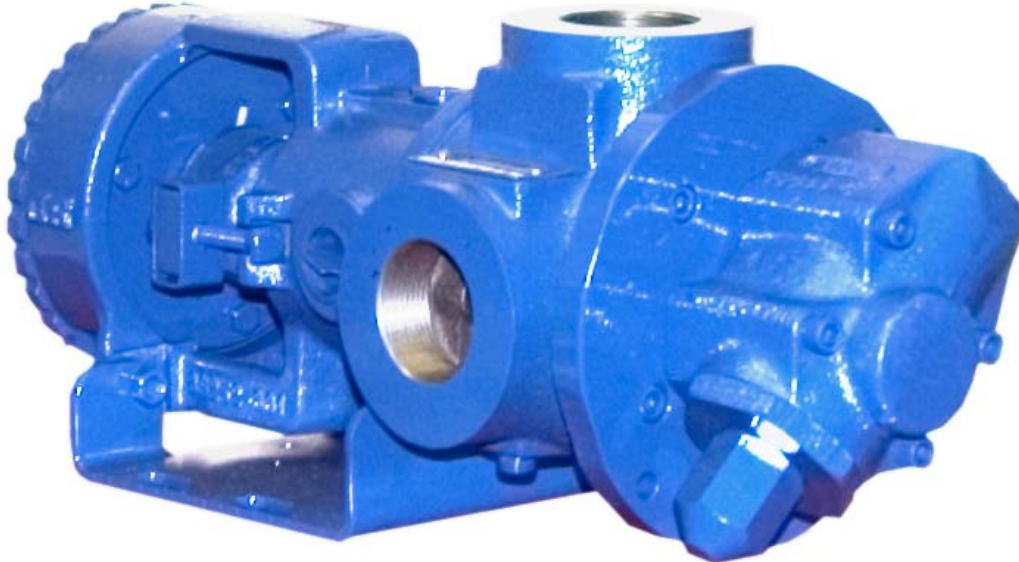




**GHS SERIES
 FLEXIBLE SEAL
 HEAVY DUTY STANDARD
 STAINLESS STEEL ROTARY
 GEAR PUMP**

This heavy duty series with internal “wetted” parts of 316 Stainless Steel is ideal for handling corrosive applications. Superior rotor shaft support and an integral maintenance-free radial/thrust bearing, reduce deflection and wear. Due to the “galling” nature of stainless, extra internal clearance is necessary. A capacity correction table for liquids less than 750 SSU is available in Section 500.



SHOWN ^W/INTERCHANGE FOOT BRACKET

The GHS stainless series is designed for applications in the operating ranges noted below. These units are available with head and backhead jackets for temperature control, silicon carbide bushings for wear resistance, and numerous shaft seal options described on the following pages.

FEATURES

- 200 PSI CAPABILITY
- BALL BEARING THRUST CONTROL
- ROTOR END CLEARANCE EXTERNALLY ADJUSTABLE
- EXCEPTIONAL SEAL VERSATILITY WITH INTERNAL SEAL VENT
- COMPUTER PROFILED GEARING FOR QUIET OPERATION
- MULTIPLE PORT POSITIONS
- FLEXIBLE SEAL DESIGN ALLOWS FOR A VARIETY OF INDUSTRY STANDARD SEALS OR PACKING

OPERATING RANGE

- CAPACITY (GPM): (3 TO 295)
 [LPM] : [11 TO 1116]
- PRESSURE (PSI) : [0 TO 200]
 [BAR] : [0 TO 14]
- VISCOSITY (SSU) : (28 TO 2,000,000)
 [cSt] : [1 TO 440,000]
- TEMPERATURE (F) : (-30° TO 675°)
 [C] : [-34° TO 358°]

APPLICATIONS

- USE WITH ANY CLEAN LIQUID COMPATIBLE WITH 316 STAINLESS 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 |
| 316 STAIN. STEEL | CAST IRON | 316 STAIN. STEEL | GHC 180° FLG. GHS 90° NPT | CARBON GRAPHITE | COATED 316 SST | STAIN. STEEL | CARBON, SIC, TEFLON ENC. | CARBON FIBER | C.W. | 316 STAINLESS STEEL | 75 PSI [5 BAR] |

