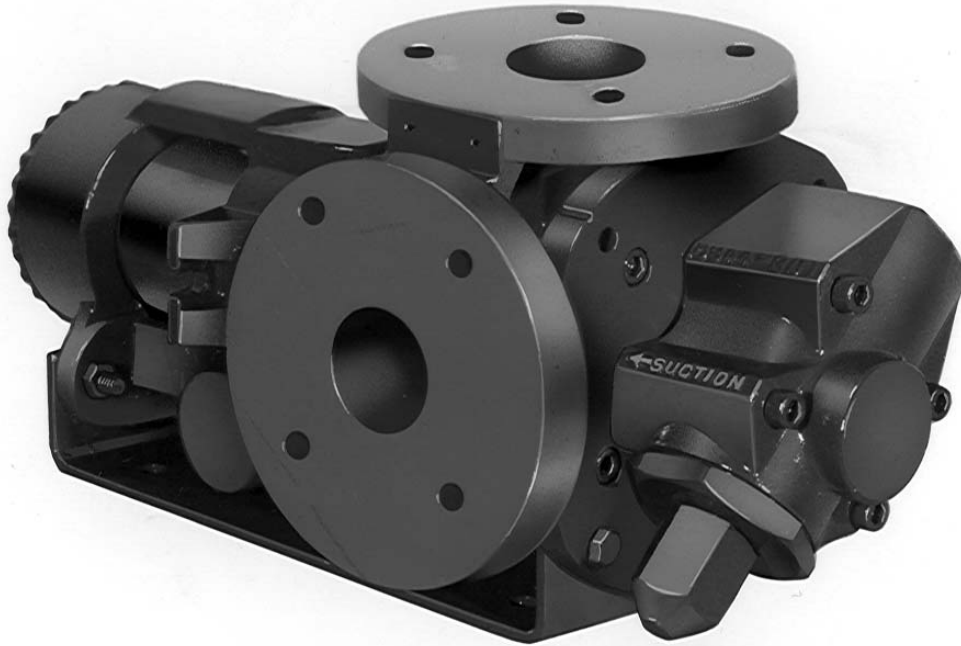


# GHS SERIES Flexible Seal HEAVY DUTY STANDARD STEEL ROTARY GEAR PUMP

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]			
GHC	GHS							LBS [KG]	CU. FT.			
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 ●	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]						350 [177]	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]						GHS ●	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]	400 [204]	71 [32,2]	2.9
GHC 3 JG32-B ● †	GHS 3 JG32-B ● † GHS 3 JG38-B ■ †	40 [126]	1150 [960]	30 [95]	870 [725]				500 [260]	154 [69,8]	5.3	
GHC 3 JJ32-B ● †	GHS 3 JJ32-B ● † GHS 3 JJ38-B ■ †	56 [177]		36 [114]						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]	5.3

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. LBS [KG]	Vol. CU. FT.
		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]		
GHC	GHS										
	GHS 2 NK32-B ● † GHS 2 NK38-B ■ †	99 [375]	960 [960]	60 [189]	580 [480]			300 [21]		200 [90,7]	5.3
	GHS 3 NK32-B ● † GHS 3 NK38-B ■ †									200 [90,7]	
	GHS 2 NM32-B ● † GHS 2 NM38-B ■ †	132 [500]	960 [960]	80 [252]	580 [480]			300 [21]		200 [90,7]	5.3
	GHS 3 NM32-B ● † GHS 3 NM38-B ■ †									200 [90,7]	
	GHS 3 NP32-B ① ● † GHS 3 NP38-B ① ■ †	165 [624]	960 [960]	99 [312]	580 [480]			200 [14]		200 [90,7]	5.3
	GHS 2-1/2 RM32-B ● † GHS 2-1/2 RM38-B ■ †	172 [542]								720 [600]	
	GHS 3 RM32-B ● † GHS 3 RM38-B ■ †		302 [136,9]	10.7							
	GHS 4 RM32-B ● † GHS 4 RM38-B ■ †	215 [678]	720 [600]	143 [451]	480 [400]	100 [7]	150 [10]	300 [21]		302 [136,9]	10.7
	GHS 3 RP32-B ● † GHS 3 RP38-B ■ †									302 [136,9]	
	GHS 4 RP32-B ● † GHS 4 RP38-B ■ †	255 [804]	720 [600]	170 [536]	480 [400]	100 [7]	150 [10]	300 [21]		302 [136,9]	10.7
	GHS 3 RR32-B ● † GHS 3 RR38-B ■ †									302 [136,9]	
	GHS 4 RR32-B ● † GHS 4 RR38-B ■ †	295 [930]	720 [600]	196 [618]	480 [400]	100 [7]	150 [10]	300 [21]		302 [136,9]	10.7
	GHS 3 RS32-B ① ● † GHS 3 RS38-B ① ■ †									302 [136,9]	
	GHS 4 RS32-B ① ● † GHS 4 RS38-B ① ■ †							200 [14]		302 [136,9]	10.7

