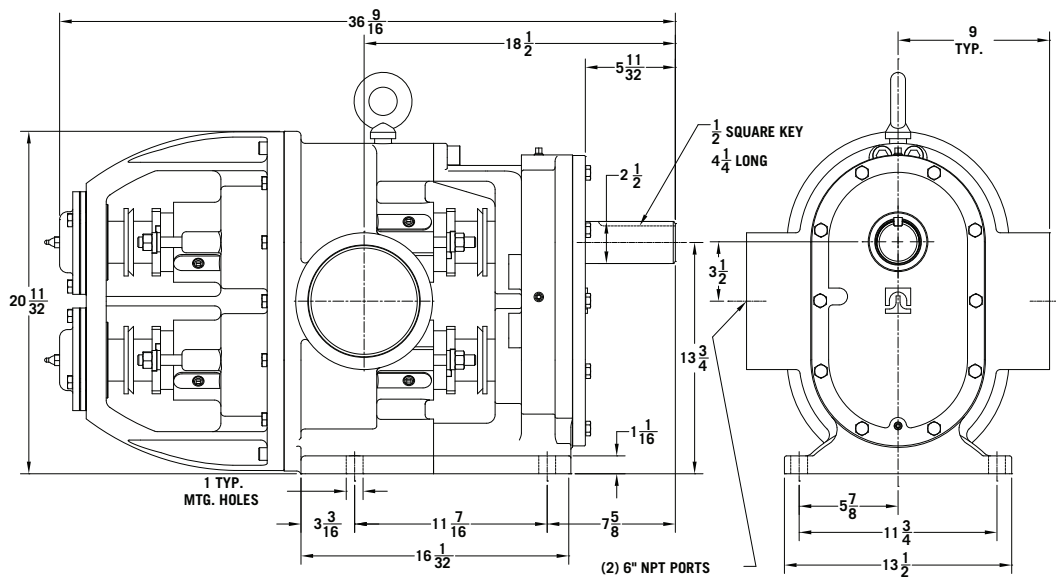
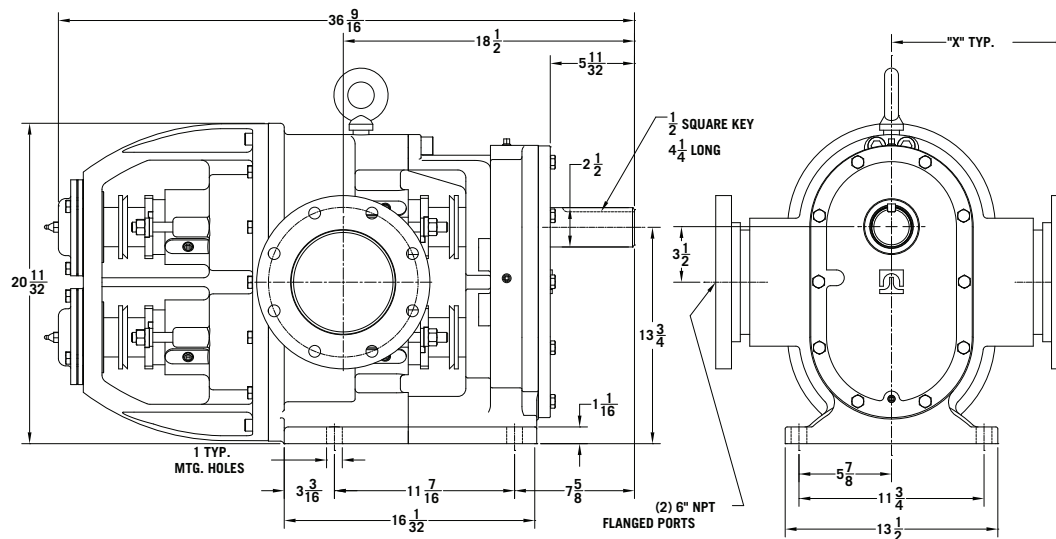


600 PUMP MOUNTING DIMENSIONS

All measurements are in inches.



