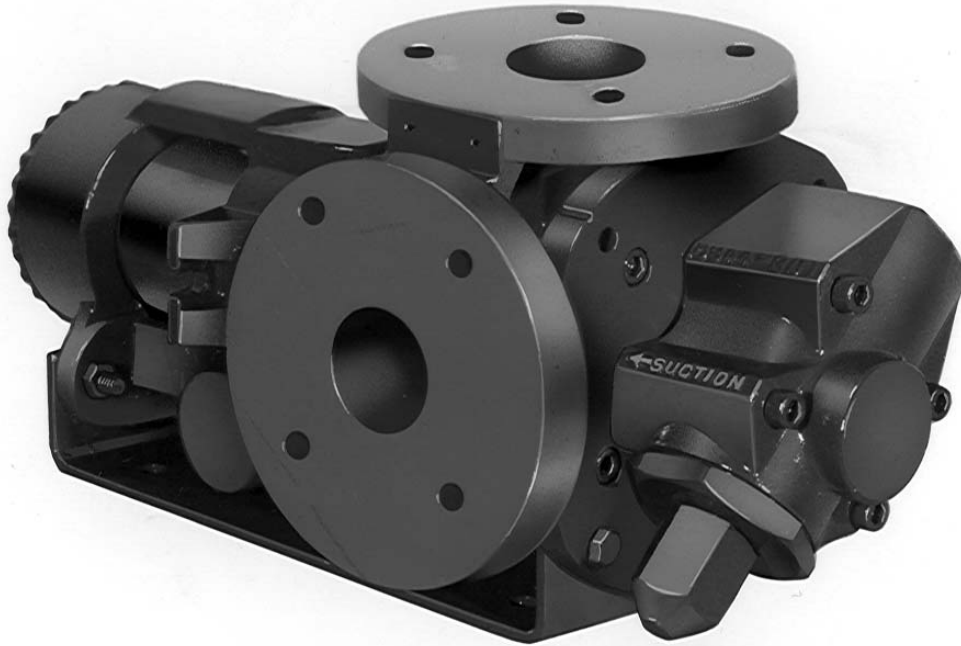


# GHS SERIES Flexible Seal HEAVY DUTY STANDARD STEEL ROTARY GEAR PUMP

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					100 [7]	150 [10]					
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]						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		
GHC	GHS	[LPM]	60 Hz	[LPM]	60 Hz	38 SSU	100 SSU	250,000 SSU	[° C]	LBS	CU. FT.
			[50 HZ]		[50 HZ]	[4 cSt]	[21 cSt]	[55,000 cSt]		[KG]	
	GHS 2 NK32-B ● † GHS 2 NK38-B ■ †	99 [375]	960 [960]	60 [189]	580 [480]			300 [21]		200	5.3
										[90,7]	
	GHS 3 NK32-B ● † GHS 3 NK38-B ■ †	132 [500]	960 [960]	80 [252]	580 [480]			300 [21]		200	5.3
										[90,7]	
	GHS 2 NM32-B ● † GHS 2 NM38-B ■ †	165 [624]	720 [600]	99 [312]	480 [400]	100 [7]	150 [10]	300 [21]		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]	720 [600]	143 [451]	480 [400]	100 [7]	150 [10]	300 [21]	GHS ■ 500 [260]	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]		302	10.7
										[136,9]	
	GHS 2-1/2 RP32-B ● † GHS 2-1/2 RP38-B ■ †	295 [930]	720 [600]	196 [618]	480 [400]	100 [7]	150 [10]	300 [21]		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]	720 [600]	196 [618]	480 [400]	100 [7]	150 [10]	300 [21]		302	10.7
										[136,9]	
	GHS 3 RR32-B ● † GHS 3 RR38-B ■ †	295 [930]	720 [600]	196 [618]	480 [400]	100 [7]	150 [10]	300 [21]		302	10.7
										[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	10.7
										[136,9]	
	GHS 3 RS32-B ① ● † GHS 3 RS38-B ① ■ †	295 [930]	720 [600]	196 [618]	480 [400]	100 [7]	150 [10]	300 [21]		302	10.7
										[136,9]	
	GHS 4 RS32-B ① ● † GHS 4 RS38-B ① ■ †	295 [930]	720 [600]	196 [618]	480 [400]	100 [7]	150 [10]	300 [21]		302	10.7
										[136,9]	