STANDARD MODELS CONTINUED

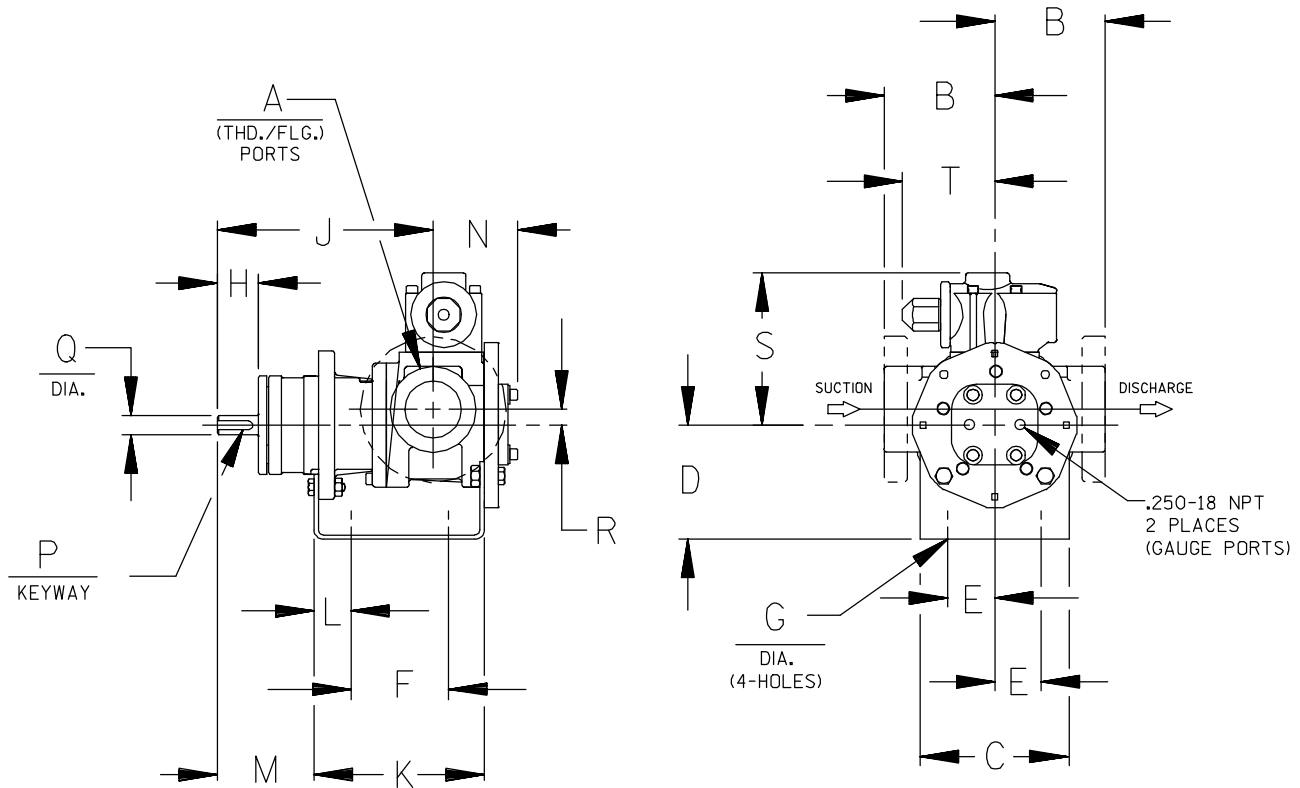
- MECHANICAL SEAL
- LIPSEAL/PACKING
- † PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

① PUMP LIMITED TO 200 PSI MAXIMUM PRESSURE.

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<b>APPLICATION RECOMMENDATIONS:</b>		
<b>APPLICATION</b>	<b>OPTIONS REQUIRED (Select One From Each Row)</b>	<b>OPERATING LIMITATIONS</b>
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

