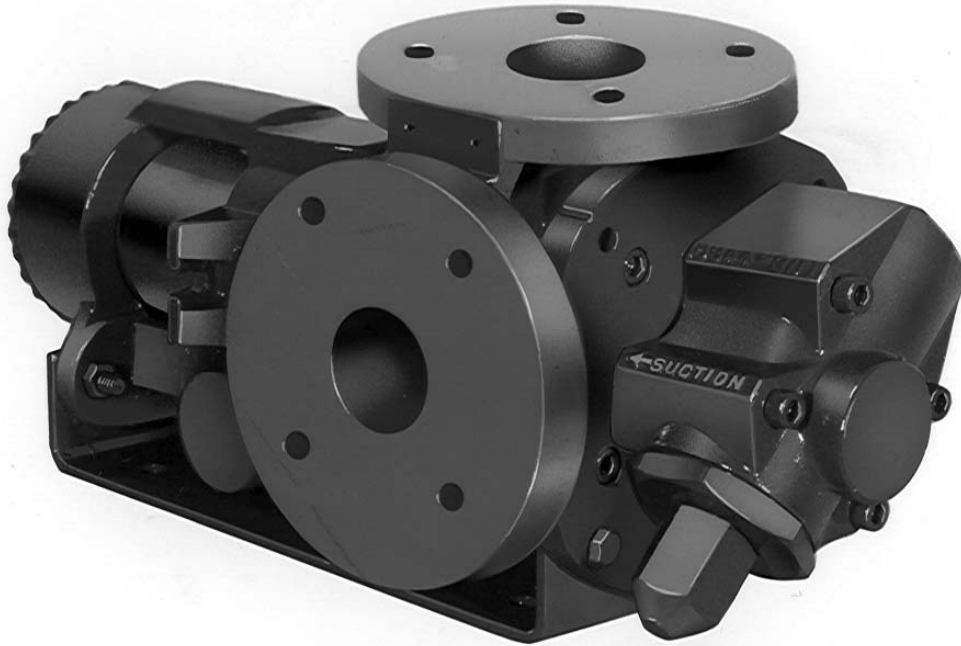


GHS SERIES Flexible Seal HEAVY DUTY STANDARD STEEL ROTARY GEAR PUMP

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]	100 [7]	150 [10]	300 [21]	GHC ● [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]						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]			100 [7]	150 [10]	300 [21]	GHS ● [204]	154 [69,8]	5.3
GHC 3 JJ32-B ● †	GHS 3 JJ32-B ● † GHS 3 JJ38-B ■ †	56 [177]		36 [114]								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]								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		
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]		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]		115 [362]					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]		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

