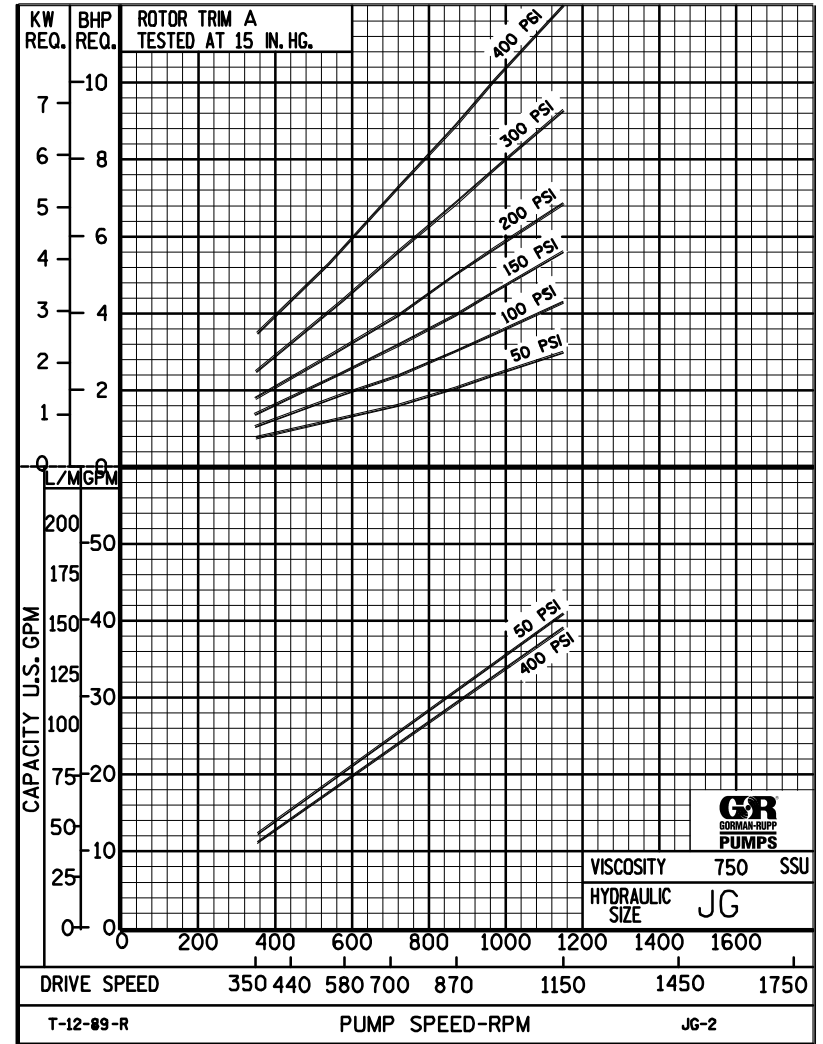
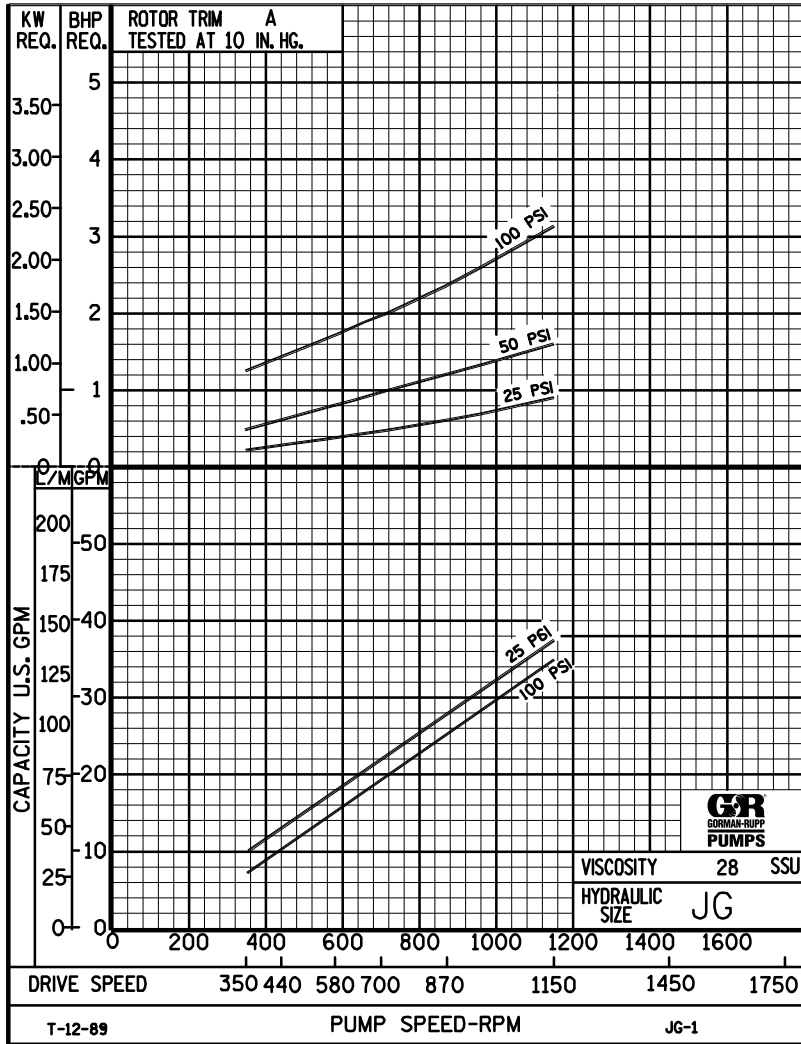