600 PUMP MOUNTING DIMENSIONS WITH FLANGED PORTS



FLANGED PORT DIMENSIONS

PORT DIMENSIONS		
FLANGES	X	X
150# FF	11-5/32"	11-5/32"
150# RF	11-5/32"	11-5/32"
300# RF	11-21/32"	11-21/32"

NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

HEAVY DUTY TEMPERATURE LIMITS

°F	CLEARANCES	BUSHINGS			GASKETS		SEALS		PACKING	OIL	°C
600	Consult Factory										316
550											288
500		Class 1 Clearance Impellers	Standard DU Bushings (DI)	Carbon (DI)	Tungsten Carbide Bushings	PTFE-Glass Filled Gasket	Gore-Tex Rope Gasket	Viton Oil Seals for Faceplate & Gear Case	Standard Packing	High-Temperature APG 250 Gear Case Oil	260
450	HT Carbon (SS)			PTFE Oil Seals for Faceplate & Gear Case				232			
400	Standard Clearance Impellers	Bronze (DI)	Standard Carbon (SS)	Standard Gasket Material	Standard Oil Seals for Faceplate & Gear Case	Standard Gear Case Oil	204				
350							177				
300										149	
250										121	
200										93	
150										66	
100										38	
50										10	
0										-18	
-40										-40	

NOTE: Viton and PTFE oil seals can be used in place of standard oil seals upon request. PTFE and Gor-Tex gaskets can be used in place of standard seals upon request. If using a mechanical seal, please consult factory for temperature limitations.

HEAVY DUTY MATERIALS OF CONSTRUCTION

PART NAME	MATERIAL	STANDARD	COMMENTS	AVAILABILITY	
				GGI	GGs
IMPELLER COVER	Ductile Iron	ASTM A536, Grade 80-55-06	187-255 Brinell Hardness	S	
	Stainless Steel	ASTM A743, Grade CF-8M	155-185 Brinell Hardness		S
	Tutrided Ductile Iron	ASTM A536, Grade 80-55-06	Surface Hardened	0	
FACEPLATE	Ductile Iron	ASTM A536, Grade 80-55-06	187-255 Brinell Hardness	S	
	Stainless Steel	ASTM A743, Grade CF-8M	155-185 Brinell Hardness		S
	Tutrided Ductile Iron	ASTM A536, Grade 80-55-06	Surface Hardened	0	
GEARCASE	Cast Iron	ASTM A48		S	S
GEARCASE COVER	Cast Iron	ASTM A48		S	S
IMPELLERS	Ductile Iron	ASTM A536, Grade 80-55-06		S	
	Stainless Steel	ASTM A743, Grade CF-8M	155-185 Brinell Hardness		S
	Tutrided Ductile Iron	ASTM A536, Grade 80-55-06	Surface Hardened	0	
DRIVE & DRIVEN SHAFTS	High-Strength Steel	ASTM A564, Grade 630	Armco 17-4PH	S	S
	CO Coated High-Strength Steel	ASTM A564, Grade 630	Armco 17-4PH Chrome Oxide Coated	0	0
HOUSING BUSHINGS	Carbon	Carbon Graphite Resin			S
	DU Bushing	Steel Backed/PTFE Coated		S	
GEARCASE BALL BEARING	Steel			S	S
FACEPLATE BALL BEARING	Steel			S	S
STEAM JACKET	Aluminum			0	0

