

# GHS SERIES HEAVY DUTY STANDARD; S & T HYD SIZE DUCTILE IRON ROTARY GEAR PUMP



The GHS ductile iron, high capacity series is designed for applications in the operating ranges noted below. These units are ideal for bulk handling of thin or viscous liquids. For temperature control, backhead and housing jackets are standard; head jackets are available. Also, carbon graphite bushings for low viscosity liquids, silicon carbide bushings for wear resistance, and numerous shaft seal options are described on the following pages.

This heavy duty series provides superior rotor shaft support and an integral, maintenance-free radial/thrust bearing for reduced deflection and wear.

### FEATURES

*BALL BEARING THRUST CONTROL  
 ROTOR END CLEARANCE EXTERNALLY  
 ADJUSTABLE  
 HIGH STRENGTH, COMPUTER  
 PROFILED GEARING FOR QUIET  
 OPERATION  
 RUGGED, DURABLE CONSTRUCTION  
 JACKETED HOUSING AND BACKHEAD  
 FLEXIBLE SEAL DESIGN ALLOWS FOR  
 A VARIETY OF INDUSTRIAL  
 STANDARD SEALS OR PACKING*

### OPERATING RANGE

CAPACITY (GPM) : (40 TO 500)  
 [LPM] : [151 TO 1892]  
 PRESSURE (PSI) : [0 TO 200]  
 [BAR] : [0 TO 14]  
 VISCOSITY (SSU) : (28 TO 2,000,000)  
 [cSt] : [1 TO 440,000]  
 TEMPERATURE (F) : (-60° TO 500°)  
 [C] : [-51° TO 260°]

### APPLICATIONS

USE WITH ANY CLEAN LIQUID  
 COMPATIBLE WITH CAST  
 IRON

- ★ BOOSTER SERVICE
- ★ CIRCULATING
- ★ FILTERING
- ★ LUBRICATING
- ★ TRANSFERRING
- ★ METERING

**GORMAN-RUPP PUMPS**

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EXTER- IOR	ROTOR & IDLER	HOUSING PORTS	BUSHINGS	IDLER PIN	SHAFT	SHAFT SEALING		ROTATION	INTERNAL RELIEF VALVE	
						MECH. SEAL ●	PACKING ■		MATERIAL	SETTING
DUCTILE IRON	HIGH STRENGTH IRON	90° 150# FLG	BRONZE	HARDENED STEEL	STEEL	VITON	CARBON FIBER	C.W.	CAST IRON	75 PSI [5 BAR]

## Standard Models

**G H S 4 SU 31 - B**  
 | | | | | | | | | |  
 GEAR DUTY DESIGN PORT SIZE HYDRAULIC SEAL STYLE  
 SIZE SIZE SIZE

MODEL NUMBER	NOM. CAPACITY - SPEED		MAXIMUM			TEMP.	SHIPPING DATA	
	MAXIMUM		DIFFERENTIAL PRESSURE-PSI [BAR]				Weight LBS [KG]	Volume CU. FT.
	GPM [LPM]	RPM	BELOW 38 SSU 14 cSt	38 TO 100 SSU [21 cSt]	100 TO 250,000 SSU [55,000 cSt]	°F [°C]		
<b>GHS 4 SR31-B ● †</b>	300 [1135]	520	75 [5.2]	125 [8.7]	200 [14]	400° [204]	530 [240]	17.3
<b>GHS 6 SR31-B ● † †</b>								
<b>GHS 4 SU31-B ● †</b>	500 [1892]							
<b>GHS 6 SU31-B ● † †</b>								
<b>GHS 6 TU31-B ● † †</b>	600 [2270]	350	50 [3.5]	100 [7]	150 [10.5]	837 [380]	21.3	

SEAL LIMITATIONS:				
● MECHANICAL SEAL OPTIONS	MAXIMUM INLET PRESSURE (PSI [BAR])		MAXIMUM VISCOSITY (SSU [cSt])	TEMPERATURE RANGE (°F [°C])
	NON-LUBRICATING LIQUID	LUBRICATING LIQUID		
STD	100 [7]	150 [10.5]	15,000 [3250]	0 to 400 [-17 to 204]
60D	200 [14]	350 [24]	25,000 [5417]	-75 to 500 [-60 to 260]
61J	100 [7]	200 [14]	15,000 [3250]	0 to 400 [-17 to 204]
■ PACKING	MAXIMUM INLET PRESSURE (PSI [BAR])		MAXIMUM VISCOSITY (SSU [cSt])	TEMPERATURE RANGE (°F [°C])
65P	400 [28]		250,000 [55,000]	-50 to 500 [-45 to 260]
STD	400 [28]		2,000,000 [440,000]	-50 to 650 [-45 to 344]

BUSHING LIMITATIONS:				
BUSHING OPTIONS	OPTIMAL VISCOSITY RANGE	TEMP LIMIT °F[°C]	ABRASIVES	CORROSIVES
STD, 40G	500 TO 100,000 SSU	400 [205]	NO	NO
40C, 40K, 70G	0.1 cPs TO 2,000,000 SSU	500 [260]	NO	YES *
40U, 41K, 70N	0.1 cPs TO 2,000,000 SSU	500 [260]	YES	YES *

\* Note: Verify chemical compatibility

● MECHANICAL SEAL

† PORTS ARE COMPATIBLE WITH 125# ANSI CAST IRON FLANGES.

