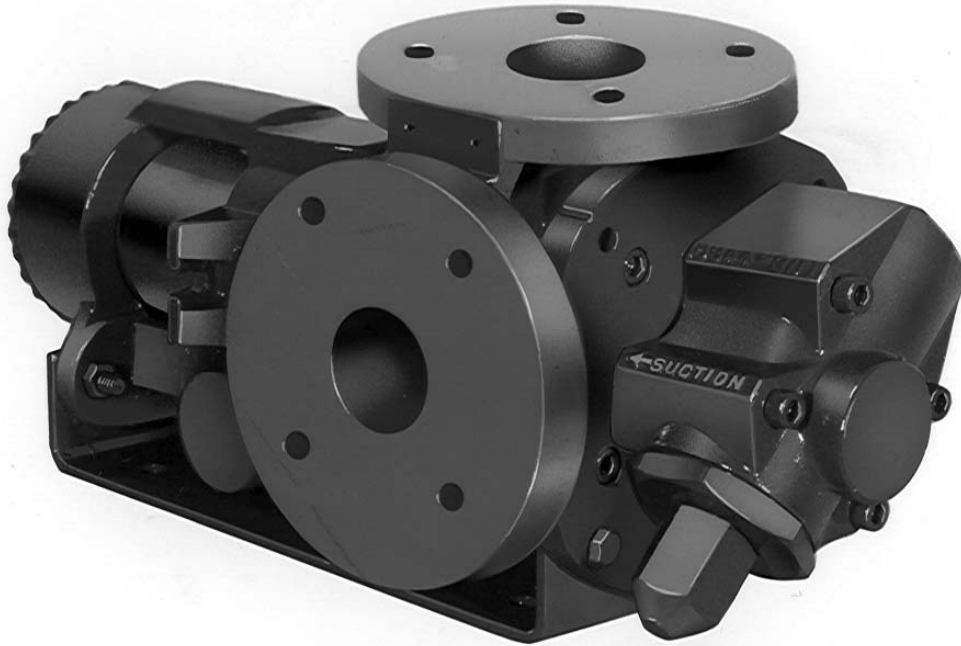


GHS SERIES Flexible Seal HEAVY DUTY STANDARD STEEL ROTARY GEAR PUMP

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 ●	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.	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]	720 [600]	170 [536]	480 [400]	100 [7]	150 [10]	300 [21]	● 500 [260]	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]	720 [600]	170 [536]	480 [400]	100 [7]	150 [10]	300 [21]		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