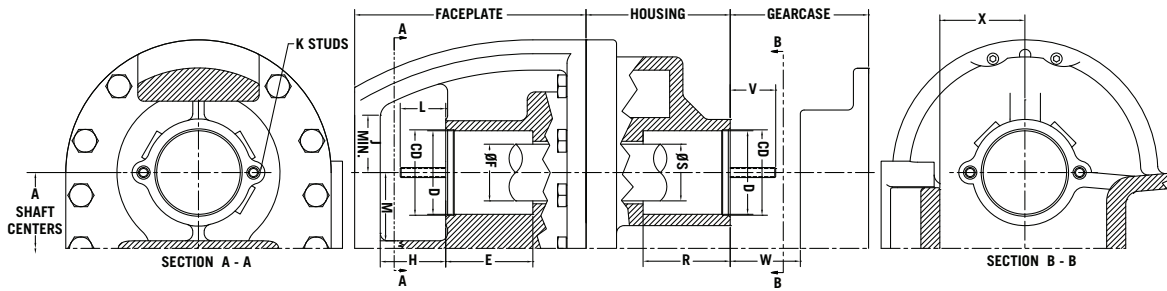
DI - Ductile Iron Pumps

SS - Stainless Steel Pumps

S - Standard

0 - Optional

SEAL CHAMBER DIMENSIONS



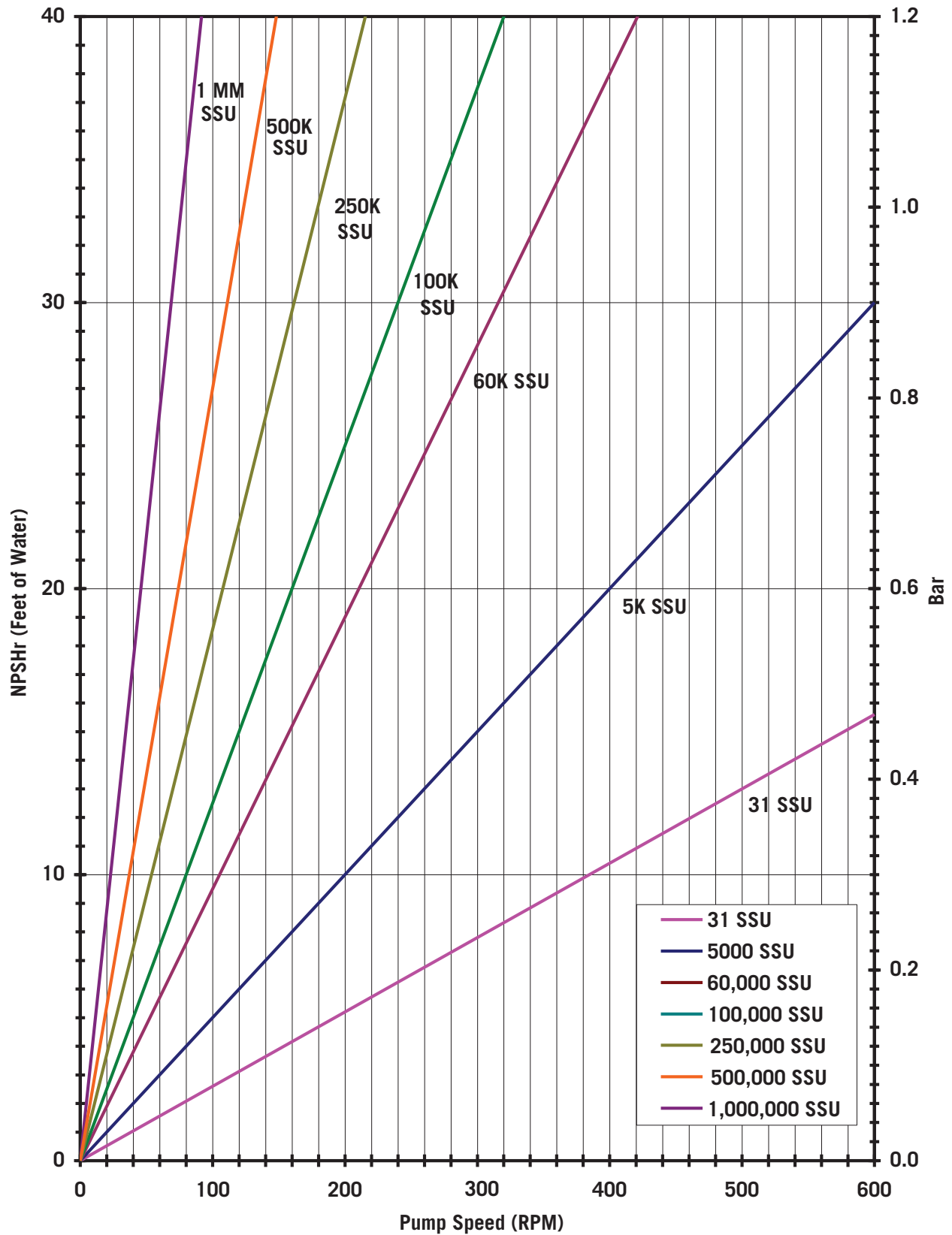
MODEL	"A"	"B"	"D"	"E"	"F"	"H"		"J"		"L"		"M"		"K STUDS"	
						SS	DI	SS	DI	SS	DI	SS	DI	QTY	SIZE
70A	$\frac{5.0005}{4.9995}$	$3 \frac{5}{8}$	$\frac{2.758}{2.752}$	$2 \frac{7}{8}$	$\frac{1.869}{1.868}$	$2 \frac{3}{8}$	$2 \frac{11}{32}$	$2 \frac{3}{16}$	$2 \frac{3}{16}$	$1 \frac{1}{2}$	$1 \frac{1}{2}$	$2 \frac{15}{64}$	$2 \frac{1}{4}$	8	$\frac{3}{8} - 16$
120A	$\frac{5.0005}{4.9995}$	$3 \frac{5}{8}$	$\frac{2.758}{2.752}$	$2 \frac{7}{8}$	$\frac{1.869}{1.868}$	$2 \frac{3}{8}$	$2 \frac{11}{32}$	$2 \frac{3}{16}$	$2 \frac{3}{16}$	$1 \frac{1}{2}$	$1 \frac{1}{2}$	$2 \frac{15}{64}$	$2 \frac{1}{4}$	8	$\frac{3}{8} - 16$
330	$\frac{6.4005}{6.3995}$	$4 \frac{1}{4}$	$\frac{3.255}{3.250}$	$3 \frac{5}{16}$	$\frac{2.244}{2.243}$	$3 \frac{1}{8}$	$3 \frac{7}{32}$	$2 \frac{1}{2}$	$2 \frac{1}{2}$	2	2	$2 \frac{15}{16}$	$2 \frac{61}{64}$	8	$\frac{1}{2} - 13$
600	$\frac{7.0005}{6.9995}$	$6 \frac{3}{4}$	$\frac{3.510}{3.505}$	$3 \frac{1}{4}$	$\frac{2.494}{2.493}$	$4 \frac{1}{16}$	$3 \frac{7}{8}$	$2 \frac{3}{4}$	$2 \frac{5}{8}$	$2 \frac{3}{16}$	$2 \frac{1}{16}$	$3 \frac{1}{4}$	$3 \frac{7}{32}$	8	$\frac{5}{8} - 11$