G H C 1 DC 9 - B
G H S 1 DC 9 - B
 | | | | | | | | | | | |
 GEAR DUTY DESIGN PORT SIZE HYD. SIZE SEAL STYLE

Standard Models

| 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 1 DC9-B ① ● ▸ | GHS 1 DC9-B ① ● | 9 [28] | 1750 [1460] | 6 [19] | 1150 [960] | 75 [5] | 100 [7] | 200 [14] | 32 [14,5] | 2.9 | |
| | GHS 1 DC10-B ① ■ | | | | | | | | | | |
| GHC 1 DE9-B ① ● ▸ | GHS 1 DE9-B ① ● | 11 [35] | 1750 [1460] | 7 [22] | 1150 [960] | 75 [5] | 100 [7] | 200 [14] | 32 [14,5] | 2.9 | |
| | GHS 1 DE10-B ① ■ | | | | | | | | | | |
| GHC 1-1/2 GC9-B ● ▸ | GHS 1-1/2 GC9-B ● | 16 [50] | 1750 [1460] | 10 [32] | 1150 [960] | 75 [5] | 100 [7] | 200 [14] | 63 [28,6] | 2.9 | |
| | GHS 1-1/2 GC10-B ■ | | | | | | | | | | |
| GHC 1-1/2 GF9-B ● ▸ | GHS 1-1/2 GF9-B ● | 23 [73] | 1750 [1460] | 15 [47] | 1150 [960] | 75 [5] | 100 [7] | 200 [14] | 63 [28,6] | 2.9 | |
| | GHS 1-1/2 GF10-B ■ | | | | | | | | | | |
| GHC 1-1/2 GH9-B ● ▸ | GHS 1-1/2 GH9-B ● | 31 [98] | 1750 [1460] | 20 [63] | 1150 [960] | 75 [5] | 100 [7] | 200 [14] | 63 [28,6] | 2.9 | |
| | GHS 1-1/2 GH10-B ■ | | | | | | | | | | |
| GHC 1-1/2 GJ9-B ● ▸ | GHS 1-1/2 GJ9-B ● | 38 [120] | 1750 [1460] | 25 [79] | 1150 [960] | 75 [5] | 100 [7] | 200 [14] | 63 [28,6] | 2.9 | |
| | GHS 1-1/2 GJ10-B ■ | | | | | | | | | | |
| GHC 3 JG9-B ● ▸ | GHS 2 JG9-B ● | 40 [126] | 1150 [960] | 30 [95] | 870 [725] | 75 [5] | 100 [7] | 200 [14] | 161 [73,2] | 5.3 | |
| | GHS 2 JG10-B ■ | | | | | | | | | | |
| GHC 3 JJ9-B ● ▸ | GHS 3 JG9-B ● | 56 [177] | 1150 [960] | 42 [133] | 870 [725] | 75 [5] | 100 [7] | 200 [14] | 161 [73,2] | 5.3 | |
| | GHS 3 JJ9-B ● | | | | | | | | | | |
| GHC 3 JJ9-B ● ▸ | GHS 3 JJ10-B ■ | 56 [177] | 1150 [960] | 42 [133] | 870 [725] | 75 [5] | 100 [7] | 200 [14] | 161 [73,2] | 5.3 | |
| | GHS 3 JJ10-B ■ | | | | | | | | | | |

STANDARD MODELS CONTINUED

① 3450 [2875] RPM PERMISSIBLE TO 1,000 SSU [220 cSt.] AND 100 PSI [7 BAR]

● MECHANICAL SEAL
 ■ PACKING/LIP SEAL

▸ PORTS ARE COMPATIBLE WITH 150# ANSI FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS ARE AVAILABLE FOR EXPORT MARKET.

NOTE: RECOMMENDED PORT SIZES ARE SHOWN IN **BOLDFACE**. EXAMPLE: **GHC 1 DC9-B**, **GHS 1 DC9-B**

THE GORMAN-RUPP COMPANY • MANSFIELD, OHIO

GORMAN-RUPP OF CANADA LIMITED • ST. THOMAS, ONTARIO, CANADA

Standard Models (Continued)