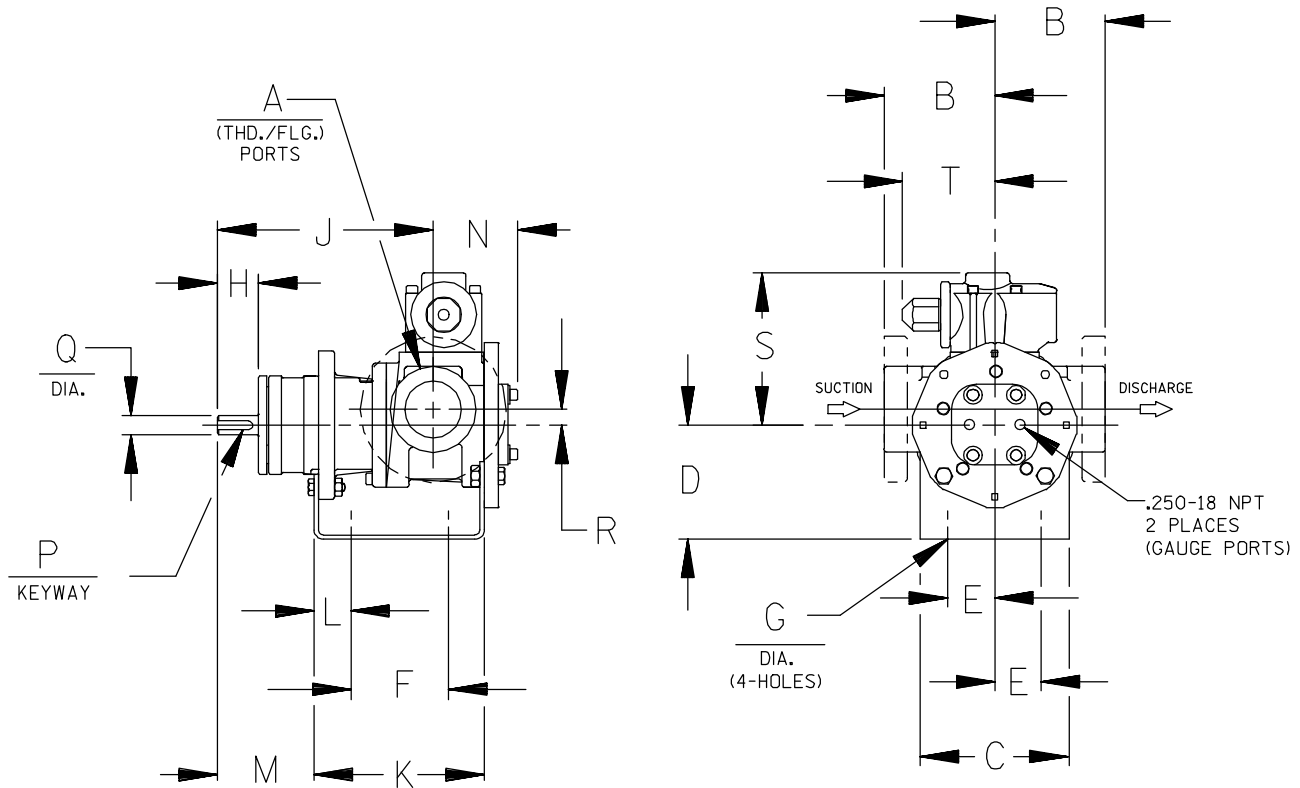
- MECHANICAL SEAL
- LIPSEAL/PACKING
- † PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

① PUMP LIMITED TO 200 PSI MAXIMUM PRESSURE.

THE GORMAN-RUPP COMPANY • MANSFIELD, OHIO
GORMAN-RUPP OF CANADA LIMITED • ST. THOMAS, ONTARIO, CANADA

