

WOLF[®]

CUSTOMIZED PUMPS

Right Pump. Right Now.

WP0001
0920
Supersedes
0520

Submersible Turbine Pumps

4" through 8" and 10" diameter

25 - 1,700 GPM / 5.7 - 386 m³/hr

Special options on materials of construction
available - Consult factory

Accessories

For quotes and order inquiries please contact sales@wolfpumps.com



Follow the QR code to
our pump sizing tool or
visit WolfPumps.com
for more information



PO Box 490
18014 N I-27 Hwy.
Abernathy, TX 79311
800-886-2606
WolfPumps.com

PO Box 490 95 North Oak St.
 18014 N I-27 Hwy. Kendallville, IN 46755
 Abernathy, TX 79311 800-345-9422
 800-886-2606 FlintandWalling.com
 WolfPumps.com



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History of Wolf Pump

Bill Wolf and Sons began operations in 1951 as a drilling and pump service company in Abernathy, TX. At that time irrigation was new to the West Texas region but rapidly gaining popularity. After several years of experience with the harsh well conditions and ever-changing water tables in West Texas, Mr. Wolf recognized the need to design, manufacture, and build a pump that was better suited for these applications. This was the start of the Wolf Pump line of submersible turbine pumps. Wolf Pump continues to transition from a regional manufacturing and pump service company to an international supplier of submersible turbine pumps with ever expanding facilities to accommodate growth into new regional and end-user markets.

In 2012, Wolf Pump was purchased by Flint & Walling, a world-wide leader in the pump industry since 1866. Under this organization and with the ability to leverage more sales, marketing, and engineering resources, several significant investments in facilities upgrades, including a state-of-the-art testing laboratory, have been made.

As Wolf grows in the future, customers should expect the same high level of service that they have grown accustomed to over the past several decades, and to be held to the following Covenant that we make with the marketplace.



WOLF PUMP'S COVENANT TO YOU

WE WILL NEVER FORGET THAT WE SERVE PEOPLE.

Wolf understands that the people we serve are depending upon us to help ensure their own livelihoods and we know that everyone we meet is working towards achieving personal goals. When this principle guides our actions, our other promises will be easy to keep.

OUR QUALITY ALWAYS COMES FIRST.

Wolf strives to meet or exceed our customer's expectations in every situation. Wolf products are designed in a way that maximizes the durability and life span of our products, and our employees are trained to identify and eliminate defects before they reach you. Product selections made by our inside sales team are made with the overall quality of the pump system in mind. Accessories and other products that complement our pump offering will always be chosen based on the quality reputation of our suppliers.

WE WILL OFFER FRIENDLY AND RESPONSIVE CUSTOMER SERVICE.

When you call, we answer the phone. When we don't know the answer, we find it....and we do it all with a smile. Wolf employees value the relationships we develop with our customers and have a passion for providing them with the best possible customer experience.

WE ARE COMMITTED TO MINIMIZING PRODUCTION LEAD TIMES.

When we receive your order, we consider it a privilege and an opportunity to impress you. Everyone in our facility knows that we have received your order and works toward the goal of shipping it to you as quickly as possible.

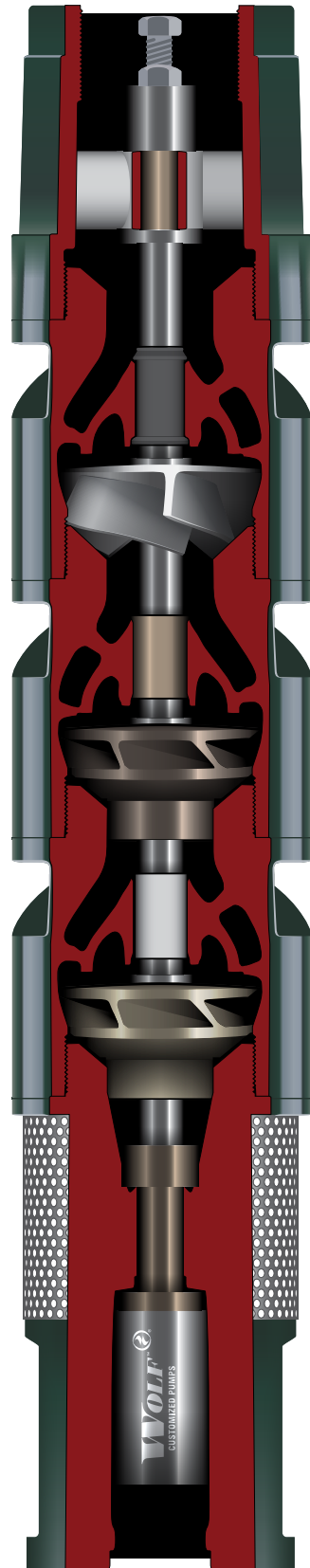
WE REMEMBER THAT OUR MARKET NEEDS CHANGE OVER TIME.

Wolf Pump's employees care about what you have to say about us and about our industry. The voice of a single customer is more powerful than a thousand consultants. If you have a need that is not currently being fulfilled, we relish the opportunity to innovate.

OUR CORE VALUES WILL ALWAYS BE ANCHORED BY INTEGRITY.

We expect our team to consistently do the right thing. A financially successful business that lacks integrity is not a success.

Submersible Pumps



- Discharge Adapter** - Ductile iron or 316SS on select models
Interchangeable sizes available with top bearing and thrust bolt assembly.
Discharge rings without bearings available on select models.
- Pump Shaft** - chrome plated C1045, 416 stainless steel, and ion plasma treated in stock.
Other specialty options are also available.
Turned, ground and polished. Meets or exceeds AWWA standards.
- Bushings**
Discharge adapter – bronze or Vesconite
Motor bracket – bronze or Vesconite
Intermediate - bronze, Buna-N rubber, Viton, Vesconite, 2-piece silicon carbide,
or Wolf proprietary Z bearing
- Intermediate Bowl** - cast iron standard, ductile iron or 316 stainless steel available on select models
Baked-on porcelain lining and custom coatings available.
Threaded bowl connections up to 8" sizes, and bolt together 10" bowls.
- Impeller** - bronze, 304 stainless steel, or 316 stainless steel
Anti-corrosive semi-open or enclosed design. Balanced to reduce vibration.
- Collet** - 416 or 316 stainless steel
Split taper provides a tight lock.
- Sand Collar** - bronze or 316 stainless steel
Restricts sand entry to motor bracket bushing.
- Motor Bracket** - Ductile iron or 316 stainless steel on select models
Fits NEMA standard motors. Custom motor adaptations available on request.
- Thrust Collar** - bronze UHMW
Provides up-thrust protection.
- Inlet Screen** - 316 stainless steel or 416 stainless steel
Limits entry of large objects into pump while allowing sufficient inflow of water.
- Motor Coupling** - 316 stainless steel or 416 stainless steel
Provides a non-corrosive connection between motor and pump shaft.
- Cable Guard** - 316 stainless steel or 416 stainless steel
Provides motor lead protection.
- Motor brackets and other custom options available.**

Bowl Design and Model Numbers

Bowl Model	Min Well ID (inches)	Capacities to (GPM)	Available Bowl and Impeller Materials		
			Cast Iron / Bronze Fitted	Cast Iron / Stainless Fitted	316SS / Stainless Fitted
4HO	5	125		X	
4MO	5	105		X	
5LL5V	6	175		X	
5LL8V	6	200		X	
5ML6V	6	120	X		
5MH6V	6	250	X	X	
5MH7V	6	250	X	X	
5MM6V	6	195	X	X	
5MM8V	6	195	X		
5HH7V	6	350		X	
5HX7V	6	550	X		
6LL6V	7	120	X		
6LM6V	7	195	X	X	X
6LM8V	7	220	X		
6LH6V	7	290	X	X	X
6LH7V	7	320	X	X	X
6LO	7	270	X	X	X
6MM8V	7	365	X	X	
6MO	7	390	X	X	
6HH7V	7	450	X	X	
7MH5V	8	640		X	
7MH7V	8	850		X	
8LL4V	9	500	X		
8LL8V	9	575	X	X	
8LM8V	9	625	X		
8MM5V	9	800	X	X	
8MM7V	9	1000	X	X	
10LL5V	11	750		X	X
10LL8V	11	950		X	X
10MM6V	11	1250		X	X
10MM8V	11	1600		X	X



4" - 10" Submersible Turbine RFQ Form

WP0055
0820
replaces
0420

P.O. Box 490 / 18014 N I-27 Office: (806) 298-2514
Abernathy, TX 79311-0490 E-mail: sales@wolfpumps.com

Company Name: _____
Contact Name: _____ Date: _____
Phone: _____
E-Mail: _____ New or Existing System

SUBMERSIBLE TURBINE DETAILS

Industry Sector: Residential Ag Irrigation Water Utility Mining Other
Application: Water Well Seawater Lift Dewatering Other

If "other" to either, please explain: _____

Well Diameter: _____ Special Notes: _____
Pumping Water Level: _____
Column Pipe Diameter: _____
Setting: _____
(total column pipe length)



Please check items you would like quoted:
 Pump End Motor Column Pipe Check Valve Cable Well Head Control Panel

PERFORMANCE DATA

Head Calculation:
Lift (Pumping Water Level) _____
Column friction losses _____
Check valve friction losses _____
Discharge head(ft) + _____
TDH (feet): _____

Required Capacity (USGPM): _____
OR
Maximize Existing HP Rating: _____
Motor: HP _____ Phase _____ Voltage _____ RPM _____
Materials: Standard Other
Controls: Constant Speed Variable Speed

Special Notes: _____

TOP OF THE LINE TESTING FACILITY



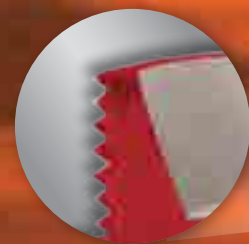
Quality Equipment. Quality People. Quality Results.

- Max Working Pressure 1500 psi
- Max Flow Rate 8000 GPM
- Max Horsepower 500 HP on VFD
- Max Voltage 6600
- Max Amps 1200
- 2 Axis Vibration Readings
- 65,000 Gallons of Reserve Water
- 2 - 60 in. Casings, 85 ft. deep
- 66 ft. tall Tower with 4 Ton Electric Crane
- Calibrated Electronic Flow Meters
- Air Operated Valves
- Yokagawa Motor Analyzer
- Custom Computer Program for Data
- Collection and Performance Curve Generation
- Remote View for Offsite Witness Testing

4" Pump Curve

pages 10-11

THE WOLF ADVANTAGE



Concealed, water-tight threads — Assemble with ease and prohibit water penetration



Robust casting — Up to 23% heavier wall thickness than competitors



Smooth, high-flow bowl — Up to 12% larger internal diameter than bolt-together bowls



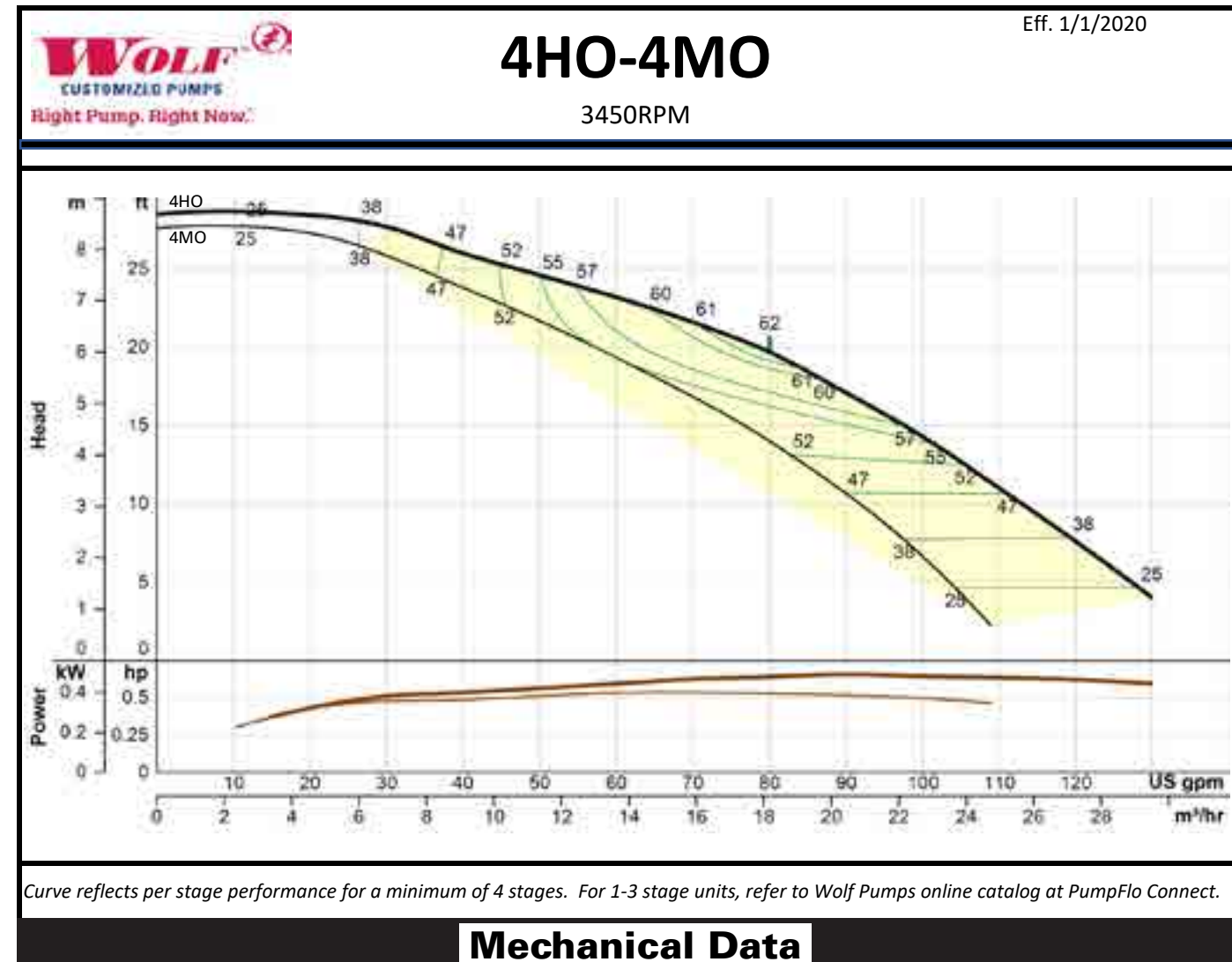
HIGH EFFICIENCY BOWL DESIGN —

PROVIDES MORE FLOW WITH LESS HORSEPOWER

- Designed for quick assembly and field repairability.
- Extends the life of your pump even in the harshest well conditions.
- 4, 5, 6, 7 & 8 in. sizes available.
- Available in cast iron, glass-lined or ductile iron.

THAT'S THE RIGHT SOLUTION, RIGHT WHEN YOU NEED IT.

To find the right pump for your application, see our Sizing Tool at WolfPumps.com, call (800) 886-2606, or email sales@wolfpumps.com



5" Pump Curve

pages 12-21

**SMALL,
BUT MIGHTY.**



WOLF 5HX SERIES SUBMERSIBLES

DESIGNED TO FIT IN 6" CASING (PVC OR STEEL)

- Delivers 600 GPM — A small bodied pump with big power
- Multiple bearing and shaft options
- Threaded bowl design for quick assembly
- In stock, and readily available

To find the right pump for your application,
see our Sizing Tool at WolfPumps.com,
call (800) 886-2606
or email info@WolfPumps.com



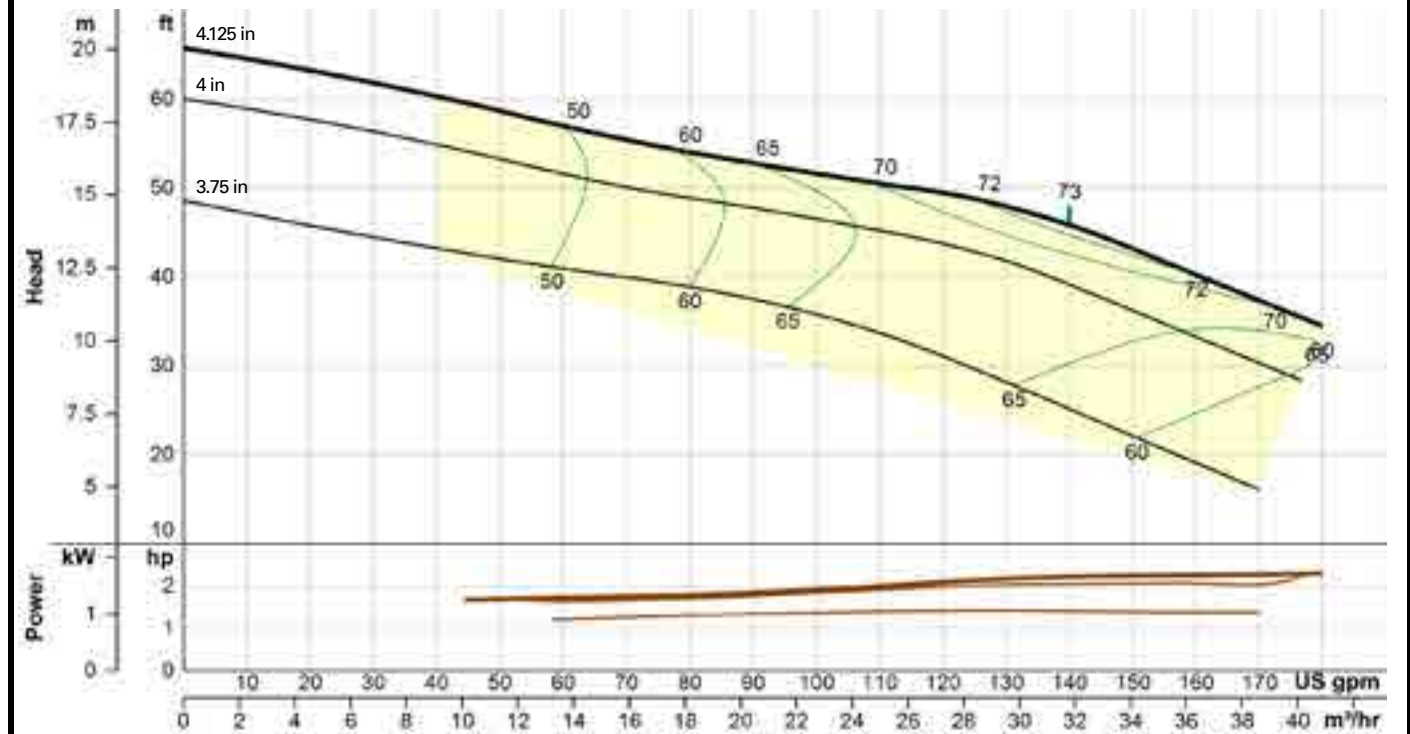
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Eff. 1/1/2020



5LL5V

3450RPM



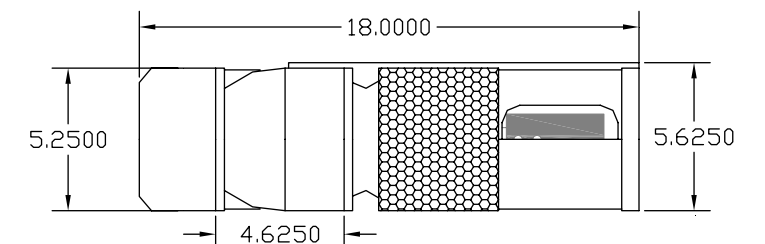
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	4.125"		4.0"		3.75"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
110	50.5	2.1	45.3	1.9	33.8	1.4
130	47.8	2.2	41.8	2.1	28.3	1.5
140	46	2.3	39	2.1	25.3	1.5
160	40.3	2.3	33.3	2.2	19.1	1.4