MODEL	"R"	"S"	"V"		"W"	"X" MIN
			SS	DI		
70A	$2 \frac{7}{8}$	$\frac{1.8745}{1.8740}$	$1 \frac{1}{2}$	$1 \frac{1}{2}$	$2 \frac{5}{16}$	3
120A	$2 \frac{7}{8}$	$\frac{1.8745}{1.8740}$	$1 \frac{1}{2}$	$1 \frac{1}{2}$	$2 \frac{5}{16}$	3
330	$3 \frac{5}{16}$	$\frac{2.2488}{2.2480}$	2	2	$3 \frac{1}{16}$	$3 \frac{5}{8}$
600	$3 \frac{1}{4}$	$\frac{2.4988}{2.4980}$	2	2	$3 \frac{3}{4}$	$3 \frac{1}{8}$

- D = Sealing Chamber Bore**
- E = Sealing Chamber Bore Depth Faceplate**
- F = Faceplate Shaft Diameter**
- H = Length to Obstruction, Faceplate Side**
- J = Length to Obstruction**
- L = Stud Length Faceplate**
- M = Length to Obstruction**
- K = Stud Information**
- R = Sealing Chamber Depth Housing**
- S = Shaft Diameter Housing**
- V = Stud Length**
- W = Length to Nearest Obstruction**