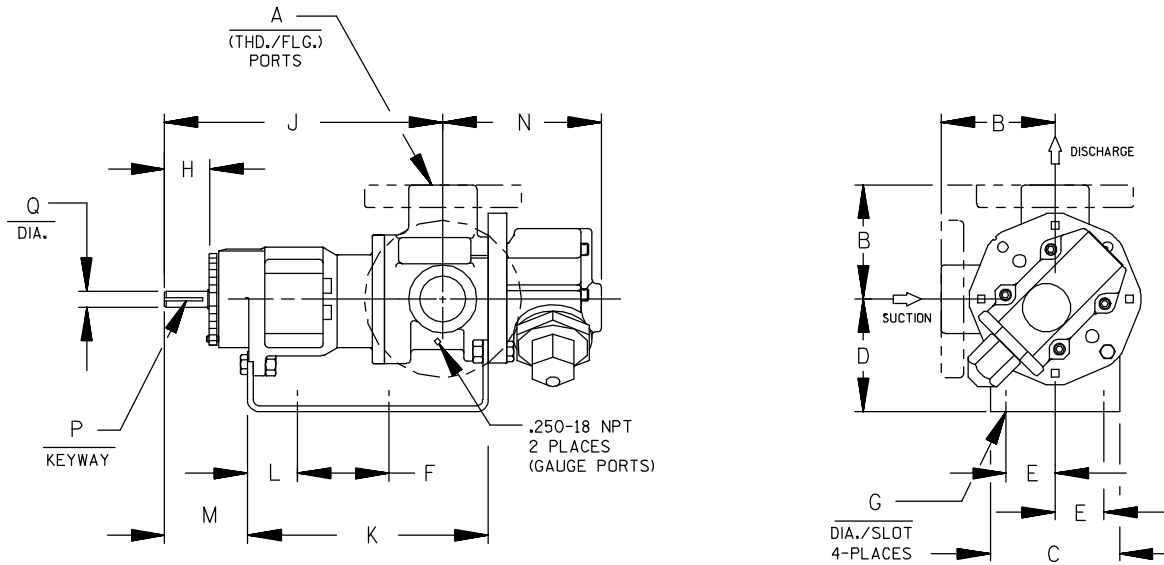
NOTE: PROPER PUMP APPLICATION REQUIRES CONSIDERATION OF ADDITIONAL FACTORS. PLEASE REVIEW APPLICATION GUIDE IN SECTION 500 OR CONSULT THE FACTORY.