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

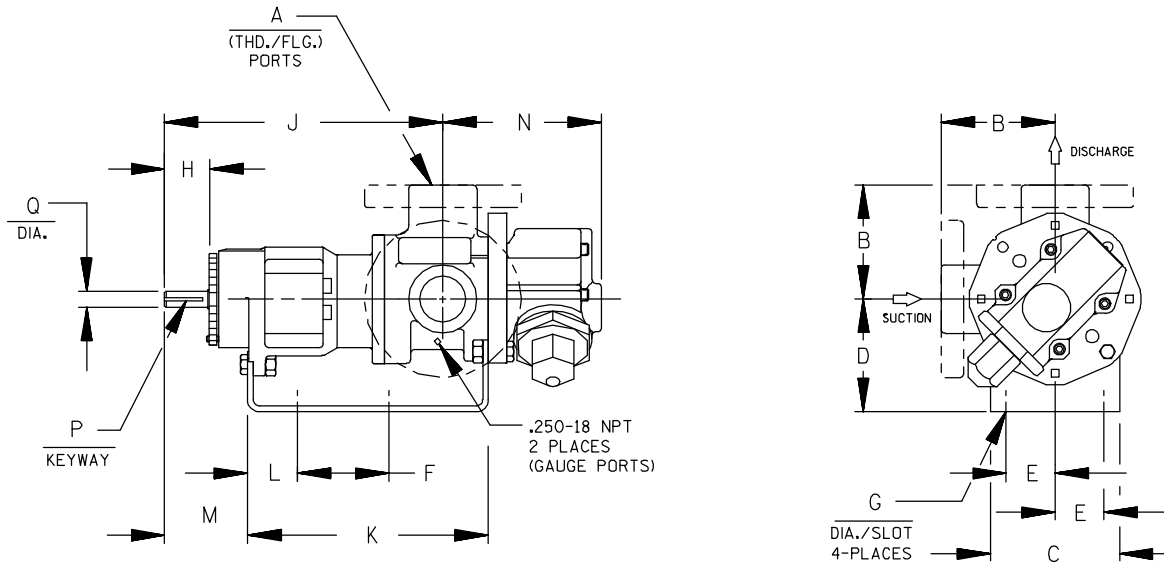
NOTE: PROPER PUMP APPLICATION REQUIRES CONSIDERATION OF ADDITIONAL FACTORS. PLEASE REVIEW APPLICATION GUIDE IN SECTION 500 OR CONSULT THE FACTORY.



