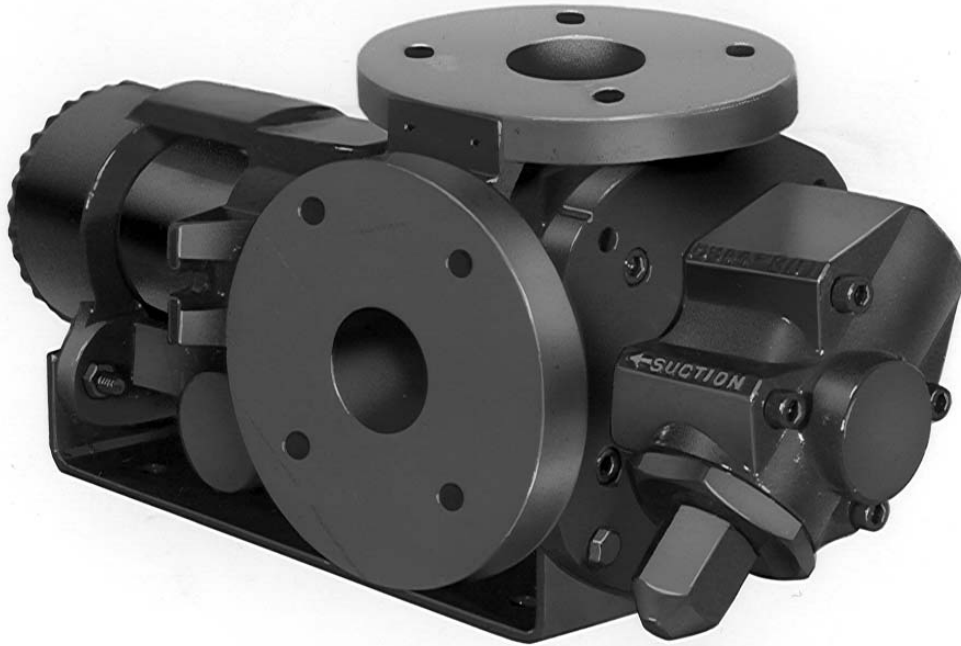


GHS SERIES Flexible Seal HEAVY DUTY STANDARD STEEL ROTARY GEAR PUMP

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]