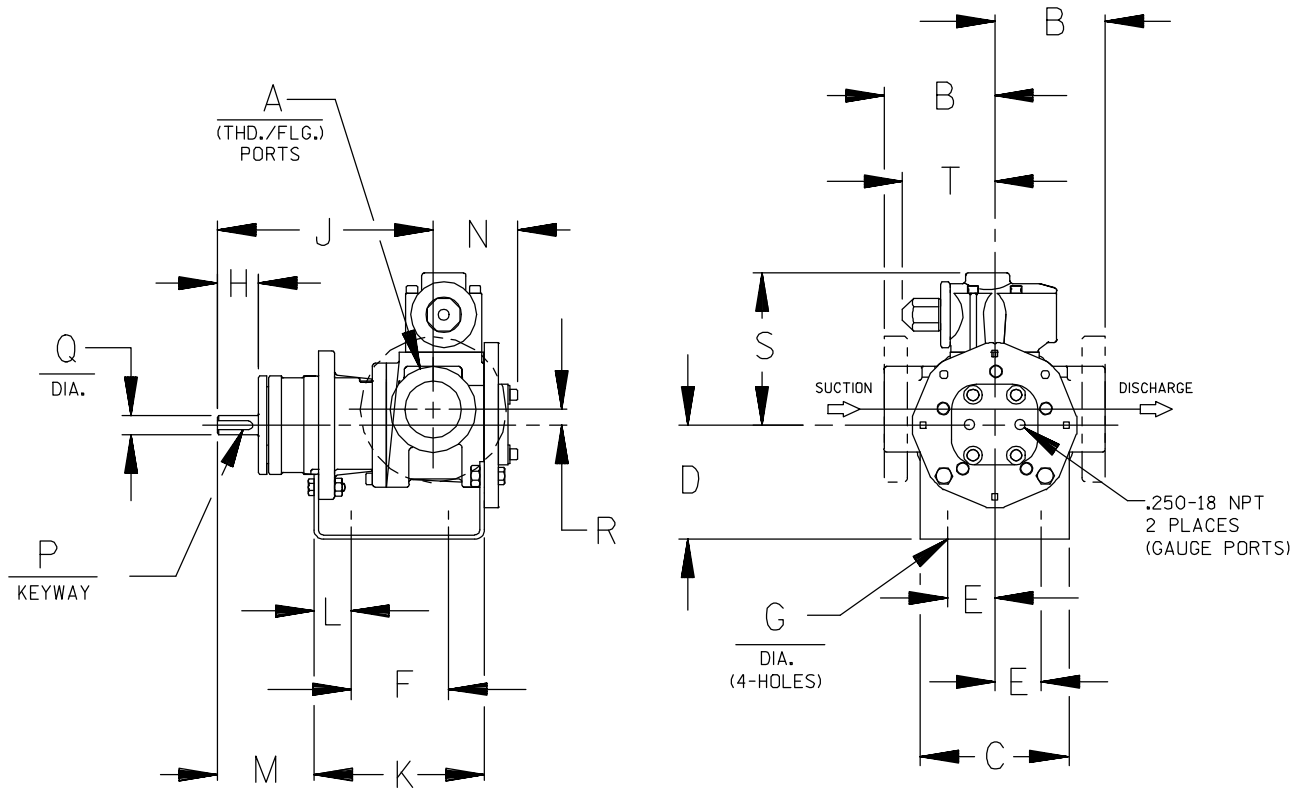
- MECHANICAL SEAL
- LIPSEAL/PACKING
- † PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

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

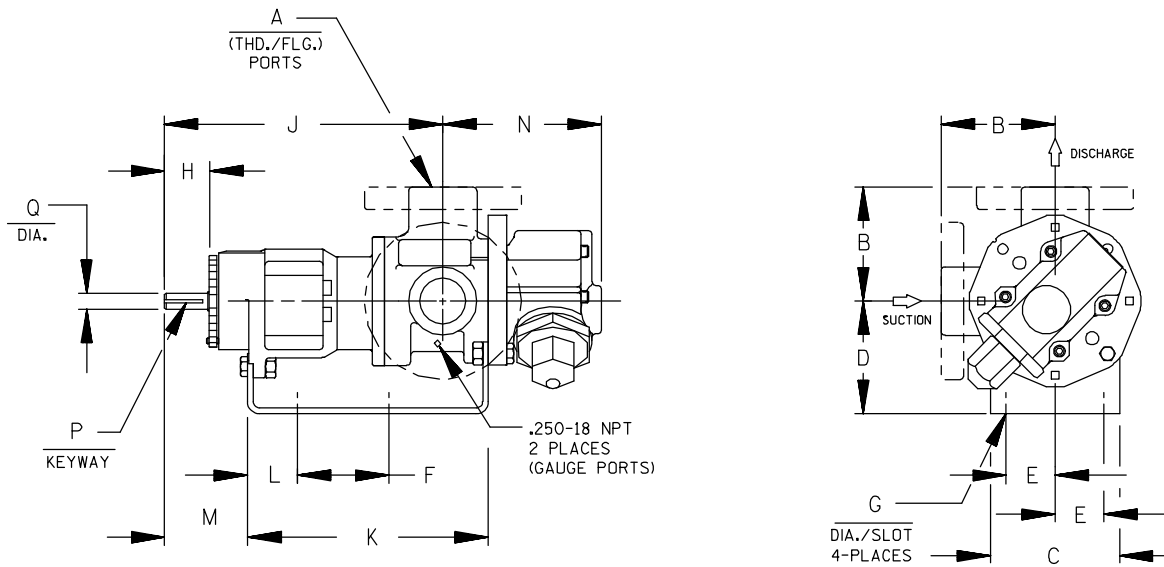
NOTE: PROPER PUMP APPLICATION REQUIRES CONSIDERATION OF ADDITIONAL FACTORS. PLEASE REVIEW APPLICATION GUIDE IN SECTION 500 OR CONSULT THE FACTORY.