Mechanical Data

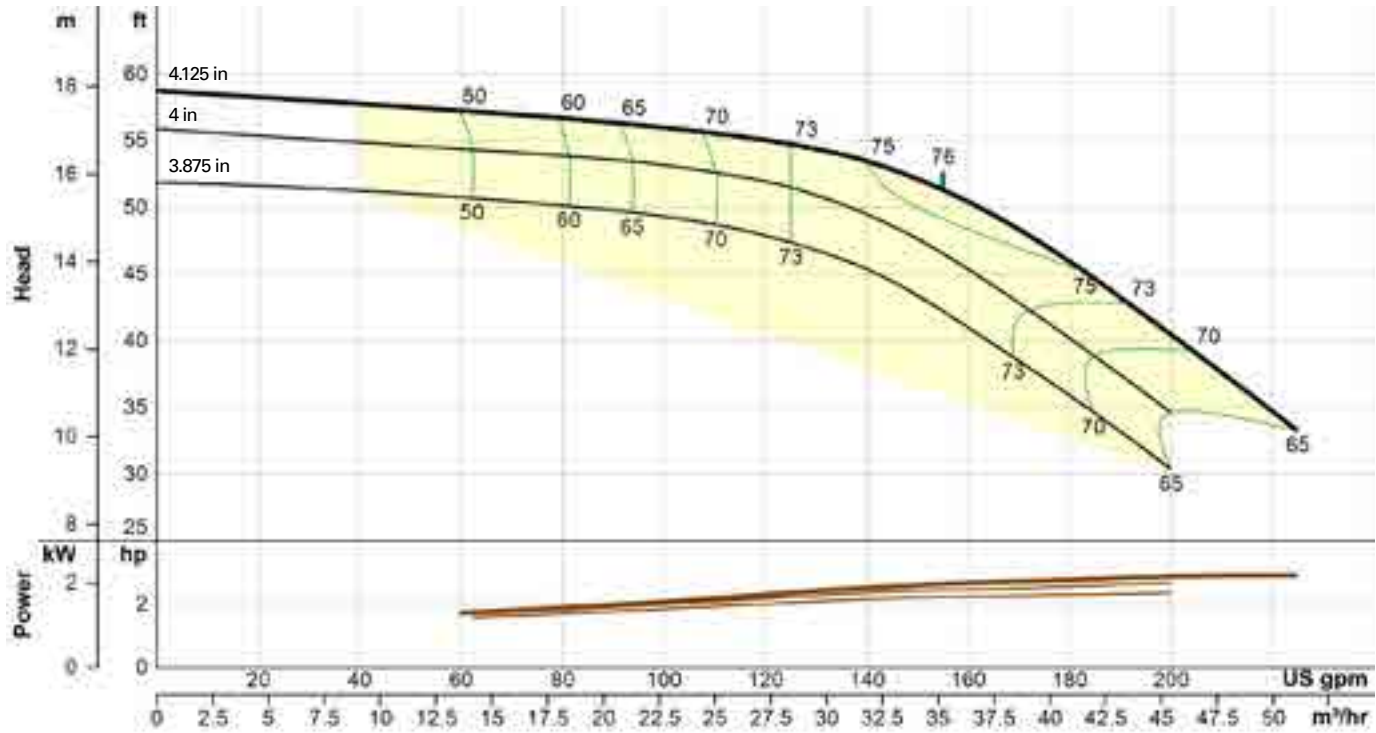
Bowl Shaft Diameter (in)	0.875	Max Sphere Size (in)	0.375
Disch Sizes Available (in)	3" F - 4" M	Impeller Eye Area (square inches)	3.52
Motor Sizes Available (in)	4, 6	Impeller Type	enclosed
K factor	2.3	Bowl Pressure Limits (psig)	533
Runout NPSHr (ft)	8		
1 stg weight (lbs)	50		
Add stage weight (lbs)	14		
Impeller weight (lbs)	1.7		
Bowl Diameter (in)	5.25		
Max Diameter w/ Cable Guard (in)	5.625		
1 stg length (in)	18		
Add stage length (in)	4.625		



5LL8V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

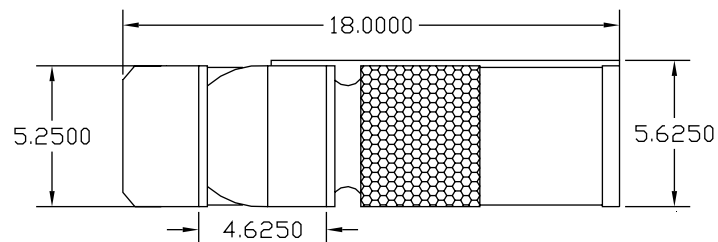
GPM	4.125"		4.0"		3.875"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
140	53.5	2.6	49.2	2.4	45.5	2.2
145	52.8	2.6	48.8	2.5	44.2	2.2
155	51.3	2.7	46.3	2.5	42	2.3
170	48	2.8	42.8	2.6	39	2.3

Mechanical Data

Bowl Shaft Diameter (in) 0.875
 Disch Sizes Available (in) 3" F - 4"M
 Motor Sizes Available (in) 4, 6
 K factor 2.4
 Runout NPSHr (ft) 12

Max Sphere Size (in) 0.375
 Impeller Eye Area (square inches) 2.81
 Impeller Type enclosed
 Bowl Pressure Limits (psig) 533

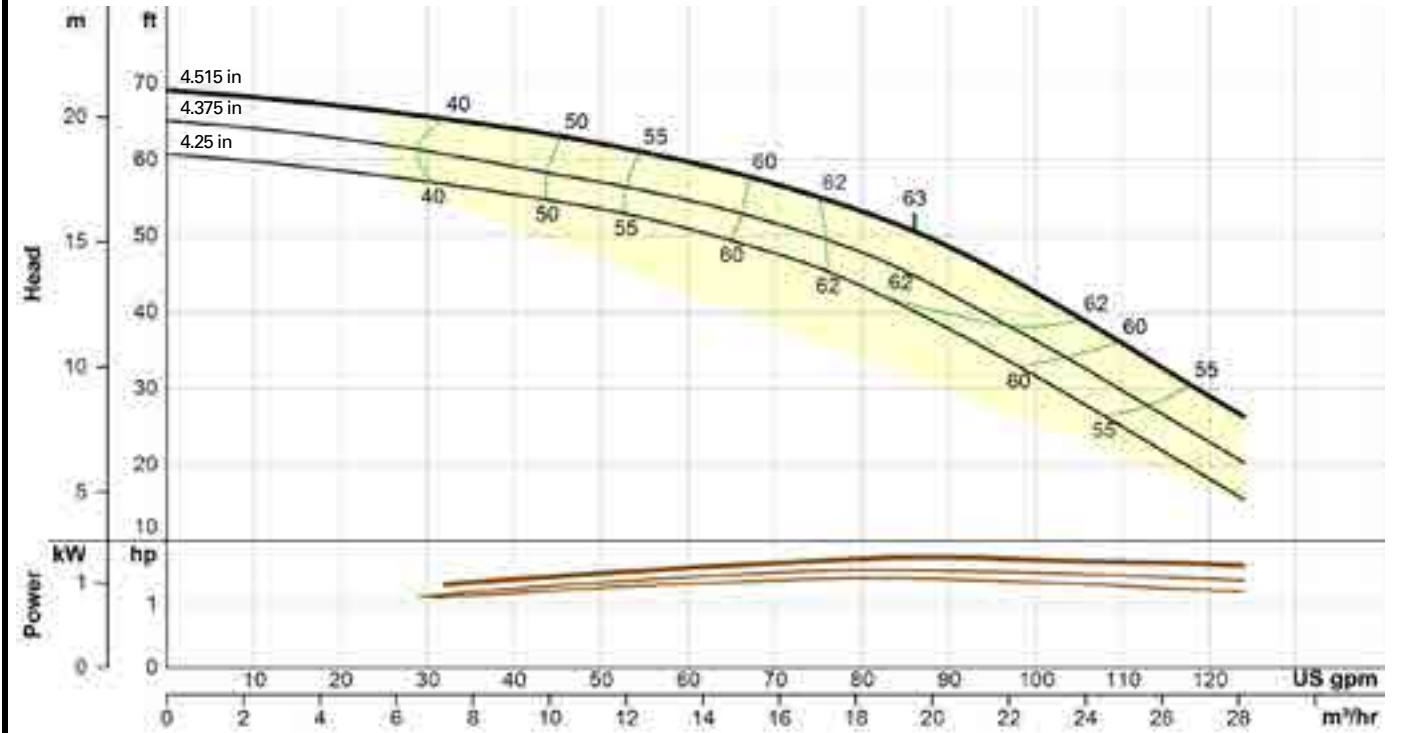
1 stg weight (lbs) 50
 Add stage weight (lbs) 14
 Impeller weight (lbs) 1.75
 Bowl Diameter (in) 5.25
 Max Diameter w/ Cable Guard (in) 5.625
 1 stg length (in) 18
 Add stage length (in) 4.625



5ML6V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

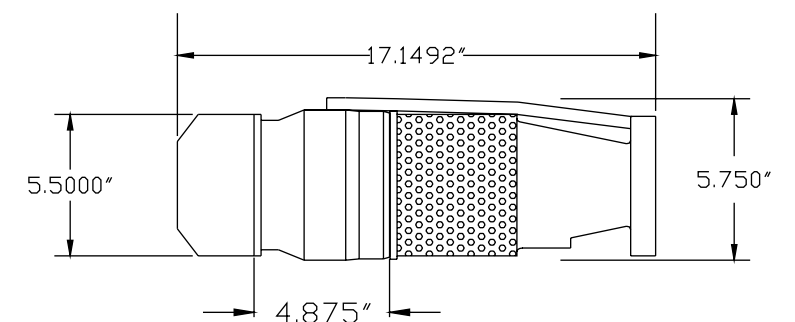
GPM	4.515"		4.375"		4.25"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
60	59.6	1.72	54.5	1.56	50.8	1.45
75	55.1	1.83	49.8	1.66	45.7	1.52
87	50	1.89	43.9	1.66	39.4	1.52
100	42.2	1.84	36.2	1.63	31.6	1.47

Mechanical Data

Bowl Shaft Diameter (in) 1
 Disch Sizes Available (in) 3" F - 4"Mx
 Motor Sizes Available (in) 4, 6x
 K factor 2.3
 Runout NPSHr (ft) 20

Max Sphere Size (in) 0.24
 Impeller Eye Area (square inches) 4.34
 Impeller Type enclosed
 Bowl Pressure Limits (psig) 560

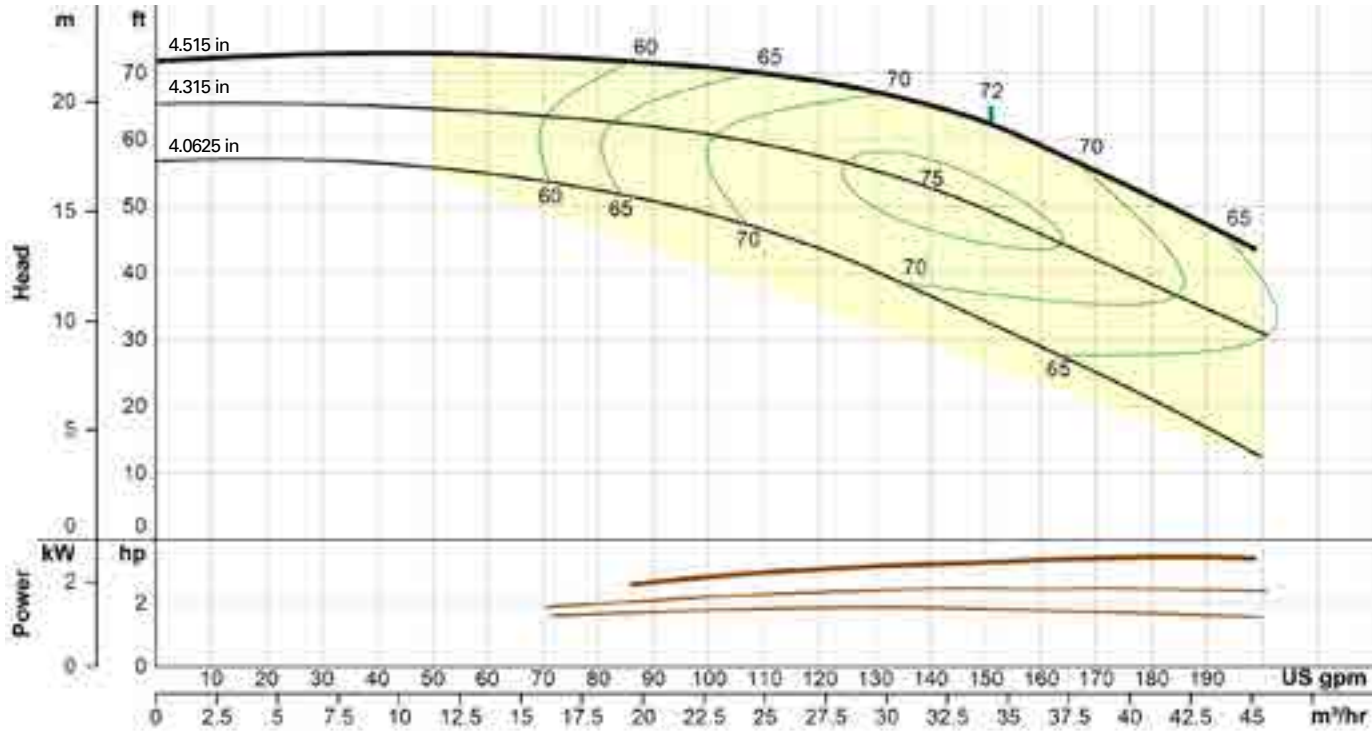
1 stg weight (lbs) 49
 Add stage weight (lbs) 16
 Impeller weight (lbs) 2.2
 Bowl Diameter (in) 5.5
 Max Diameter w/ Cable Guard (in) 5.75
 1 stg length (in) 17.15
 Add stage length (in) 4.875



5MM6V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

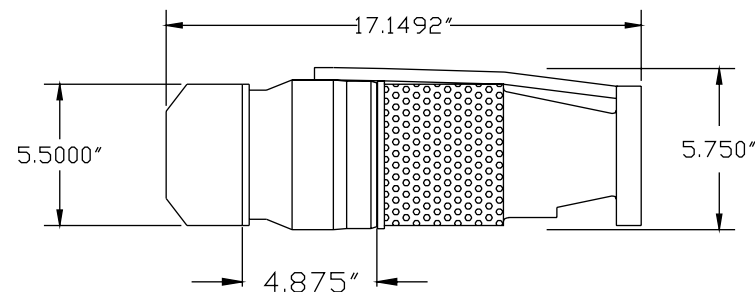
GPM	4.515"		4.315"		4.0625"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
125	67.8	3.2	57	2.4	42	1.9
140	65	3.3	53	2.5	37	1.9
150	63	3.4	49.3	2.5	33	1.9
180	51.3	3.5	38.3	2.5	21	1.7

Mechanical Data

Bowl Shaft Diameter (in) 0.875
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 4, 6
K factor 2.3
Runout NPSHr (ft) 12

Max Sphere Size (in) 0.41
Impeller Eye Area (square inches) 3.93
Impeller Type enclosed
Bowl Pressure Limits (psig) 560

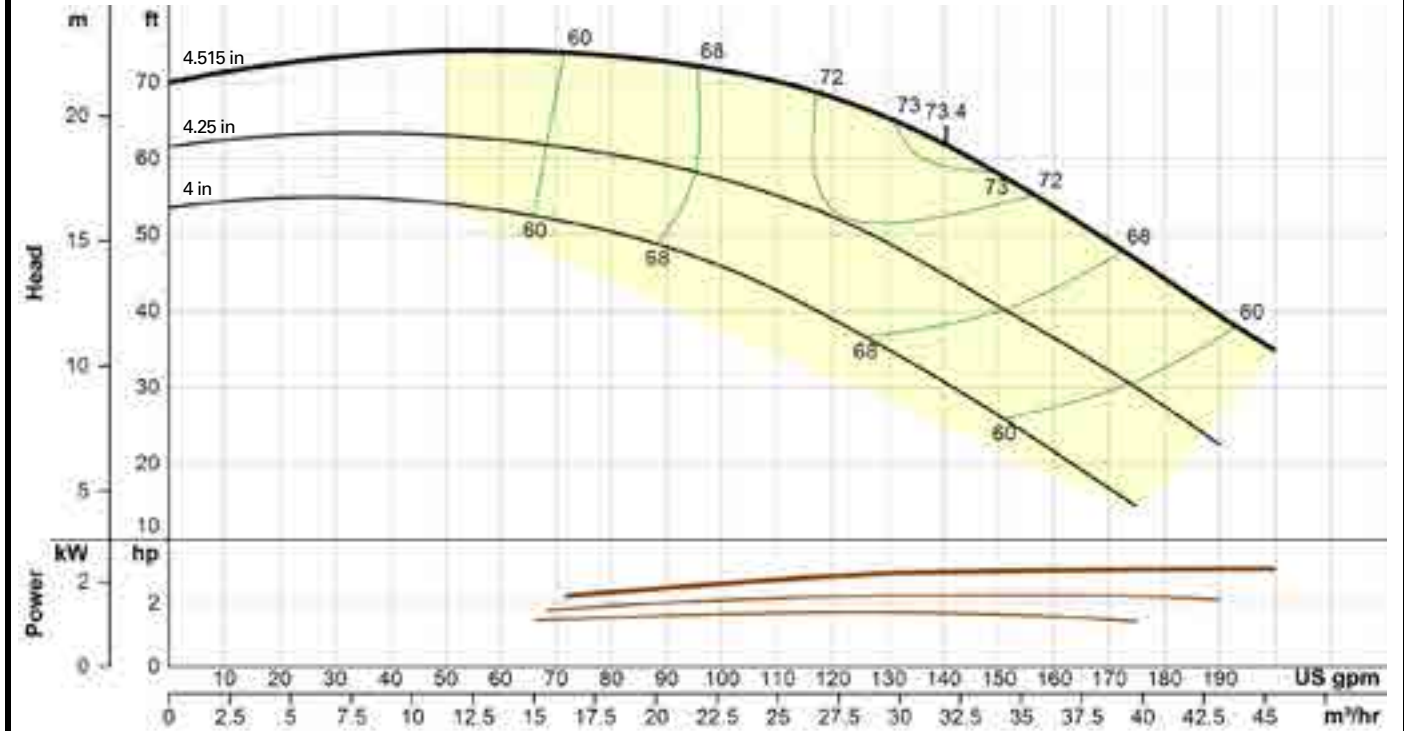
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2.2
Bowl Diameter (in) 5.5
Max Diameter w/ Cable Guard (in) 5.75
1 stg length (in) 17.15
Add stage length (in) 4.875



5MM8V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

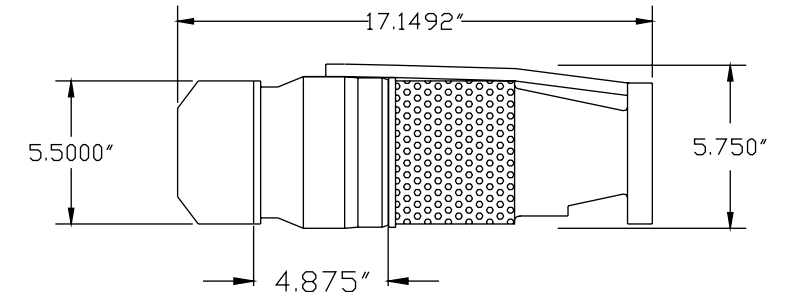
GPM	4.515"		4.25"		4.0"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
100	72	2.7	57.2	2.2	45.8	1.7
120	68	2.9	52.3	2.3	38.8	1.8
140	62	3.1	44.5	2.3	30.5	1.7
160	54	3.1	36.5	2.3	21.6	1.6

Mechanical Data

Bowl Shaft Diameter (in) 0.875
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 4, 6
K factor 2.3
Runout NPSHr (ft) 14

Max Sphere Size (in) 0.41
Impeller Eye Area (square inches) 3.93
Impeller Type enclosed
Bowl Pressure Limits (psig) 560