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] 6.25 [159] 7.00 [178] 8.00 [203]	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"														
	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]	.38 [10] x 1.88 [48]	1.44 [37]
	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

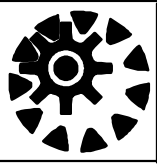
SECTION 540

FOR GHS DRIVE OPTIONS

AND DIMENSIONS

SEE

SECTION 545

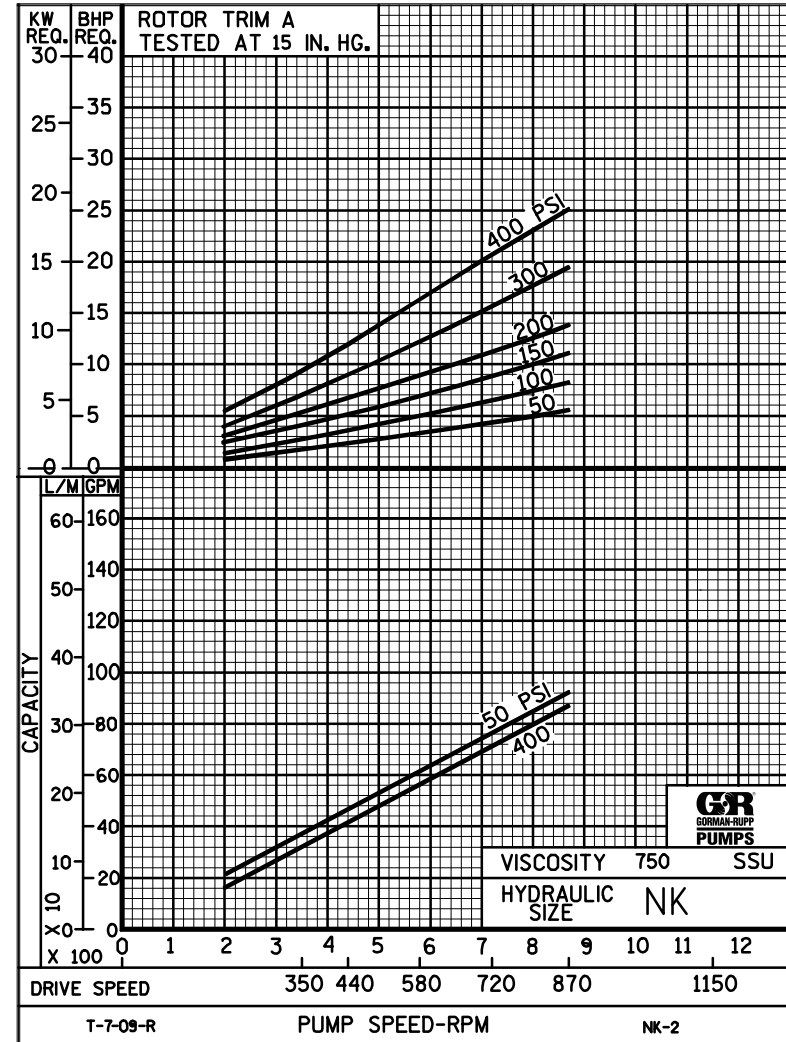
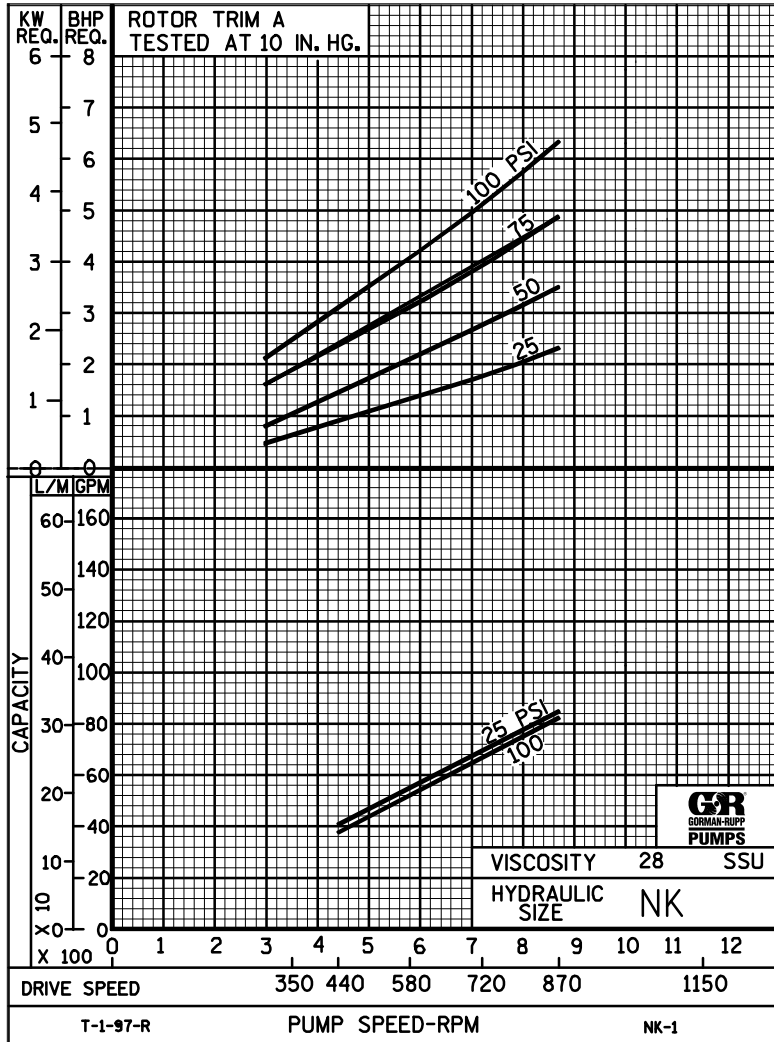