PERFORMANCE CURVES

SPEED VS. CAPACITY/HORSEPOWER

JG

Hydraulic Size



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PERFORMANCE CURVES

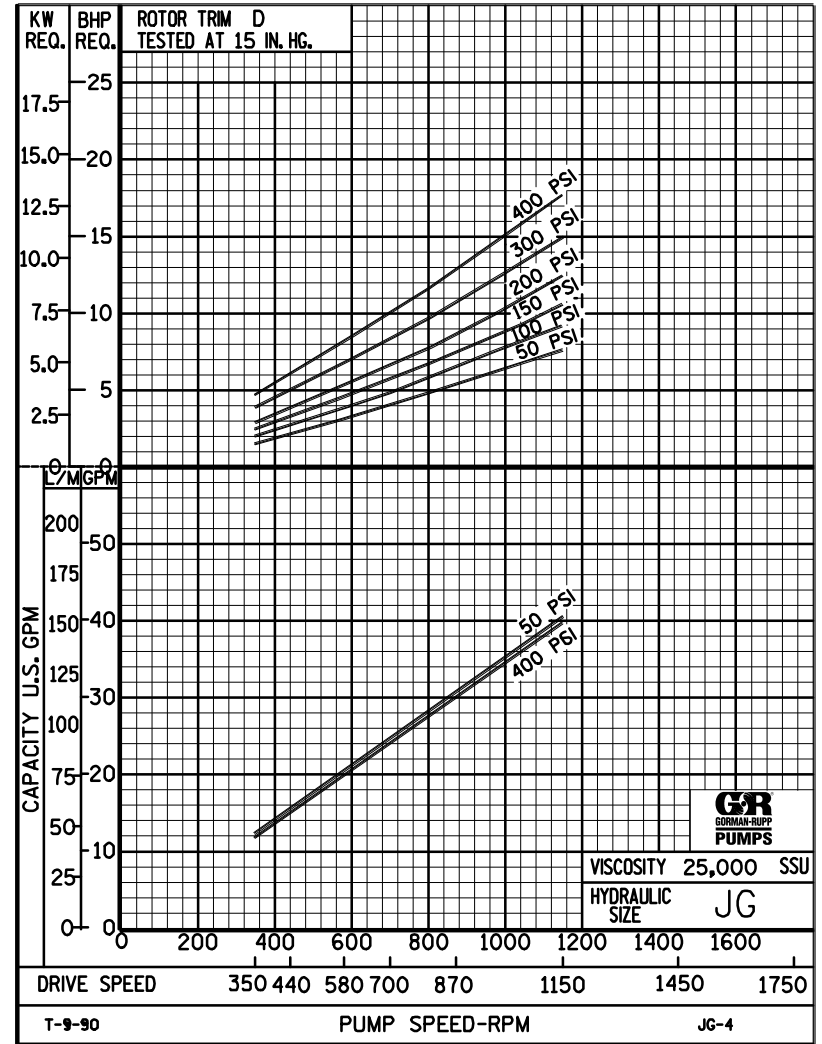
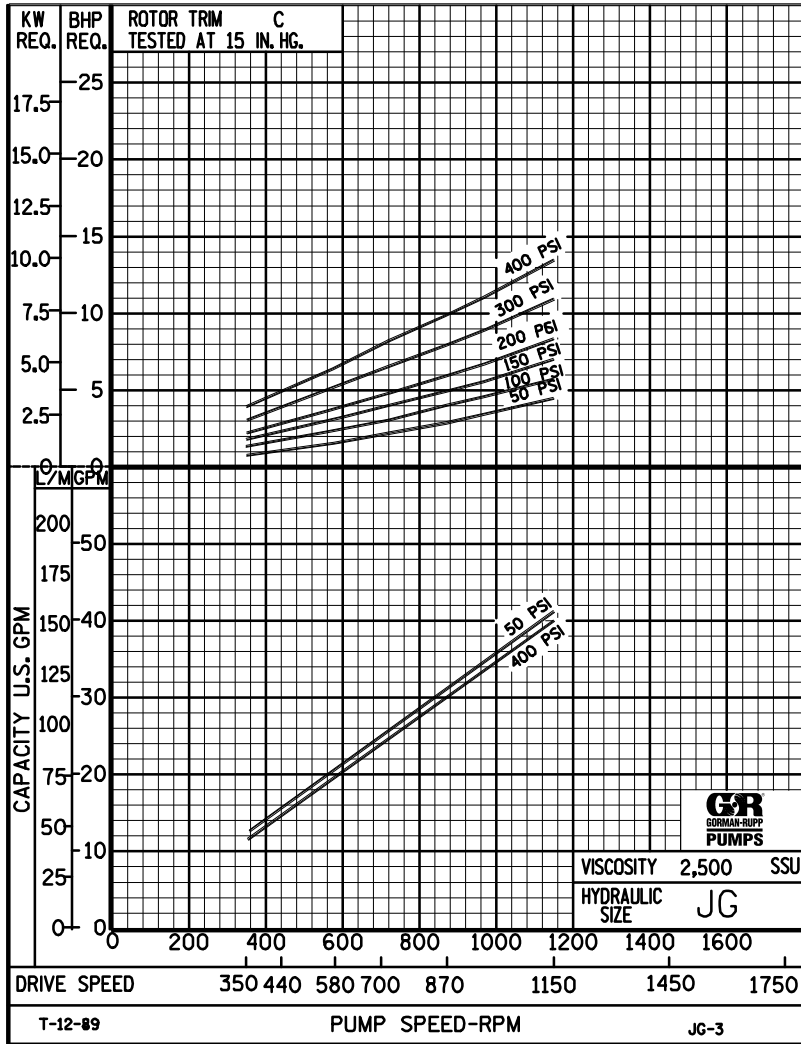
SPEED VS. CAPACITY/HORSEPOWER