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

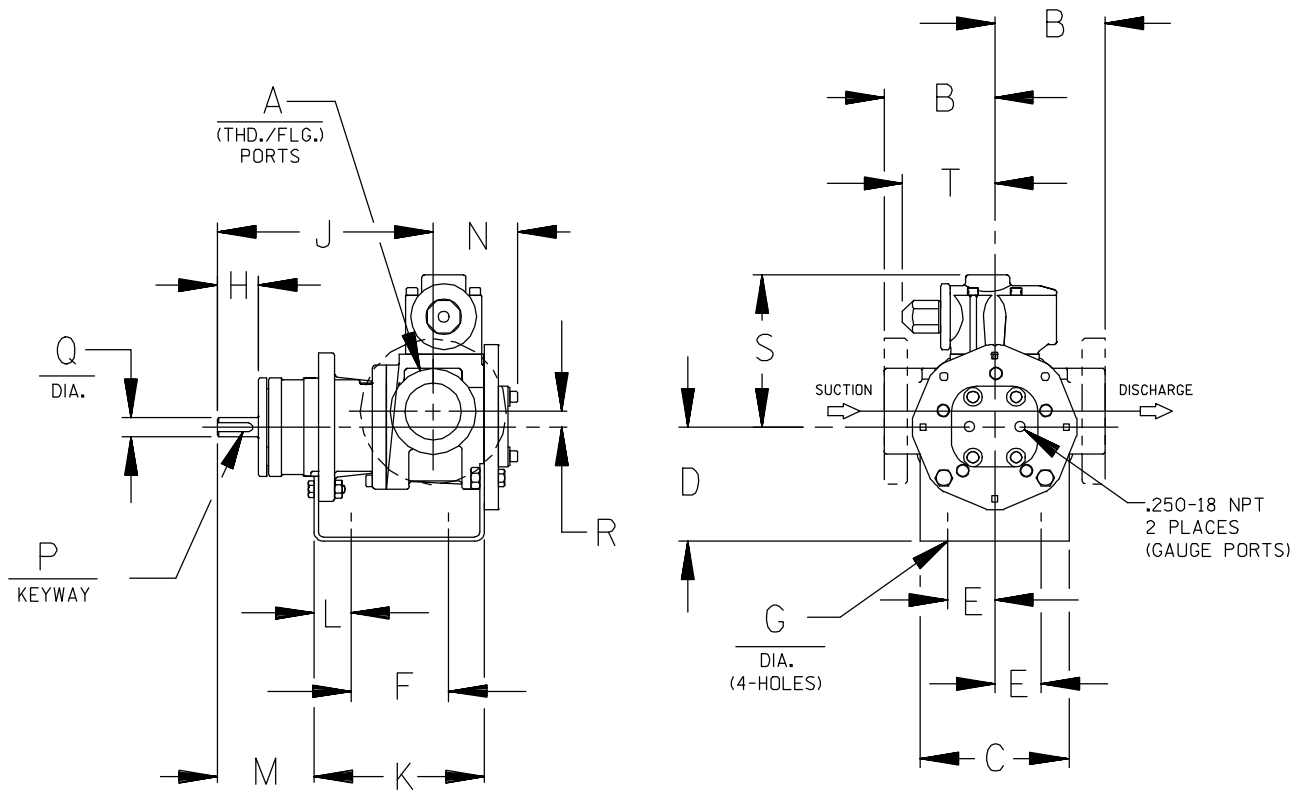
- MECHANICAL SEAL
- LIPSEAL/PACKING
- † PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

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

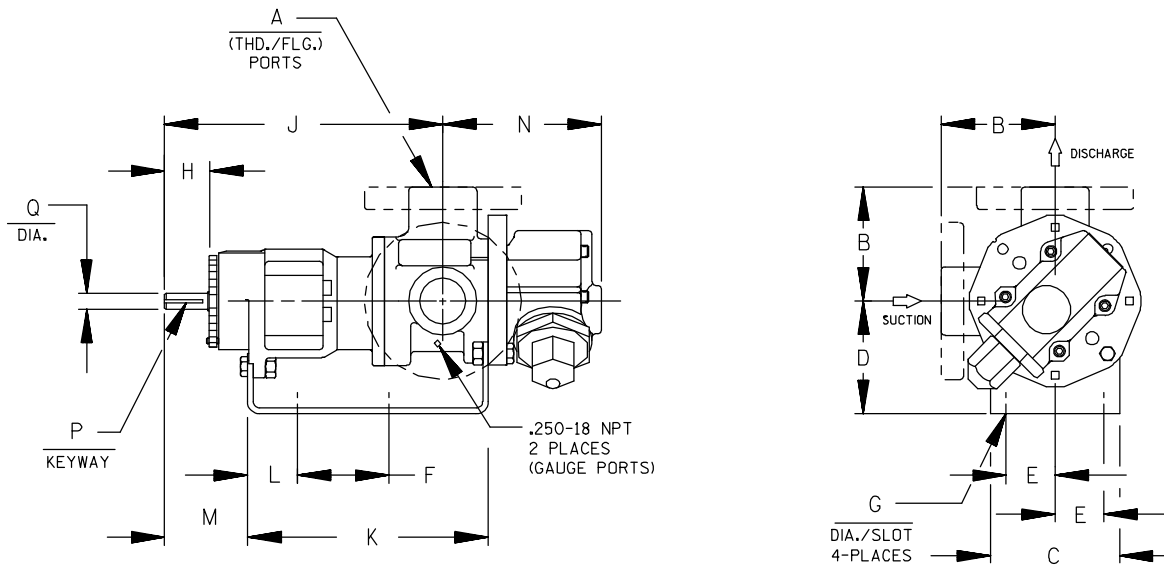
NOTE: PROPER PUMP APPLICATION REQUIRES CONSIDERATION OF ADDITIONAL FACTORS. PLEASE REVIEW APPLICATION GUIDE IN SECTION 500 OR CONSULT THE FACTORY.