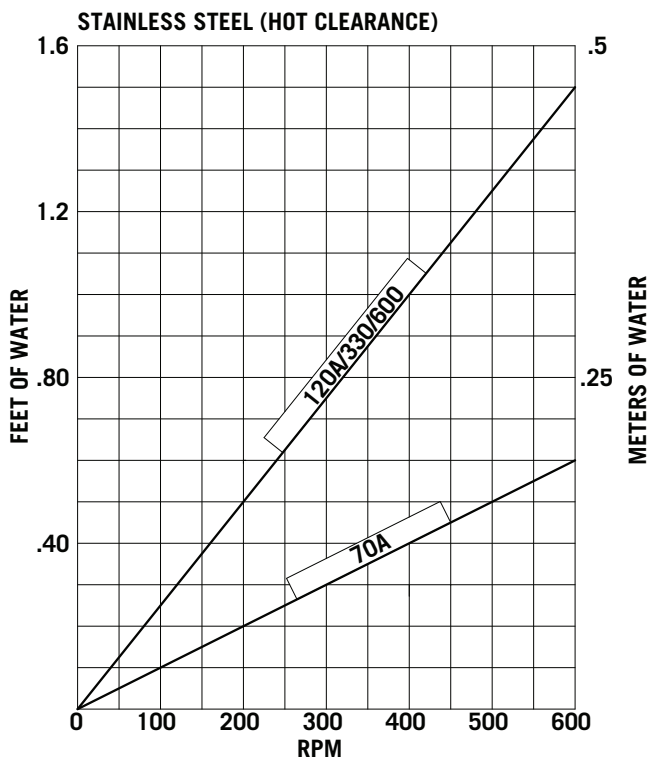
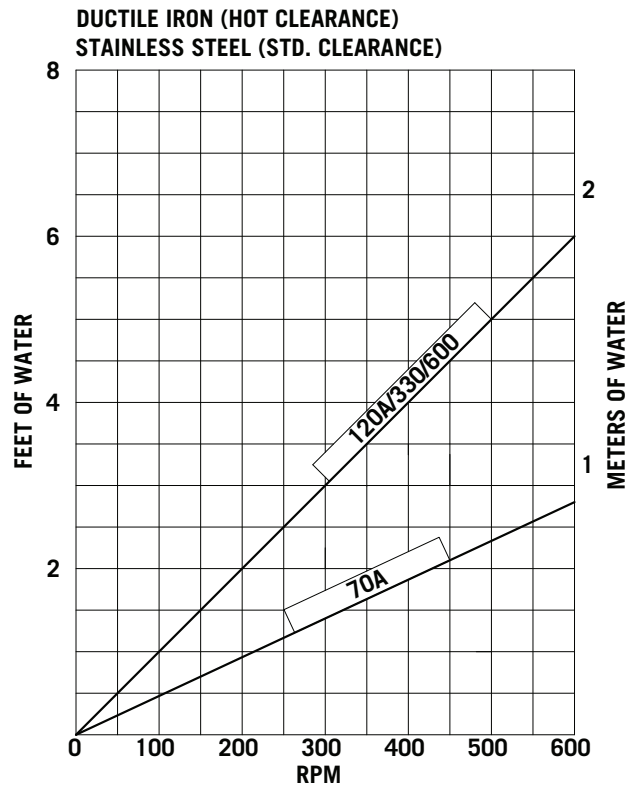
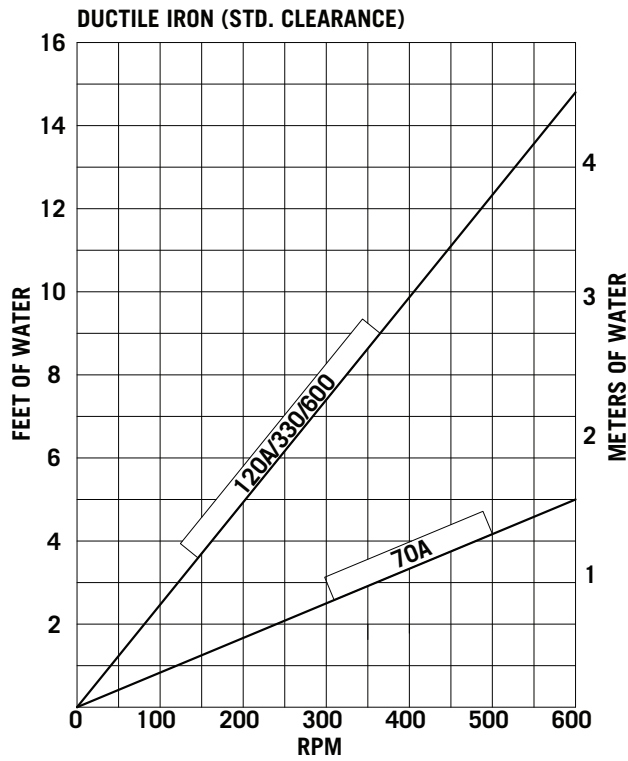
NOTE: In conjunction with our program of continuous testing and design upgrading, all specifications are subject to change without notice. All data is approximate. Request a quotation for your specific application.