| 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 2 JL9-B ● | 77 [243] | 1150 [960] | 58 [133] | 870 [725] | 75 [5] | 100 [7] | 200 [14] | 161 [73,2] | 5.3 | |
| | GHS 2 JL10-B ■ | | | | | | | | | | |
| GHC 3 JL9-B ● † | GHS 3 JL9-B ● | 107 [338] | 960 [960] | 81 [256] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 161 [73,2] | 5.3 | |
| | GHS 3 JL10-B ■ | | | | | | | | | | |
| GHC | GHS 2 JP9-B ● | 107 [338] | 960 [960] | 81 [256] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 161 [73,2] | 5.3 | |
| | GHS 2 JP10-B ■ | | | | | | | | | | |
| GHC 3 JP9-B ● † | GHS 3 JP9-B ● | 132 [500] | 960 [960] | 80 [252] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 161 [73,2] | 5.3 | |
| | GHS 3 JP10-B ■ | | | | | | | | | | |
| GHC | GHS 2 NK9-B ● | 99 [375] | 960 [960] | 60 [189] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 2 NK10-B ■ | | | | | | | | | | |
| GHC | GHS 2-1/2 NK9-B ● | 132 [500] | 960 [960] | 80 [252] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 2-1/2 NK10-B ■ | | | | | | | | | | |
| GHC | GHS 3 NK9-B ● | 165 [624] | 960 [960] | 99 [312] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 3 NK10-B ■ | | | | | | | | | | |
| GHC | GHS 2 NM9-B ● | 165 [624] | 960 [960] | 99 [312] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 2 NM10-B ■ | | | | | | | | | | |
| GHC | GHS 2-1/2 NM9-B ● | 172 [542] | 960 [960] | 115 [362] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 2-1/2 NM10-B ■ | | | | | | | | | | |
| GHC | GHS 3 NM9-B ● | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 3 NM10-B ■ | | | | | | | | | | |
| GHC | GHS 2-1/2 NP9-B ● | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 2-1/2 NP10-B ■ | | | | | | | | | | |
| GHC | GHS 3 NP9-B ● | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 180 [81,8] | 5.3 | |
| | GHS 3 NP10-B ■ | | | | | | | | | | |
| GHC | GHS 2 RM9-B ● | 172 [542] | 960 [960] | 115 [362] | 580 [480] | 75 [5] | 100 [7] | 200 [14] | 357 [162] | 10.7 | |
| | GHS 2 RM10-B ■ | | | | | | | | | | |
| GHC | GHS 2-1/2 RM9-B ● † | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 357 [162] | 10.7 | |
| | GHS 2-1/2 RM10-B ■ † | | | | | | | | | | |
| GHC | GHS 3 RM9-B ● † | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 357 [162] | 10.7 | |
| | GHS 3 RM10-B ■ † | | | | | | | | | | |
| GHC | GHS 4 RM9-B ● † | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 357 [162] | 10.7 | |
| | GHS 4 RM10-B ■ † | | | | | | | | | | |
| GHC | GHS 3 RP9-B ● † | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 357 [162] | 10.7 | |
| | GHS 3 RP10-B ■ † | | | | | | | | | | |
| GHC | GHS 4 RP9-B ● † | 215 [678] | 960 [960] | 143 [451] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | 357 [162] | 10.7 | |
| | GHS 4 RP10-B ■ † | | | | | | | | | | |