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

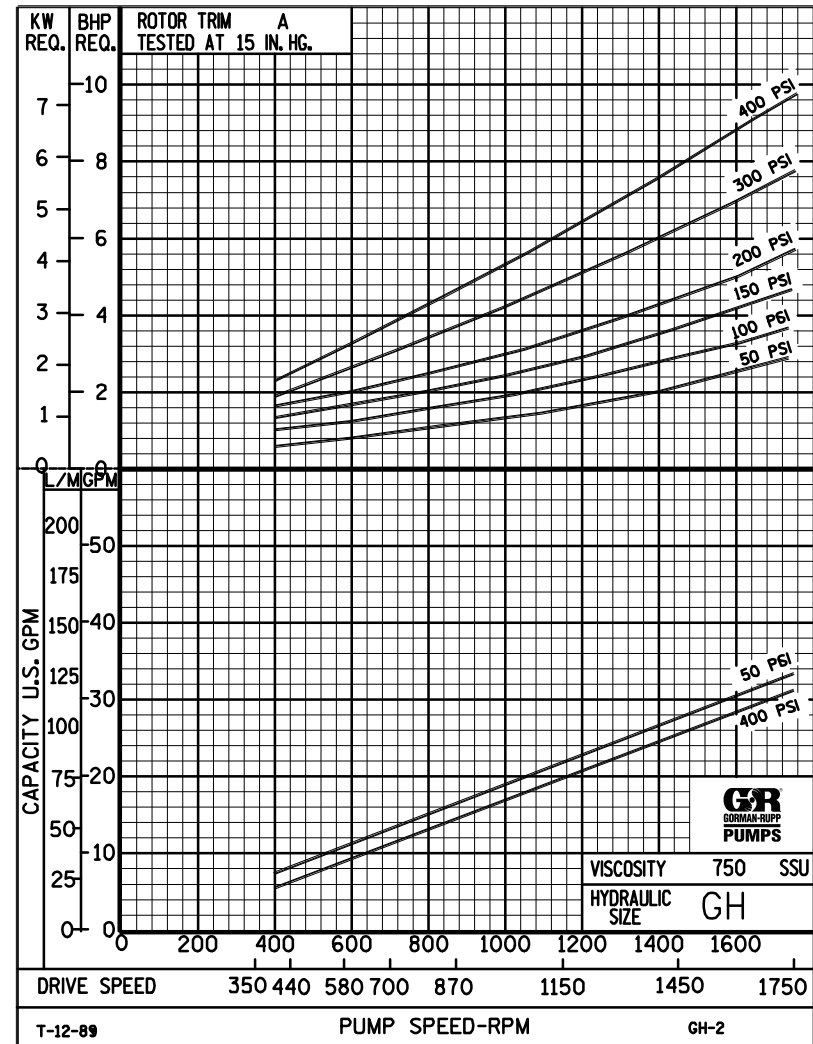
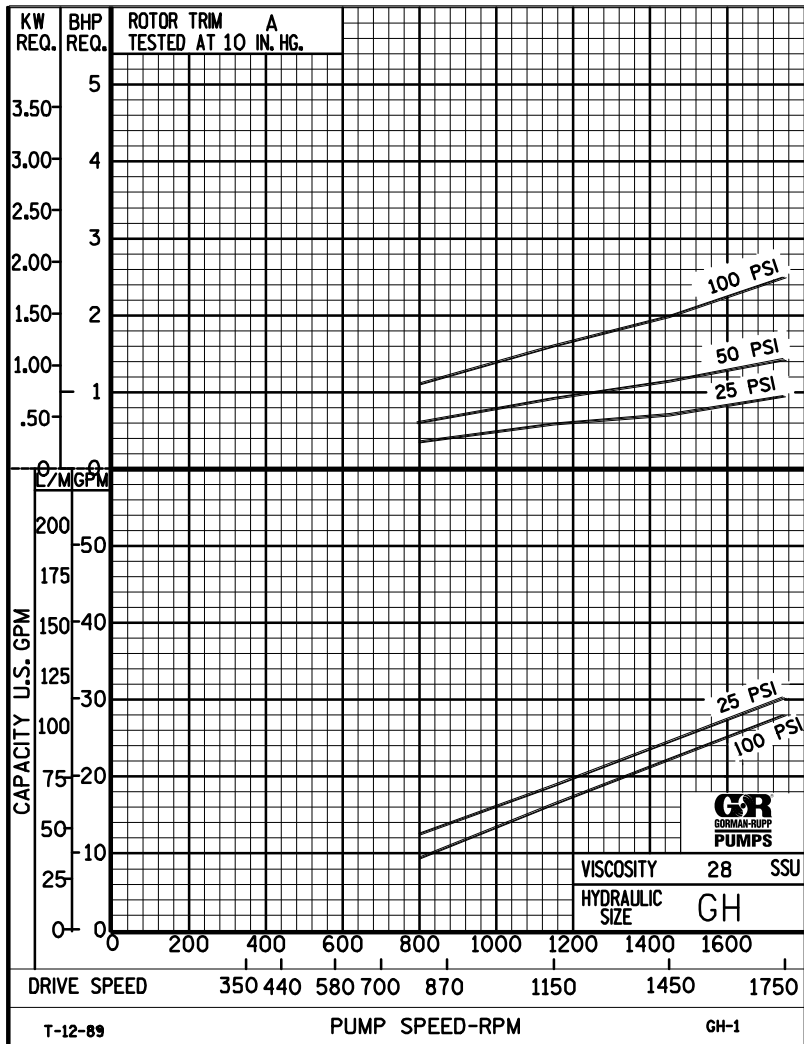
# GH