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] 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 ANSI PIPE. OPTIONAL (DIN) FLANGES OR TAPPED (BSP) PORTS AVAILABLE FOR EXPORT MARKET.

† 180° HOUSING

GHC/GHS

**FOR GHC DRIVE OPTIONS
AND DIMENSIONS**

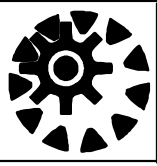
SEE

SECTION 540

**FOR GHS DRIVE OPTIONS
AND DIMENSIONS**

SEE

SECTION 545

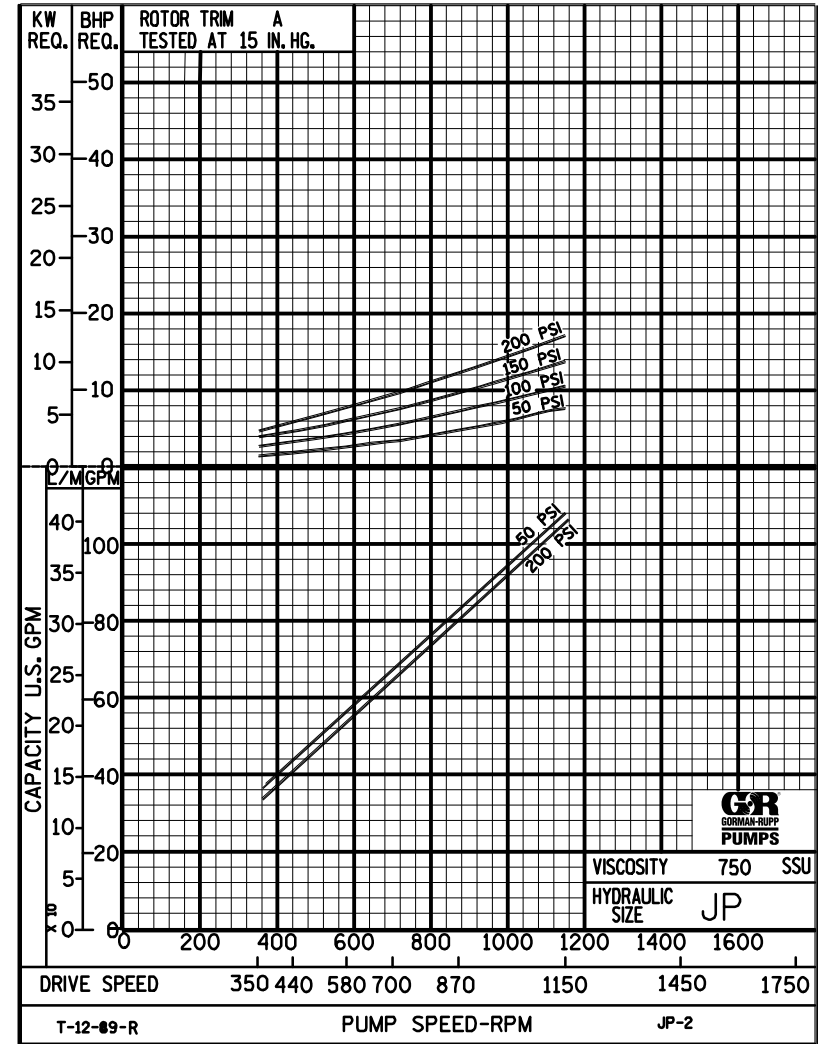
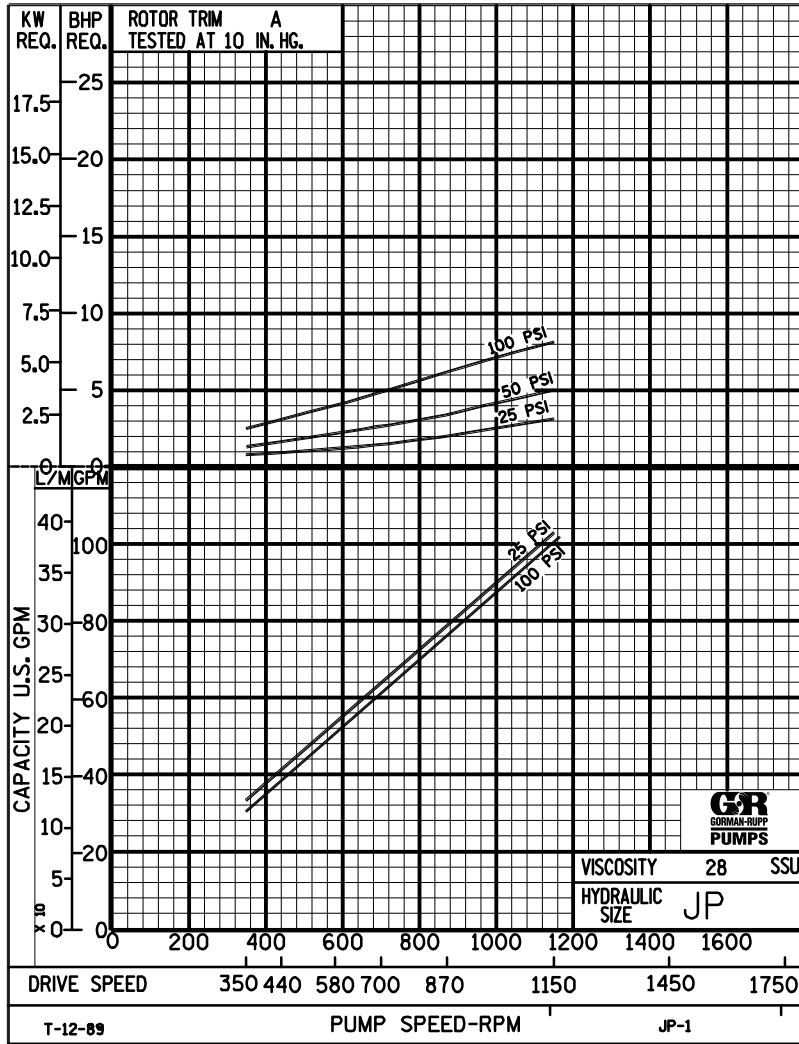