STANDARD MODELS CONTINUED

- MECHANICAL SEAL
- PACKING/LIP SEAL

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

NOTE: RECOMMENDED PORT SIZES ARE SHOWN IN **BOLDFACE**. EXAMPLE: **GHC 1 DC9-B, GHS 1 DC9-B**

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 GORMAN-RUPP OF CANADA LIMITED • ST. THOMAS, ONTARIO, CANADA

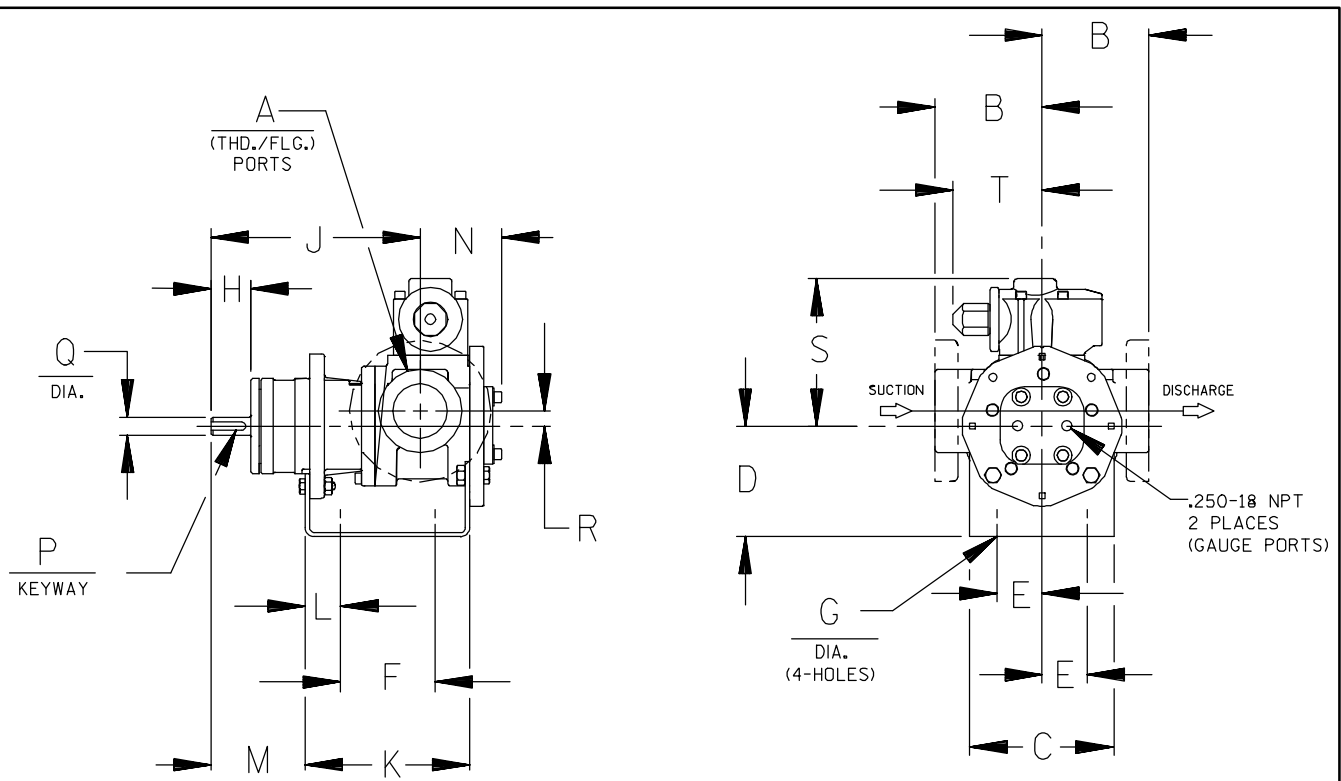
| MODEL NUMBER | | NOM. CAPACITY - SPEED | | | | MAXIMUM | | | | SHIPPING DATA | |
|--------------|-------------------------------------|-----------------------|-------------------|-------------|-------------------|----------------------------|------------------------|---------------------------------|-----------------------------------|---------------|---------|
| | | 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 | | | | | | | | | | |
| | GHS 3 RR9-B ● ▸ GHS 3 RR10-B ■ ▸ | 255 [804] | 720 [600] | 170 [536] | 480 [400] | 75 [5] | 100 [7] | 200 [14] | GHS ● 400 [204] ■ 500 [260] | 357 [162] | 10.7 |
| | GHS 4 RR9-B ● ▸ GHS 4 RR10-B ■ ▸ | | | 196 [618] | | | | | | 357 [162] | |
| | GHS 4 RS9-B ● ▸ GHS 4 RS10-B ■ ▸ | | | 295 [930] | | | | | | 357 [162] | |

▸ PORTS ARE COMPATIBLE WITH 150# ANSI STAINLESS STEEL FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL [DIN] FLANGES OR TAPPED [BSP] PORTS AVAILABLE FOR EXPORT MARKET.

NOTE: RECOMMENDED PORT SIZES ARE SHOWN IN BOLDFACE. EXAMPLE: **GHC 1 DC9-B**, **GHS 1 DC9-B**

| 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) 40R, 70K 61H OR 65Q | TEMPERATURE: 675 °F MAX. PRESSURE: 200 PSI MAX. |
| GHS ONLY JACKETED | 40K, 40W, 41U, 41W | LIMIT JACKET PRESSURE TO 150 PSI |