† 180° DEGREE HOUSING

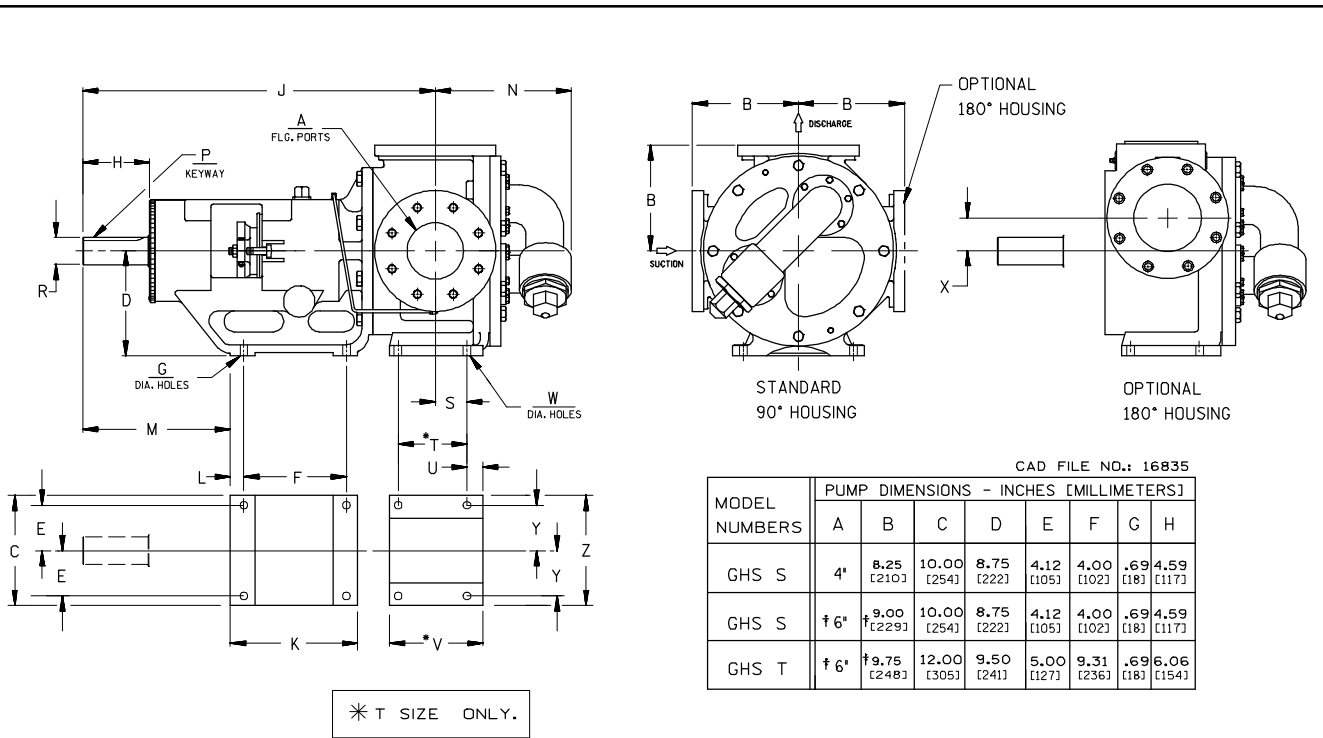
## GORMAN-RUPP PUMPS

APPLICATION RECOMMENDATIONS:		
APPLICATION	OPTIONS REQUIRED (Select One From Each Row)	OPERATING LIMITATIONS
ASPHALT	25U, 25V, OR 25W (S SIZE) 25, 25A, 25C (T SIZE) 35J–35M 40G, 40K, 40U, 41K 70, 70G, 70N	TEMPERATURE: 500° MAX.

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

## GORMAN-RUPP PUMPS

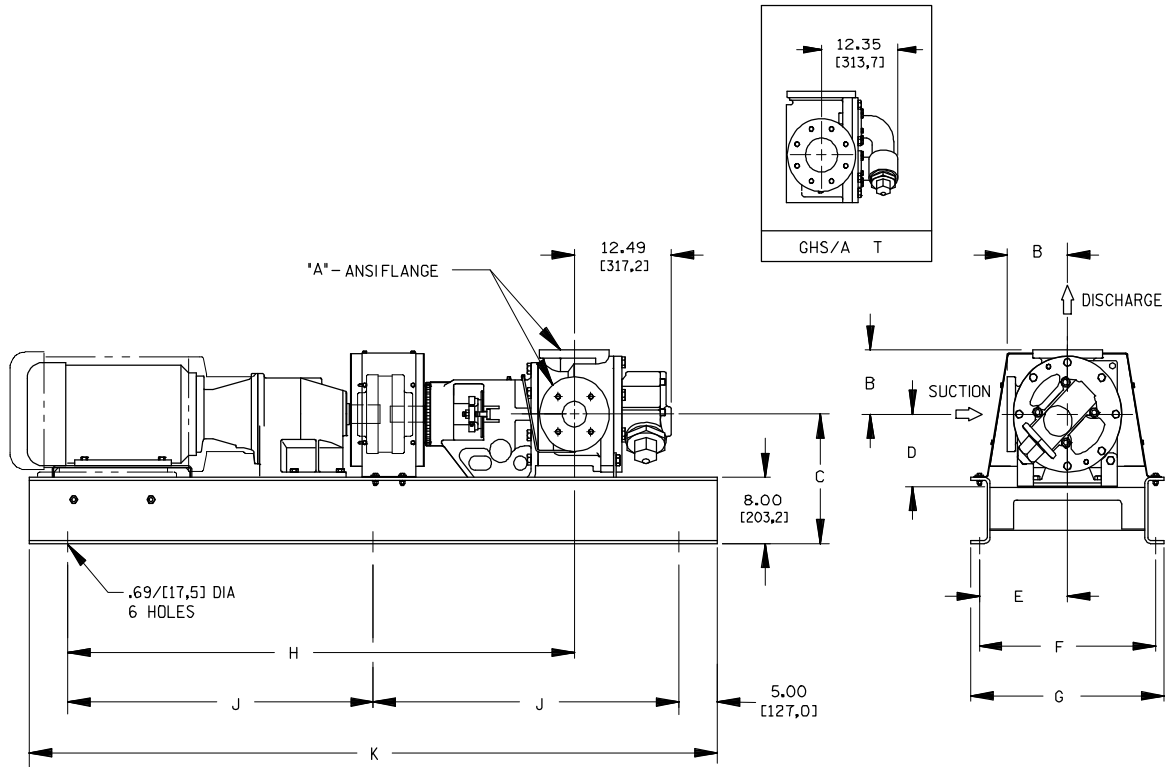
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† 180° HOUSING

MODEL NUMBERS	PUMP DIMENSIONS - INCHES [MILLIMETERS]																						
	A	J	K	L	M	N	N1	P	R	S	T	U	V	W	X	Y	Z						
GHS S	4"	23.85 [606]	5.50 [140]	.85 [22]	11.37 [289]	12.49 [317]	7.05 [179]	.50 [13] x 3.37 [86]	2.00 [51]	3.61 [92]		1.79 [45]		.69 [18]		5.57 [141]	12.89 [327]						
GHS S	†6"	23.85 [606]	5.50 [140]	.85 [22]	11.37 [289]	12.49 [317]	7.05 [179]	.50 [13] x 3.37 [86]	2.00 [51]	3.61 [92]		1.79 [45]		.69 [18]	3.00 [76]	5.57 [141]	12.89 [327]						
GHS T	6"	32.00 [813]	11.54 [293]	1.22 [31]	13.40 [340]	12.35 [314]		.62 [16] x 4.62 [117]	2.50 [64]	2.88 [73]	6.25 [159]	1.44 [37]	8.50 [216]	.69 [18]	†3.00 [76]	5.00 [127]	12.00 [305]						

**GORMAN-RUPP PUMPS**



CAD FILE NO.: 18604

PUMP MODEL	PUMP DIMENSIONS - INCHES[MILLIMETERS]											
	A	MOTOR FRAME	REDUCER RATIO	B	C	D	E	F	G	H	J	K
GHS S	4'	184TC, 213TC	16.66:1, 14.55:1 9.80:1	7.75 [196,9]	15.22 [386,6]	8.75 [222,2]	11.38 [288,9]	22.75 [577,9]	25.00 [635,0]	58.01 [1473,5]	35.75 [908,1]	81.50 [2070,1]
		213TC/215TC 254TC/256TC	17.71:1, 8.50:1 6.19:1, 5.10:1 3.89:1, 3.50:1							61.51 [1562,4]	37.50 [952,5]	85.00 [2159,0]
		254TC/256TC 284TC/286TC	17.81:1, 14:1 8.83:1, 6.09:1 5.08:1, 4.08:1 3.40:1	65.51 [1562,4]						39.50 [1003,3]	89.00 [2260,6]	
		324TC/326TC 364TC	8.78:1, 6.35:1 4.93:1, 4.05:1 3.30:1	71.51 [1816,4]						43.00 [1092,2]	95.00 [2413,0]	
		364TC/365TC	4.12:1, 3.43:1	74.45 [1891,0]						41.00 [1041,4]	92.00 [2336,0]	
GHS T	6"	184TC 213TC	16.66:1, 14.55:1 9.60:1	9.62 [244,3]	15.97 [405,6]	9.50 [241,3]	11.38 [288,9]	22.75 [577,9]	25.00 [635,0]	66.12 [1679,4]	36.75 [933,5]	83.50 [2120,9]
		213TC/215TC 254TC/256TC	17.71:1, 8.50:1 6.19:1, 5.10:1							69.62 [1768,3]	38.50 [977,9]	87.00 [2236,8]
		284TC/286TC 324TC/326TC 364TC	18.14:1, 13.92:1 8.78:1, 6.35:1 4.93:1							80.62 [2047,7]	44.00 [1117,6]	98.00 [2489,2]
		324TC/326TC 364TC/365TC	16.86:1, 14.33:1 9.46:1, 6.42:1 4.85:1							82.62 [2098,5]	45.00 [1143,0]	100.0 [2540,0]