Hydraulic Size

SEC. 500

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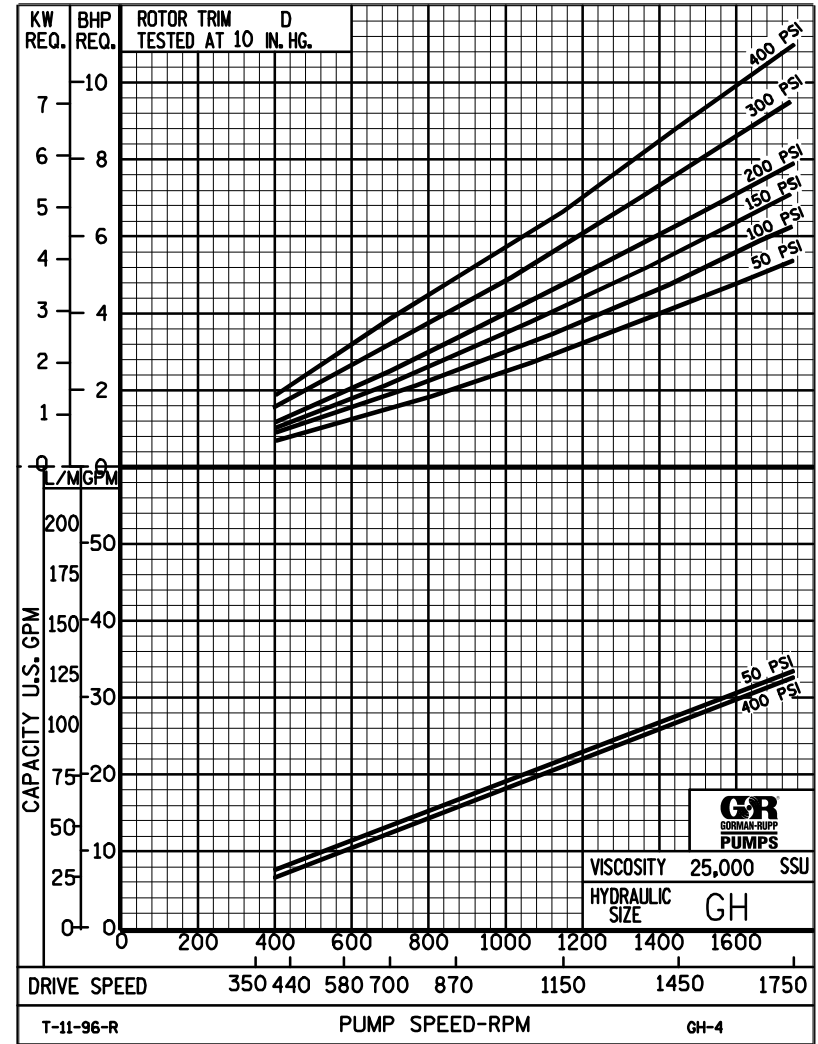
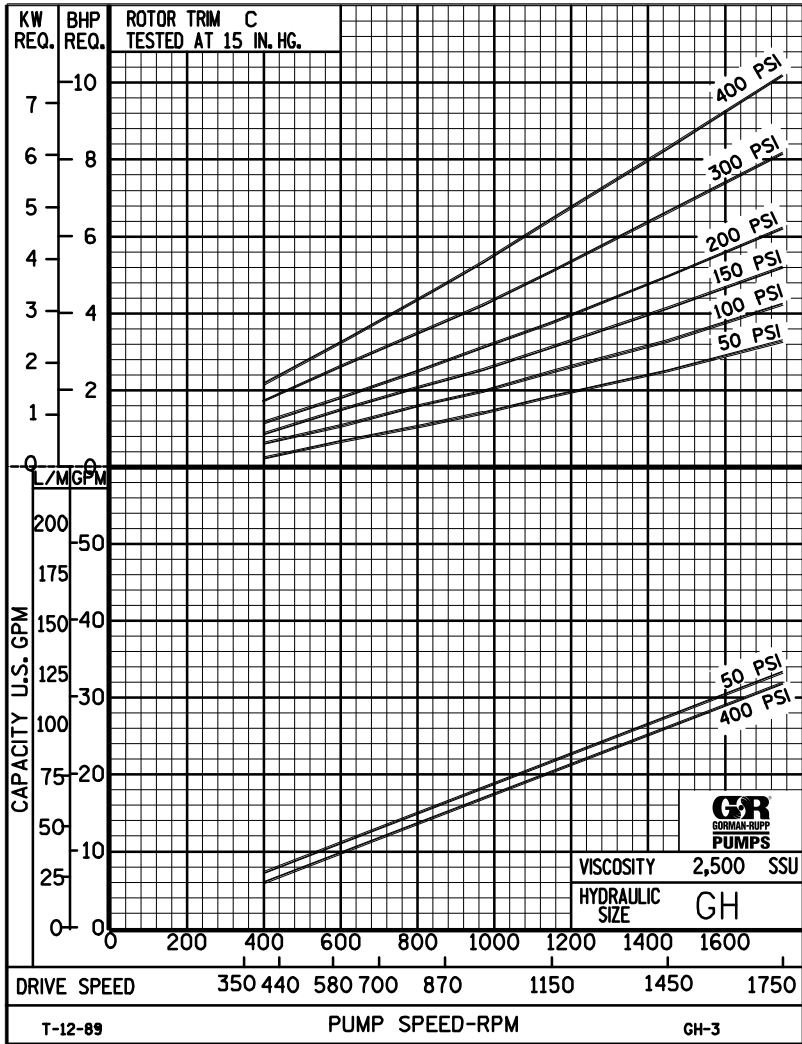