JG Hydraulic Size

SEC. 500

Page 63

January 2010



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JG

PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 64

January 2010

**40 GPM
1150 RPM**

NOMINAL		ROTOR TRIM	VISCOSITY (SSU)	N.I.P.R. (PSIA)	FRICTION PIPE LOSS (PSI/FT) <small>(Based on Sch 40 Steel Pipe)</small>					FULL BYPASS RELIEF VALVE PRESSURE (PSI)					CAPACITY (GPM) / H.P. REQUIRED														
CAP. GPM	SPEED RPM				PIPE DIAMETER					CRACKING PRESS. (PSI)					DIFFERENTIAL PRESSURE (PSI)														
					1½"	2"	2½"	3"	4"	LOW PRES R/V			HI PRES R/V		25	50	75	100	150	200	300	400							
40	1150	STD	28	3.9	.01	.01	.01	.01	.01	59	84	116				37	36	35	35										
			32		.04	.01	.01	.01	.01							.91	1.6	2.4	3.1										
			38	3.9	.05	.02	.01	.01	.01	59	84	116	160				38	37	37	36	35								
			50		.06	.02	.01	.01	.01								1.1	1.8	2.4	3.2	4.8								
			70	3.9	.07	.02	.01	.01	.01	59	84	116	160	212			39	38	38	37	37	36							
			100		.08	.03	.01	.01	.01								1.4	2.0	2.6	3.3	4.8	6.2							
			150	3.9	.09	.03	.01	.01	.01	60	85	118	160	212			40	39	39	39	38	38	37	36					
			200		.10	.03	.01	.01	.01								1.8	2.3	2.8	3.5	5.4	6.7	8.7	12					
			300	3.9	.10	.04	.02	.01	.01	60	87	118	160	212			40	40	40	39	39	39	38	37					
			500		.18	.06	.03	.01	.01								2.3	2.8	3.4	3.9	5.5	6.7	9.1	12					
			750	3.9	.26	.10	.05	.02	.01	60	87	118	160	212			41	41	40	40	40	40	39	39					
			1,000		.35	.13	.06	.03	.01								2.6	3.0	3.6	4.3	5.6	6.9	9.3	12					
		2,000	3.9	.70	.26	.13	.05	.02	62	89	120	162	214			41	41.1	41	41	40	40	40	40						
		3,500		1.23	.45	.22	.09	.03								3.9	4.5	5.1	5.7	7.0	8.4	11	14						
		5,000	3.9	1.75	.65	.32	.13	.05	64	91	122	162	214			41	41	41	41	40	40	40	40						
		7,500		2.63	.97	.48	.20	.07								4.4	5.7	6.2	7.0	8.3	9.6	12	15						
		10,000	3.9	3.50	1.29	.63	.27	.09	66	93	125	162	216			41	41	41	40	40	40	40	40						
		15,000		5.25	1.93	.95	.40	.14								5.8	7.0	7.4	8.3	9.6	11	14	14						
		20,000	4.0	7.00	2.58	1.27	.53	.18	68	95	128	162	216			40	40	40	40	40	40	40	39						
		25,000		8.75	3.22	1.58	.67	.23								7.2	7.8	8.5	9.2	11	12	15	18						
		50,000	5.3	17.5	6.44	3.17	1.33	.45	72	99	132	166	220			40	40	40	40	40	40	40	39						
		75,000		-	-	-	-	-								11	12	12	13	15	17	20	24						
		100,000																											
		150,000																											
200,000																													
250,000																													

(NOTE) For speeds not shown on the pump hydraulic charts, consult factory.