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



CAD FILE NO.: 16458B

| 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" | 2.50 [64] † | 4.00 [102] | 3.50* [89] | 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] | .50 [13] | .62 [16] | 5.19 [132] | 3.58 [91] |
| | | 4.00* [102] † | | 5.25 [133] | | | | | | | | | | .75 [19] | | | | |
| GHC G | 1-1/2" | 3.50 [89] † | 5.88 [149] | 3.50* [89] | 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] | .75 [19] | .62 [16] | 6.00 [152] | 3.62 [92] |
| | | 4.00* [102] † | | 4.50 [114] | | | | | | | | | | 5.25 [133] | | | | |
| GHC J | 3" | 4.50 [114] † | 6.88 [175] | 4.50 [114] | 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] | 1.00 [25] | 1.12 [28] | 9.06 [230] | 6.75 [171] |
| | | 6.00* [152] † | | 5.25* [133] | | | | | | | | | | 6.25 [159] | | | | |

* STANDARD DIMENSION

† PORTS ARE COMPATIBLE WITH 125* OR 250* ANSI CAST IRON FLANGES. ALL OTHER PORTS ARE TAPPED NPT FOR ANSI PIPE. OPTIONAL (DIN) FLANGES OR TAPPED (BSP) PORTS AVAILABLE FOR EXPORT MARKET.

† 90° HOUSING



CAD FILE NO.: 16669G

| MODEL NUMBERS | PUMP DIMENSIONS - INCHES [MILLIMETERS] | | | | | | | | | | | | | | | |
|---------------|--|-----------------|----------------|----------------|---------------|----------------|----------------|--------------|----------------|----------------|----------------|---------------|----------------|----------------------------------|---------------------------------|-----------------|
| | A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | |
| GHS D | 1" | 2.50* [641] | 4.00 [102] | 3.50* [891] | 4.50 [114] | 1.62 [41] | 5.50 [140] | .41 [10] | 1.16 [30] | 8.43 [214] | 7.54 [192] | 1.09 [28] | 2.29 [58] | 4.98 [127] | .12 [3] x .75 [19] | .50 [13] |
| | | 4.00 † [102] | | 5.25 [133] | | | | | | | | | | | | |
| GHS G | 1-1/2" 2" | 3.50* [891] | 4.88 [124] | 3.50* [891] | 4.50 [114] | 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] |
| | | 4.00 † [102] | | 6.25 [159] | | | | | | | | | | | | |
| GHS J | 2" 3" | 4.50* [114] | 6.88 [175] | 5.25* [133] | 6.25 [159] | 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] |
| | | 6.00 † [152] | | 7.00 [178] | | | | | | | | | | | | |
| GHS N | 2" 3" | 5.12 [130] | 8.00 [203] | 4.50 [114] | 6.25 [159] | 2.88 [73] | 10.00 [254] | .44 [11] | 2.58 [66] | 16.37 [416] | 15.14 [385] | 2.69 [68] | 4.56 [116] | 8.72 [221] | .25 [6] x 2.00 [51] | 1.12 [32] |
| | | | | 5.25* [133] | | | | | | | | | | | | |
| GHS R | 2" 2-1/2" 3" 4" | 6.50 [165] | 10.50 [267] | 7.00 [178] | 3.75 [95] | 13.75 [349] | .52 [13] | 2.25 [57] | 17.87 [454] | 17.36 [441] | 1.86 [47] | 4.70 [119] | 11.31 [287] | .38 [10] x 1.88 [48] | 1.44 [37] | |
| | | | | | | | | | | | | | | | | 7.19 † [183] |