# PERFORMANCE CURVES

## SPEED VS. CAPACITY/HORSEPOWER

# GH

Hydraulic Size



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# GH

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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**31 GPM  
1750 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													
					PIPE DIAMETER					CRACKING PRESS. (PSI)					DIFFERENTIAL PRESSURE (PSI)													
CAP. GPM	SPEED RPM				¾"	1"	1¼"	1½"	2"	LOW PRES R/V					MEDIUM DUTY AND HEAVY DUTY				HEAVY DUTY ONLY									
										50	75	100	150	200	25	50	75	100	150	200	300	400						
31	1750	STD	28	4.2	.01	.01	.01	.01	.01	68	97	126			30	29	28	28										
			32		.61	.19	.05	.03	.01								.95	1.4	2.0	2.5								
			38	4.2	.78	.25	.07	.03	.01	68	97	126	176			31	30	29	29	28								
			50		.93	.30	.08	.04	.01							1.2	1.8	2.5	2.7	3.9								
			70	4.2	1.02	.35	.09	.05	.02	70	99	128	176	230		32	31	31	30	29	29							
			100		1.22	.39	.11	.05	.02							1.4	2.0	2.6	3.0	4.2	5.0							
			150	4.2	1.35	.44	.12	.06	.02	72	101	130	176	232		32	32	32	31	31	30	29	28					
			200		1.58	.52	.13	.07	.03							1.6	2.3	2.8	3.3	4.4	5.2	7.3	9.3					
			300	4.2	1.80	.61	.16	.08	.03	72	101	130	177	234		33	32	32	32	31	31	30	30					
			500		1.98	.75	.25	.14	.05							1.9	2.8	3.1	3.7	4.8	5.6	7.5	9.6					
		750	4.2	2.97	1.13	.38	.21	.08	74	102	132	177	235		33	33	33	33	32	32	31	30						
		1,000		3.96	1.51	.51	.27	.10							2.0	3.0	3.5	3.8	5.0	5.8	7.7	9.8						
		2,000	5.5	7.91	3.01	1.00	.54	.20	76	103	133	178	238		33	33	33	33	33	32	32	31						
		3,500		13.9	5.27	1.76	.95	.35							2.2	3.3	4.0	4.5	5.5	6.5	8.4	11						
		5,000	6.3	20.0	7.53	2.52	1.36	.50	80	105	137	180	240		33	33	33	33	33	32	32	31						
		7,500		29.7	11.3	3.77	2.04	.75							2.9	4.4	5.0	5.4	6.4	7.3	9.2	11.0						
		10,000	7.1	39.6	15.1	5.03	2.71	1.00	84	109	140	182	242		33	33	33	33	33	32	32	32						
		15,000		59.3	22.6	7.54	4.07	1.50							3.7	5.5	6.0	6.6	7.6	8.5	10	12						
		20,000	7.8	79.1	30.1	10.1	5.43	2.00	88	113	144	184	244		33	33	33	33	33	32	32	32						
		25,000		98.9	37.6	12.6	6.78	2.50							4.7	6.8	7.4	7.9	8.9	9.9	12	14						
50,000																												
75,000																												
100,000																												
150,000																												
200,000																												
250,000																												

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



# GH

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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**20 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)													
					3/4"	1"	1 1/4"	1 1/2"	2"	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									
20	1150	STD	28	2.3	.01	.01	.01	.01	.01	63	89	114			18	18	17	16										
			32		.28	.09	.03	.01	.01							.58	.91	1.3	1.6									
			38	2.3	.36	.12	.03	.02	.01	63	89	114	164			19	19	18	17	17								
			50		.44	.14	.04	.02	.01							.66	1.1	1.4	1.7	2.3								
			70	2.3	.49	.15	.04	.02	.01	64	90	116	166	228		20	20	19	18	18	17							
			100		.58	.19	.05	.02	.01							.83	1.2	1.6	1.9	2.6	2.9							
			150	2.3	.64	.21	.06	.03	.01	64	90	116	166	228		21	20	20	19	18	18	17	16					
			200		.68	.25	.08	.04	.02							.91	1.3	1.7	2.0	2.8	3.3	4.5	5.9					
			300	2.3	.78	.30	.10	.06	.02	65	91	120	167	230		21	21	21	20	20	19	19	18					
			500		1.28	.49	.16	.09	.03							1.0	1.5	1.8	2.1	2.9	3.5	4.9	6.0					
			750	2.3	1.92	.73	.24	.13	.05	65	91	120	167	230		22	21	21	21	21	21	20	20					
			1,000		2.55	.97	.33	.18	.07							1.2	1.7	2.2	2.4	3.0	3.6	4.9	6.2					
		2,000	3.1	5.10	1.94	.65	.35	.13	66	92	121	168	230		22	21	21	21	21	21	21	20						
		3,500		8.93	3.40	1.14	.61	.23							1.3	1.9	2.2	2.5	3.1	3.8	5.1	6.4						
		5,000	3.6	12.8	4.86	1.62	.88	.32	73	95	123	170	230		22	22	21	21	21	21	21	21						
		7,500		19.1	7.29	2.43	1.31	.49							1.7	2.5	2.7	3.0	3.7	4.4	5.6	6.9						
		10,000	4.1	25.5	9.71	3.24	1.75	.65	76	97	126	170	230		22	22	22	21	21	21	21	21						
		15,000		38.3	14.6	4.86	2.63	.97							2.6	3.0	3.4	3.7	4.4	5.1	6.3	7.6						
		20,000	4.6	51.0	19.4	6.49	3.50	1.29	79	101	128	172	230		22	22	22	21	21	21	21	21						
		25,000		63.8	24.3	8.11	4.38	1.61							3.5	3.7	4.1	4.4	5.1	5.7	7.0	8.3						
		50,000	7.3	128	48.6	16.2	8.75	3.22	84	107	132	178	235		22	22	22	21	21	21	21	21						
		75,000		191	72.8	24.3	13.1	4.83							5.4	5.7	6.3	6.8	7.4	8.2	9.6	11						
		100,000																										
		150,000																										
200,000																												
250,000																												