STANDARD MODELS CONTINUED

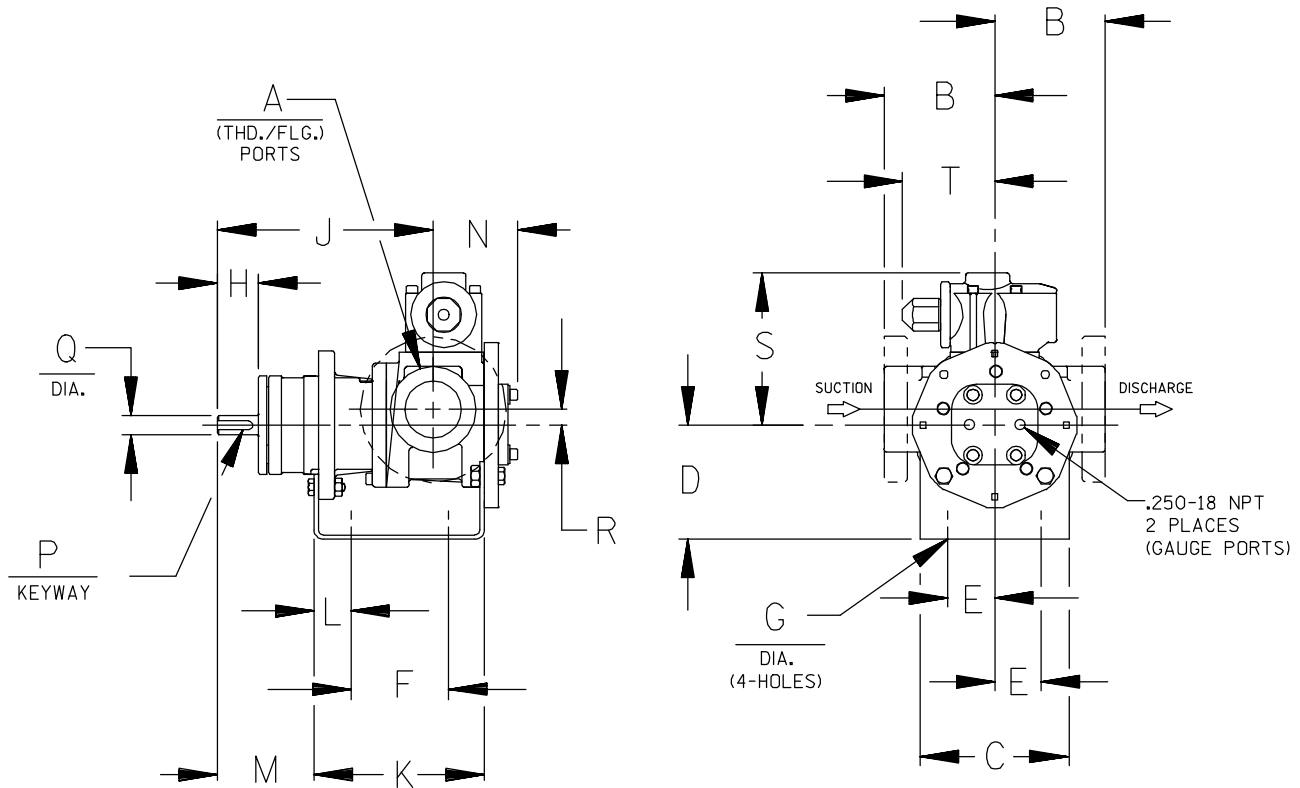
- MECHANICAL SEAL
- LIPSEAL/PACKING
- † PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

① PUMP LIMITED TO 200 PSI MAXIMUM PRESSURE.