JG

PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 65

January 2010

**30 GPM
870 RPM**

NOMINAL		ROTOR TRIM	VISCOSITY (SSU)	N.I.P.R. (PSIA)	FRICTION PIPE LOSS (PSI/FT) <small>(Based on Sch 40 Steel Pipe)</small>					FULL BYPASS RELIEF VALVE PRESSURE (PSI)					CAPACITY (GPM) / H.P. REQUIRED									
CAP. GPM	SPEED RPM				PIPE DIAMETER					CRACKING PRESS. (PSI)					DIFFERENTIAL PRESSURE (PSI)									
					1½"	2"	2½"	3"	4"	LOW PRES R/V			HI PRES R/V		MEDIUM DUTY AND HEAVY DUTY				HEAVY DUTY ONLY					
							50	75	100	150	200	25	50	75	100	150	200	300	400					
30	870	STD	28	2.5	.01	.01	.01	.01	.01	55	81	112			27	27	26	25						
			32		.02	.01	.01	.01	.01						.63	1.2	1.7	2.4						
			38	2.5	.03	.01	.01	.01	.01	55	81	112	158			28	28	27	27	26				
			50		.04	.01	.01	.01	.01							.69	1.3	2.0	2.6	3.6				
			70	2.5	.04	.01	.01	.01	.01	55	82	112	158	210			29	29	28	28	27	27		
			100		.05	.02	.01	.01	.01								.75	1.4	2.2	2.7	3.7	4.8		
			150	2.5	.05	.02	.01	.01	.01	55	82	112	158	210			30	30	29	29	28	28	28	26
			200		.05	.02	.01	.01	.01								.84	1.5	2.4	2.8	3.8	4.9	6.8	8.8
			300	2.5	.08	.03	.02	.01	.01	56	83	112	158	210			30	30	30	30	29	29	29	28
			500		.13	.05	.03	.01	.01								1.2	1.8	2.5	3.0	3.9	5.0	6.9	8.8
		750	2.5	.20	.07	.04	.02	.01	56	83	112	158	210			31	30	30	30	30	30	30	29	
		1,000		.26	.10	.05	.02	.01								1.7	2.1	2.5	3.0	4.0	5.0	6.9	8.9	
		2,000	2.6	.53	.19	.10	.04	.01	58	85	114	158	210			31	31	31	30	30	30	30	30	
		3,500		.92	.34	.17	.07	.02								2.5	2.9	3.4	4.0	4.9	6.0	8.0	9.8	
		5,000	2.7	1.31	.48	.24	.10	.04	60	87	116	159	211			31	31	30	30	30	30	30	30	
		7,500		1.97	.73	.36	.15	.05								3.2	4.0	4.7	5.1	6.0	7.0	9.1	11	
		10,000	2.8	2.63	.97	.48	.20	.07	62	89	119	160	212			31	31	30	30	30	30	30	30	
		15,000		3.93	1.45	.71	.30	.10								4.0	4.8	5.6	6.0	6.8	7.9	10	12	
		20,000	2.9	5.25	1.93	.95	.40	.14	65	92	122	160	212			31	30	30	30	30	30	30	29	
		25,000		6.56	2.42	1.19	.50	.17								5.0	5.4	5.9	6.3	7.4	8.5	11	13	
50,000	4.1	13.1	4.83	2.37	1.00	.34	68	95	125	163	215			31	30	30	30	30	30	30	29			
75,000		19.7	7.25	3.56	1.49	.50								7.6	8.2	8.5	9.2	11	11	13	16			
100,000	5.6	26.3	9.66	4.75	1.99	.67	72	99	129	167	219			31	30	30.5	30	30	30	30	29			
150,000		-	-	-	-	-								9.4	10	11	12	14	14	15	18			
200,000																								
250,000																								

(NOTE) For speeds not shown on the pump hydraulic charts, consult factory.