* STANDARD DIMENSION

† PORTS ARE COMPATIBLE WITH 150# OR 300# ANSISTAINLESS STEEL 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

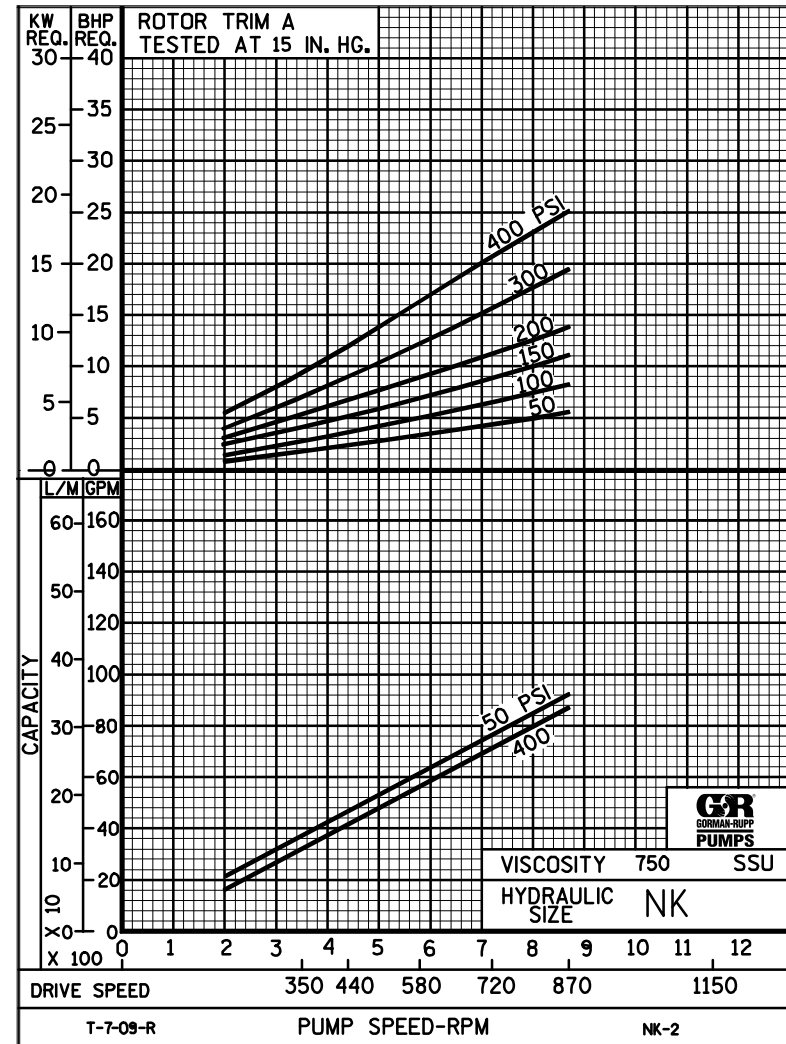
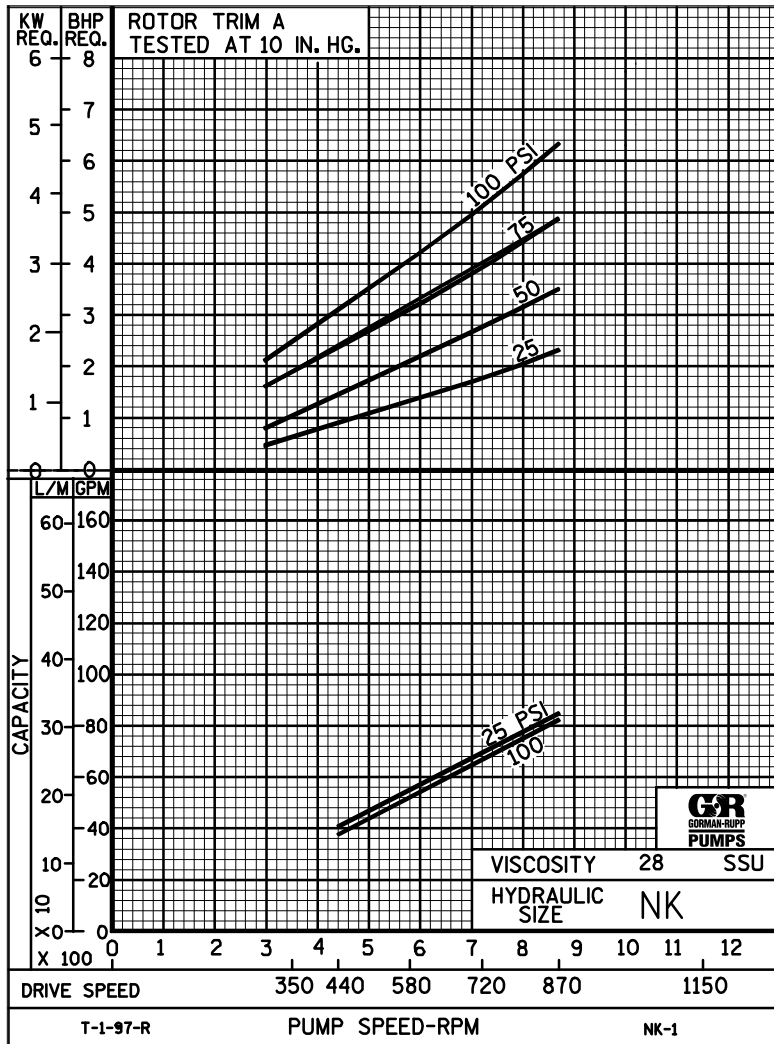