NPSH_r DATA



PRIMING ABILITY

Performance curves indicating priming ability of pumps is based on test data obtained on new pumps. Priming ability of older pumps, because of larger clearances, will not be as accurate.



ABRASIVES & SLURRIES

The Heavy Duty process pumps are ideally suited for slurries as it is capable of handling a wide range of apparent viscosities and solid particle sizes. When sizing a process pump, you must determine the viscosity of the carrier fluid, particle size, and particle hardness.

The thicker the carrier fluid, the less recirculation of product through the fluid chamber clearances (slip), thus there is less erosive wear from any abrasive particle. If the carrier fluid is water thin, the abrasive particles are allowed to recirculate in the clearances, resulting in short wear life.

Particle size and hardness both affect the wear life of a process pump. Each process pump model has different clearance dimensions. If the particle is harder than the pump material construction and larger than the clearance dimension, the pump will generally have initial wear equal to that of the particle size and level off to a slower, constant wear rate. If the particle size is smaller than the pump clearances, the wear is less of a problem. A particle is therefore defined as abrasive if it is equal to or harder than the pump construction and larger than the factory set clearances in a new pump.

Knowing that the process pump has been successfully applied on abrasive slurries, we generally do not recommend pump speeds on inorganic slurries to be any greater than 190 RPM. Try to maintain the slowest possible speeds for any abrasive slurry. Wear life is relative; the Heavy Duty process pump will always do better than a gear or vane pump at identical operating speeds.

Maximum Recommended Pump Speeds For Existing Applications

Waste solvents, oils, paints, etc.	230 RPM
Municipal sludge/scum	190 RPM
Animal rendering	100 RPM
Asphalt with filler	100 RPM
Magnetic oxide slurries	150 RPM
Grain slurries (mash)	150 RPM
Clay coating slurries	280 RPM
Clay slip & ceramic slurries	50 RPM
Coal oil surface	190 RPM

SPHERICAL PARTICLE SIZE DATA

The chart at right shows the theoretical maximum and recommended maximum particle size that a pump will pass. This is strictly a function of geometry. Pumps will last longer if abrasive particles are smaller than internal pump clearances and softer than the internal pump parts. On slurries with maximum diameter particles, a maximum speed of 100 RPM is recommended to minimize crushing. Particles must be able to be sheared by pump impellers or the pump will stall.

Pump Model	Theoretical Maximum Diameter	Recommended Maximum Diameter
70A	1.25" [31.75mm]	0.75" [19.05mm]
120A	1.50" [38.10mm]	0.875" [22.23mm]
330	2.25" [57.15mm]	1.00" [25.40mm]
600	3.00" [76.20mm]	1.25" [31.75mm]