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<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

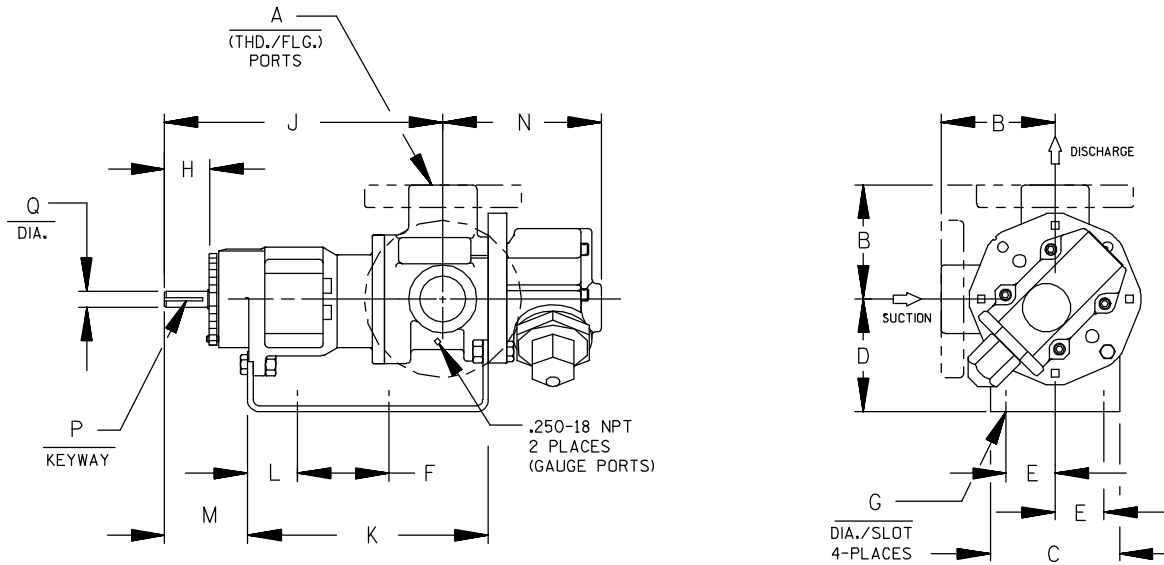
NOTE: PROPER PUMP APPLICATION REQUIRES CONSIDERATION OF ADDITIONAL FACTORS. PLEASE REVIEW APPLICATION GUIDE IN SECTION 500 OR CONSULT THE FACTORY.



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]		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**