PERFORMANCE CURVES

SPEED VS. CAPACITY/HORSEPOWER

NK

Hydraulic Size



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GORMAN-RUPP OF CANADA LIMITED • ST. THOMAS, ONTARIO, CANADA



PERFORMANCE CURVES

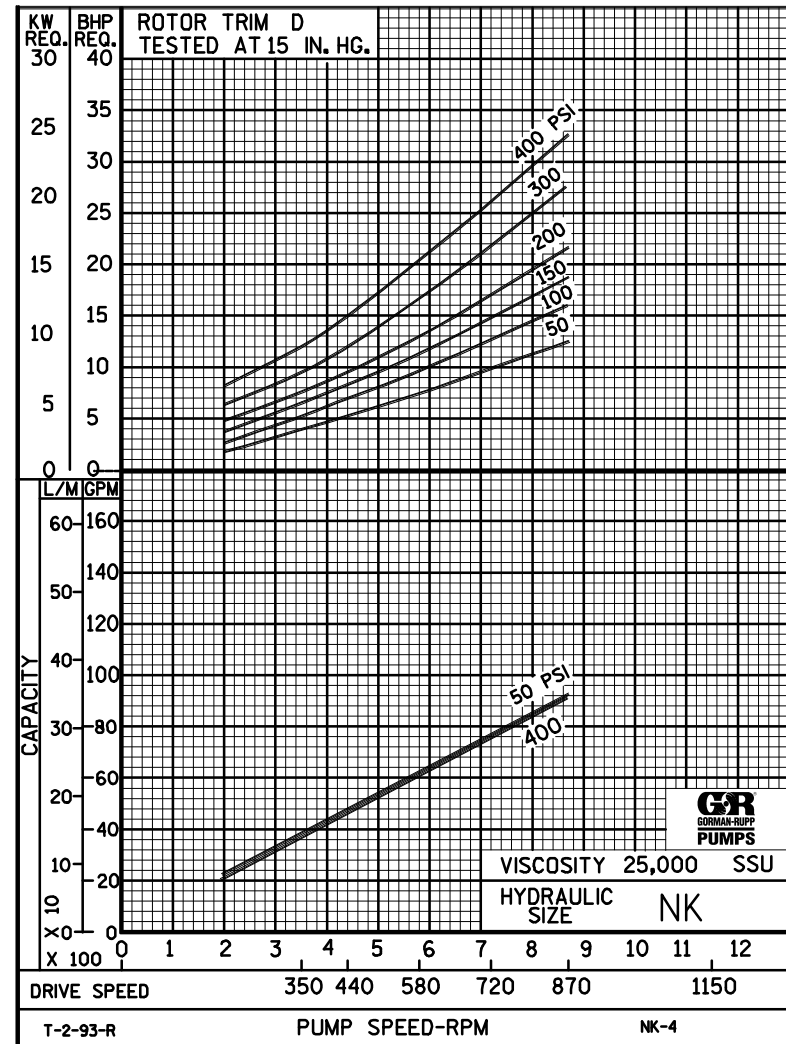
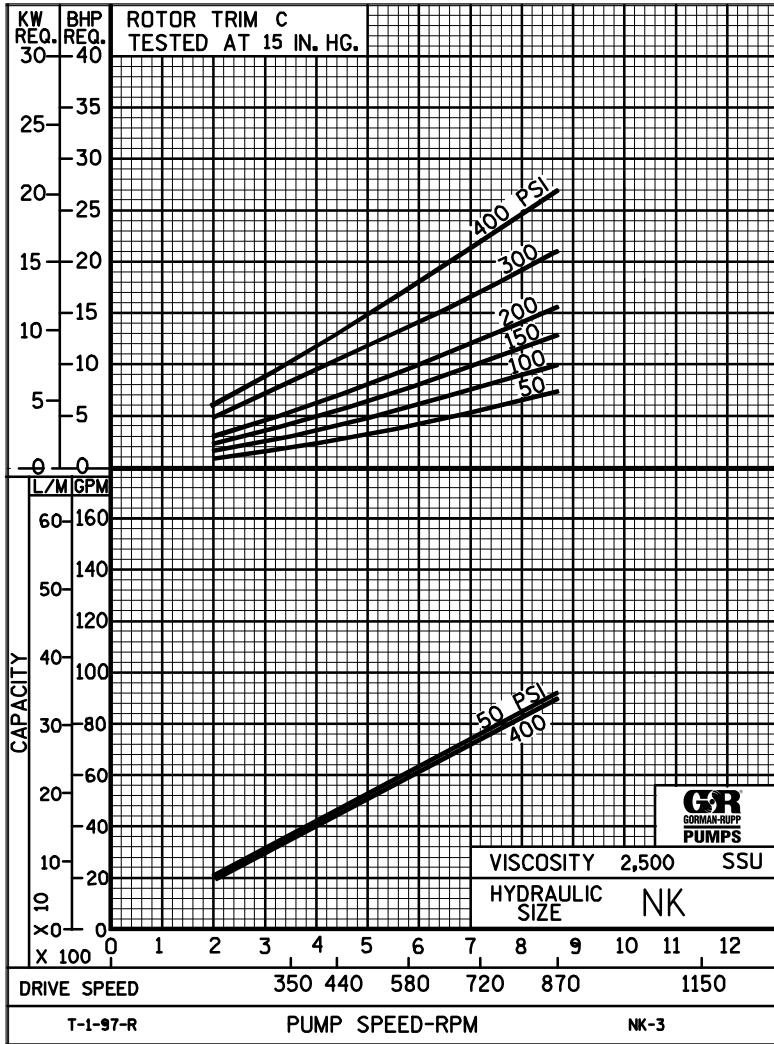
SPEED VS. CAPACITY/HORSEPOWER