PERFORMANCE CURVES

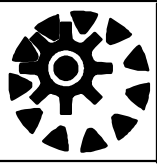
SPEED VS. CAPACITY/HORSEPOWER

NK

Hydraulic Size



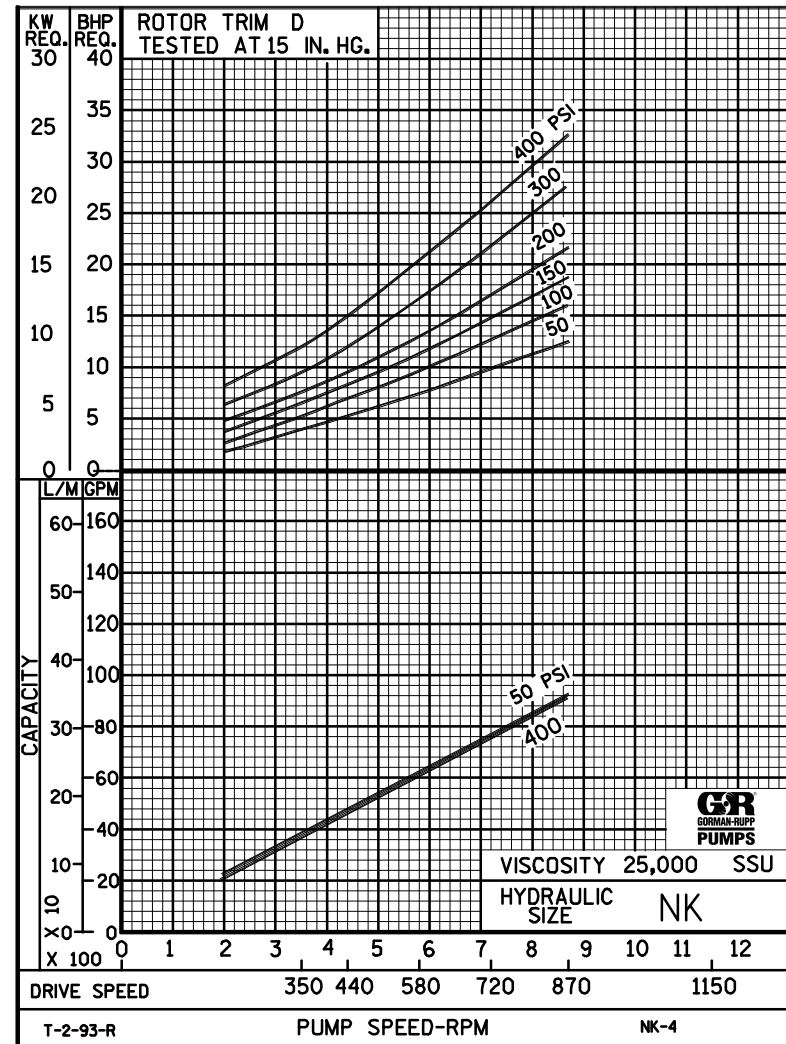
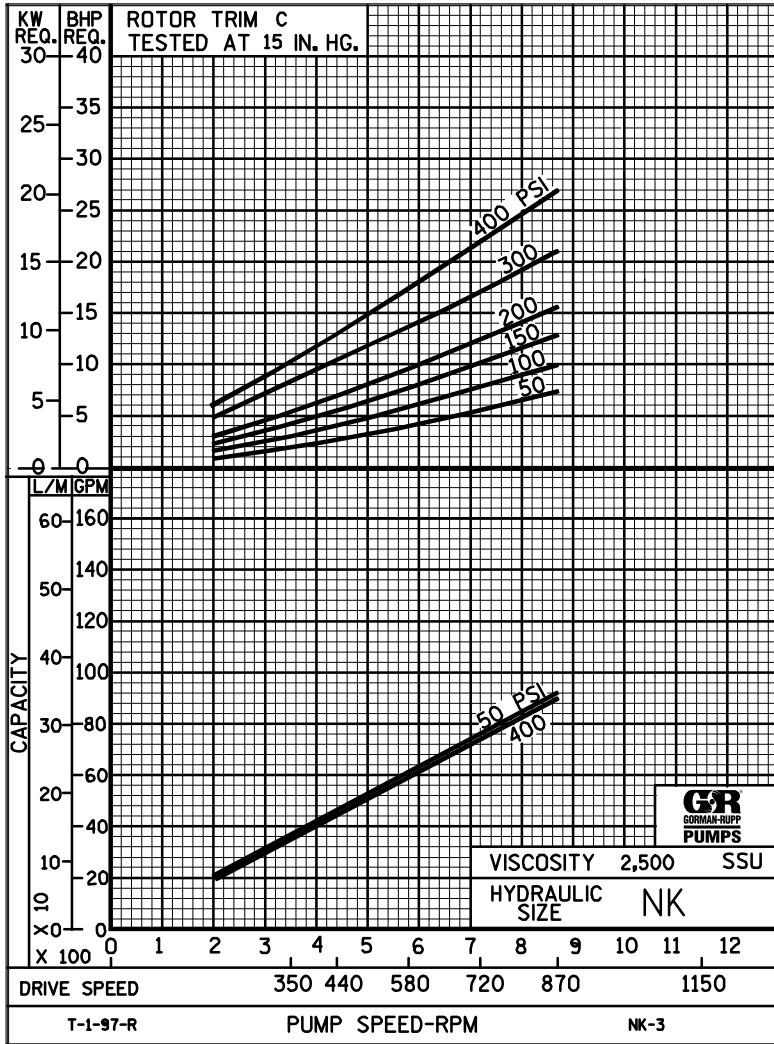
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PERFORMANCE CURVES