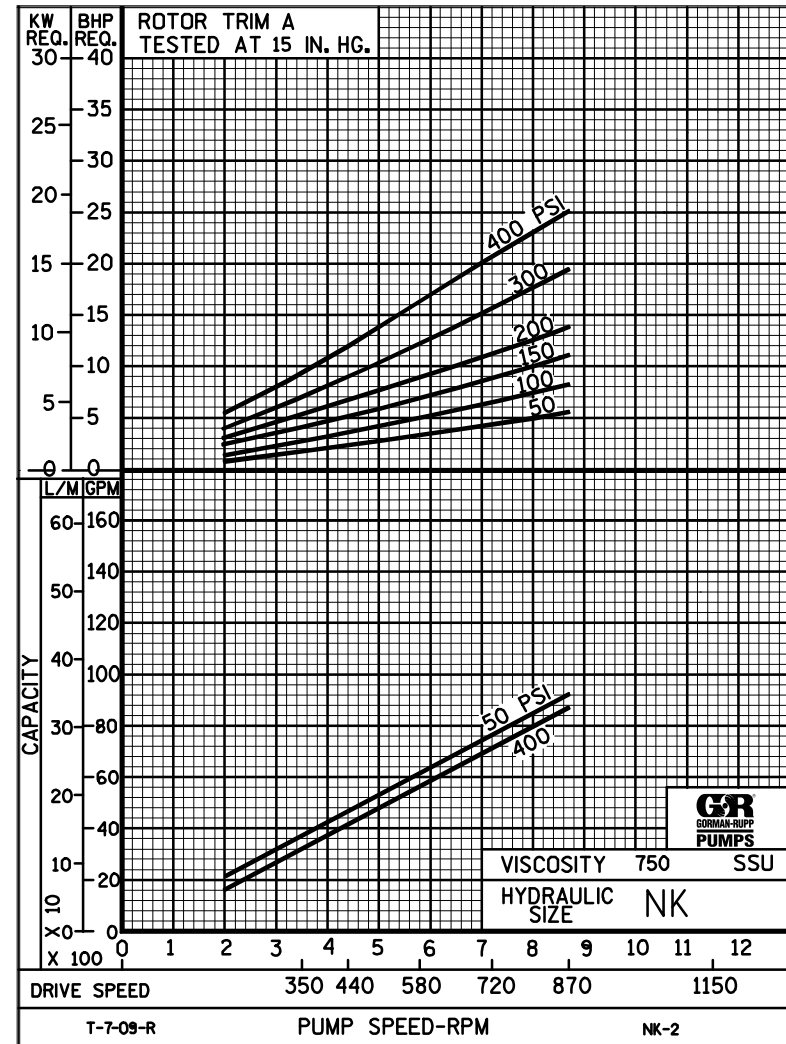
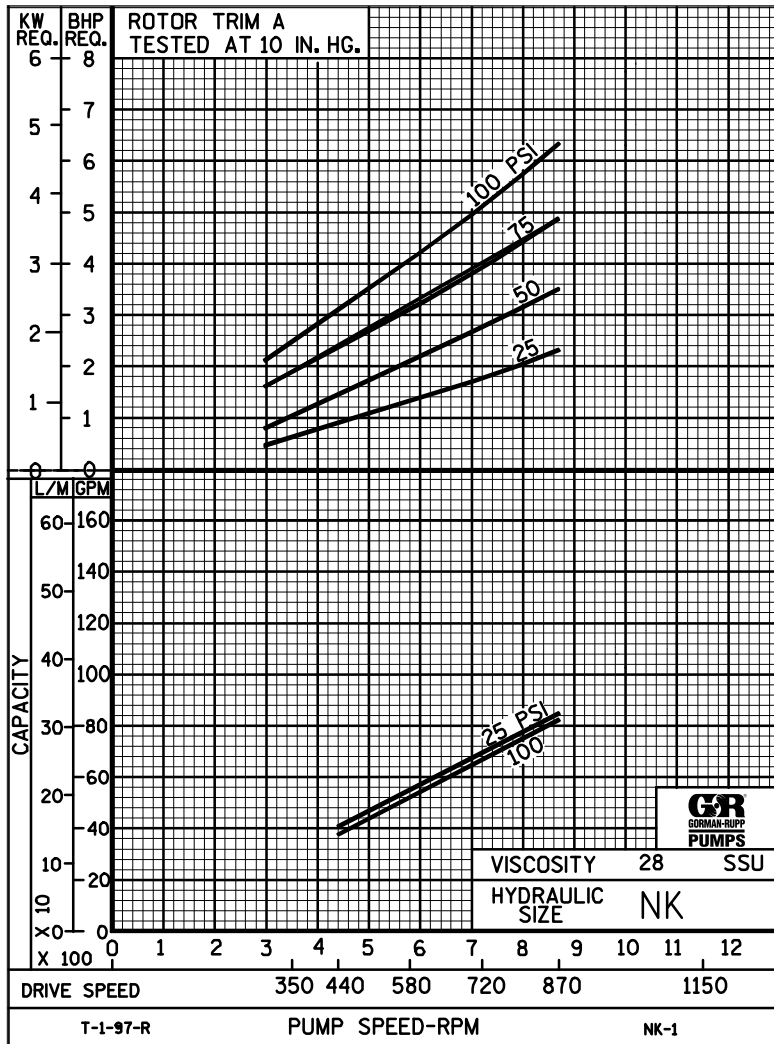