PERFORMANCE CURVES

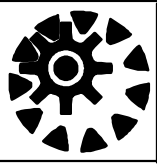
SPEED VS. CAPACITY/HORSEPOWER

JP

Hydraulic
Size



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PERFORMANCE CURVES

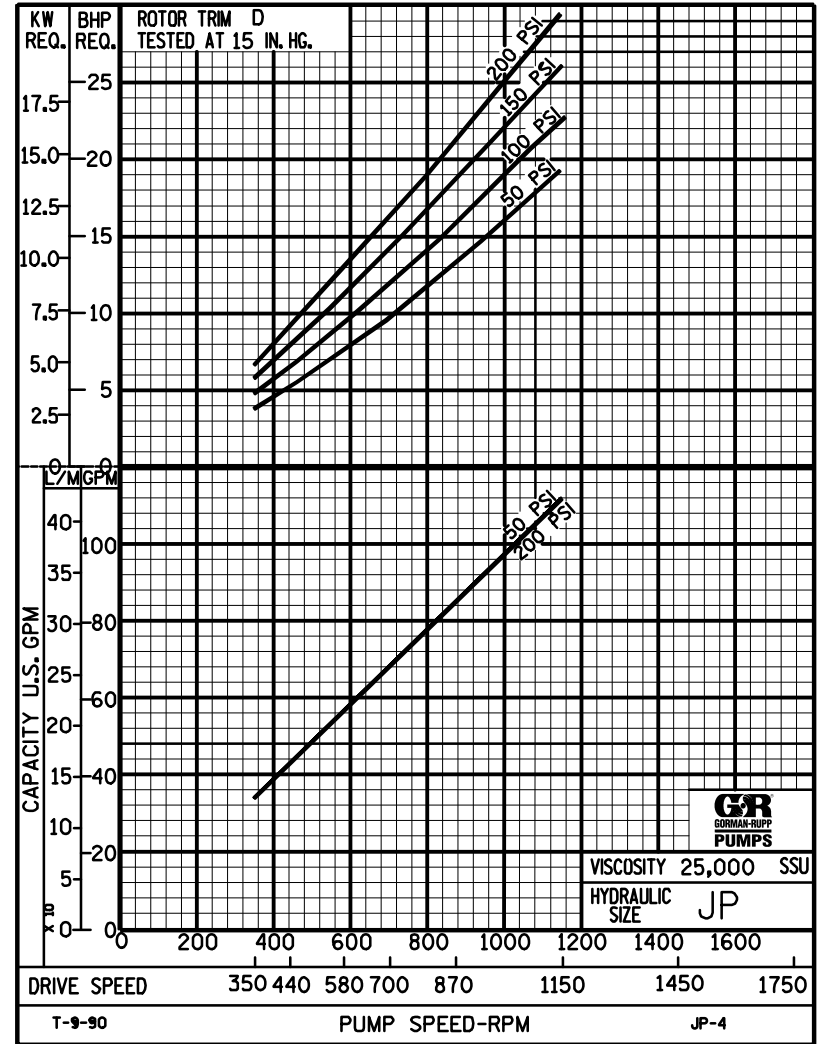
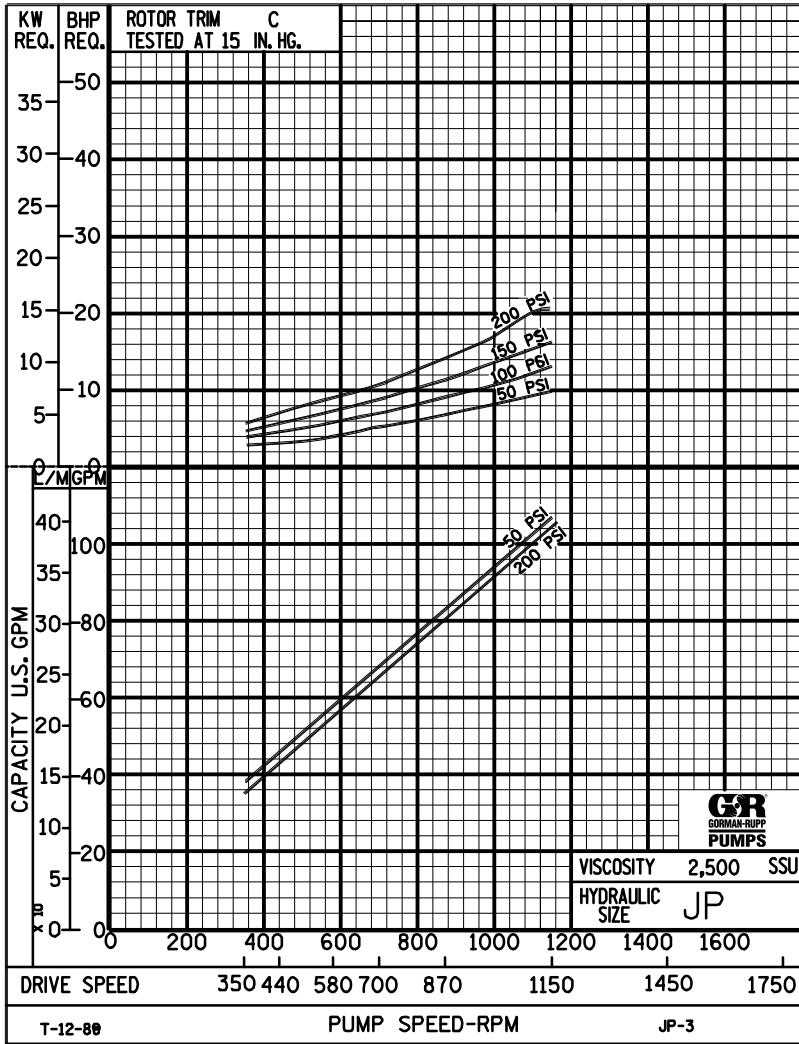
SPEED VS. CAPACITY/HORSEPOWER