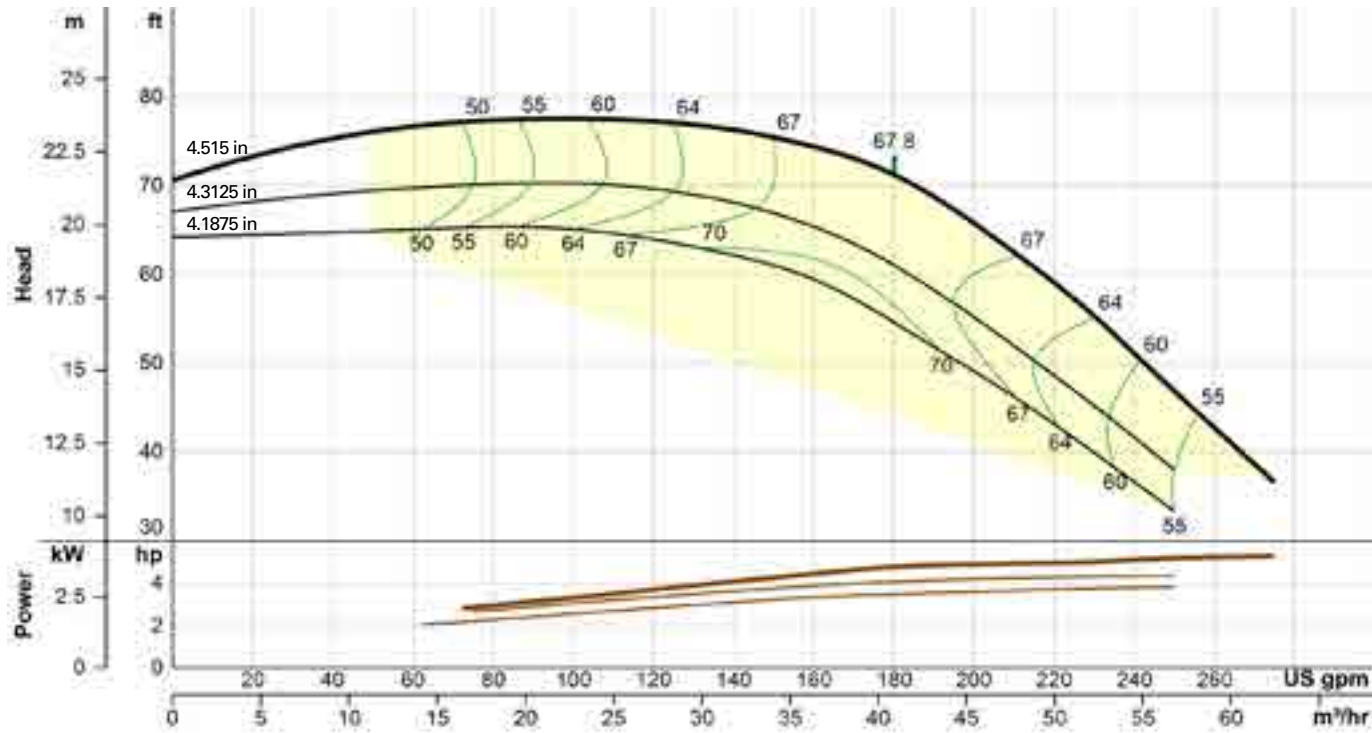
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2.5
Bowl Diameter (in) 5.5
Max Diameter w/ Cable Guard (in) 5.75
1 stg length (in) 17.15
Add stage length (in) 4.875



5MH6V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

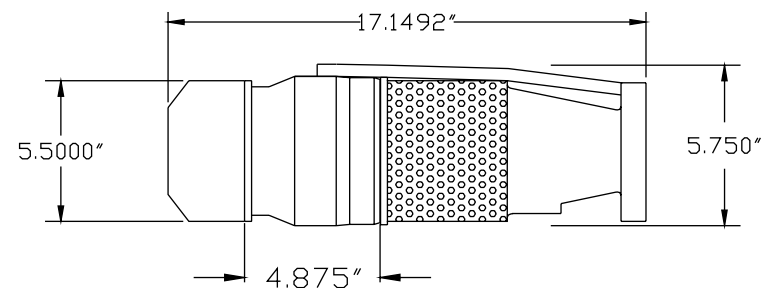
GPM	4.515"		4.3125"		4.1875"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
160	74	4.6	65.2	4	59.5	3.4
170	72.8	4.8	63.5	4.1	57	3.5
180	71.3	4.9	60.8	4.2	54.5	3.6
200	65.5	5.1	55.3	4.3	49	3.7

Mechanical Data

Bowl Shaft Diameter (in) 0.875
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 6
K factor 2.3
Runout NPSHr (ft) 14

Max Sphere Size (in) 0.55
Impeller Eye Area (square inches) 3.87
Impeller Type enclosed
Bowl Pressure Limits (psig) 560

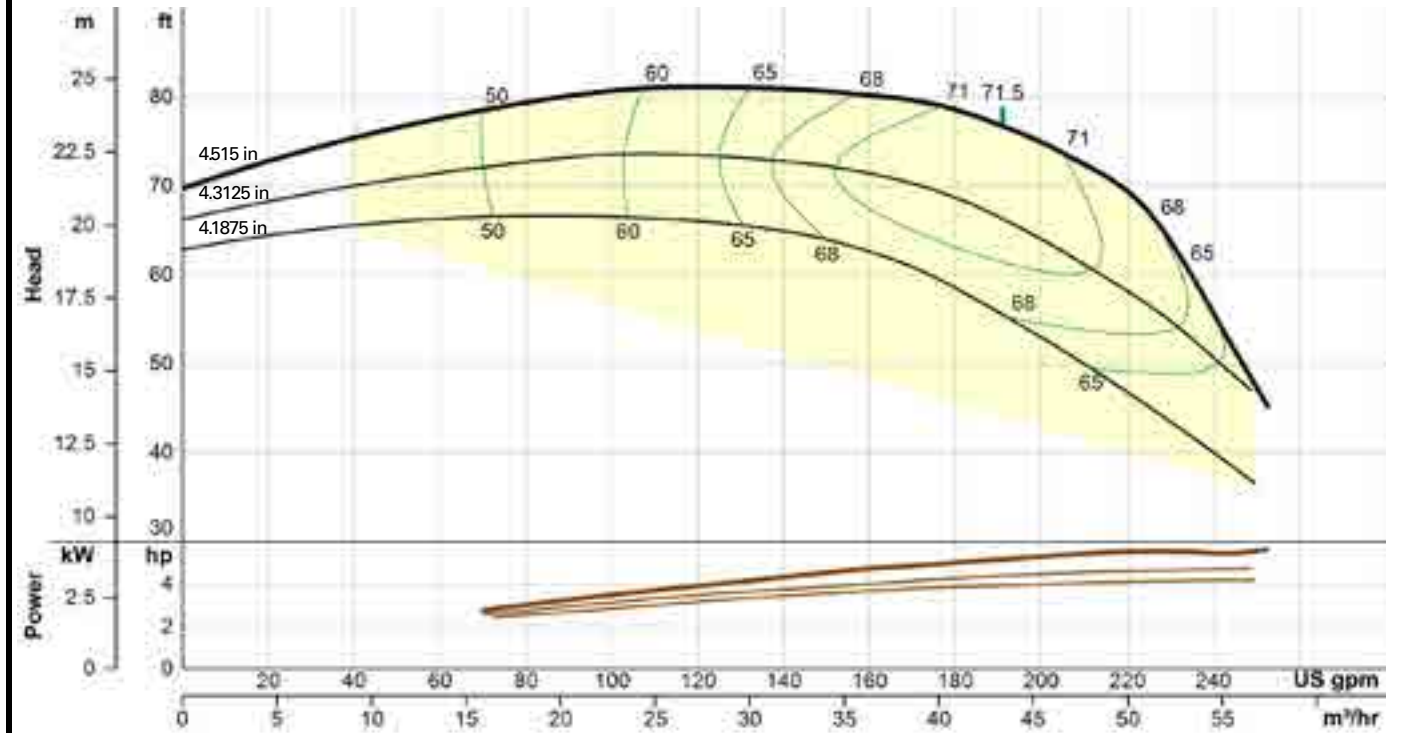
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2
Bowl Diameter (in) 5.5
Max Diameter w/ Cable Guard (in) 5.75
1 stg length (in) 17.15
Add stage length (in) 4.875



5MH7V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

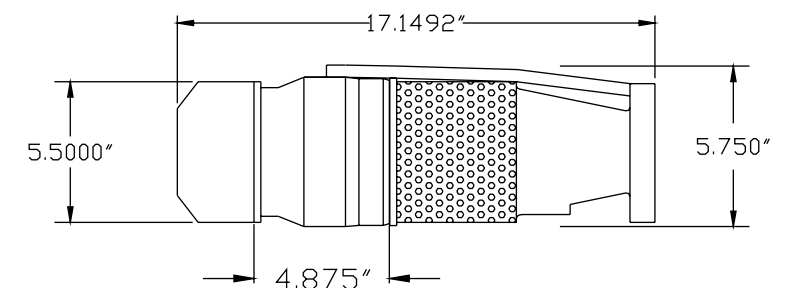
GPM	4.515"		4.3125"		4.1875"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
170	79.5	5	70	4.3	60.8	3.9
180	78.5	5.2	68.5	4.4	58.5	4
190	77	5.3	66	4.5	55.8	4.1
200	74.8	5.5	63.5	4.6	53	4.1

Mechanical Data

Bowl Shaft Diameter (in) 0.875
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 6
K factor 2.3
Runout NPSHr (ft) 14

Max Sphere Size (in) 0.55
Impeller Eye Area (square inches) 3.87
Impeller Type enclosed
Bowl Pressure Limits (psig) 560

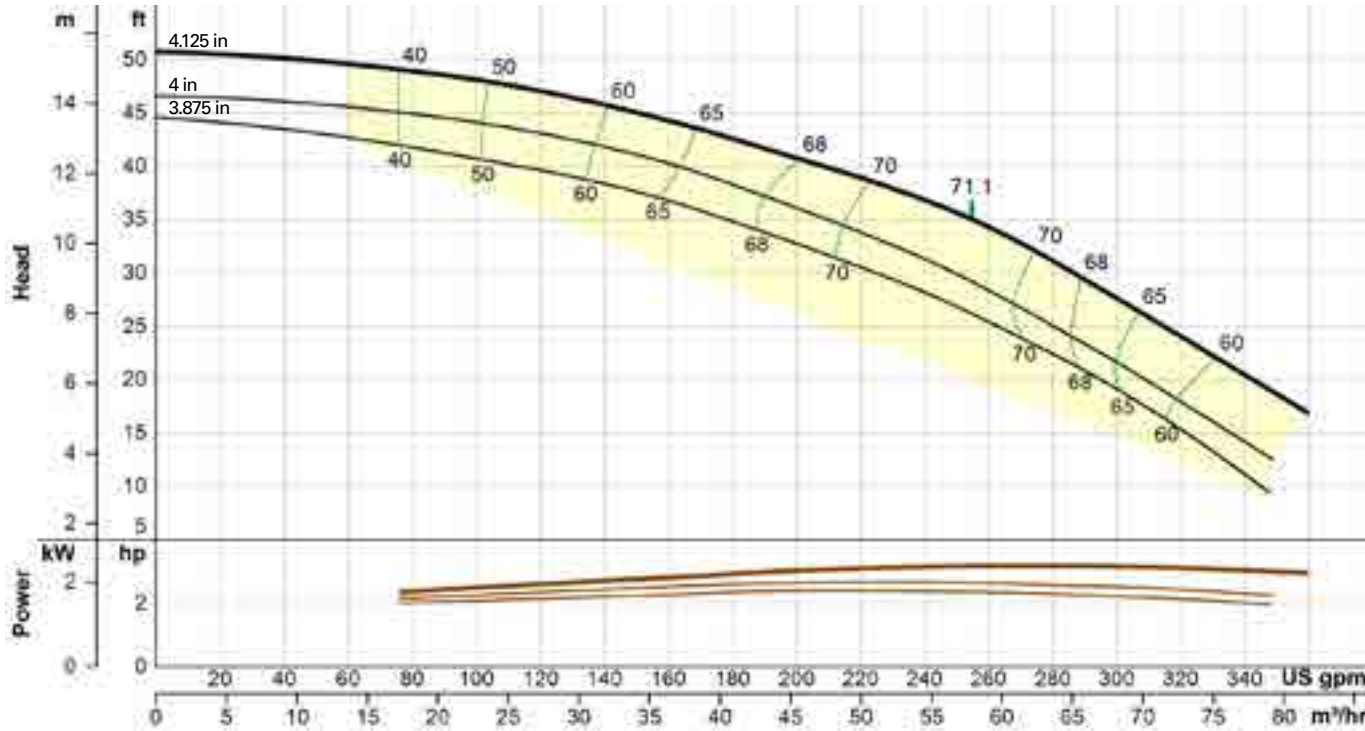
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2.3
Bowl Diameter (in) 5.5
Max Diameter w/ Cable Guard (in) 5.75
1 stg length (in) 17.15
Add stage length (in) 4.875



5HH7V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

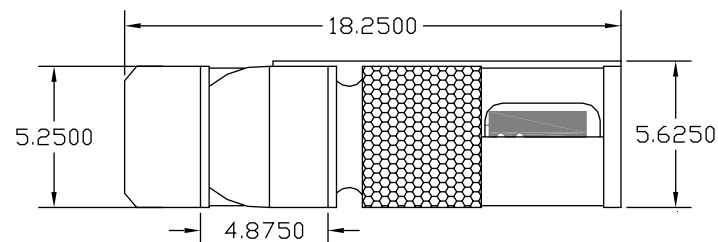
GPM	4.125"		4.0"		3.875"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
240	36.8	3.2	31.3	2.8	28.3	2.4
245	36.3	3.3	30.8	2.8	27.5	2.4
255	35	3.3	29	2.7	26	2.4
275	32	3.3	26	2.7	23.2	2.4

Mechanical Data

Bowl Shaft Diameter (in) 0.875
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 4, 6
K factor 2.5
Runout NPSHr (ft) 28

Max Sphere Size (in) 0.5
Impeller Eye Area (square inches) 7.16
Impeller Type enclosed
Bowl Pressure Limits (psig) 533

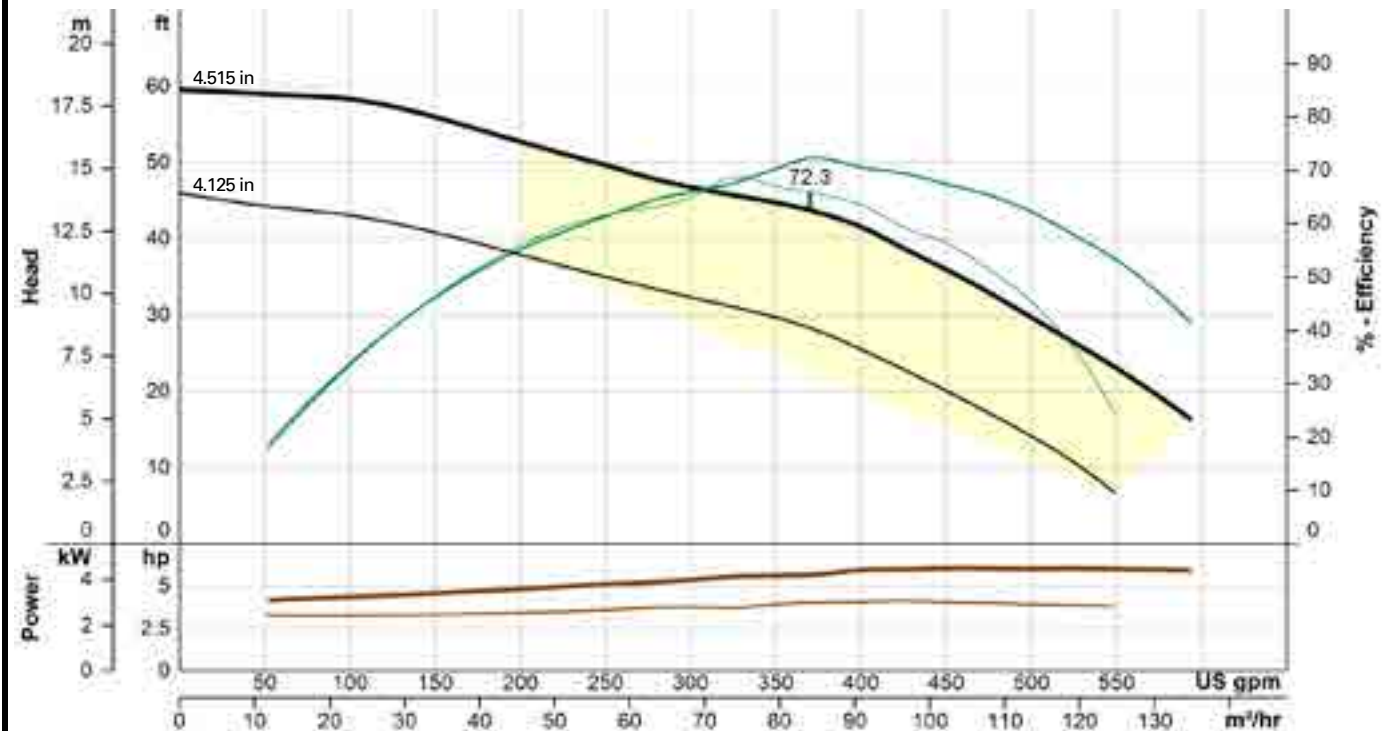
1 stg weight (lbs) 50
Add stage weight (lbs) 14
Impeller weight (lbs) 1.95
Bowl Diameter (in) 5.25
Max Diameter w/ Cable Guard (in) 5.625
1 stg length (in) 18.25
Add stage length (in) 4.875



5HX7V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

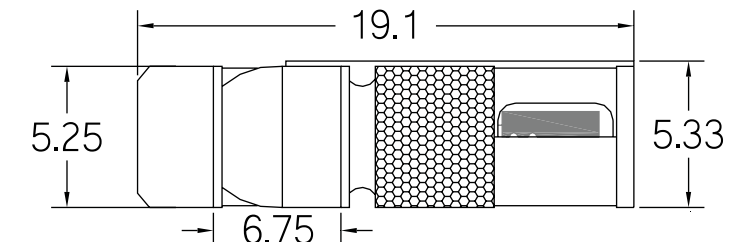
GPM	4.515"		4.3125"		4.125"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
330	46.5	5.8	38.8	4.8	31.5	3.9
350	45.7	5.9	37.8	4.8	30.5	4.1
375	44.5	6	35.8	5	28.8	4.2
425	40	6.3	31	5.2	23.8	4.3

Mechanical Data

Bowl Shaft Diameter (in) 1
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 6
K factor 30
Runout NPSHr (ft) 30

Max Sphere Size (in) 0.425
Impeller Eye Area (square inches) 6.85
Impeller Type enclosed
Bowl Pressure Limits (psig) 560

1 stg weight (lbs) 52
Add stage weight (lbs) 20
Impeller weight (lbs) 3
Bowl Diameter (in) 5.2
Max Diameter w/ Cable Guard (in) 5.33
1 stg length (in) 19.1
Add stage length (in) 6.75



6" Pump Curve

pages 22-31

6-INCH SUBMERSIBLE TURBINE STAINLESS STEEL



6L SERIES

Each pump is personally built by our expert craftsmen and then passed through our world-class testing facility to ensure your exact specifications are met.

- Produces up to 320 GPM
- Open or closed stainless steel impeller
- Durable in high-corrosive and harsh pumping environments
- Perfect for municipal, off-shore, chemical and mining applications

In most cases, Wolf can take an order and ship within 48 hours, truly delivering on our promise: Right Pump. Right Now.