# PERFORMANCE CURVES

## SPEED VS. CAPACITY/HORSEPOWER

# NK

Hydraulic Size



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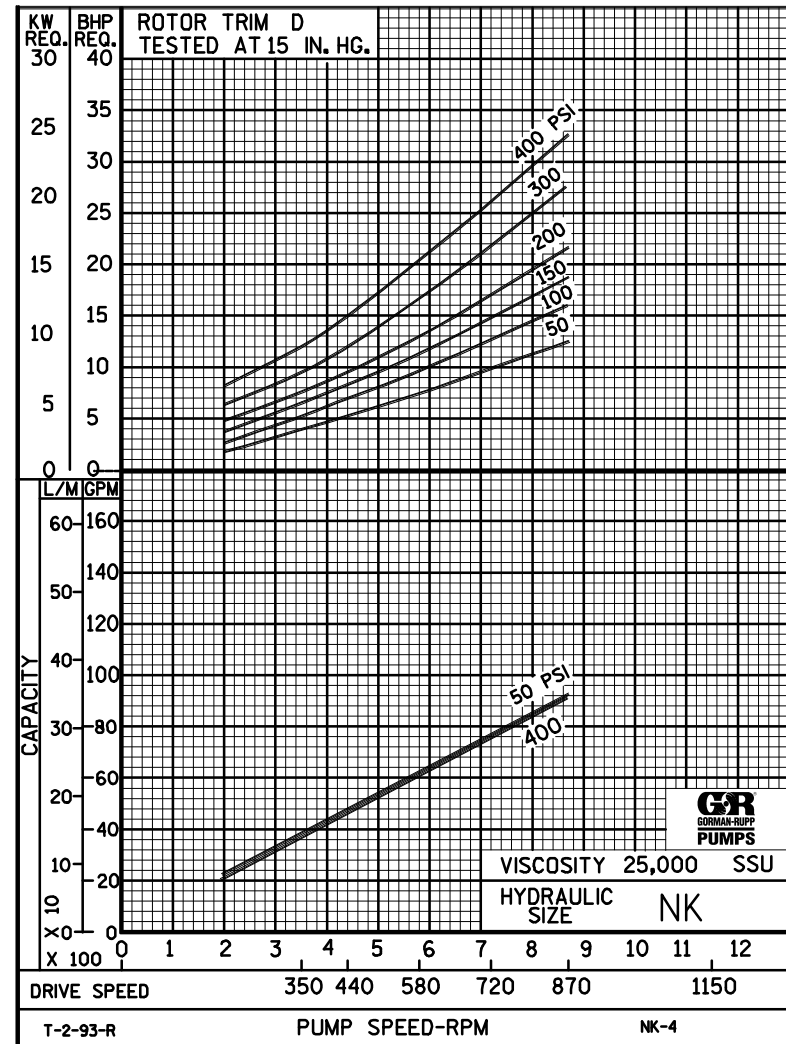
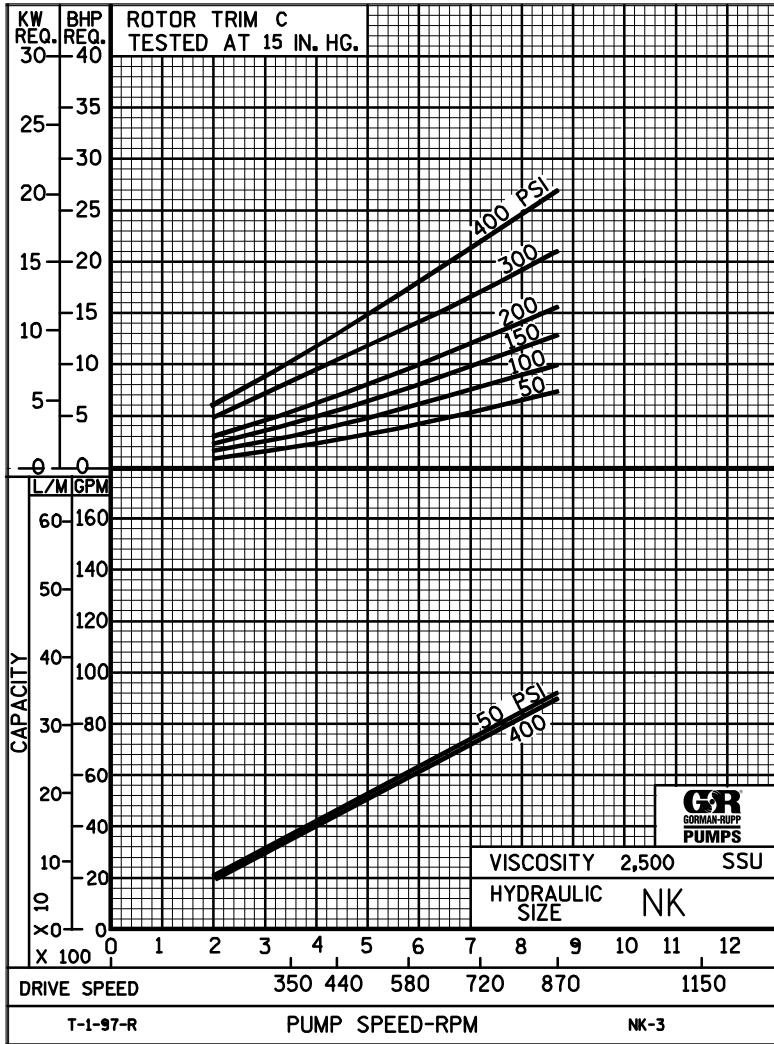