JP Hydraulic Size

SEC. 500

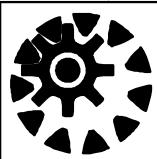
Page 81

January 2010



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JP

PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 82

January 2010

107 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		HEAVY DUTY												
							50	75	100	150	200	25	50	75	100	150	200	300	400								
107	1150	STD	28	4.8	.01	.01	.01	.01	.01	77	104	143				103	100	100	99								
			32		.23	.07	.03	.01	.01							3.2	5.0	6.3	8.1								
			38	4.8	.29	.09	.04	.02	.01	78	105	144	188				105	103	102	101	100						
			50		.34	.11	.05	.02	.01								3.5	5.5	6.8	8.6	12						
			70	4.8	.39	.12	.05	.02	.01	79	107	144	189	240				106	105	104	103	102	101				
			100		.44	.14	.06	.02	.01									3.8	6.0	7.4	9.1	13	16				
			150	4.8	.50	.15	.07	.03	.01	80	107	145	189	241				108	106	106	105	104	103				
			200		.54	.17	.07	.03	.01									4.1	6.5	8.0	9.6	13	16				
			300	4.8	.61	.19	.08	.03	.01	81	109	145	190	242				109	108	107	107	106	105				
			500		.64	.22	.09	.04	.01									4.4	7.1	8.5	10	14	17				
		750	4.8	.70	.26	.13	.06	.02	82	111	146	190	243				109	109	108	108	108	107					
		1,000		.94	.35	.17	.07	.03									4.7	7.6	9.1	11	14	17					
		2,000	5.7	1.87	.69	.34	.14	.05	86	118	153	196	252				109	109	109	108	108	108					
		3,500		3.28	1.21	.59	.25	.09									6.1	9.9	12	13	16	20					
		5,000	6.2	4.68	1.73	.85	.36	.12	90	123	156	200	256				110	110	109	109	109	109					
		7,500		7.02	2.59	1.27	.54	.18									9.9	13	15	16	20	23					
		10,000	6.8	9.36	3.45	1.70	.71	.24	96	129	160	204	260				110	110	110	109	109	109					
		15,000		14.1	5.17	2.54	1.07	.36									14	16	18	19	23	26					
		20,000	7.3	18.7	6.89	3.39	1.42	.48	102	135	164	208	264				111	110	110	110	109	109					
		25,000		23.4	8.62	4.23	1.78	.60									18	19	21	23	26	30					
50,000																											
75,000																											
100,000																											
150,000																											
200,000																											
250,000																											