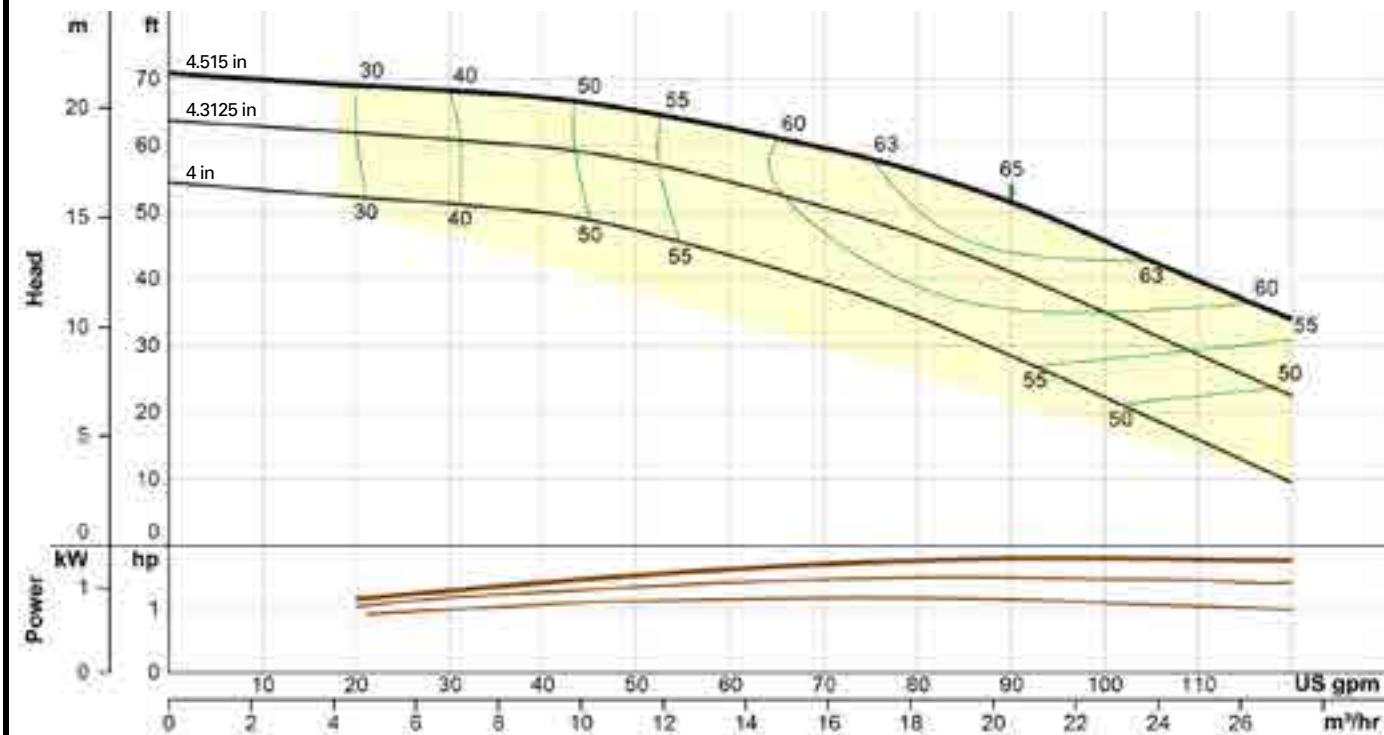
See our Pump Selector at:
www.wolfpumps.com



6LL6V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

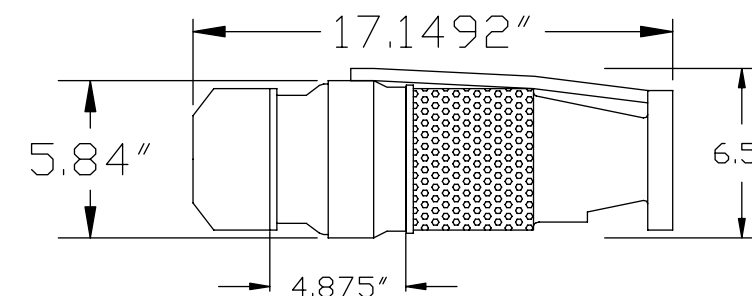
TABLED PERFORMANCE DATA

GPM	4.515"		4.3125"		4.0"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
78	56.8	1.8	47.3	1.5	35.5	1.2
85	53.8	1.8	43.8	1.6	31.3	1.2
90	51.5	1.9	40.8	1.5	28.5	1.2
100	45.5	1.9	35	1.5	22.3	1.1

Mechanical Data

- Bowl Shaft Diameter (in) 1
- Disch Sizes Available (in) 3" F - 4"M
- Motor Sizes Available (in) 6, 8
- K factor 2.3
- Runout NPSHr (ft) 10
- 1 stg weight (lbs) 49
- Add stage weight (lbs) 16
- Impeller weight (lbs) 2.2
- Bowl Diameter (in) 5.84
- Max Diameter w/ Cable Guard (in) 6.5
- 1 stg length (in) 17.15
- Add stage length (in) 4.875

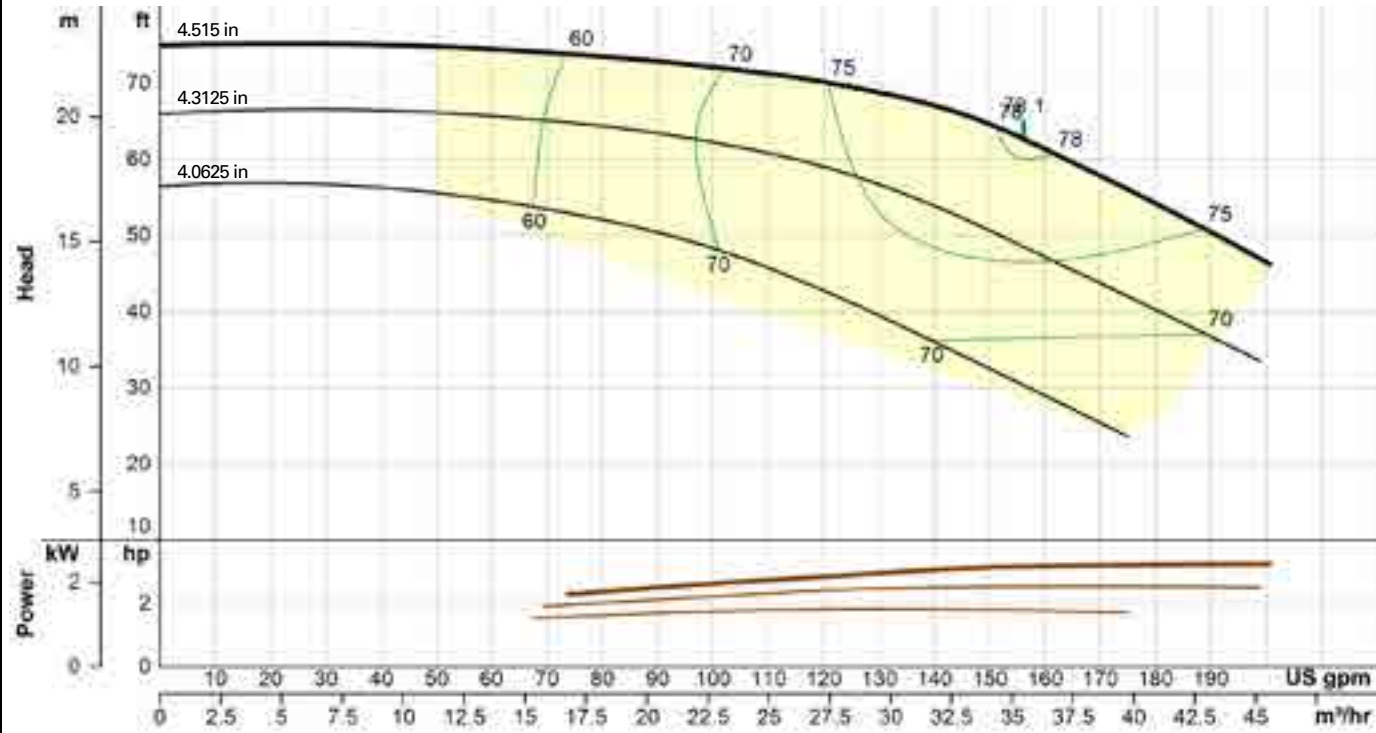
- Max Sphere Size (in) 0.24
- Impeller Eye Area (square inches) 4.34
- Impeller Type enclosed
- Bowl Pressure Limits (psig) 560



6LM6V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

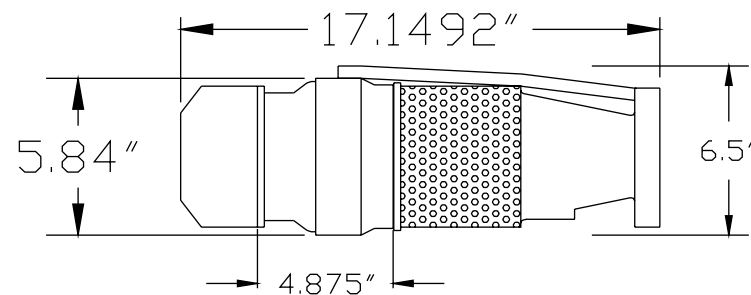
GPM	4.515"		4.3125"		4.0625"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
125	69.3	3	58	2.5	41.3	1.9
140	66.5	3.1	54	2.6	36	1.9
155	63	3.2	49	2.6	30.8	1.8
165	59.5	3.3	45.5	2.6	27.3	1.8

Mechanical Data

Bowl Shaft Diameter (in) 1
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 6, 8
K factor 2.3
Runout NPSHr (ft) 20

Max Sphere Size (in) 0.41
Impeller Eye Area (square inches) 3.92
Impeller Type enclosed
Bowl Pressure Limits (psig) 560

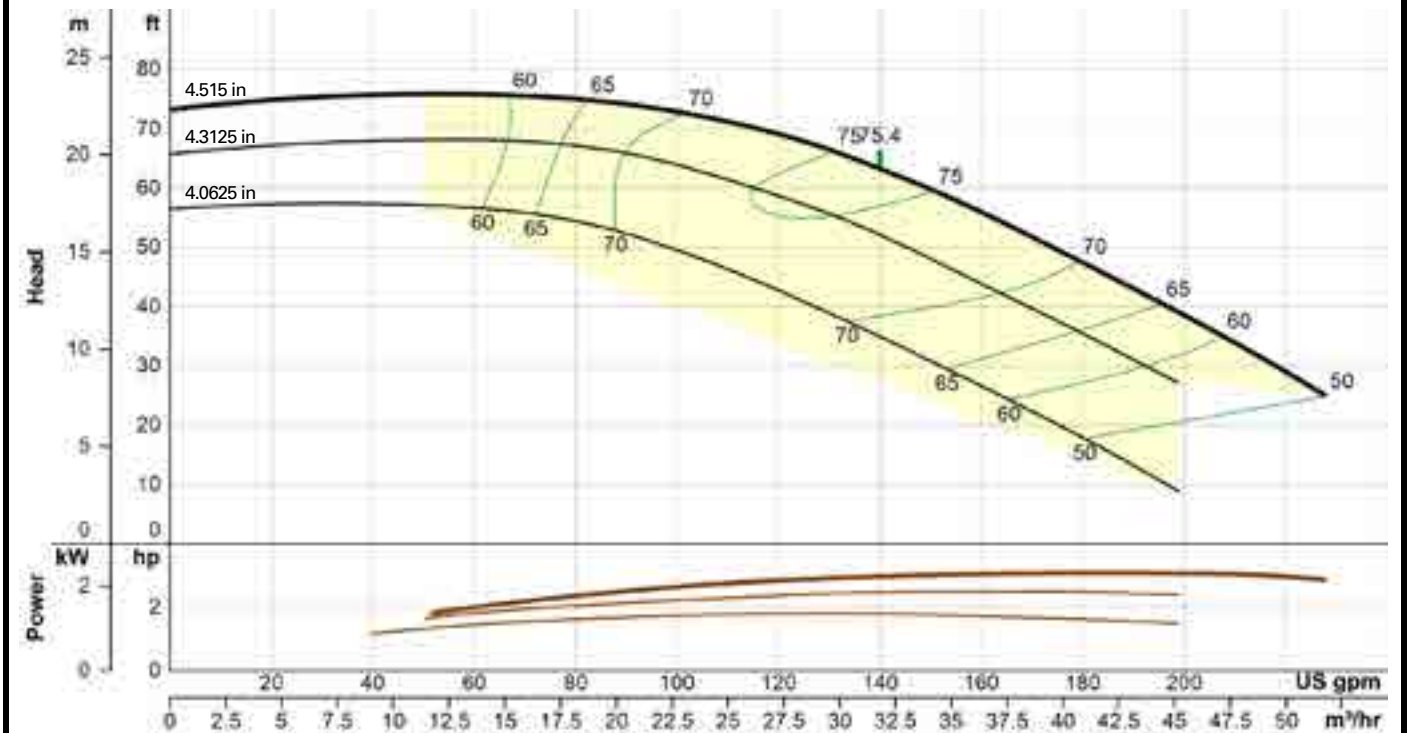
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2.2
Bowl Diameter (in) 5.84
Max Diameter w/ Cable Guard (in) 6.5
1 stg length (in) 17.15
Add stage length (in) 4.875



6LM8V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

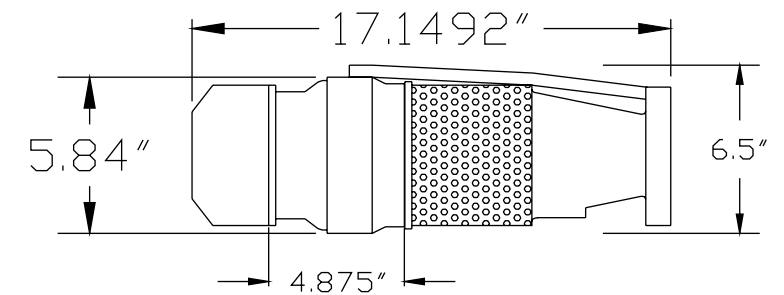
GPM	4.515"		4.3125"		4.0625"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
100	72.8	2.7	63.5	2.3	49.5	1.8
125	67.5	3	57.3	2.5	40.8	1.8
140	63.3	3.1	51.8	2.5	35	1.8
160	55.8	3.1	43.8	2.6	26.8	1.8

Mechanical Data

Bowl Shaft Diameter (in) 1
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 6, 8
K factor 2.3
Runout NPSHr (ft) 30

Max Sphere Size (in) 0.41
Impeller Eye Area (square inches) 3.92
Impeller Type enclosed
Bowl Pressure Limits (psig) 560

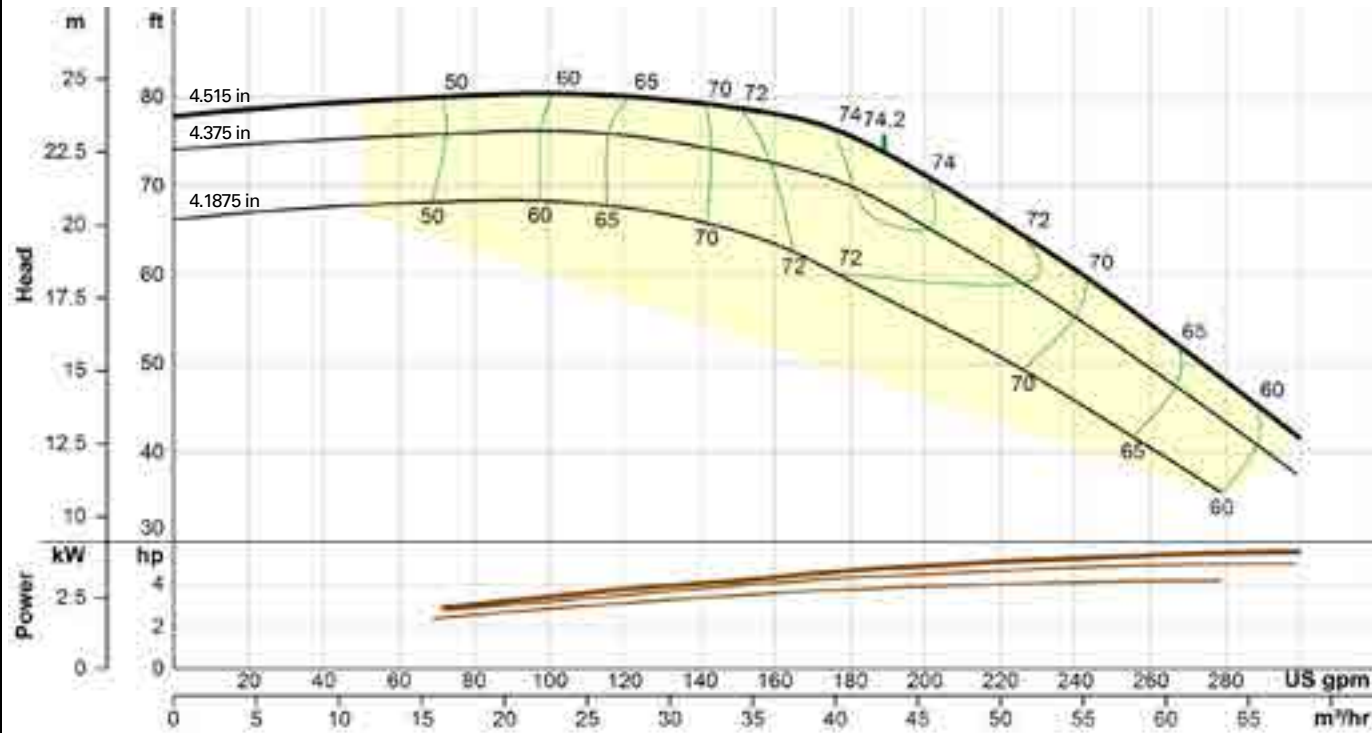
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2.5
Bowl Diameter (in) 5.84
Max Diameter w/ Cable Guard (in) 6.5
1 stg length (in) 17.15
Add stage length (in) 4.875



6LH6V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

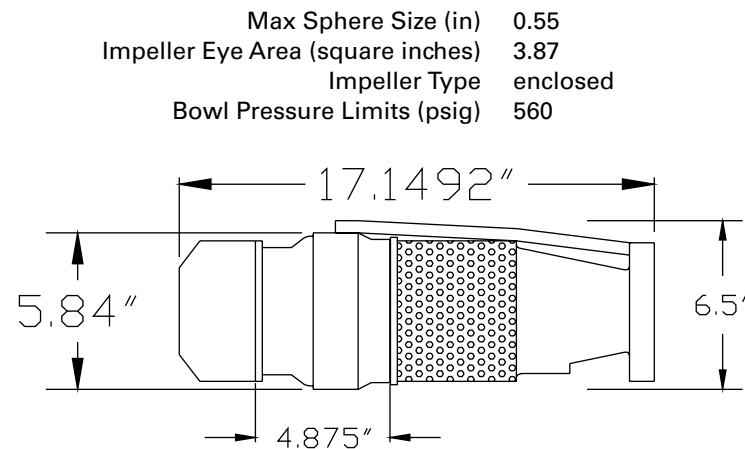
TABLED PERFORMANCE DATA

GPM	4.515"		4.3125"		4.1875"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
170	77	4.6	71.3	4.3	61.5	3.8
180	75.5	4.8	70	4.4	59.5	3.9
190	73	4.9	68	4.5	57.3	3.9
210	68.8	5.1	63	4.7	52.8	4

Mechanical Data

Bowl Shaft Diameter (in) 1
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 6, 8
K factor 2.3
Runout NPSHr (ft) 30