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



# GH

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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January 2010

**15 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											
					PIPE DIAMETER					CRACKING PRESS. (PSI)					DIFFERENTIAL PRESSURE (PSI)											
CAP. GPM	SPEED RPM				3/4"	1"	1 1/4"	1 1/2"	2"	LOW PRES R/V					MEDIUM DUTY AND HEAVY DUTY				HEAVY DUTY ONLY							
										50	75	100	150	200	25	50	75	100	150	200	300	400				
15	870	STD	28	1.6	.01	.01	.01	.01	.01	59	86	111			14	13	12	11								
			32		.17	.06	.02	.01	.01							.42	.68	.98	1.2							
			38	1.6	.22	.07	.02	.01	.01	59	86	111	161			14	14	13	12	12						
			50		.27	.09	.03	.01	.01							.48	.74	1.0	1.3	1.8						
			70	1.6	.30	.10	.03	.01	.01	60	87	113	163	215		15	14	14	13	13	13					
			100		.36	.12	.03	.02	.01							.67	.89	1.1	1.4	1.8	2.3					
			150	1.6	.41	.14	.05	.02	.01	60	87	113	163	217		16	15	15	14	14	14	13	12			
			200		.46	.18	.06	.03	.01							.74	.96	1.2	1.5	1.9	2.4	3.4	4.3			
			300	1.6	.58	.22	.08	.04	.02	60	87	115	165	219		16	16	15	15	15	15	14	13			
			500		.96	.37	.12	.07	.03							.82	1.0	1.3	1.5	2.0	2.5	3.5	4.5			
		750	1.6	1.44	.55	.18	.10	.04	60	87	115	165	222		16	16	16	16	16	15	15	14				
		1,000		1.92	.73	.25	.13	.05							.89	1.1	1.4	1.6	2.1	2.6	3.6	4.6				
		"C"	2,000	2.2	3.83	1.46	.49	.26	.10	62	90	115	165	222		16	16	16	16	16	16	15	15			
			3,500		6.70	2.55	.85	.46	.17							1.1	1.3	1.5	1.8	2.3	2.8	3.8	4.8			
			5,000	2.7	9.57	3.64	1.22	.66	.24	65	92	117	167	224		16	16	16	16	16	16	16	15			
			7,500		14.4	5.46	1.83	.99	.36							1.4	1.6	1.9	2.2	2.7	3.2	4.0	5.1			
			10,000	3.1	19.1	7.29	2.43	1.31	.49	68	94	119	169	224		16	16	16	16	16	16	16	16			
			15,000		28.7	10.9	3.65	1.97	.73							1.9	2.1	2.4	2.7	3.2	3.7	4.6	5.6			
			20,000	3.5	38.3	14.6	4.87	2.63	.97	72	97	122	172	224		16	16	16	16	16	16	16	16			
			25,000		47.8	18.2	6.08	3.28	1.21							2.4	2.6	2.9	3.1	3.7	4.2	5.1	6.1			
50,000	5.8		95.7	36.4	12.2	6.56	2.42	77	102	127	177	229		16	16	16	16	16	16	16	16					
75,000			144	54.6	18.3	9.85	3.63							3.8	4.0	4.3	4.5	5.0	5.5	6.5	7.5					
"D"	100,000	8.4	191	72.8	24.3	13.1	4.83	85	110	135	185	239		16	16	16	16	16	16	16						
	150,000		-	-	-	-								4.6	4.8	5.1	5.4	5.8	6.4	7.3	8.3					
	200,000																									
	250,000																									

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



# GH

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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January 2010