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]		7.00 [178] 8.00 [203]									8.72 [221] *		
GHS R	2-1/2"													.38 [10] x 1.88 [48]	1.44 [37]
	3"	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]		
	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

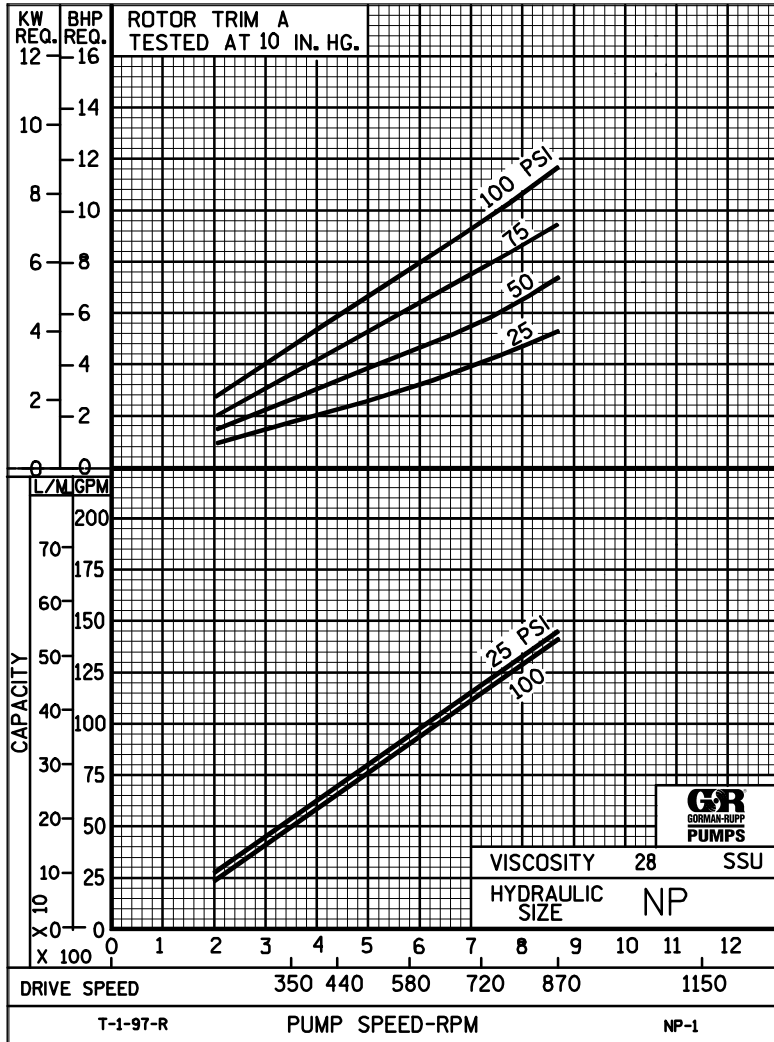


PERFORMANCE CURVES

SPEED VS. CAPACITY/HORSEPOWER

NP

Hydraulic Size





PERFORMANCE CURVES

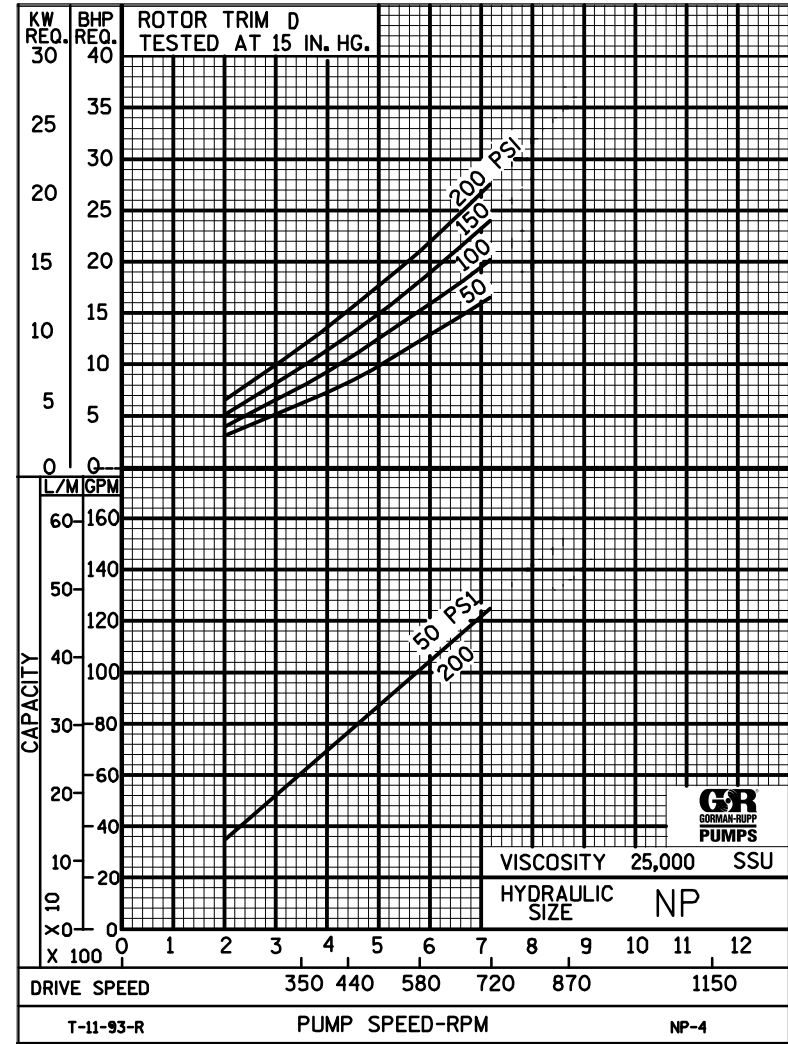
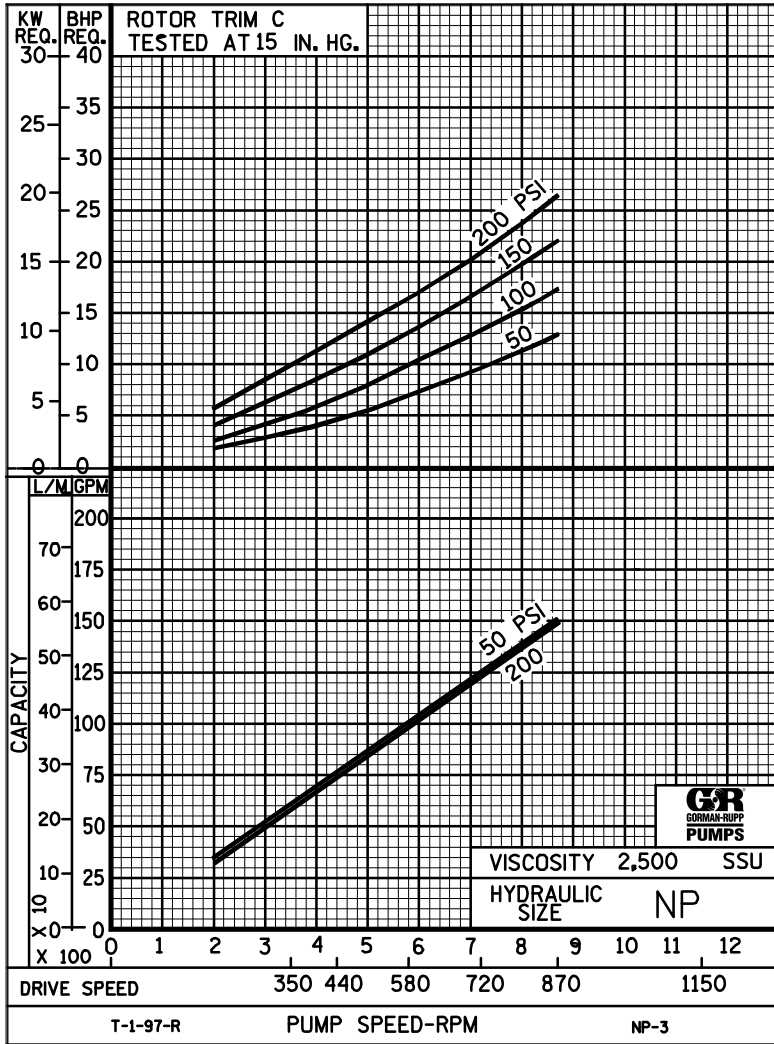
SPEED VS. CAPACITY/HORSEPOWER