90° HOUSING PORTS  
HEAD MOUNTED RELIEF VALVE  
GRR REDUCER C-FLANGE FLEX DRIVE

**GORMAN-RUPP PUMPS**

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## GRR REDUCER C-FLANGE FLEX DRIVE OPTIONS

(Drive Assy Number Includes Base, Coupling, Guard & Gear Reducer, But **NOT** the Motor)

PUMP MODEL	RPM @ 1750	RPM @ 1150	REDUCER <sup>①</sup>			FRAME	MTG.FT. OPTION REQ.	DRIVE ASSY NO.
			RATIO	MAX HP @ 1750	MAX HP @ 1150			
GHS S	500	329	3.50:1	20.00	13.20	254TC/256TC	STD	90453-004
	515	338	3.40:1	30.00	19.80	284TC/286TC	STD	90453-006
	530	348	3.30:1	60.00	39.60	324TC	STD	90453-008
	530	348	3.30:1	60.00	39.60	326TC	STD	90453-009
	530	348	3.30:1	60.00	39.60	364TC	STD	90453-010
	510	335	2.43:1	75.00	49.50	365TC	STD	90453-011
	450	296	3.89:1	20.00	13.20	254TC/256TC	STD	90453-020
	429	282	4.08:1	30.00	19.80	284TC/286TC	STD	90453-022
	432	284	4.05:1	60.00	39.60	324TC/326TC	STD	90453-024
	432	284	4.05:1	60.00	39.60	364TC	STD	90453-025
	425	279	4.12:1	60.00	39.60	365TC	STD	90453-026
	395	260	4.43:1	75.00	49.50	404TC	STD	90453-028
	343	225	5.10:1	100.00	66.00	254TC/256TC	STD	90453-030
	344	226	5.08:1	20.00	13.20	284TC/286TC	STD	90453-032
	355	233	4.93:1	30.00	19.80	324TC/326TC	STD	90453-034
	355	233	4.93:1	60.00	39.60	364TC	STD	90453-036
	283	186	6.19:1	60.00	39.60	254TC/258TC	STD	90453-042
	287	189	6.09:1	20.00	13.20	284TC	STD	90453-044
	287	189	6.09:1	30.00	19.80	286TC	STD	90453-045
	276	181	6.35:1	60.00	39.60	324TC	STD	90453-046
	276	181	6.35:1	60.00	39.60	326TC	STD	90453-047
	179	117	9.80:1	10.00	6.60	213TC	STD	90453-050
	206	135	8.50:1	20.00	13.20	254TC	STD	90453-052
	206	135	8.50:1	20.00	13.20	256TC	STD	90453-053
	198	130	8.83:1	30.00	19.80	284TC	STD	90453-054
	198	130	8.83:1	60.00	39.60	386TC	STD	90453-055
	199	131	8.78:1	60.00	39.60	324TC	STD	90453-056
	120	79	14.55:1	10.00	6.60	213TC	STD	90453-060
	125	82	14.00:1	30.00	19.80	254TC	STD	90453-062
	125	82	14.00:1	30.00	19.80	286TC	STD	90453-063
	125	82	14.00:1	30.00	19.80	284TC	STD	90453-064
	105	69	16.66:1	7.81	5.16	184TC	STD	90453-070
	99	65	17.71:1	16.48	10.88	213TC	STD	90453-072
	98	65	17.81:1	26.41	17.43	254TC	STD	90453-074
	98	65	17.81:1	26.41	17.43	256TC	STD	90453-075

<sup>①</sup> Listed reducer horsepower rated for Standard Service (8-10 hrs/day). For Light Service (3-5 hrs/day) multiply maximum rated horsepower by 1.1. For Heavy Service (16-24 hrs/day) multiply maximum rated horsepower by 0.9.

NOTE: CONSULT FACTORY FOR: HORSEPOWERS AND FRAMES NOT SHOWN. DRIP PAN BASES.



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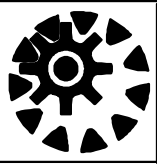
## GRR REDUCER C-FLANGE FLEX DRIVE OPTIONS

(Drive Assy Number Includes Base, Coupling, Guard & Gear Reducer, But **NOT** the Motor)

PUMP MODEL	RPM @ 1750	RPM @ 1150	REDUCER <sup>①</sup>			FRAME	MTG.FT. OPTION REQ.	DRIVE ASSY NO.
			RATIO	MAX HP @ 1750	MAX HP @ 1150			
GHS T	343	225	5.10:1	20.00	13.20	254TC/256TC	STD	90453-204
	344	226	5.08:1	30.00	19.80	284TC/286TC	STD	90453-206
	355	233	4.93:1	60.00	39.60	324TC/326TC	STD	90453-208
	355	233	4.93:1	60.00	39.60	364TC	STD	90453-210
	361	237	4.85:1	75.00	49.50	365TC	STD	90453-211
	331	213	5.29:1	100.00	66.00	405TSC	STD	90453-212
	308	202	5.68:1	200.00	100.00	444TSC	STD	90453-214
	308	202	5.68:1	200.00	100.00	445TSC	STD	90453-215
	283	186	6.19:1	20.00	13.20	254TC/256TC	STD	90453-220
	287	189	6.09:1	30.00	19.80	284TC/286TC	STD	90453-222
	276	181	6.35:1	60.00	39.60	324/326TC	STD	90453-224
	276	181	6.35:1	60.00	39.60	364TC	STD	90453-226
	273	179	6.42:1	75.00	49.50	365TC	STD	90453-227
	283	186	6.19:1	100.00	66.00	404TSC	STD	90453-228
	261	172	7.70:1	200.00	100.00	444TSC	STD	90453-230
	179	117	9.80:1	10.00	6.60	213TC	STD	90453-236
	206	135	8.50:1	20.00	13.20	254TC/256TC	STD	90453-238
	198	130	8.83:1	30.00	19.80	284TC	STD	90453-240
	198	130	8.83:1	30.00	19.80	286TC	STD	90453-241
	199	131	8.78:1	60.00	39.60	324TC	STD	90453-242
	199	131	8.78:1	60.00	39.60	326TC	STD	90453-243
	199	131	8.78:1	60.00	39.60	364TC	STD	90453-244
	185	122	9.46:1	75.00	49.50	365TC	STD	90453-245
	198	130	8.82:1	100.00	66.00	404TSC	STD	90453-246
	120	79	14.55:1	10.00	6.60	213TC	STD	90453-250
	125	82	14.00:1	30.00	19.80	254TC/256TC	STD	90453-252
	125	82	14.00:1	30.00	19.80	284TC/286TC	STD	90453-241
	126	83	13.92:1	54.47	35.95	324TC/326TC	STD	90453-256
	122	80	14.33:1	69.41	45.81	364TC	STD	90453-258
	105	69	16.66:1	7.81	5.16	184TC	STD	90453-264
	99	65	17.71:1	16.48	10.88	213TC	STD	90453-266
	98	65	17.81:1	26.41	17.43	254TC/256TC	STD	90453-268
	96	63	18.14:1	41.46	27.37	284TC/286TC	STD	90453-270
	96	63	18.14:1	41.46	27.37	324TC	STD	90453-272
	104	68	16.86:1	59.17	39.05	326TC	STD	90453-273

<sup>①</sup> Listed reducer horsepower rated for Standard Service (8-10 hrs/day). For Light Service (3-5 hrs/day) multiply maximum rated horsepower by 1.1. For Heavy Service (16-24 hrs/day) multiply maximum rated horsepower by 0.9.