JG

PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 66

January 2010

**20 GPM
580 RPM**

NOMINAL		ROTOR TRIM	VISCOSITY (SSU)	N.I.P.R. (PSIA)	FRICTION PIPE LOSS (PSI/FT) <small>(Based on Sch 40 Steel Pipe)</small>					FULL BYPASS RELIEF VALVE PRESSURE (PSI)					CAPACITY (GPM) / H.P. REQUIRED											
CAP. GPM	SPEED RPM				PIPE DIAMETER					CRACKING PRESS. (PSI)					DIFFERENTIAL PRESSURE (PSI)											
					1½"	2"	2½"	3"	4"	LOW PRES R/V			HI PRES R/V		MEDIUM DUTY AND HEAVY DUTY				HEAVY DUTY ONLY							
20	580	STD	28	1.5	.01	.01	.01	.01	.01	54	80	110				18	17	16	16							
			32		.01	.01	.01	.01	.01							.41	.82	1.2	1.6							
			38	1.5	.02	.01	.01	.01	.01	54	80	110	157			18	18	17	17	16						
			50		.02	.01	.01	.01	.01							.44	.89	1.2	1.7	2.4						
			70	1.5	.02	.01	.01	.01	.01	54	80	110	157	208			19	18	18	18	17	17				
			100		.02	.01	.01	.01	.01								.50	.98	1.3	1.7	2.5	3.1				
			150	1.5	.03	.01	.01	.01	.01	55	81	110	157	208			19	19	19	19	18	18	18	17		
			200		.04	.01	.01	.01	.01								.58	1.1	1.4	1.8	2.5	3.2	4.4	5.9		
			300	1.5	.05	.02	.01	.01	.01	55	81	110	157	208			20	20	19	19	19	19	18	18		
			500		.09	.03	.02	.01	.01								.65	1.2	1.6	1.9	2.5	3.2	4.5	5.9		
		750	1.5	.13	.05	.03	.01	.01	55	81	110	157	208			20	20	20	20	20	20	19	19			
		1,000		.18	.07	.03	.01	.01								.83	1.4	1.7	2.1	2.7	3.3	4.6	6.0			
		2,000	1.7	.35	.13	.06	.02	.01	56	82	111	158	209			20	20	20	20	20	20	19	19			
		3,500		.61	.23	.11	.05	.02								1.5	1.9	2.3	2.7	3.4	4.1	5.4	6.8			
		5,000	1.8	.88	.32	.16	.07	.02	57	83	112	159	210			20	20	20	20	20	20	20	19			
		7,500		1.31	.48	.24	.10	.04								1.9	2.3	2.7	3.1	3.8	4.5	5.9	7.2			
		10,000	2.0	1.75	.65	.32	.13	.05	58	85	113	160	211			20	20	20	20	20	20	20	20			
		15,000		2.63	.97	.48	.20	.07								2.4	2.8	3.2	3.6	4.3	5.0	6.4	6.7			
		20,000	2.1	3.50	1.29	.63	.27	.09	60	87	114	160	211			20	20	20	20	20	20	20	20			
		25,000		4.38	1.61	.79	.33	.11								2.8	3.1	3.5	3.9	4.6	5.3	6.8	8.2			
50,000	3.3	8.75	3.22	1.58	.67	.23	62	89	116	162	213			20	20	20	20	20	20	20	20					
75,000		13.1	4.83	2.37	1.00	.34								4.2	4.7	5.1	5.6	6.7	7.2	8.5	10					
100,000	4.7	17.5	6.44	3.17	1.33	.45	65	92	119	165	216			20	20	20	20	20	20	20	20					
150,000		26.3	9.66	4.75	1.99	.67								5.3	5.9	6.4	7.0	8.3	8.6	9.9	12					
200,000	8.6	35.0	12.9	6.33	2.65	.90	68	95	122	168	219			20	20	20	20	20	20	20	20					
250,000		-	-	-	-	-								6.3	7.0	7.4	8.2	9.8	9.9	11	13					

(NOTE) For speeds not shown on the pump hydraulic charts, consult factory.