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



JP

PUMP HYDRAULIC SIZE CHART

SEC. 500

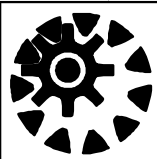
Page 83

January 2010

**81 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							
81	870	STD	28	3.0	.01	.01	.01	.01	.01	74	100	133			77	75	75	74								
			32		.14	.04	.02	.01	.01						2.2	3.4	4.7	6.0								
			38	3.0	.18	.06	.03	.01	.01	74	100	133	174			78	77	76	75	75						
			50		.21	.07	.03	.01	.01							2.3	3.7	5.0	6.2	7.5						
			70	3.0	.24	.08	.03	.01	.01	74	101	134	174	226			79	78	78	77	76	75				
			100		.27	.09	.04	.02	.01								2.5	4.0	5.2	6.5	8.0	10				
			150	3.0	.31	.10	.04	.02	.01	75	101	134	175	226			81	79	79	78	78	77				
			200		.34	.11	.05	.02	.01								2.6	4.3	5.5	6.8	8.6	11				
			300	3.0	.38	.12	.05	.02	.01	75	102	135	175	227			81	81	80	79	79	78				
			500		.44	.13	.07	.03	.01								2.8	4.5	5.8	7.0	9.2	12				
		750	3.0	.53	.20	.10	.04	.02	75	102	135	175	227			82	81	81	80	80.5	80					
		1,000		.71	.26	.13	.06	.02								3.0	4.8	6.0	7.3	9.7	12					
		2,000	3.7	1.42	.52	.26	.11	.04	76	104	137	177	229			82	82	81	81	81	81					
		3,500		2.48	.92	.45	.19	.07								4.2	6.8	7.9	9.0	12	14					
		5,000	4.2	3.55	1.31	.64	.27	.09	80	109	139	179	231			83	83	82	82	82	82					
		7,500		5.32	1.96	.96	.41	.14								6.8	9.0	10	11	14	16					
		10,000	4.6	7.09	2.61	1.28	.54	.18	84	114	143	183	235			84	84	83	83	83	82					
		15,000		10.7	3.92	1.92	.81	.27								9.3	11	12	14	16	19					
		20,000	5.0	14.2	5.22	2.57	1.08	.37	89	120	149	187	241			85	84	84	84	84	83					
		25,000		17.7	6.52	3.21	1.35	.46								12	13	14	16	18	21					
50,000	7.6	35.5	13.1	6.41	2.69	.91	95	126	155	193	247			85	84	84	84	84	83							
75,000		-	-	-	-	-								17	18	21	23	24	27							
100,000																										
150,000																										
200,000																										
250,000																										

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



JP

PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 84

January 2010

**54 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							
54	580	STD	28	1.9	.01	.01	.01	.01	.01	62	87	114				51	50	50	49							
			32		.07	.02	.01	.01	.01							1.5	2.3	3.1	4.0							
			38	1.9	.09	.03	.01	.01	.01	62	89	116	166				52	51	51	50	50					
			50		.10	.03	.02	.01	.01								1.6	2.5	3.3	4.2	5.0					
			70	1.9	.12	.04	.02	.01	.01	63	90	118	167	219			53	52	52	51	51	50				
			100		.14	.04	.02	.01	.01								1.7	2.7	3.5	4.4	5.4	6.9				
			150	1.9	.16	.05	.02	.01	.01	64	91	120	167	219			54	53	53	52	52	51				
			200		.17	.05	.02	.01	.01								1.8	2.9	3.7	4.5	5.8	7.3				
			300	1.9	.19	.06	.03	.01	.01	65	92	122	168	220			54	54	53	53	53	52				
			500		.24	.09	.05	.02	.01								1.9	3.0	3.9	4.7	6.2	7.8				
		750	1.9	.36	.13	.07	.03	.01	66	93	124	168	220			54	54	54	54	54	53					
		1,000		.47	.18	.09	.04	.01								2.0	3.2	4.0	4.9	6.5	8.2					
		2,000	2.6	.95	.35	.17	.07	.03	70	95	124	168	222			55	55	54	54	54	54					
		3,500		1.66	.61	.30	.13	.04								2.8	4.6	5.3	6.1	7.8	9.5					
		5,000	3.0	2.36	.87	.43	.18	.06	72	97	126	170	224			55	55	55	55	55	54					
		7,500		3.55	1.31	.64	.27	.09								4.6	6.0	6.8	7.6	9.3	11					
		10,000	3.5	4.73	1.74	.86	.36	.12	74	99	128	172	226			56	56	56	55	55	55					
		15,000		7.09	2.61	1.28	.54	.18								6.3	7.4	8.2	9.1	11	13					
		20,000	3.9	9.45	3.48	1.71	.72	.24	78	103	128	174	226			57	56	56	56	56	56					
		25,000		11.8	4.35	2.14	.90	.30								8.0	8.9	9.6	11	12	14					
50,000	6.1	23.6	8.70	4.27	1.79	.61	82	107	132	178	230			57	56	56	56	56	56							
75,000		35.5	13.1	6.41	2.69	.91								11	12	14	16	16	18							
100,000																										
150,000																										
200,000																										
250,000																										