NOTE: CONSULT FACTORY FOR: HORSEPOWERS AND FRAMES NOT SHOWN. DRIP PAN BASES.

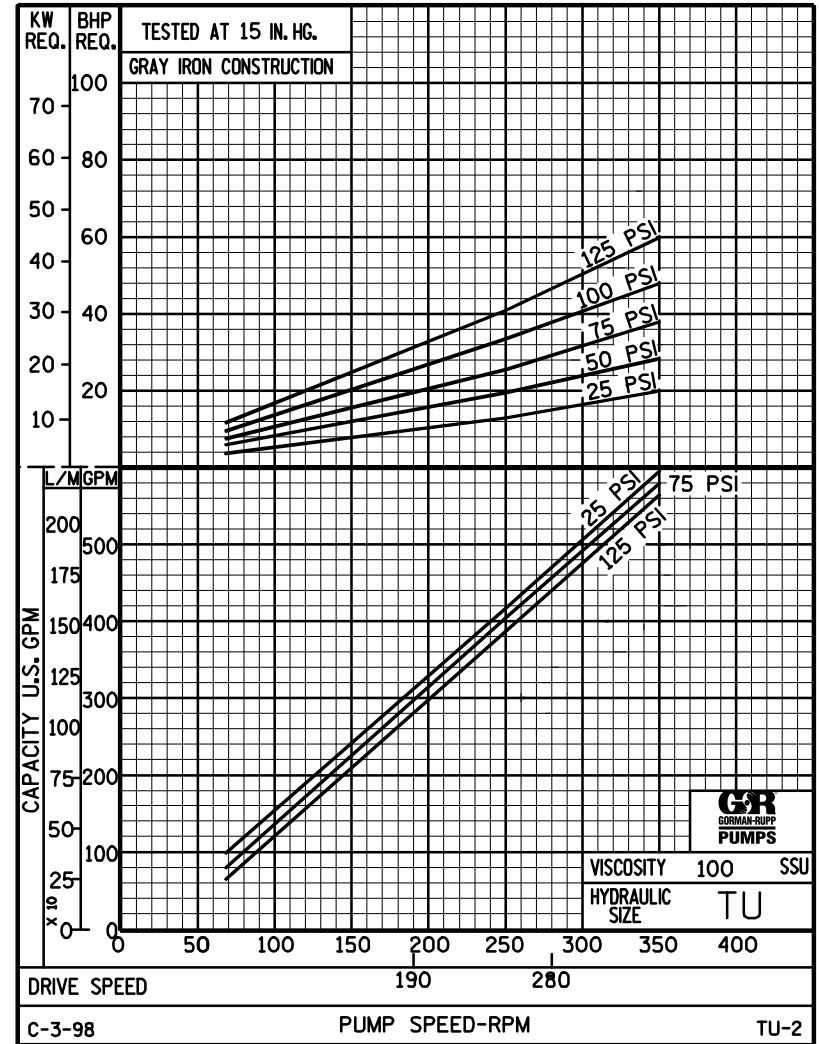
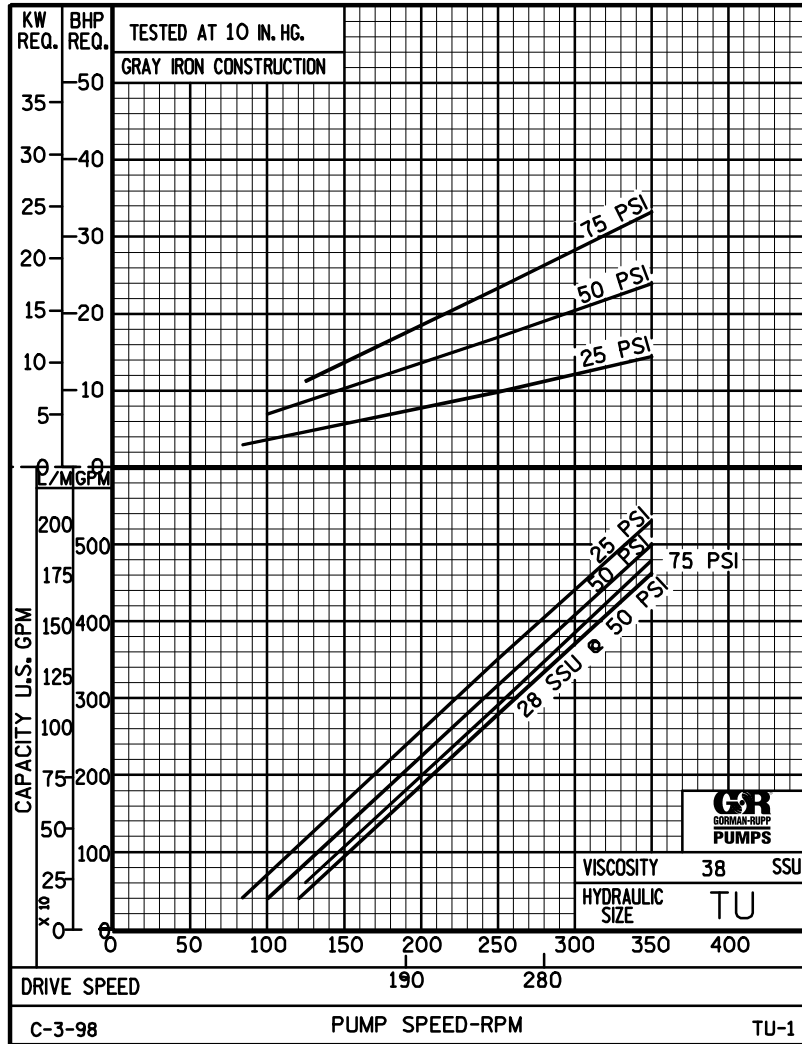