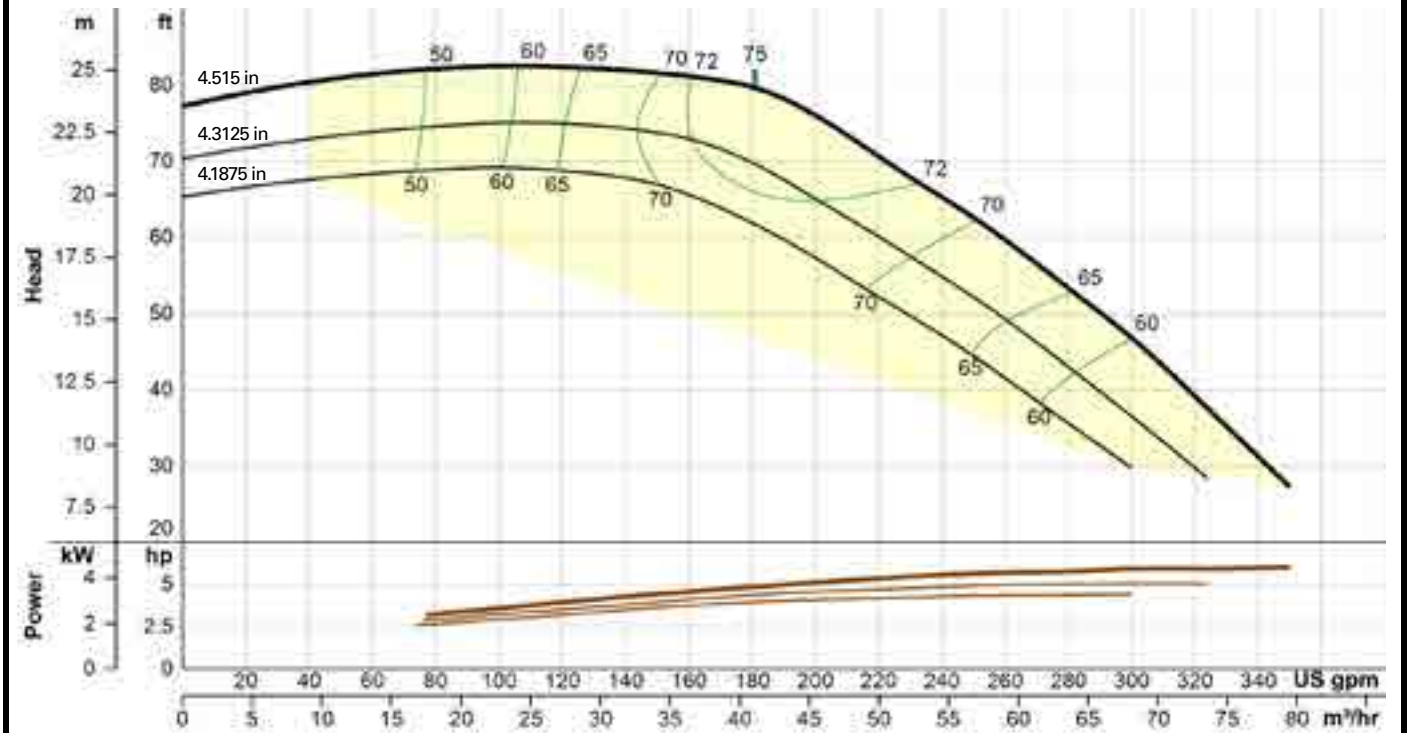
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2
Bowl Diameter (in) 5.84
Max Diameter w/ Cable Guard (in) 6.5
1 stg length (in) 17.15
Add stage length (in) 4.875



6LH7V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

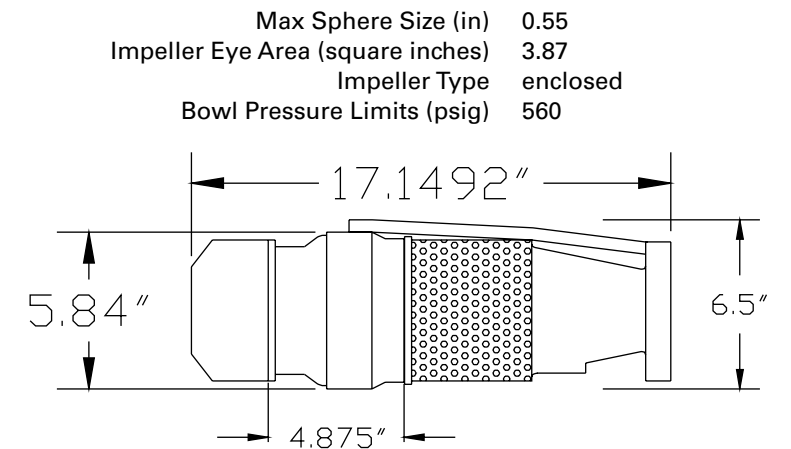
TABLED PERFORMANCE DATA

GPM	4.515"		4.3125"		4.1875"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
170	80.5	4.8	71.5	4.4	63.5	4
180	79.8	5	69.8	4.5	61.8	4.1
220	70.3	5.5	60	4.9	52.3	4.3
260	59.5	5.9	49.3	5.1	41.5	4.5

Mechanical Data

Bowl Shaft Diameter (in) 1
Disch Sizes Available (in) 3" F - 4"M
Motor Sizes Available (in) 6, 8
K factor 2.3
Runout NPSHr (ft) 33

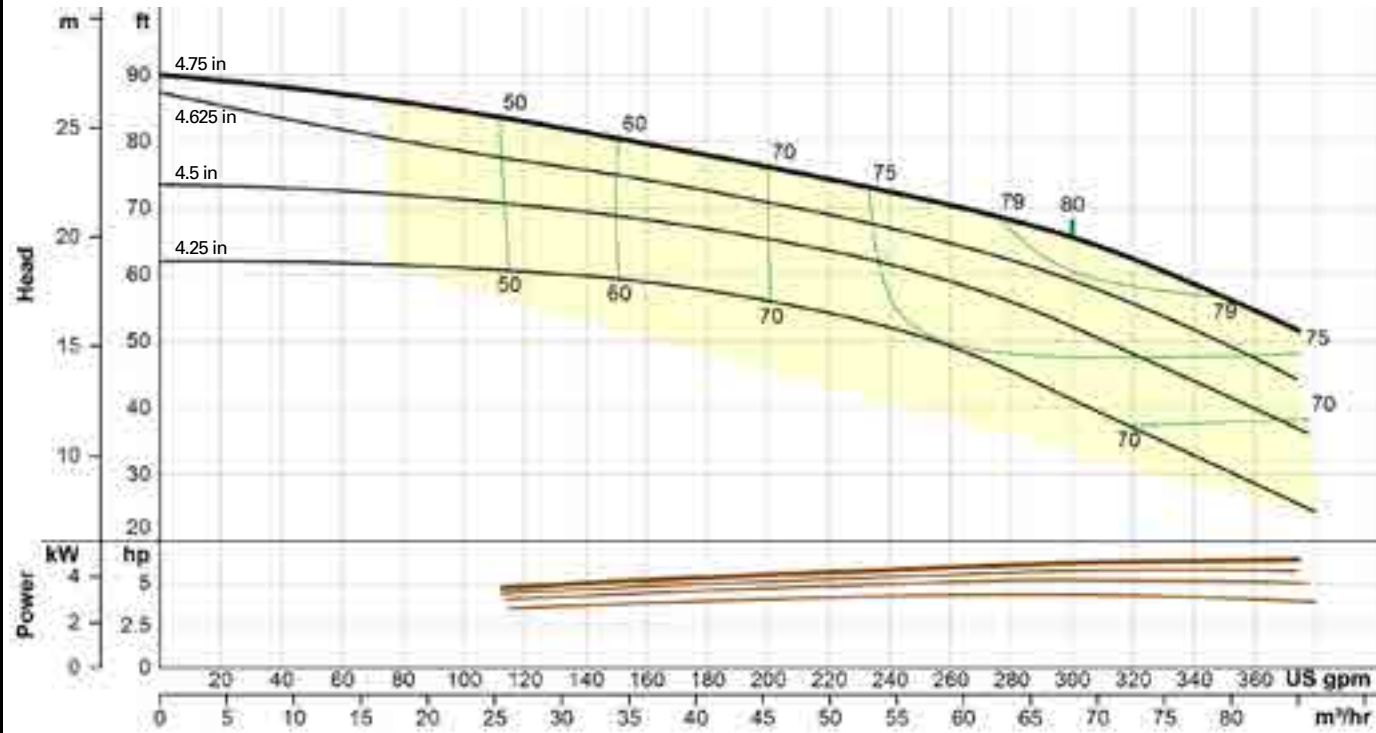
1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 2.3
Bowl Diameter (in) 5.84
Max Diameter w/ Cable Guard (in) 6.5
1 stg length (in) 17.15
Add stage length (in) 4.875



6MM8V

3450RPM

Eff. 1/1/2020



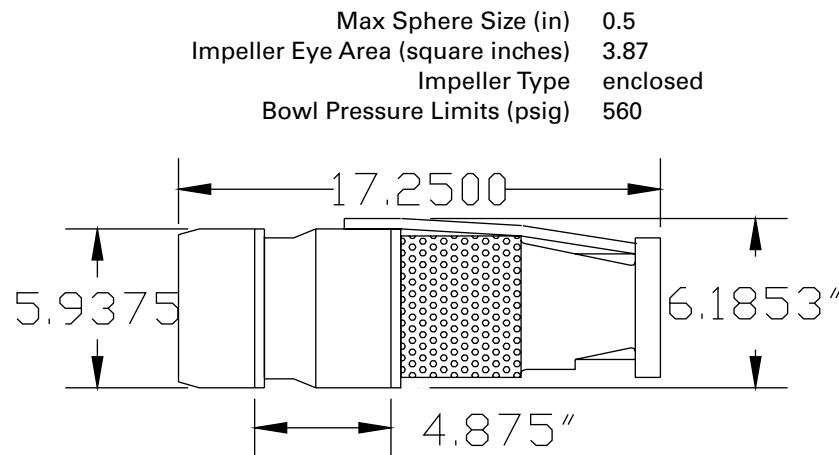
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	4.75"		4.5"		4.25"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
255	70.8	6	59.3	5.1	50	4.4
280	68.3	6.2	56	5.3	45	4.4
300	65.5	6.3	52	5.3	41	4.4
320	62	6.4	48	5.2	37	4.4

Mechanical Data

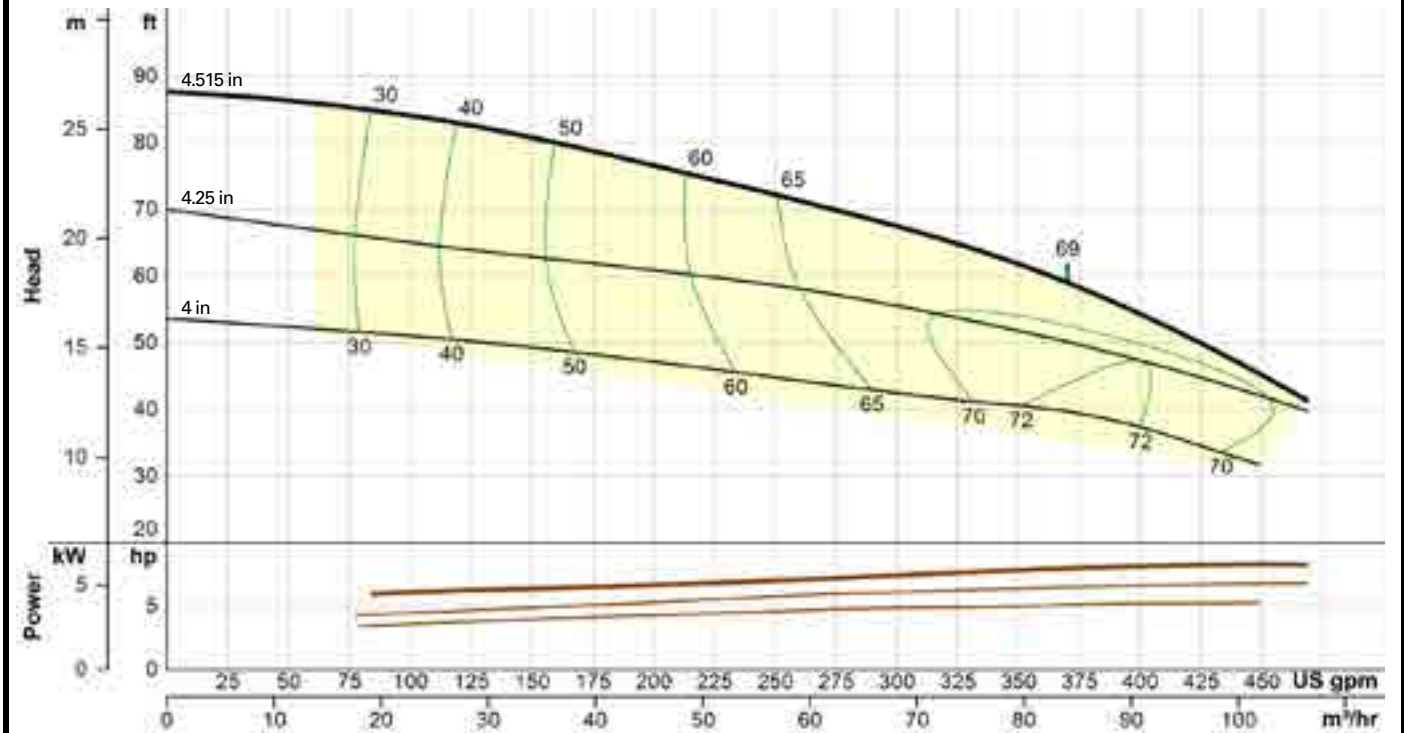
- Bowl Shaft Diameter (in) 1
- Disch Sizes Available (in) 4" F
- Motor Sizes Available (in) 6, 8
- K factor
- Runout NPSHr (ft) 32
- 1 stg weight (lbs) 56
- Add stage weight (lbs) 19
- Impeller weight (lbs) 2.5
- Bowl Diameter (in) 5.93
- Max Diameter w/ Cable Guard (in) 6.19
- 1 stg length (in) 17.25
- Add stage length (in) 4.875



6HH7V

3450RPM

Eff. 1/1/2020



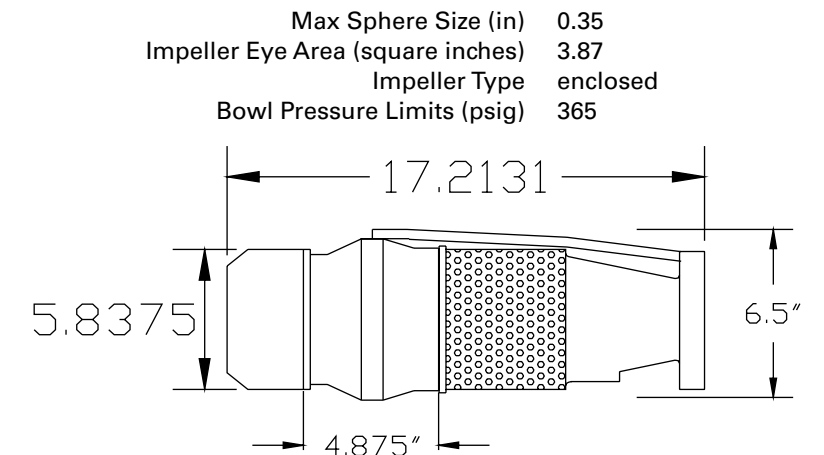
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

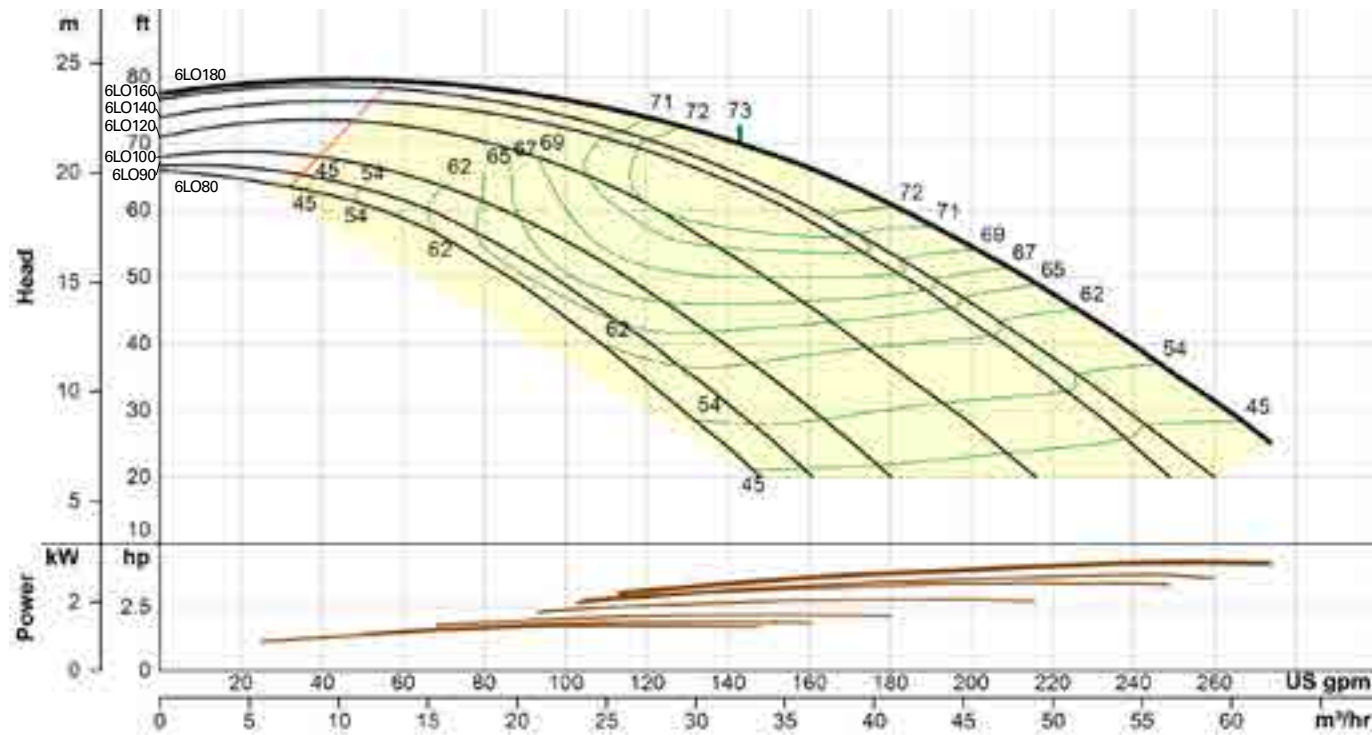
TABLED PERFORMANCE DATA

GPM	4.515"		4.25"		4.0"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
300	66.8	7.6	55.5	6.2	42.5	4.9
370	59	8.1	49.8	6.6	39.8	5.2
400	54.3	8.3	47.3	6.7	37.5	5.3
425	50	8.4	44.8	6.8	34.5	5.3

Mechanical Data

- Bowl Shaft Diameter (in) 1
- Disch Sizes Available (in) 3" F - 4" M
- Motor Sizes Available (in) 6, 8
- K factor 3.4
- Runout NPSHr (ft) 34
- 1 stg weight (lbs) 47
- Add stage weight (lbs) 15
- Impeller weight (lbs) 2.4
- Bowl Diameter (in) 5.95
- Max Diameter w/ Cable Guard (in) 6.5
- 1 stg length (in) 17.21
- Add stage length (in) 4.875