# PERFORMANCE CURVES

## SPEED VS. CAPACITY/HORSEPOWER

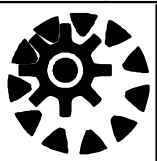
**NK** Hydraulic Size



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# NK

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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**90 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)								
		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	50	75	100	150	200	25	50	75	100	150	200	300	400				
90	870	STD	28	3.1	.01	.01	.01	.01	.01	60	86	116			85	84	83	82					
			32		.05	.02	.01	.01	.01					2.2	3.5	4.9	6.4						
			38	3.1	.07	.03	.01	.01	.01	60	86	116	162			87	86	85	84	82			
			50		.08	.04	.01	.01	.01					2.4	3.6	5.0	6.6	9.5					
			70	3.1	.09	.04	.02	.01	.01	62	88	118	162	208		89	88	87	86	85	82		
			100		.10	.05	.02	.01	.01					3.0	4.1	5.5	7.0	9.9	13				
			150	3.1	.11	.05	.02	.01	.01	62	90	118	166	212		90	89	89	88	87	86	82	80
			200		.13	.06	.02	.01	.01					3.5	4.6	6.0	7.5	10	13	19	24		
			300	3.1	.14	.06	.02	.01	.01	64	92	120	166	216		91	90	90	90	89	88	85	82
			500		.15	.07	.03	.01	.01					4.3	5.4	6.8	8.1	11	13	19	25		
			750	3.1	.22	.11	.05	.02	.01	66	94	120	170	220		92	92	92	91	91	90	87	85
			1,000		.29	.14	.06	.02	.01					4.7	5.6	7.1	8.5	11	14	20	25		
		2,000	3.6	.58	.29	.12	.04	.02	72	100	126	178	228		92	92	92	91	91	91	90	89	
		3,500		1.02	.50	.21	.07	.03					6.9	8.0	9.1	11	13	16	22	27			
		5,000	4.0	1.45	.71	.30	.10	.04	74	102	128	182	232		92	92	92	91	91	91	91	90.1	
		7,500		2.18	1.07	.45	.15	.06					8.2	9.4	11	12	15	18	23	29			
		10,000	4.5	2.90	1.43	.60	.20	.08	76	104	130	186	234		92	92	92	91	91	91	91	90.1	
		15,000		4.35	2.14	.90	.30	.12					9.8	11	13	14	17	20	25	31			
		20,000	4.9	5.80	2.85	1.20	.41	.17	78	106	132	190	238		92	92	92	92	92	91	91	91	
		25,000		7.25	3.56	1.50	.51	.21					12	13	15	16	19	22	27	33			
		50,000																					
75,000																							
100,000																							
150,000																							
200,000																							
250,000																							