# PERFORMANCE CURVES

## SPEED VS. CAPACITY/HORSEPOWER

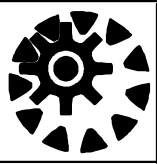
# TU

Hydraulic Size



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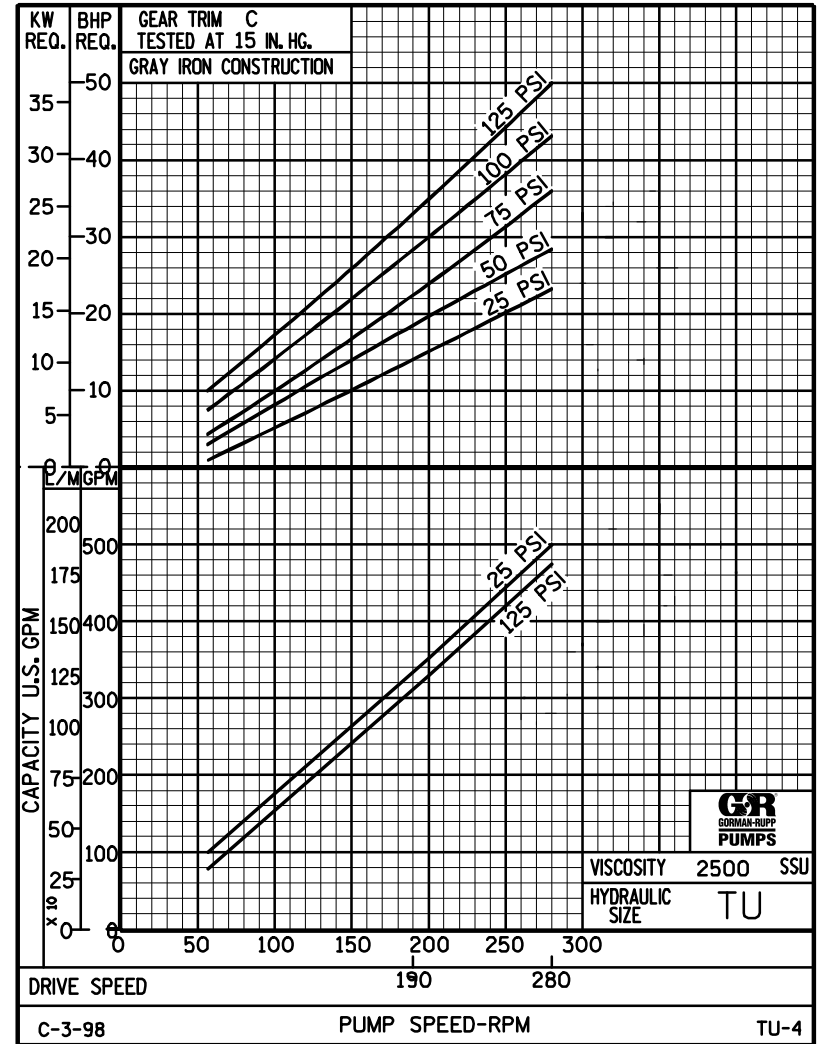
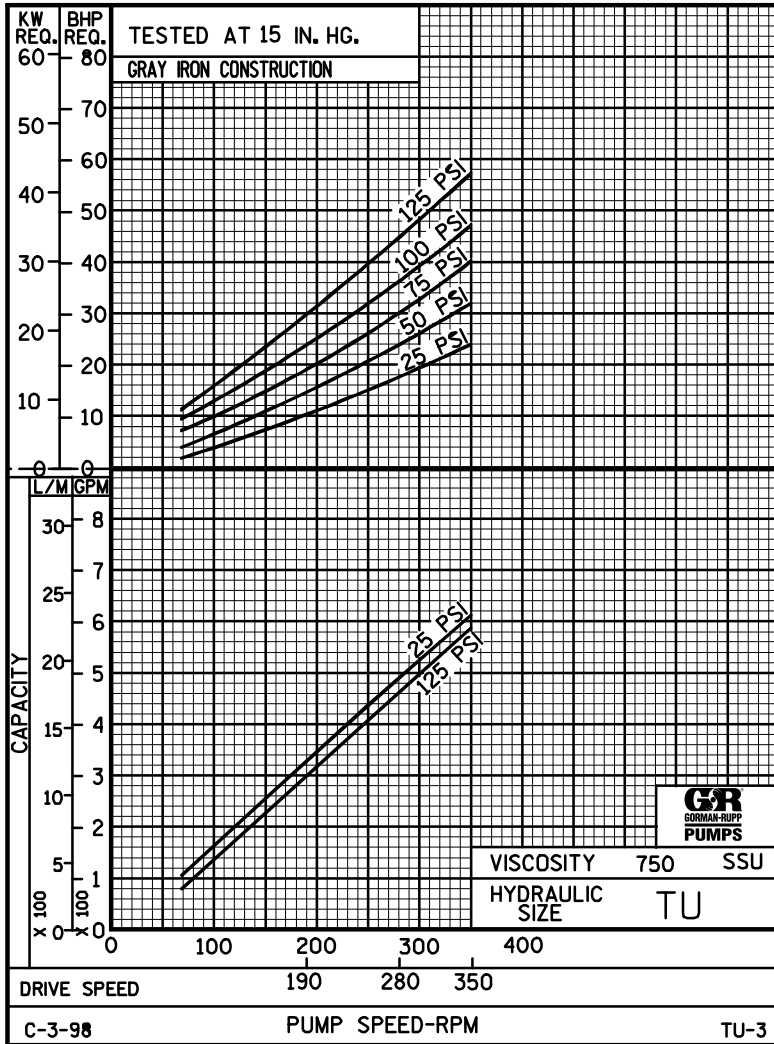


# PERFORMANCE CURVES

## SPEED VS. CAPACITY/HORSEPOWER

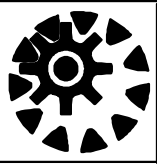
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Hydraulic Size



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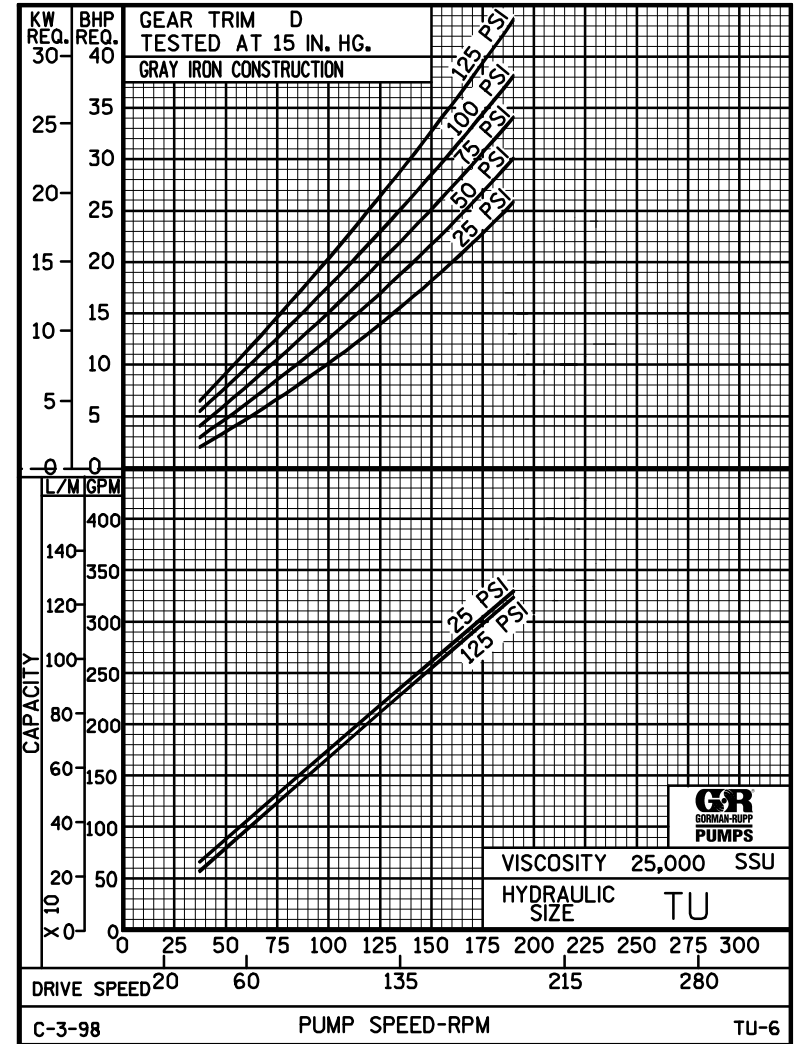
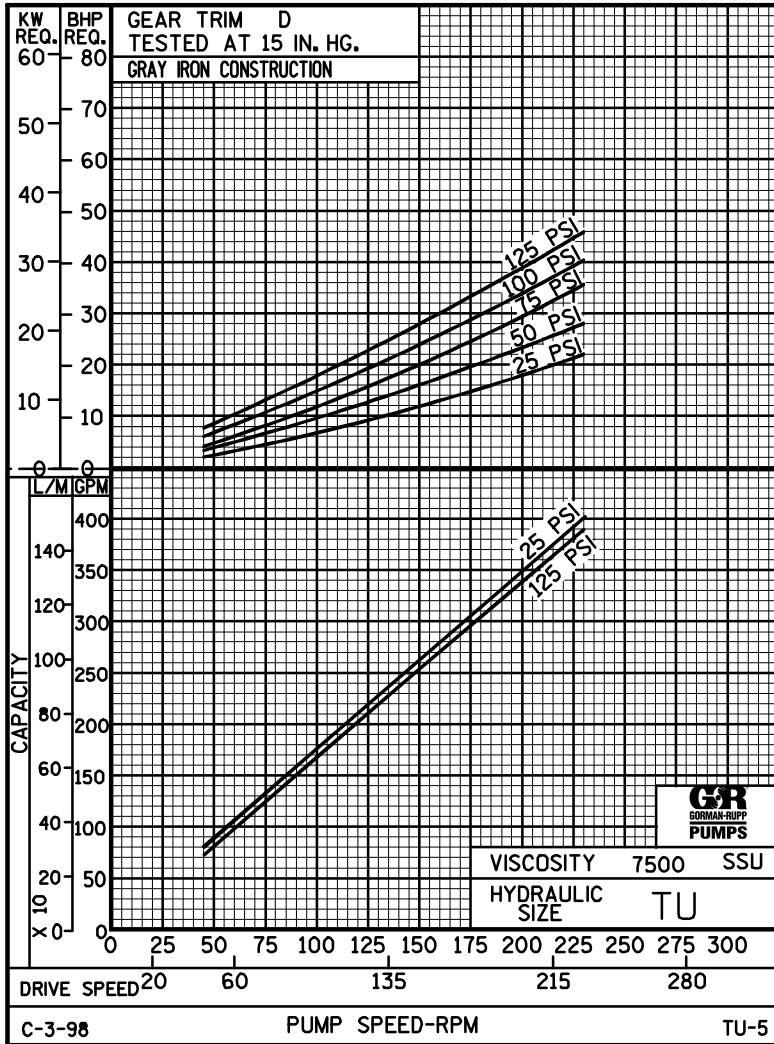