JG

PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 67

January 2010

**12 GPM
350 RPM**

NOMINAL		ROTOR TRIM	VISCOSITY (SSU)	N.I.P.R. (PSIA)	FRICTION PIPE LOSS (PSI/FT) <small>(Based on Sch 40 Steel Pipe)</small>					FULL BYPASS RELIEF VALVE PRESSURE (PSI)					CAPACITY (GPM) / H.P. REQUIRED											
CAP. GPM	SPEED RPM				PIPE DIAMETER					CRACKING PRESS. (PSI)					DIFFERENTIAL PRESSURE (PSI)											
					1½"	2"	2½"	3"	4"	LOW PRES R/V			HI PRES R/V		MEDIUM DUTY AND HEAVY DUTY				HEAVY DUTY ONLY							
12	350	STD	28	1.1	.01	.01	.01	.01	.01	53	79	105				11	10	10	9.5							
			32		.01	.01	.01	.01	.01							.26	.52	.73	.98							
			38	1.1	.01	.01	.01	.01	.01	53	79	105	154			11	10	10	10	9.5						
			50		.01	.01	.01	.01	.01							.29	.55	.78	.99	1.5						
			70	1.1	.01	.01	.01	.01	.01	53	79	105	154	204			11	11	11	11	10	10				
			100		.01	.01	.01	.01	.01								.32	.58	.80	1.0	1.5	1.9				
			150	1.1	.02	.01	.01	.01	.01	54	80	106	155	205			12	11	11	11	11	11	10	10		
			200		.02	.01	.01	.01	.01								.37	.62	.84	1.1	1.6	1.9	2.7	3.5		
			300	1.1	.03	.01	.01	.01	.01	54	80	106	155	205			12	12	12	11	11	11	11	11		
			500		.05	.02	.01	.01	.01								.43	.69	.93	1.1	1.6	2.0	2.8	3.6		
		750	1.1	.08	.03	.02	.01	.01	54	80	106	155	205			12	12	12	12	12	12	11	11			
		1,000		.11	.04	.02	.01	.01								.59	.80	1.0	1.2	1.7	2.1	2.9	3.7			
		2,000	1.3	.21	.08	.04	.02	.01	54	80	106	155	205			12.	12	12	12	12	12	12	11			
		3,500		.37	.14	.07	.03	.01								.82	1.1	1.3	1.6	2.0	2.4	3.2	4.0			
		5,000	1.5	.53	.19	.10	.04	.01	55	80	106	155	205			12	12	12	12	12	12	12	11			
		7,500		.79	.29	.14	.06	.02								.96	1.2	1.4	1.7	2.2	2.6	3.4	4.3			
		10,000	1.7	1.05	.39	.19	.08	.03	56	81	107	156	206			12	12	12	12	12	12	12	12			
		15,000		1.58	.58	.29	.12	.04								1.1	1.4	1.6	1.9	2.4	2.8	3.7	4.6			
		20,000	1.8	2.10	.77	.38	.16	.06	56	82	108	156	206			12	12	12	12	12	12	12	12			
		25,000		2.63	.97	.48	.20	.08								1.3	1.5	1.8	2.5	2.9	3.0	3.9	4.7			
50,000	3.0	5.25	1.93	.95	.40	.14	58	84	110	158	208			12	12	12	12	12	12	12	11					
75,000		7.88	2.90	1.43	.60	.20								2.0	2.3	2.6	2.9	3.4	4.0	4.8	5.9					
100,000	4.5	10.5	3.87	1.90	.80	.27	60	86	112	160	210			12	12	12	12	12	12	12	11					
150,000		15.8	5.80	2.85	1.20	.40								2.5	2.9	3.2	3.7	4.0	4.8	5.6	6.7					
200,000	7.0	21.0	7.73	3.80	1.59	.54	62	88	114	162	212			12	12	12	12	12	12	12	11					
250,000		26.3	9.66	4.75	1.99	.67								3.0	3.5	3.8	4.3	4.6	5.5	6.3	7.4					

(NOTE) For speeds not shown on the pump hydraulic charts, consult factory.



JG

SEC. 500

PAGE 67.1

February 2025

**5 GPM
150 RPM**

NOMINAL		VISCOSITY		N.I.P.R.	FRICTION PIPE LOSS (PSI/FT) <small>(Schedule 40 Steel Pipe)</small>					CAPACITY (GPM)				H.P. REQUIRED					
GPM	RPM	ROTOR TRIM	(SSU)	(PSIa)	PIPE DIAMETER					MEDIUM-DUTY & HEAVY-DUTY				HEAVY-DUTY ONLY					
										DIFFERENTIAL PRESSURE (PSI)									
					2"	2½"	3"	4"	5"	25	50	75	100	150	200	300	400		
5	150	STD																	
		"D"																	
			200,000	2.9	3.2	1.6	0.66	0.2	0.1	5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2		
			399,999		6.45	3.2	1.3	0.45	0.2	1.4	1.5	1.6	1.7	2.0	2.2	2.4	2.7		
			400,000	3.3	5.4	5.4	5.3	5.3		5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2		
			599,999		9.7	4.8	2	0.7	0.3	1.5	1.6	1.7	1.8	2.1	2.3	2.6	2.9		
			600,000	4	5.4	5.4	5.3	5.3		5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2		
			799,999		12.9	6.3	2.7	0.9	0.36	1.7	1.8	1.9	2.0	2.3	2.5	2.8	3.1		
			800,000	4.4	5.4	5.4	5.3	5.3		5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2		
			1M		16.1	7.9	3.3	1.1	0.45	1.9	2.0	2.1	2.2	2.5	2.7	3.0	3.3		

(NOTE) For speeds not shown on the pump hydraulic charts, consult factory.