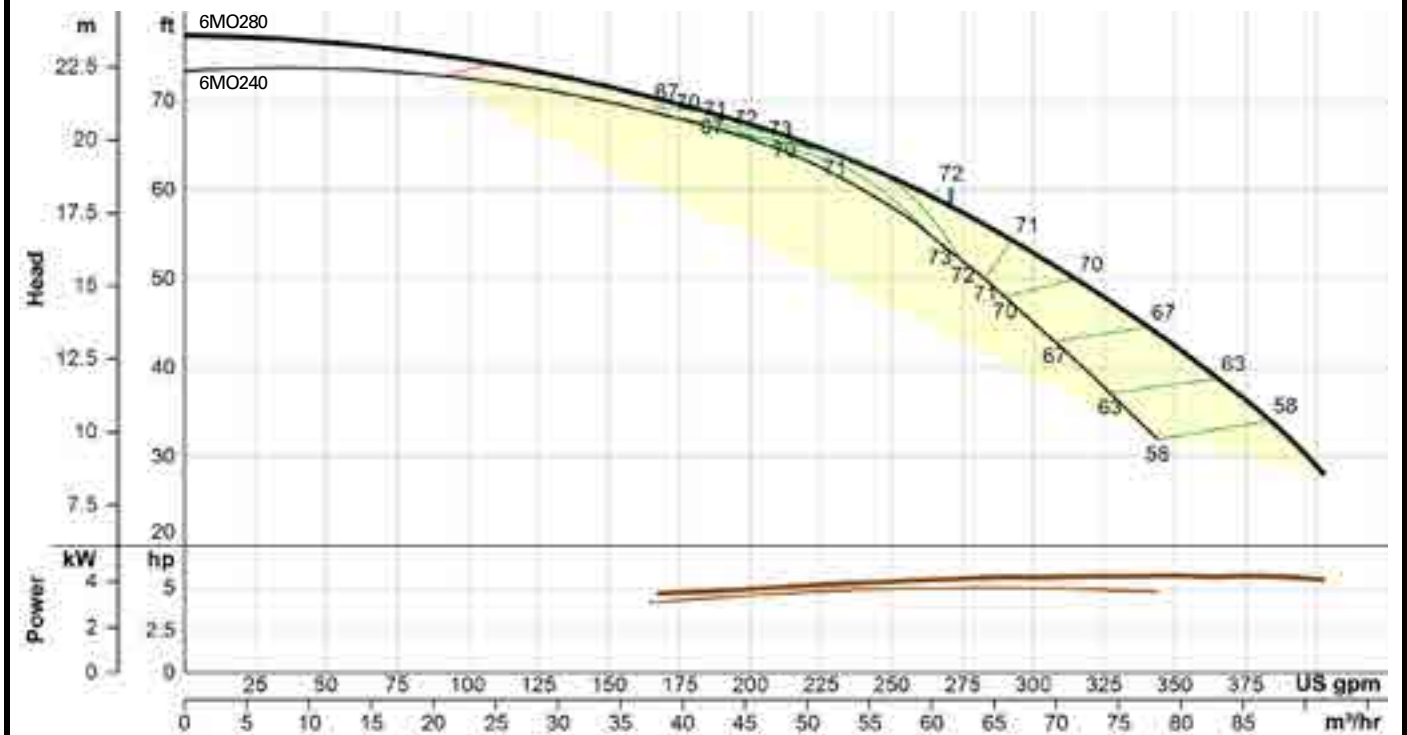
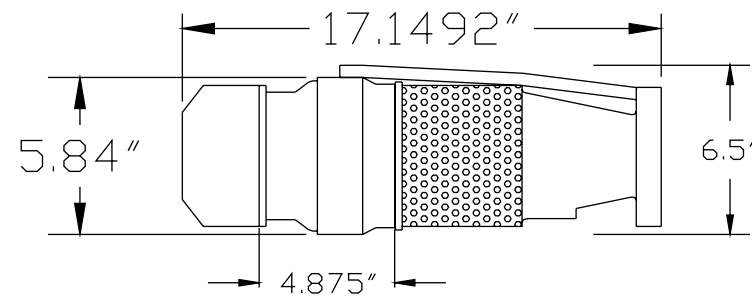
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

Mechanical Data

Bowl Shaft Diameter (in) 1
Disch Sizes Available (in) 3"F-4"M
Motor Sizes Available (in) 6
K factor 3.1
Runout NPSHr (ft) 30

Max Sphere Size (in) 0.08 - .45
Impeller Eye Area (square inches) 2.85
Impeller Type open
Bowl Pressure Limits (psig) 560

1 stg weight (lbs) 49
Add stage weight (lbs) 16
Impeller weight (lbs) 1
Bowl Diameter (in) 5.84
Max Diameter w/ Cable Guard (in) 6.5
1 stg length (in) 17.15
Add stage length (in) 4.875"



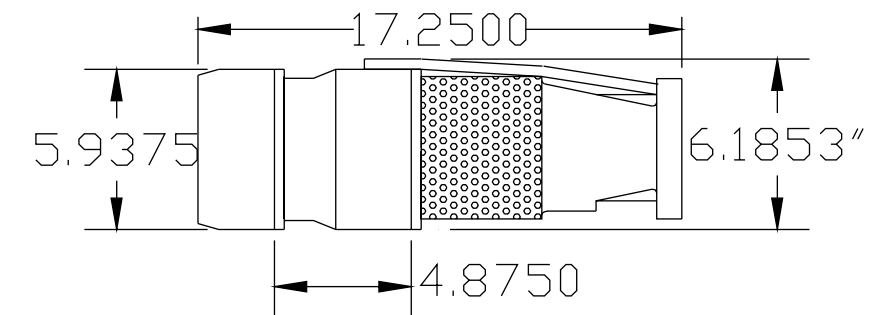
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

Mechanical Data

Bowl Shaft Diameter (in) 1
Disch Sizes Available (in) 4" F
Motor Sizes Available (in) 6
K factor 3.1
Runout NPSHr (ft) 33

Max Sphere Size (in) 0.5
Impeller Eye Area (square inches) 3.365
Impeller Type open
Bowl Pressure Limits (psig) 560

1 stg weight (lbs) 55
Add stage weight (lbs) 18
Impeller weight (lbs) 1
Bowl Diameter (in) 5.93
Max Diameter w/ Cable Guard (in) 6.19
1 stg length (in) 17.25
Add stage length (in) 4.875"



7" Pump Curve

pages 32-34

7-INCH SUBMERSIBLE TURBINE

7MH SERIES

Each pump is personally built by our expert craftsmen and then passed through our world-class testing facility to ensure your exact specifications are met.

- Produces up to 1100 GPM
- 5 vane or 7 vane investment cast impellers
- Stainless steel impeller construction
- Easily fits in 8" casing

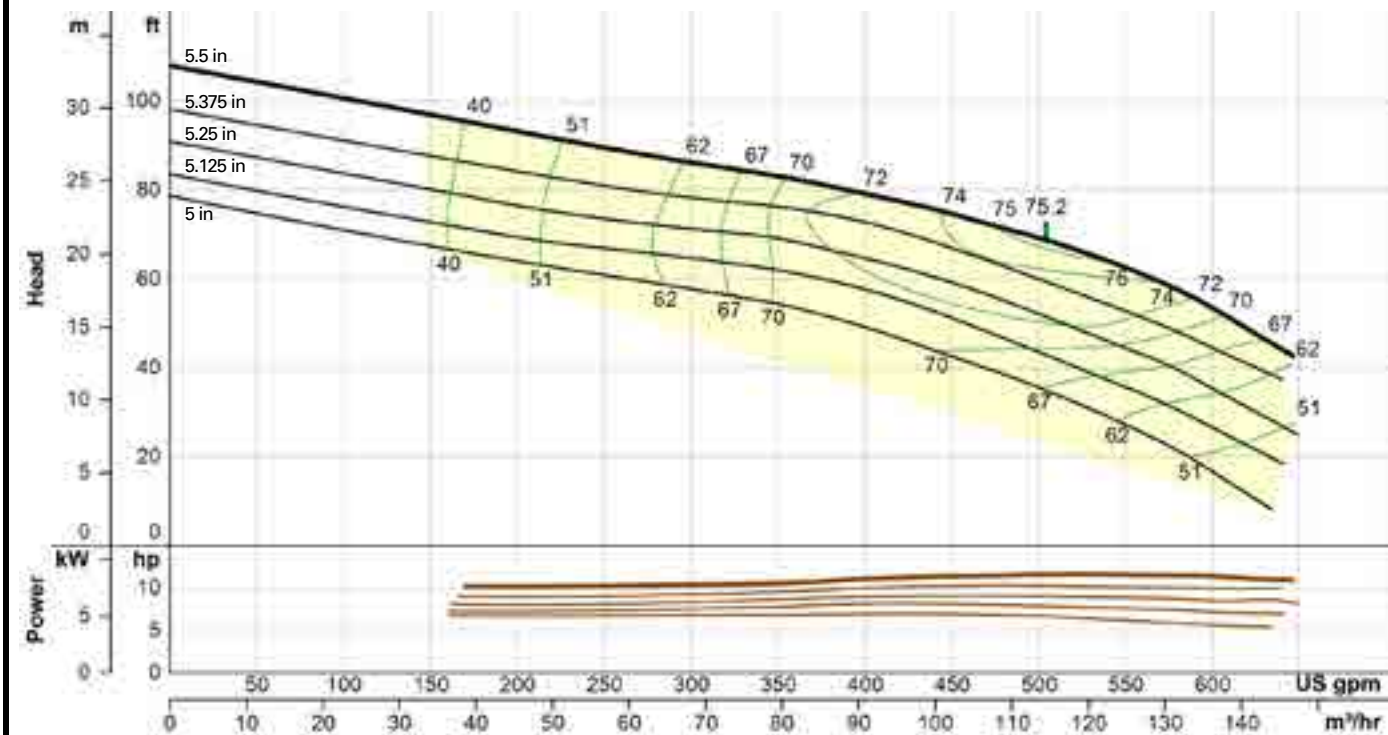
In most cases, Wolf can take an order and ship within 48 hours, truly delivering on our promise: Right Pump. Right Now.



7MH5V

3450RPM

Eff. 1/1/2020



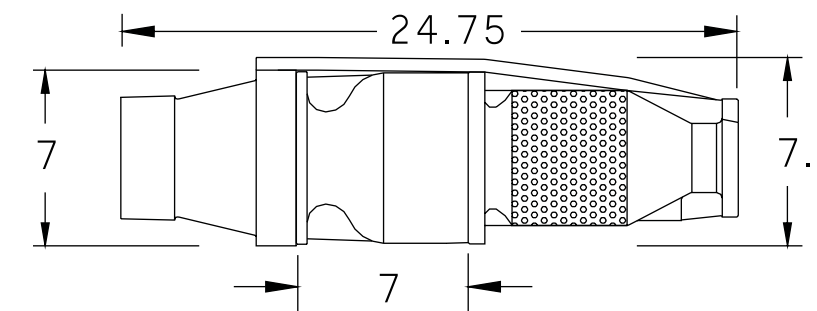
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

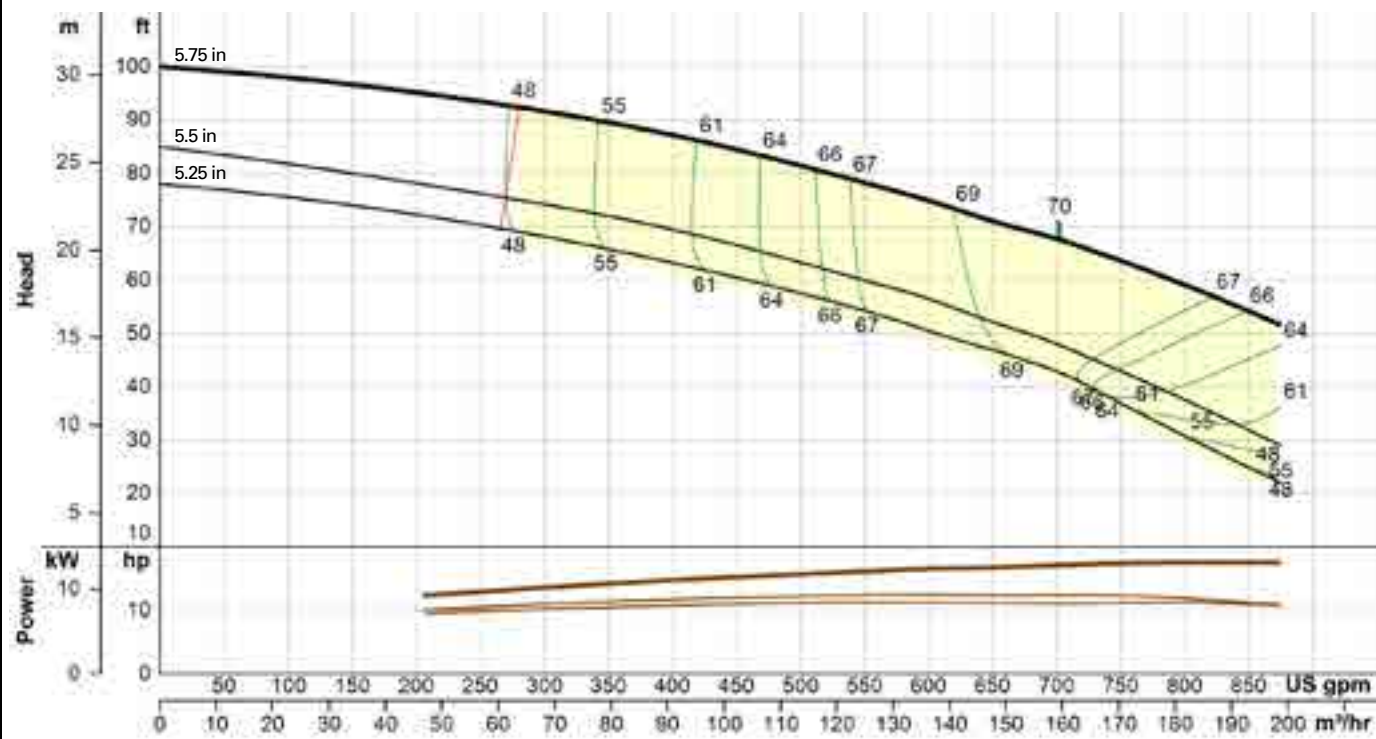
TABLED PERFORMANCE DATA

GPM	5.5"		5.25"		5.0"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
400	78	10.9	63.5	8.8	48.3	6.96
450	73.5	11.2	58.3	9	41.8	6.8
500	68.3	11.4	51	8.9	34.8	6.6
550	61.3	11.4	43.5	8.7	26.3	6.1

Mechanical Data

Bowl Shaft Diameter (in)	1.18	Max Sphere Size (in)	0.5
Disch Sizes Available (in)	5" F - 6"M	Impeller Eye Area (square inches)	12.1
Motor Sizes Available (in)	6, 8	Impeller Type	enclosed
K factor	5.2	Bowl Pressure Limits (psig)	463
Runout NPSHr (ft)	32		
1 stg weight (lbs)	100		
Add stage weight (lbs)	34		
Impeller weight (lbs)	5.9		
Bowl Diameter (in)	7		
Max Diameter w/ Cable Guard (in)	7.5		
1 stg length (in)	24.75		
Add stage length (in)	7		





Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	5.75"		5.5"		5.25"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
640	71.8	17.1	53	12.4	47.5	11.2
665	70	16.7	51	12.4	45.8	11.2
700	67.8	16.9	48	12.4	42.8	11
750	63.5	17.4	42.8	12.2	37	11.2

Mechanical Data

Bowl Shaft Diameter (in)	1.18	Max Sphere Size (in)	0.5
Disch Sizes Available (in)	5" F - 6" M	Impeller Eye Area (square inches)	12.1
Motor Sizes Available (in)	6, 8	Impeller Type	enclosed
K factor	5.2	Bowl Pressure Limits (psig)	463
Runout NPSHr (ft)	34		
1 stg weight (lbs)	100		
Add stage weight (lbs)	34		
Impeller weight (lbs)	6.1		
Bowl Diameter (in)	7		
Max Diameter w/ Cable Guard (in)	7.5		
1 stg length (in)	24.75		
Add stage length (in)	7		

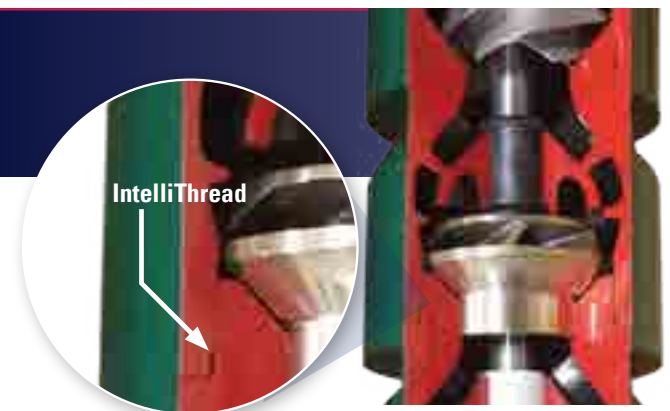
The Wolf Advantage

Your reputation is staked on the pumps you put in the ground. At Wolf Pumps, we stand behind you by using only premium components. Every detail matters: from the thread design in our bowls, to the way we store our shafts, to the precision trim options in our impellers. We leave nothing to chance.

BOWLS *Intelligently designed*

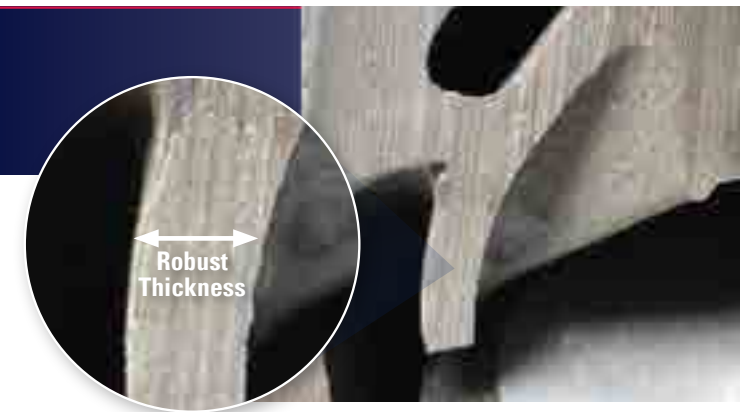
Concealed, water-tight IntelliThread design threads together with ease and prohibits water penetration.

Designed for quick assembly and field repairability. 4, 5, 6, 7, 8 & 10 in. sizes available.



Robust casting has a 23% heavier wall thickness than competitors.

Extends the life of your pump even in the harshest well conditions.



Available in cast iron, glass-lined or ductile iron, our bowls feature a smooth, high-flow design that has a 12% larger internal diameter than bolt together bowls.

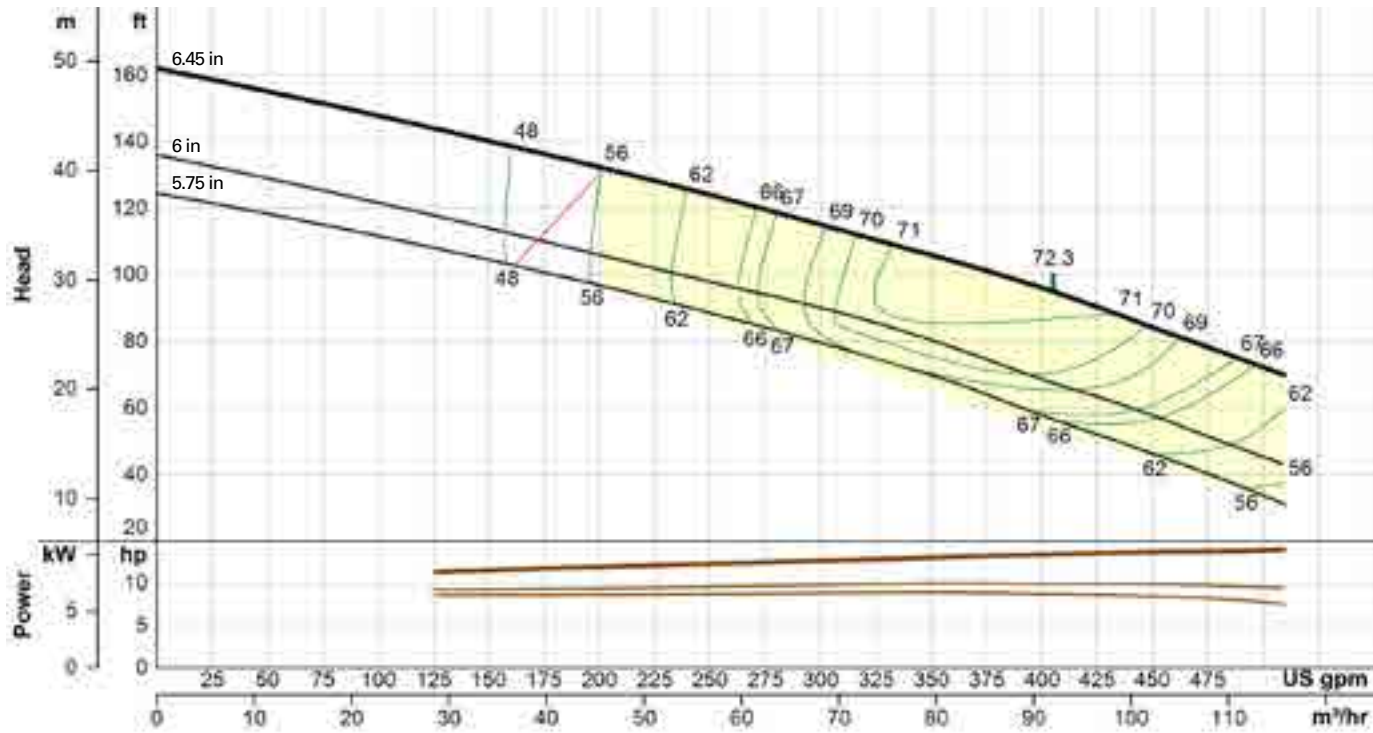
A high-efficiency pump that provides more flow with less horsepower.