# PERFORMANCE CURVES

## SPEED VS. CAPACITY/HORSEPOWER

# TU

Hydraulic Size



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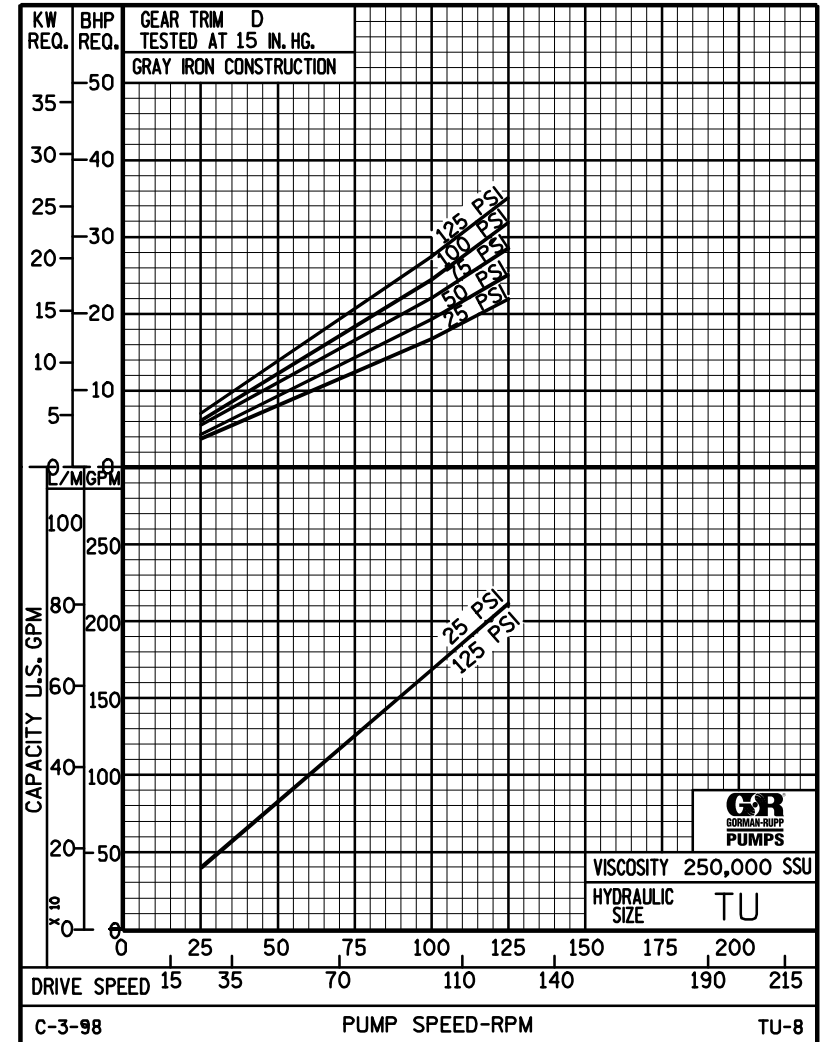
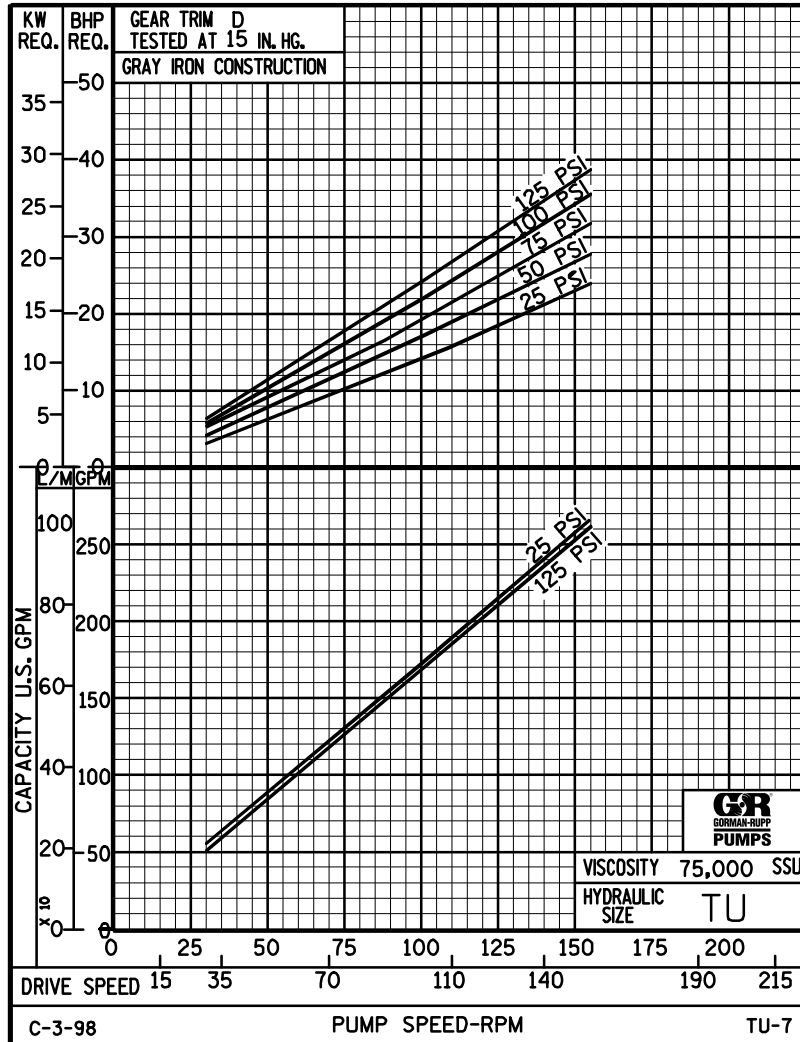