NP Hydraulic Size

SEC. 500

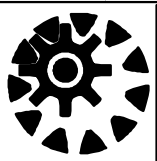
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NP

PUMP HYDRAULIC SIZE CHART

SEC. 500

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99 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)								
		2"	2 1/2"	3"	4"	5"	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					
99	580	STD	28	2.5	.01	.01	.01	.01	.01	62	88	118			95	92	91	90					
			32		.06	.03	.01	.01	.01					3.2	4.6	6.2	7.8						
			38	2.5	.08	.03	.01	.01	.01	62	88	118	164			96	94	94	93	92			
			50		.09	.04	.02	.01	.01					3.2	4.7	6.3	7.9	11					
			70	2.5	.11	.05	.02	.01	.01	64	90	120	164	210		98	97	96	96	95	94		
			100		.12	.05	.02	.01	.01					3.3	4.7	6.4	8.0	11	14				
			150	2.5	.14	.06	.02	.01	.01	64	92	120	168	214		99	99	98	98	97	96		
			200		.15	.06	.03	.01	.01					3.5	4.9	6.5	8.1	11	14				
			300	2.5	.17	.06	.03	.01	.01	66	94	122	168	218		100	99	99	99	98	98		
			500		.17	.08	.04	.01	.01					4.0	5.1	6.8	8.2	11	15				
		750	2.5	.24	.12	.05	.02	.01	68	96	122	172	222		101	101	101	100	99	99			
		1,000		.32	.16	.07	.02	.01					4.5	5.9	7.1	8.9	12	15					
		2,000	3.2	.64	.32	.13	.05	.02	74	102	128	180	230		101	101	101	100	100	99			
		3,500		1.12	.55	.23	.08	.03					5.9	7.3	8.9	10	14	17					
		5,000	3.8	1.60	.79	.33	.11	.05	76	104	130	184	234		101	101	101	100	100	100			
		7,500		2.39	1.18	.50	.17	.07					7.1	9.0	10	12	15	18					
		10,000	4.5	3.19	1.57	.66	.22	.09	78	106	132	188	236		101	101	101	100	100	100			
		15,000		4.79	2.35	.99	.33	.14					8.9	11	13	14	17	20					
		20,000	5.2	6.38	3.14	1.32	.45	.18	80	108	134	192	240		101	101	101	100	100	100			
		25,000		7.97	3.92	1.64	.56	.23					11	12	14	15	18	21					
50,000	9.0	16.0	7.83	3.29	1.11	.45	88	120	146	208	250		101	101	101	100	100	100					
75,000		23.9	11.8	4.93	1.66	.68					17	23	25	27	30	33							
100,000																							
150,000																							
200,000																							
250,000																							

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