**10 GPM  
580 RPM**

NOMINAL		ROTOR TRIM	VISCOSITY (SSU)	N.I.P.R. (PSIA)	FRICTION PIPE LOSS (PSI/FT) (Based on Sch 40 Steel Pipe)					FULL BYPASS RELIEF VALVE PRESSURE (PSI)					CAPACITY (GPM) / H.P. REQUIRED															
CAP. GPM	SPEED RPM				PIPE DIAMETER					CRACKING PRESS. (PSI)					DIFFERENTIAL PRESSURE (PSI)															
					3/4"	1"	1 1/4"	1 1/2"	2"	LOW PRES R/V		HI PRES R/V			25	50	75	100	150	200	300	400								
10	580	STD	28	1.2	.01	.01	.01	.01	.01	56	81	106			9	8.5	8	7.5												
			32		.08	.03	.01	.01	.01								.25	.41	.59	.73										
			38	1.2	.11	.04	.01	.01	.01	56	81	106	157			9.5	9	8.5	8	7.5										
			50		.13	.04	.01	.01	.01								.29	.45	.63	.80	1.1									
			70	1.2	.14	.05	.02	.01	.01	56	81	107	158	209			10	9.5	9.5	9	8.5	8.5								
			100		.14	.05	.02	.01	.01								.40	.54	.69	.84	1.1	1.4								
			150	1.2	.17	.07	.03	.02	.01	57	82	108	158	211			10	10	10	9.5	9.5	9	9	9	9	9	9	8		
			200		.30	.12	.04	.02	.01								.45	.58	.73	.88	1.2	1.4	2.0	2.6						
			300	1.2	.39	.15	.05	.02	.01	57	82	109	159	212			11	10	10	10	10	9.5	9.5	9						
			500		.64	.24	.08	.05	.02								.49	.62	.77	.92	1.2	1.5	2.1	2.7						
			750	1.2	.96	.36	.12	.07	.03	57	82	111	161	214			11	11	10	10	10	10	10	10	10	10	9.5			
			1,000		1.28	.49	.16	.09	.03								.54	.66	.82	.97	1.3	1.6	2.2	2.8						
		2,000	1.7	2.55	.97	.33	.18	.07	58	85	112	162	214			11	11	11	10	10	10	10	10	10	10	10				
		3,500		4.46	1.70	.57	.31	.12								.64	.76	.91	1.1	1.4	1.7	2.3	2.9							
		5,000	2.1	6.38	2.43	.81	.44	.16	60	85	112	162	214			11	11	11	11	10	10	10	10	10	10	10				
		7,500		9.57	3.64	1.22	.66	.24								.82	.97	1.1	1.3	1.6	1.9	2.4	3.0							
		10,000	2.5	12.8	4.86	1.62	.88	.32	63	88	114	166	216			11	11	11	11	10	10	10	10	10	10	10				
		15,000		19.2	7.29	2.43	1.31	.49								1.1	1.3	1.4	1.6	1.9	2.2	2.8	3.4							
		20,000	2.9	25.5	9.71	3.24	1.75	.65	66	91	116	168	218			11	11	11	11	10	10	10	10	10	10	10				
		25,000		31.9	12.2	4.05	2.19	.81								1.4	1.5	1.7	1.9	2.2	2.5	3.2	3.9							
		50,000	4.8	63.8	24.3	8.11	4.38	1.61	69	94	122	172	224			11	11	11	11	10	10	10	10	10	10	10				
		75,000		95.7	36.4	12.2	6.56	2.42								2.0	2.2	2.4	2.5	2.9	3.2	3.9	4.6							
		100,000	7.1	128	48.6	16.2	8.75	3.22	73	98	126	176	230			11	11	11	11	10	10	10	10	10	10	10				
		150,000		191	72.9	24.3	13.1	4.83								2.5	2.8	3.0	3.2	3.5	3.9	4.5	5.2							
		200,000																												
250,000																														

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



# GH

**SEC. 500**

PAGE 55.1

February 2025

**4 GPM**  
**200 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					
					1½"	2"	2½"	3"	4"	DIFFERENTIAL PRESSURE (PSI)				150	200	300	400		
						25	50	75	100	150	200	300	400						
<b>4</b>	<b>200</b>	<b>STD</b>																	
				<b>"D"</b>															
					200,000	2.4	7	2.6	1.3	0.5	0.2	3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7
					399,999		14	5.2	2.5	1.1	0.4	1.1	1.2	1.4	1.5	1.7	1.8	2.0	2.1
					400,000	2.7						3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7
					599,999		21	7.7	3.8	1.6	0.5	1.3	1.4	1.5	1.7	1.9	2.0	2.1	2.2
					600,000	3.3						3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7
					799,999		NR	10.3	5.1	2.1	0.7	1.4	1.5	1.6	1.8	2.0	2.1	2.2	2.3
					800,000	3.6						3.8	3.8	3.8	3.8	3.8	3.8	3.7	3.7
		1M	NR		12.9		6.3	2.7	0.9	1.6	1.9	1.9	1.9	2.1	2.2	2.3	2.4		

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