# PERFORMANCE CURVES

## SPEED VS. CAPACITY/HORSEPOWER

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# TU

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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February 2025

**680 GPM**  
**350 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)								
										25	50	75	100	125	150	200	400	
<b>680</b>	<b>350</b>	<b>STD</b>	28	3.9	1.27	0.41	0.10	0.03	0.01	612	603	593	583					
			32		1.30	0.43	0.11	0.03	0.01	16	25	37	48					
			38	3.9	1.34	0.45	0.11	0.04	0.01	616	606	597	588	578				
			50		1.42	0.48	0.12	0.04	0.02	17	26	38	49	60				
			70	3.9	1.52	0.52	0.14	0.05	0.02	625	617	609	600	590	580			
			100		1.63	0.56	0.15	0.05	0.02	18	27	38	49	60	70			
			150	3.9	1.76	0.61	0.16	0.06	0.02	643	636	630	623	613	594	590		
			200		1.86	0.65	0.18	0.06	0.03	19	28	39	49	60	71	81		
			300	3.9	2.04	0.72	0.20	0.07	0.03	669	676	680	670	663	632	620		
			500		2.31	0.82	0.23	0.08	0.03	21	31	42	50	61	71	82		
		750	3.9	2.58	0.92	0.26	0.09	0.04	690	688	687	685	678	670	630			
		1,000		2.80	1.01	0.28	0.06	0.03	22	32	42	52	61	71	82			
		2,000	5.5	3.50	0.90	0.30	0.12	0.06	690	688	687	687	687	687	640			
		3,500		3.77	1.58	0.53	0.22	0.10	24	34	44	55	65	75	88			
		5,000	6.6	5.38	2.26	0.76	0.31	0.15	690	688	687	687	687	687	640			
		7,500		8.07	3.39	1.14	0.46	0.22	26	36	47	59	70	83	93			
		10,000	8.2	10.77	4.52	1.52	0.62	0.30	690	688	687	687	687	687	640			
		15,000		16.15	6.77	2.28	0.93	0.44	30	41	53	66	79	93	108			
		20,000																
		25,000																
50,000																		
75,000																		
100,000																		
150,000																		
200,000																		
250,000																		

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



# TU

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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February 2025

**530 GPM**  
**280 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"	25	50	75	100	125	150	200	400		
<b>530</b>	<b>280</b>	<b>STD</b>	28	2.6	0.77	0.25	0.06	0.02	0.01	485	473	470	460						
			32		0.80	0.26	0.07	0.02	0.01	12	20	29	38						
			38	2.6	0.83	0.28	0.07	0.02	0.01	487	475	472	462	458					
			50		0.88	0.30	0.08	0.03	0.01	12	21	29	38	45					
			70	2.6	0.95	0.33	0.09	0.03	0.01	492	482	478	469	466	460				
			100		1.03	0.36	0.10	0.03	0.01	12	21	30	38	46	54				
			150	2.6	1.12	0.39	0.11	0.04	0.02	505	495	492	485	483	472	468			
			200		1.19	0.42	0.11	0.04	0.02	13	22	30	39	46	54	68			
			300	2.6	1.31	0.47	0.13	0.04	0.02	537	533	530	526	518	512	474			
			500		1.50	0.54	0.15	0.05	0.02	15	23	31	39	47	54	64			
		750	2.6	1.68	0.60	0.17	0.06	0.02	548	545	543	540	528	525	486				
		1,000		1.84	0.66	0.12	0.05	0.02	16	24	32	39	47	54	65				
		2,000	3.6	1.68	0.70	0.24	0.10	0.05	530	529	527	526	530	516	510				
		3,500		2.94	1.23	0.42	0.17	0.08	18	26	34	41	50	57	72				
		5,000	4.4	4.20	1.76	0.59	0.24	0.12	541	536	534	529	527	525	518				
		7,500		6.29	2.64	0.89	0.36	0.17	24	32	41	48	55	65	78				
		10,000	5.5	8.39	3.52	1.19	0.48	0.23	535	532	531	522	520	517	514				
		15,000		12.59	5.28	1.78	0.72	0.35	24	33	42	54	64	73	83				
		20,000	7	16.78	7.04	2.37	0.96	0.46	516	516	516	516	514	511	512				
		25,000		20.98	8.80	2.97	1.21	0.58	27	35	46	58	69	78	90				
50,000	8.6	41.96	17.60	5.93	2.41	1.15	516	516	516	516	516	515	516						
75,000		62.94	26.40	8.90	3.62	1.73	32	41	50	66	72	85	120						
100,000	<b>"D"</b>																		
150,000																			
200,000																			
250,000																			

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



# TU

## PUMP HYDRAULIC SIZE CHART

SEC. 500

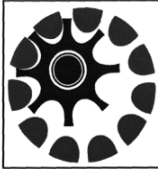
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February 2025

**363 GPM**  
**200 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)				125	150	200	400			
<b>363</b>	<b>200</b>	<b>STD</b>	28	1.6	0.37	0.12	0.03	0.01	0.00	335	334	325	315							
			32		0.38	0.13	0.03	0.01	0.00	7.7	14	21	26							
			38	1.6	0.40	0.14	0.04	0.01	0.00	336	335	326	317	307						
			50		0.43	0.15	0.04	0.01	0.01	7.9	15	21	26	31						
			70	1.6	0.47	0.16	0.04	0.01	0.01	339	338	329	320	313	304					
			100		0.52	0.18	0.05	0.02	0.01	8.1	15	21	26	32	39					
			150	1.6	0.57	0.20	0.05	0.02	0.01	346	345	337	329	324	311	302				
			200		0.61	0.22	0.06	0.02	0.01	8.2	15	21	26	32	38	44				
			300	1.6	0.68	0.24	0.07	0.02	0.01	366	363	357	350	348	340	310				
			500		0.78	0.28	0.08	0.03	0.01	9.5	16	21	26	32	38	45				
		750	1.6	0.89	0.32	0.06	0.02	0.01	373	370	365	359	335	352	325					
		1,000		0.98	0.24	0.08	0.03	0.02	10	16	21	26	32	38	47					
		2,000	2.2	1.15	0.48	0.16	0.07	0.03	373	372	368	367	363	362	356					
		3,500		2.01	0.84	0.28	0.12	0.06	11	17	22	28	38	39	50					
		5,000	2.7	2.87	1.21	0.41	0.17	0.08	388	386	384	383	365	370	376					
		7,500		4.31	1.81	0.61	0.25	0.12	16	21	27	32	52	43	42					
		10,000	3.4	5.75	2.41	0.81	0.33	0.16	382	380	379	355	364	369	370					
		15,000		8.62	3.62	1.22	0.50	0.24	20	24	29	34	39	45	48					
		20,000	4.3	11.49	4.82	1.63	0.66	0.32	372	370	371	368	365	364	358					
		25,000		14.37	6.03	2.03	0.83	0.39	24	28	32	37	43	48	59					
50,000	5.3	28.74	12.05	4.06	1.65	0.79	371	369	370	353	366	362	358							
75,000		43.11	18.08	6.10	2.48	1.18	31	33	36	41	49	53	64							
100,000	6.4	57.47	24.11	8.13	3.30	1.58	371	369	370	354	365	363	358							
150,000		86.21	36.16	12.19	4.95	2.37	31	37	41	49	54	58	69							
200,000	8.3	114.95	48.21	16.26	6.60	3.16	372	370	371	370	365	364	358							
250,000		143.69	60.27	20.32	8.26	3.95	36	44	50	55	60	66	75							