NK Hydraulic Size

SEC. 500

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January 2010



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 GORMAN-RUPP OF CANADA LIMITED • ST. THOMAS, ONTARIO, CANADA

Printed in U.S.A.



NK

PUMP HYDRAULIC SIZE CHART

SEC. 500

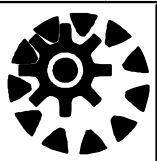
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January 2010

**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 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | 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

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 | | | 25 | 50 | 75 | 100 | 150 | 200 | 300 | 400 | | | | | | | | | |
| | | | | | | | 50 | 75 | 100 | 150 | 200 | 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.



NK

SEC. 500

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February 2025

13 GPM
125 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 | | | | | |
| | | | | | 2½" | 3" | 4" | 5" | 6" | DIFFERENTIAL PRESSURE (PSI) | | | | 150 | 200 | 300 | 400 | | |
| | | | | | | 25 | 50 | 75 | 100 | 150 | 200 | 300 | 400 | | | | | | |
| 13 | 125 | STD | | | | | | | | | | | | | | | | | |
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| | | | | "D" | | | | | | | | | | | | | | | |
| | | | | | 200,000 | 2.5 | 4.1 | 1.7 | 0.6 | 0.2 | 0.1 | 13.3 | 13.3 | 13.2 | 13.2 | 13.0 | 13.0 | 12.9 | 12.8 |
| | | | | | 399,999 | | 8.2 | 3.5 | 1.2 | 0.5 | 0.2 | 2.4 | 2.6 | 2.8 | 3.0 | 3.4 | 3.9 | 4.3 | 4.7 |
| | | | | | 400,000 | 2.7 | 12.4 | 5.2 | 1.8 | 0.7 | 0.3 | 13.3 | 13.3 | 13.2 | 13.2 | 13.0 | 13.0 | 12.9 | 12.8 |
| | | | | | 599,999 | | 2.6 | 2.9 | 3.1 | 3.3 | 3.7 | 4.1 | 4.5 | 4.9 | | | | | |
| | | | 600,000 | 3.4 | 16.5 | 6.9 | 2.3 | 0.95 | 0.45 | 13.3 | 13.3 | 13.2 | 13.2 | 13.0 | 13.0 | 12.9 | 12.8 | | |
| | | | 799,999 | | 2.9 | 3.1 | 3.3 | 3.5 | 4.0 | 4.4 | 4.7 | 5.1 | | | | | | | |
| | | | 800,000 | 3.7 | 20.6 | 8.6 | 2.9 | 1.2 | 0.6 | 13.3 | 13.3 | 13.2 | 13.2 | 13.0 | 13.0 | 12.9 | 12.8 | | |
| | | | 1M | | 3.1 | 13.6 | 3.6 | 3.8 | 4.2 | 4.6 | 5.0 | 5.4 | | | | | | | |

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