8LL4V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

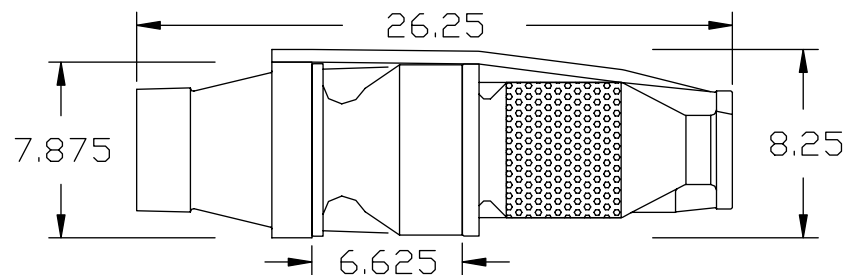
GPM	6.45"		6.0"		5.75"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
275	119.5	12.5	93.8	9.7	84	8.8
325	110.5	12.9	85.5	9.9	74.8	8.9
405	95	13.4	67.8	9.85	56.8	8.7
450	84.3	13.7	57.8	9.9	46.3	8.5

Mechanical Data

Bowl Shaft Diameter (in) 1.18
Disch Sizes Available (in) 4" F - 8" F
Motor Sizes Available (in) 6, 8
K factor 2.6
Runout NPSHr (ft) 30

Max Sphere Size (in) 0.45
Impeller Eye Area (square inches) 7.43
Impeller Type enclosed
Bowl Pressure Limits (psig) 500

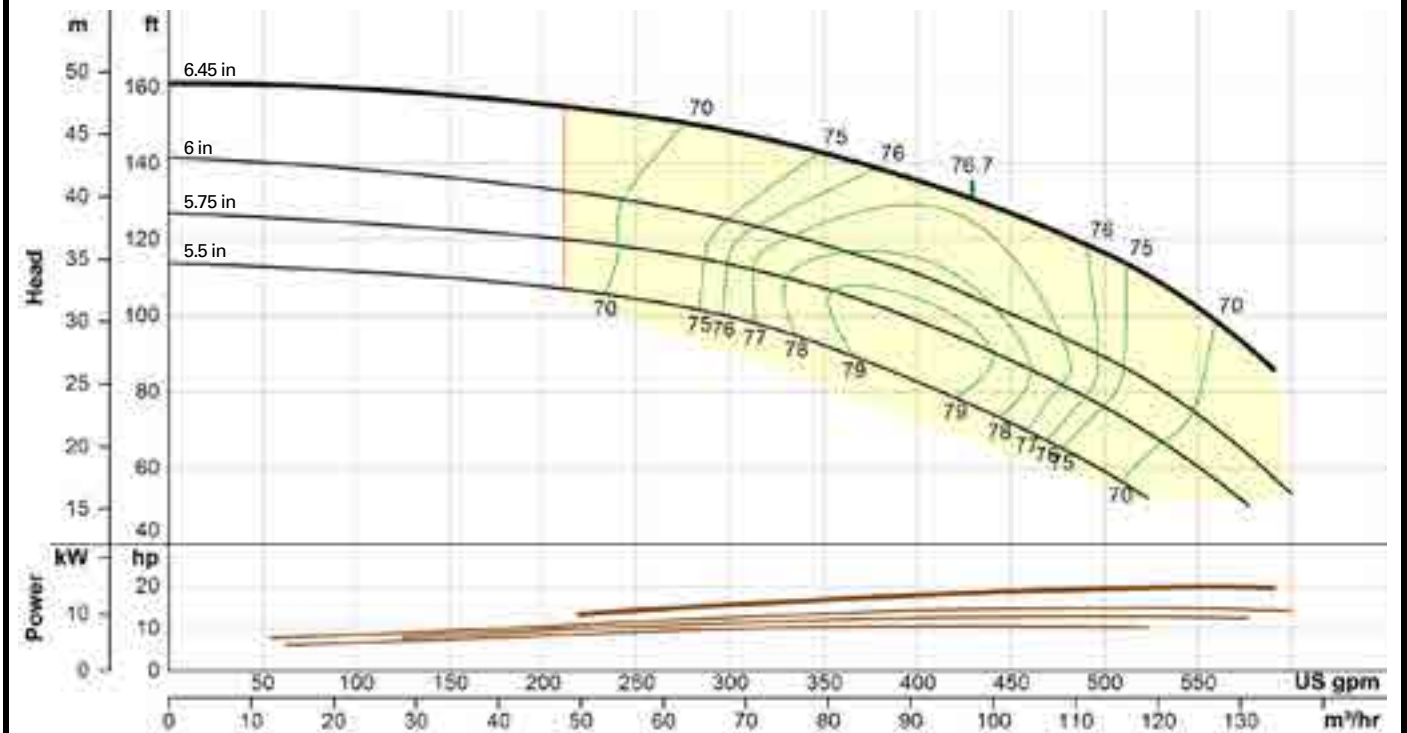
1 stg weight (lbs) 101
Add stage weight (lbs) 34.5
Impeller weight (lbs) 6.4
Bowl Diameter (in) 7.66
Max Diameter w/ Cable Guard (in) 8.25
1 stg length (in) 26.25
Add stage length (in) 6.62



8LL8V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

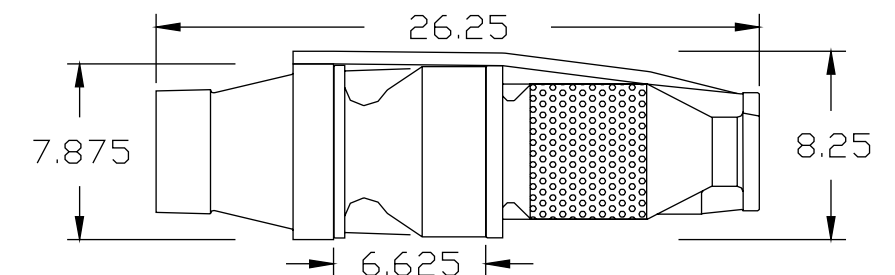
GPM	6.45"		6.0"		5.5"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
350	142.8	16.8	118.5	13.5	92.3	10.4
400	135.3	17.9	111	14.3	82.5	10.5
425	131.3	18.4	105.8	14.5	77.5	10.5
475	121.8	19.1	95	14.8	65.8	10.5

Mechanical Data

Bowl Shaft Diameter (in) 1.18
Disch Sizes Available (in) 4" F - 8" F
Motor Sizes Available (in) 6, 8
K factor 2.6
Runout NPSHr (ft) 30

Max Sphere Size (in) 0.45
Impeller Eye Area (square inches) 7.43
Impeller Type enclosed
Bowl Pressure Limits (psig) 500

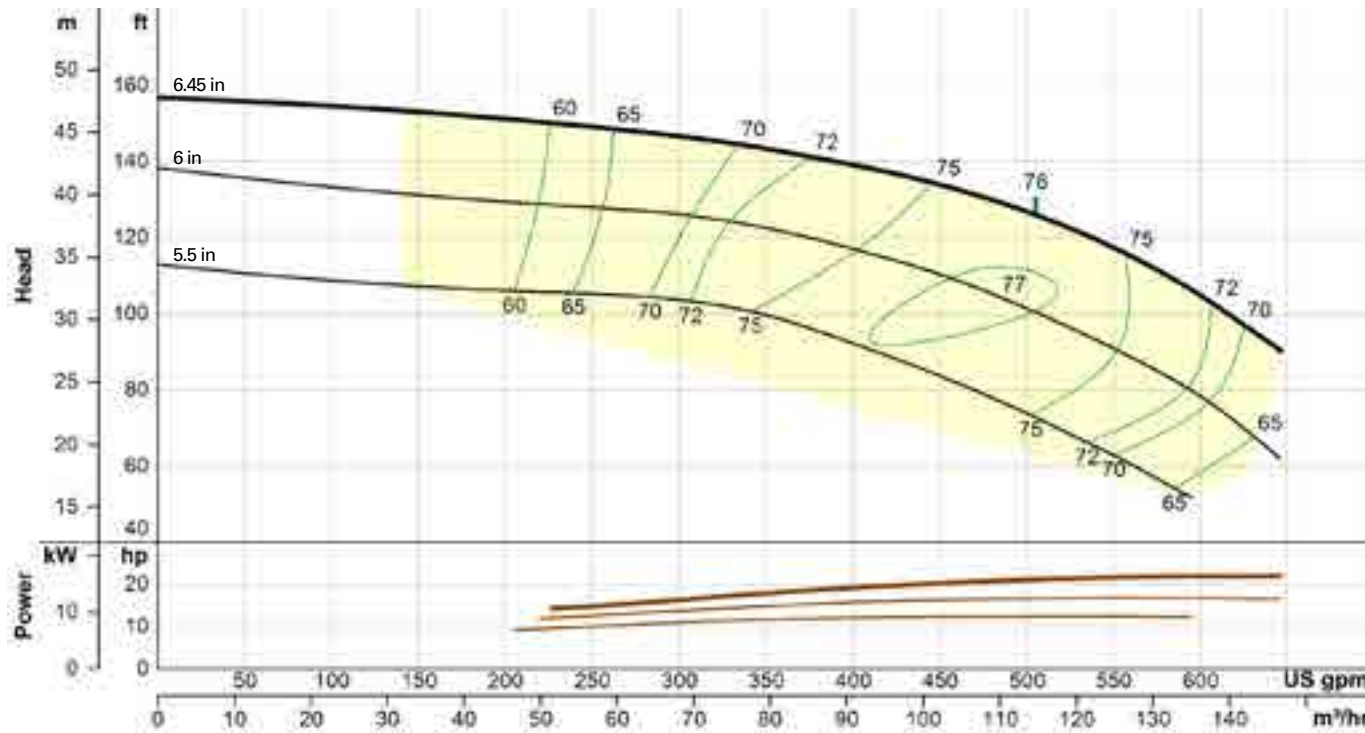
1 stg weight (lbs) 100
Add stage weight (lbs) 34
Impeller weight (lbs) 5.9
Bowl Diameter (in) 7.66
Max Diameter w/ Cable Guard (in) 8.25
1 stg length (in) 26.25
Add stage length (in) 6.62



8LM8V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

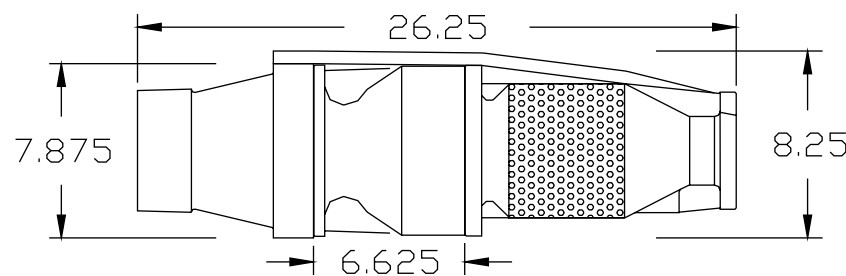
GPM	6.45"		6.0"		5.5"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
405	138.5	19.3	116.5	15.8	91.5	12.2
480	129.5	20.7	105.3	16.5	77.5	12.4
505	126	21.1	100.5	16.6	72.8	12.4
550	117.3	21.6	90.8	16.8	62.8	12.5

Mechanical Data

Bowl Shaft Diameter (in) 1.18
Disch Sizes Available (in) 4" F - 8" F
Motor Sizes Available (in) 6, 8
K factor 2.6
Runout NPSHr (ft) 40

Max Sphere Size (in) 0.57
Impeller Eye Area (square inches) 7.43
Impeller Type enclosed
Bowl Pressure Limits (psig) 500

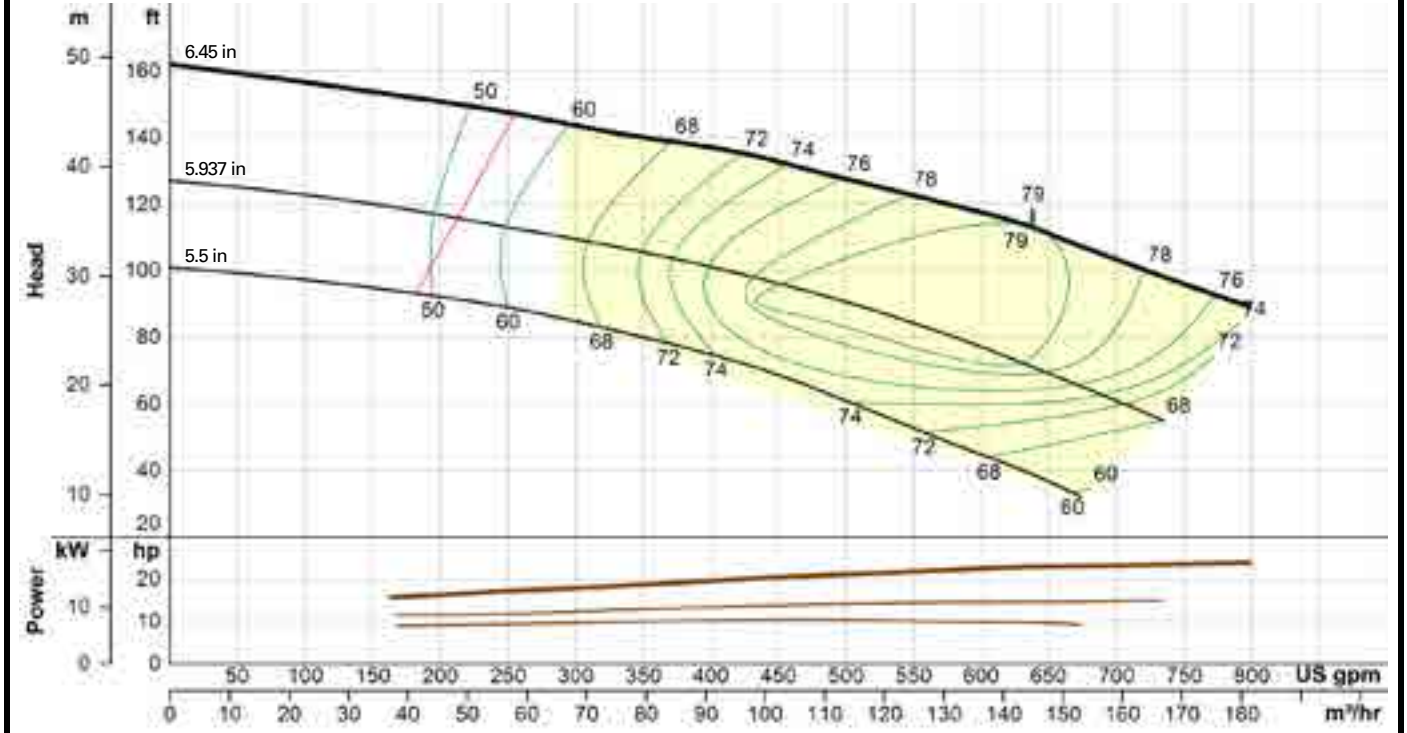
1 stg weight (lbs) 100
Add stage weight (lbs) 34
Impeller weight (lbs) 5.8
Bowl Diameter (in) 7.66
Max Diameter w/ Cable Guard (in) 8.25
1 stg length (in) 26.25
Add stage length (in) 6.62



8MM5V

3450RPM

Eff. 1/1/2020



Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

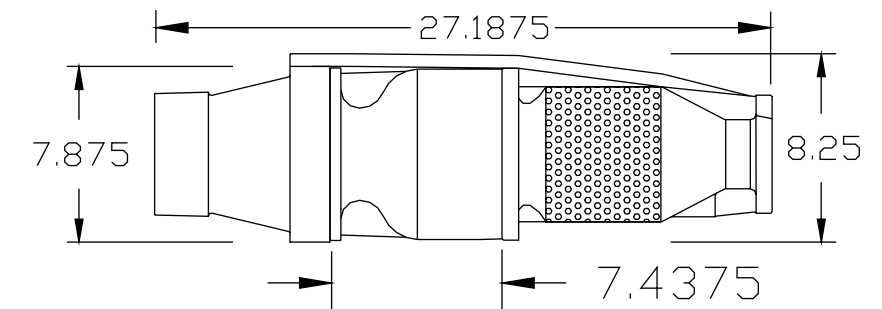
GPM	6.45"		5.937"		5.5"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
455	132.5	20.6	95.8	13.9	68	10.4
500	127.5	21.2	90.8	14.2	61	10.3
640	112.8	23.1	71.3	14.6	38.3	9.7
700	103.8	23.4	61.3	15.1		

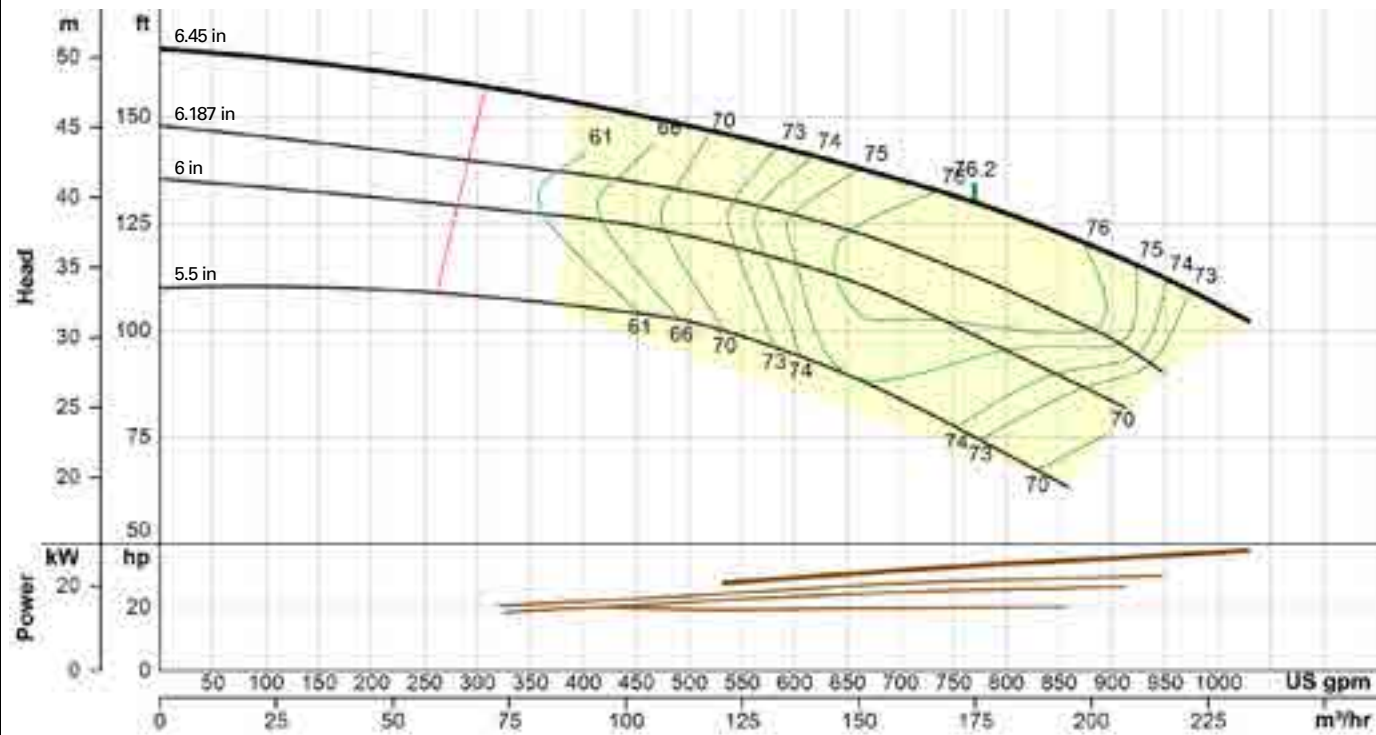
Mechanical Data

Bowl Shaft Diameter (in) 1.18
Disch Sizes Available (in) 4" F - 8" F
Motor Sizes Available (in) 6, 8
K factor 5.5
Runout NPSHr (ft) 40