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



# TU

## PUMP HYDRAULIC SIZE CHART

SEC. 500

Page 139.4

February 2025

**230 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)				125	150	200	400			
						25	50	75	100	125	150	200	400							
<b>230</b>	<b>125</b>	<b>STD</b>	28	1.1	0.15	0.05	0.01	0.00	0.00	206	196	185	176							
			32		0.16	0.05	0.01	0.00	0.00	4.9	9.0	13	15							
			38	1.1	0.17	0.06	0.02	0.01	0.00	207	198	186	177	168						
			50		0.19	0.06	0.02	0.01	0.00	5.0	9.0	13	15	19						
			70	1.1	0.21	0.07	0.02	0.01	0.00	209	200	190	180	171	161					
			100		0.23	0.08	0.02	0.01	0.00	5.0	9.0	13	15	19	23					
			150	1.1	0.26	0.09	0.02	0.01	0.00	214	204	195	190	182	172	162				
			200		0.28	0.10	0.03	0.01	0.00	5.0	9.0	13	16	20	24	28				
			300	1.1	0.31	0.11	0.03	0.01	0.00	227	219	212	211	210	209	170				
			500		0.36	0.13	0.03	0.01	0.00	5.0	9.0	13	16	20	24	29				
		750	1.1	0.27	0.11	0.04	0.02	0.01	233	225	222	221	221	221	188					
		1,000		0.36	0.15	0.05	0.02	0.01	5.4	8.9	13	16	20	24	30					
		2,000	1.5	0.73	0.31	0.10	0.04	0.02	237	234	231	227	225	222	218					
		3,500		1.27	0.53	0.18	0.07	0.04	6.0	9.7	13	17	20	24	30					
		5,000	1.9	1.82	0.76	0.26	0.10	0.05	242	240	237	235	233	231	225					
		7,500		2.73	1.15	0.39	0.16	0.08	6.7	12	15	19	22	25	32					
		10,000	2.3	3.64	1.53	0.52	0.21	0.10	241	240	237	237	235	231	225					
		15,000		5.46	2.29	0.77	0.31	0.15	7.0	12	16	19	23	26	33					
		20,000	3	7.28	3.05	1.03	0.42	0.20	242	240	237	237	236	231	225					
		25,000		9.10	3.82	1.29	0.52	0.25	8.0	13	17	20	23	27	34					
50,000	3.6	18.21	7.64	2.58	1.05	0.50	242	240	237	237	236	231	225							
75,000		27.31	11.46	3.86	1.57	0.75	11	16	19	22	26	29	35							
100,000	4.4	36.42	15.27	5.15	2.09	1.00	241	240	238	237	237	231	225							
150,000		54.62	22.91	7.73	3.14	1.50	16	20	24	26	30	33	38							
200,000	5.7	72.83	30.55	10.30	4.18	2.00	240	240	237	237	237	231	225							
250,000		91.04	38.19	12.88	5.23	2.50	22	25	29	31	34	38	42							

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



# TU

## PUMP HYDRAULIC SIZE CHART

SEC. 500

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February 2025

**180 GPM**  
**100 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)				125	150	200	400		
						25	50	75	100	125	150	200	400						
<b>180</b>	<b>100</b>	<b>STD</b>	28	1.0	0.10	0.03	0.01	0.00	0.00	158	147	137	127						
			32		0.10	0.03	0.01	0.00	0.00	4.3	7.5	11	12						
			38	1.0	0.11	0.04	0.01	0.00	0.00	159	148	139	129	119					
			50		0.12	0.04	0.01	0.00	0.00	4.2	7.4	11	12	14					
			70	1.0	0.13	0.05	0.01	0.00	0.00	160	150	141	132	126	117				
			100		0.15	0.05	0.01	0.01	0.00	4.2	7.3	11	13	14	17				
			150	1.0	0.17	0.06	0.02	0.01	0.00	165	155	149	142	140	128	118			
			200		0.18	0.06	0.02	0.01	0.00	4.2	7.2	11	13	15	18	22			
			300	1.0	0.20	0.07	0.02	0.00	0.00	179	170	168	166	168	164	160			
			500		0.24	0.06	0.02	0.01	0.00	4.2	7.0	10	13	15	18	23			
		750	1.0	0.21	0.09	0.03	0.01	0.01	184	177	177	177	177	178	176				
		1,000		0.28	0.12	0.04	0.02	0.01	4.2	6.9	9.7	13	16	19	23				
		2,000	1.4	0.57	0.24	0.08	0.03	0.02	190	187	181	180	177	175	171				
		3,500		1.00	0.42	0.14	0.06	0.03	4.5	7.2	10	13	18	18	24				
		5,000	1.7	1.50	0.60	0.20	0.08	0.04	193	193	189	188	179	157	178				
		7,500		2.00	0.90	0.30	0.12	0.06	6.3	9.0	12	14	19	19	25				
		10,000	2.1	3.00	1.20	0.40	0.16	0.08	189	189	185	183	176	163	175				
		15,000		4.00	2.00	0.60	0.25	0.12	7.2	10	13	16	19	20	26				
		20,000	2.7	6.00	2.39	0.81	0.33	0.16	184	183	181	177	176	175	172				
		25,000		7.00	2.99	1.01	0.41	0.20	8.3	11	14	17	20	22	27				
50,000	3.3	14.00	5.98	2.02	0.82	0.39	184	196	193	192	190	189	186						
75,000		21.00	8.97	3.02	1.00	0.59	12	14	17	20	23	26	31						
100,000	4.0	28.50	11.95	4.03	2.00	0.78	184	184	184	184	185	185	184						
150,000		43.00	18.00	6.00	2.46	1.00	18	19	22	26	33	32	37						
200,000	5.2	57.00	24.00	8.00	3.00	2.00	184	184	184	184	184	184	184						
250,000		71.00	30.00	10.00	4.00	1.96	25	27	29	33	36	39	43						

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



# TU

## PUMP HYDRAULIC SIZE CHART

SEC. 500

PAGE 139.6

February 2025

**115 GPM**  
**60 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						
					5"	6"	8"	10"	12"	DIFFERENTIAL PRESSURE (PSI)										
										25	50	75	100	150	200	300	400			
115	60	STD																		
				"D"	200,000	5.6	2.1	1	0.3	0.1	0.1	115	115	114	114	113	113	111	110	
			399,999		4.2		2	0.7	0.3	0.1	9.0	11	13	14	17	21	24	27		
			400,000		6.2	115	115	114	114	113	113	111	110							
			599,999			9.7	12	13	15	18	21	25	28							
			600,000		7.7	115	115	114	114	113	113	111	110							
			799,999			11	12	14	16	19	22	25	29							
			800,000		8.4	115	115	114	114	113	113	111	110							
			1M			11	13	14	16	19	23	26	29							

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