SPEED VS. CAPACITY/HORSEPOWER

NK Hydraulic Size



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NK

PUMP HYDRAULIC SIZE CHART

SEC. 500

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January 2010

36 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)												
					2"	2 1/2"	3"	4"	5"	LOW PRES R/V		HI PRES R/V			MEDIUM DUTY AND HEAVY DUTY				HEAVY DUTY ONLY								
36	350	STD	28	1.1	.01	.01	.01	.01	.01	54	80	106				32	31	31	30								
			32		.01	.01	.01	.01	.01							.73	1.3	1.9	2.5								
			38	1.1	.02	.01	.01	.01	.01	54	80	106	156			34	33	32	31	29							
			50		.02	.01	.01	.01	.01							.74	1.4	2.0	2.5	3.8							
			70	1.1	.02	.01	.01	.01	.01	55	81	108	157	208		35	34	33	32	31	28						
			100		.02	.01	.01	.01	.01							.77	1.5	2.1	2.6	3.8	4.8						
			150	1.1	.02	.01	.01	.01	.01	55	81	108	157	208		36	36	35	34	33	32	30	27				
			200		.03	.01	.01	.01	.01							.80	1.6	2.2	2.7	3.9	4.9	7.2	10				
			300	1.1	.04	.02	.01	.01	.01	56	82	110	159	210		37	36	36	35	34	33	32	31				
			500		.06	.03	.01	.01	.01							.87	1.8	2.3	2.9	4.0	5.1	7.3	9.6				
		750	1.1	.09	.05	.02	.01	.01	56	82	110	159	210		37	37	36	36	35	35	34	33					
		1,000		.12	.06	.03	.01	.01							1.1	2.0	2.6	3.2	4.5	5.7	8.1	10					
		2,000	1.4	.23	.12	.05	.02	.01	58	84	112	162	212		37	37	37	37	36	36	35	35					
		3,500		.41	.20	.09	.03	.01							1.5	2.3	2.9	3.5	4.6	5.8	8.2	11					
		5,000	1.6	.58	.29	.12	.04	.02	58	84	112	164	214		37	37	37	37	36	36	36	35					
		7,500		.87	.43	.18	.06	.03							1.9	2.8	3.3	3.9	5.1	6.2	8.7	11					
		10,000	1.9	1.16	.57	.24	.08	.04	60	86	114	166	216		37	37	37	37	36	36	36	36					
		15,000		1.74	.86	.36	.12	.05							2.6	3.3	3.9	4.5	5.7	6.8	9.3	11					
		20,000	2.2	2.32	1.14	.49	.16	.07	60	86	114	168	216		37	37	37	37	36	36	36	36					
		25,000		2.90	1.43	.60	.20	.08							3.5	4.0	4.6	5.1	6.4	7.5	9.8	12					
50,000	3.4	5.80	2.85	1.20	.41	.17	62	88	116	170	218		37	37	37	37	36	36	36	36							
75,000		8.70	4.27	1.79	.61	.25							4.9	5.6	6.4	7.1	8.3	9.7	12	14							
100,000	5.6	11.6	5.70	2.39	.81	.33	66	92	120	174	222		37	37	37	37	36	36	36	36							
150,000		17.4	8.55	3.59	1.21	.49							6.1	7.0	7.9	8.8	10	12	15	16							
200,000	8.8	23.2	11.4	4.78	1.61	.65	70	96	125	179	228		37	37	37	37	36	36	36	36							
250,000		29.0	14.3	5.97	2.02	.82							7.3	8.3	9.5	11	12	14	16	18							

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