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



JP

PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 85

January 2010

**32 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					
							50	75	100	150	200	25	50	75	100	150	200	300	400					
32	350	STD	28	1.3	.01	.01	.01	.01	.01	56	82	113			31	30	30	29						
			32		.03	.01	.01	.01	.01						.89	1.4	1.9	2.4						
			38	1.3	.04	.01	.01	.01	.01	56	82	113	159			31	31	30	30	30				
			50		.04	.02	.01	.01	.01							.94	1.5	2.0	2.5	3.0				
			70	1.3	.05	.02	.01	.01	.01	56	83	113	159	211			32	31	31	31	30.7	30.4		
			100		.06	.02	.01	.01	.01								1.0	1.6	2.1	2.6	3.2	4.1		
			150	1.3	.06	.02	.01	.01	.01	56	83	113	159	211			32	32	31	31	31	31		
			200		.06	.02	.01	.01	.01								1.1	1.7	2.2	2.7	3.5	4.4		
			300	1.3	.09	.03	.02	.01	.01	57	84	113	159	211			32	32	32	32	32	31		
			500		.14	.05	.03	.01	.01								1.1	1.8	2.3	2.8	3.7	4.7		
		750	1.3	.21	.08	.04	.02	.01	57	84	113	159	211			32	32	32	32	32	32			
		1,000		.28	.11	.05	.02	.01								1.2	1.9	2.4	2.9	3.9	5.0			
		2,000	2.0	.56	.21	.10	.04	.02	59	86	115	159	211			33	33	32	32	32	32			
		3,500		.98	.36	.18	.08	.03								1.7	2.7	3.2	3.6	4.7	5.7			
		5,000	2.4	1.40	.52	.26	.11	.04	61	88	117	160	212			33	33	33	33	33	32			
		7,500		2.10	.78	.38	.16	.06								2.7	3.6	4.1	4.5	5.6	6.6			
		10,000	2.9	2.80	1.03	.51	.21	.07	63	90	120	161	213			33	33	33	33	33	33			
		15,000		4.20	1.55	.76	.32	.11								3.8	4.5	4.9	5.4	6.5	7.5			
		20,000	3.2	5.60	2.06	1.02	.43	.15	66	93	123	161	213			34	34	34	33	33	33			
		25,000		7.00	2.58	1.27	.53	.18								4.8	5.3	5.8	6.3	7.4	8.4			
50,000	5.4	14.0	5.16	2.53	1.06	.36	69	96	126	164	216			34	34	34	33	33	33					
75,000		21.0	7.73	3.80	1.60	.54								6.7	7.3	8.2	9.4	9.8	11					
100,000	8.0	28.0	10.3	5.07	2.13	.72	73	100	130	168	220			34	34	34	33	33	33					
150,000		42.0	15.5	7.60	3.19	1.08								8.1	8.8	10	11	12	13					
200,000																								
250,000																								

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