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



# NK

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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January 2010

**60 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									
60	580	STD	28	1.8	.01	.01	.01	.01	.01	57	83	107			55	53	53	52							
			32		.03	.01	.01	.01	.01							1.3	2.2	3.2	4.1						
			38	1.8	.03	.02	.01	.01	.01	57	83	107	157			56	55	54	54	52					
			50		.04	.02	.01	.01	.01							1.5	2.3	3.3	4.2	6.1					
			70	1.8	.05	.02	.01	.01	.01	58	85	109	157	210		58	57	57	56	55	54				
			100		.05	.02	.01	.01	.01							1.7	2.5	3.5	4.4	6.3	8.3				
			150	1.8	.06	.03	.01	.01	.01	58	85	109	157	210		60	59	58	58	57	56	53	48		
			200		.06	.03	.01	.01	.01							2.0	2.8	3.7	4.7	6.5	8.5	12	15		
			300	1.8	.06	.03	.01	.01	.01	59	87	112	159	212		61	60	59	59	58	58	55	52		
			500		.10	.05	.02	.01	.01							2.5	3.2	4.0	5.0	6.8	8.8	12	16		
			750	1.8	.15	.07	.03	.01	.01	59	87	112	159	212		61	61	60	60	60	59	57	55		
			1,000		.20	.10	.04	.02	.01							2.8	3.6	4.5	5.4	7.1	9.2	13	16		
		2,000	2.3	.39	.19	.08	.03	.01	63	90	117	170	219		61	61	61	60	60	60	59	59			
		3,500		.68	.33	.14	.05	.02							3.8	4.5	5.4	6.2	8.0	10	14	18			
		5,000	2.6	.97	.48	.20	.07	.03	64	90	117	170	219		62	61	61	61	60	60	60	59			
		7,500		1.45	.71	.30	.10	.04							4.6	5.4	6.2	7.0	8.8	11	14	19			
		10,000	2.9	1.93	.95	.40	.14	.06	65	92	120	174	225		62	61	61	61	61	60	60	59			
		15,000		2.90	1.43	.60	.20	.08							5.7	6.5	7.3	8.2	10	12	16	20			
		20,000	3.2	3.87	1.90	.80	.27	.11	65	92	120	174	225		62	62	61	61	61	61	60	60			
		25,000		4.83	2.38	1.00	.34	.14							6.9	7.6	8.5	9.5	11	13	17	21			
		50,000	4.8	9.66	4.75	2.00	.67	.27	70	98	126	179	232		62	62	61	61	61	61	60	60			
75,000		14.5	7.12	2.99	1.01	.41							9.6	11	12	13	15	17	21	25					
100,000	6.5	19.3	9.49	3.98	1.35	.55	75	104	132	185	238		62	62	61	61	61	61	60	60					
150,000		-	-	-	-	-							12	13	14	15	18	21	26	32					
200,000																									
250,000																									

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



# NK

## PUMP HYDRAULIC SIZE CHART

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**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		25	50	75	100	150	200	300	400								
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.