Max Sphere Size (in) 0.74
Impeller Eye Area (square inches) 7.43
Impeller Type enclosed
Bowl Pressure Limits (psig) 325

1 stg weight (lbs) 104
Add stage weight (lbs) 37
Impeller weight (lbs) 5.9
Bowl Diameter (in) 7.67
Max Diameter w/ Cable Guard (in) 8.25
1 stg length (in) 27.19
Add stage length (in) 7.44





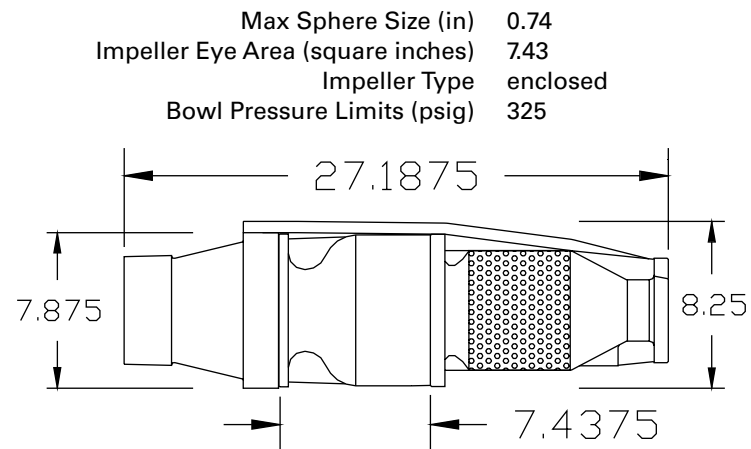
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	6.45"		6.0"		5.5"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
650	138.8	30.5	111.5	24.1	89.5	19.6
675	137	31	109.5	24.4	86.8	19.7
770	130	33.3	98.8	25.5	75	19.9
800	127	33.8	95.3	25.8	71	20

Mechanical Data

- Bowl Shaft Diameter (in) 1.18
- Disch Sizes Available (in) 4" F - 8" F
- Motor Sizes Available (in) 6, 8
- K factor 5.5
- Runout NPSHr (ft) 43
- 1 stg weight (lbs) 104
- Add stage weight (lbs) 37
- Impeller weight (lbs) 6
- Bowl Diameter (in) 7.67
- Max Diameter w/ Cable Guard (in) 8.25
- 1 stg length (in) 27.19
- Add stage length (in) 7.44



10" Pump Curve

pages 41-45

IMPELLERS *Trimmed and balanced to perfection*



- Every impeller is meticulously balanced to prevent vibration.
- Wolf Pumps is the only pump company to offer stainless steel open impellers in 4", 5", and 6".
- Impellers trimmed in 1/16" increments to meet every design point.

Precision impellers prevent early failure and optimize flow.

SHAFTS *Straightened, tested, and straightened again*



- Every shaft is cut to length and straightened before storage.
- Every shaft is tested again before pump assembly to ensure straightness.

Less shaft vibration for longer pump life.

BUSHINGS *Custom materials for your custom design*

Standard to proprietary options to provide protection in any condition.

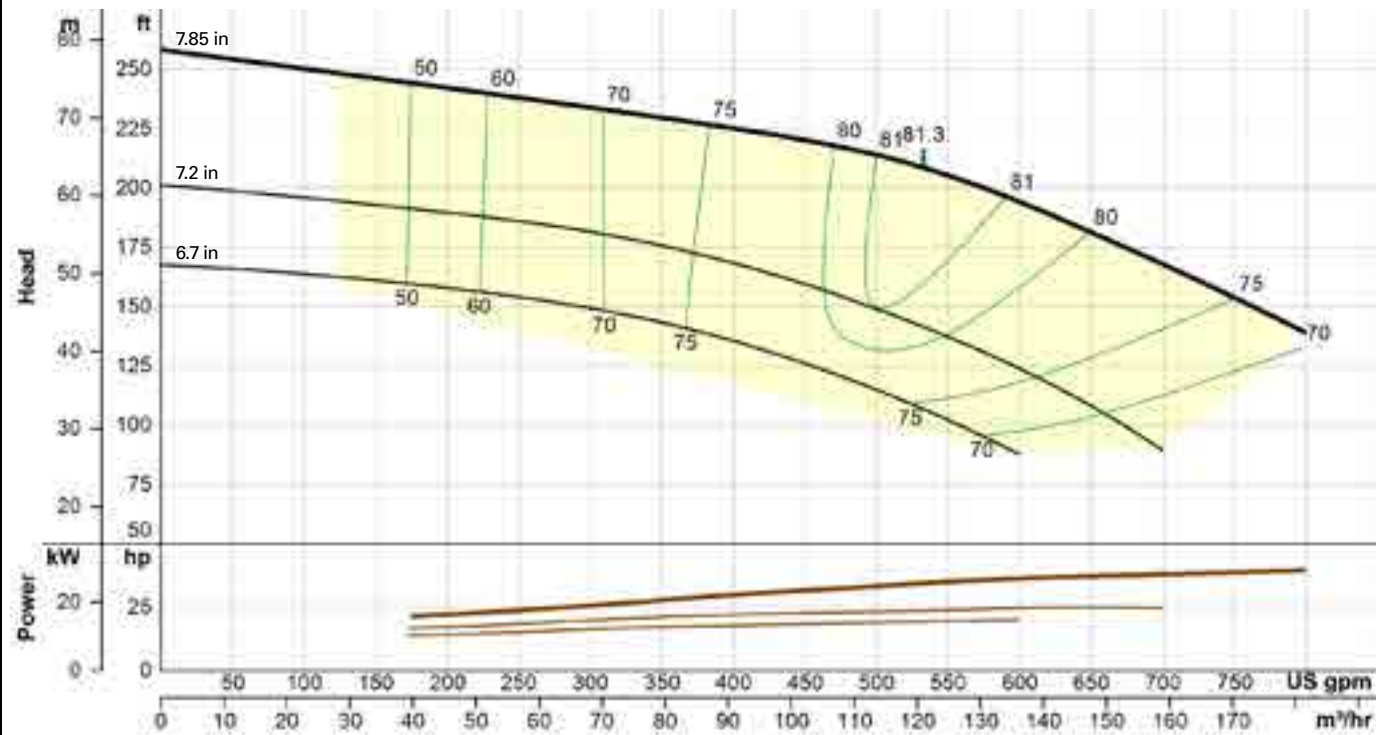


Rubber, bronze, silicon carbide, and Vesconite options meet any application requirement.

10LL5V

3450RPM

Eff. 1/1/2020



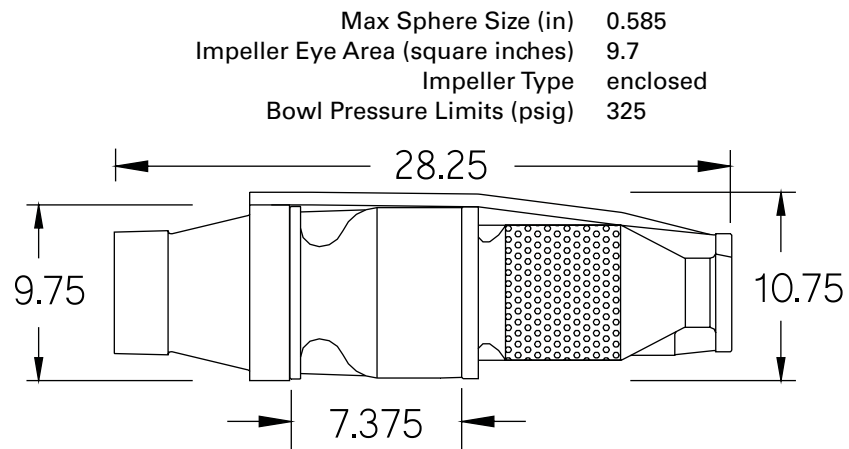
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	7.85"		7.2"		6.7"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
475	217.3	33	154.5	23.3	120.8	19
500	214	33.8	149	23.5	114.8	19.2
533	208.5	35	141.3	24	106.8	19.6
600	194	36.8	123.5	25	87.8	20.3

Mechanical Data

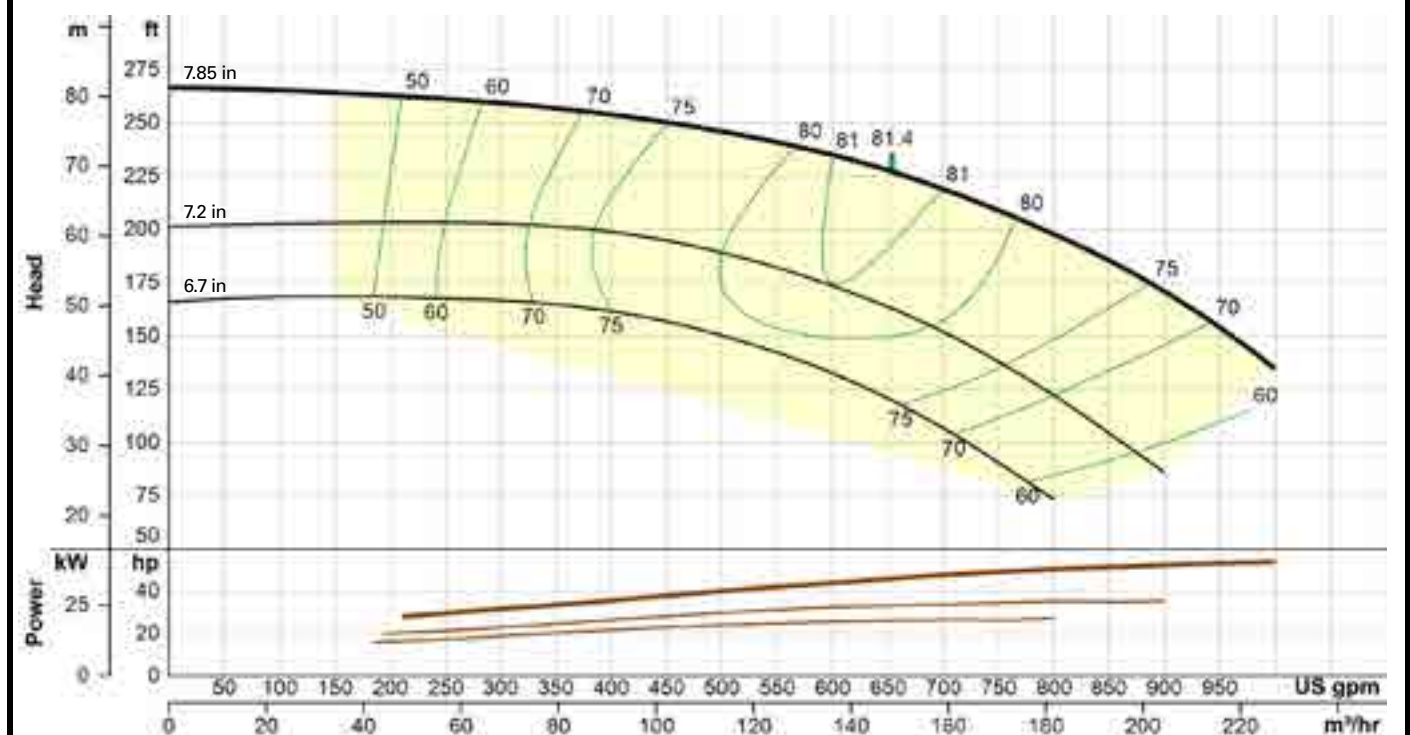
- Bowl Shaft Diameter (in) 1.5
- Disch Sizes Available (in) 6" F - 8" F
- Motor Sizes Available (in) 6, 8, 10
- K factor 3.9
- Runout NPSHr (ft) 40
- 1 stg weight (lbs) 173
- Add stage weight (lbs) 68
- Impeller weight (lbs) 9
- Bowl Diameter (in) 9.63
- Max Diameter w/ Cable Guard (in) 10.75
- 1 stg length (in) 28.25
- Add stage length (in) 7.375



10LL8V

3450RPM

Eff. 1/1/2020



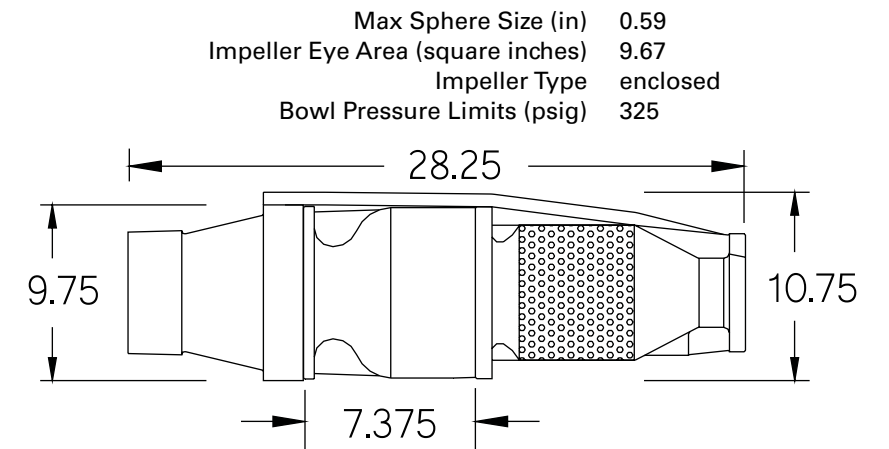
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	7.85"		7.2"		6.7"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
500	245.5	40.5	189.3	30.3	150.3	24.3
600	235	44.5	173.5	32.8	130.3	25.8
655	227	46.8	162	33.5	119	26.5
750	208.8	49.8	137.8	35	90.3	27

Mechanical Data

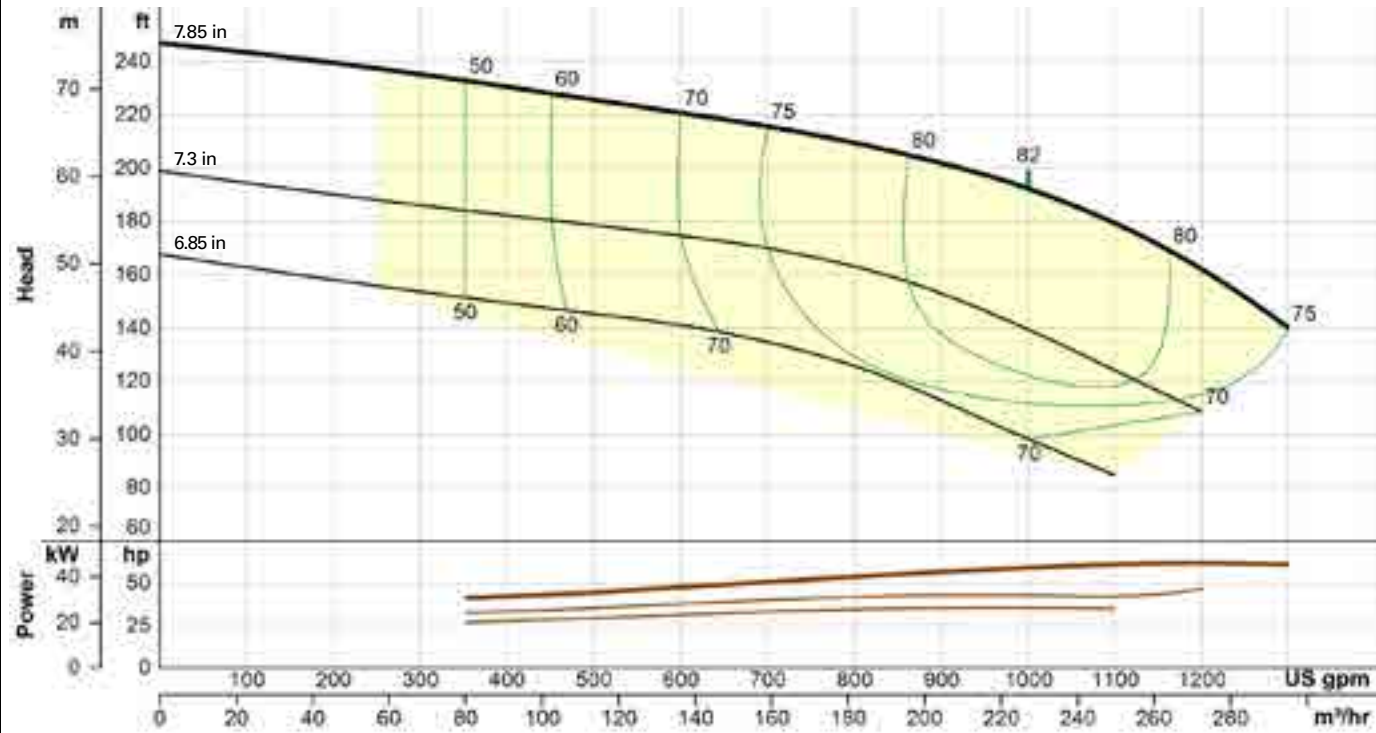
- Bowl Shaft Diameter (in) 1.5
- Disch Sizes Available (in) 6" F - 8" F
- Motor Sizes Available (in) 6, 8, 10
- K factor 4.0
- Runout NPSHr (ft) 43
- 1 stg weight (lbs) 173
- Add stage weight (lbs) 68
- Impeller weight (lbs) 9
- Bowl Diameter (in) 9.63
- Max Diameter w/ Cable Guard (in) 10.75
- 1 stg length (in) 28.25
- Add stage length (in) 7.375



10MM6V

3450RPM

Eff. 1/1/2020



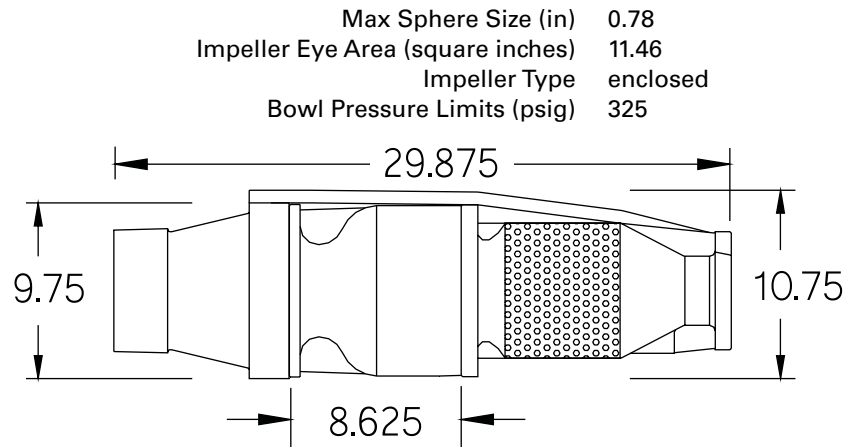
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	7.85"		7.3"		6.85"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
700	215.8	51.5	170	40.5	134	33.5
800	234	54.5	162.3	42.3	125.8	35.3
1000	192.3	60	139.4	43.5	98.3	36
1100	178	61.8	124	43.3	84.8	35.5

Mechanical Data

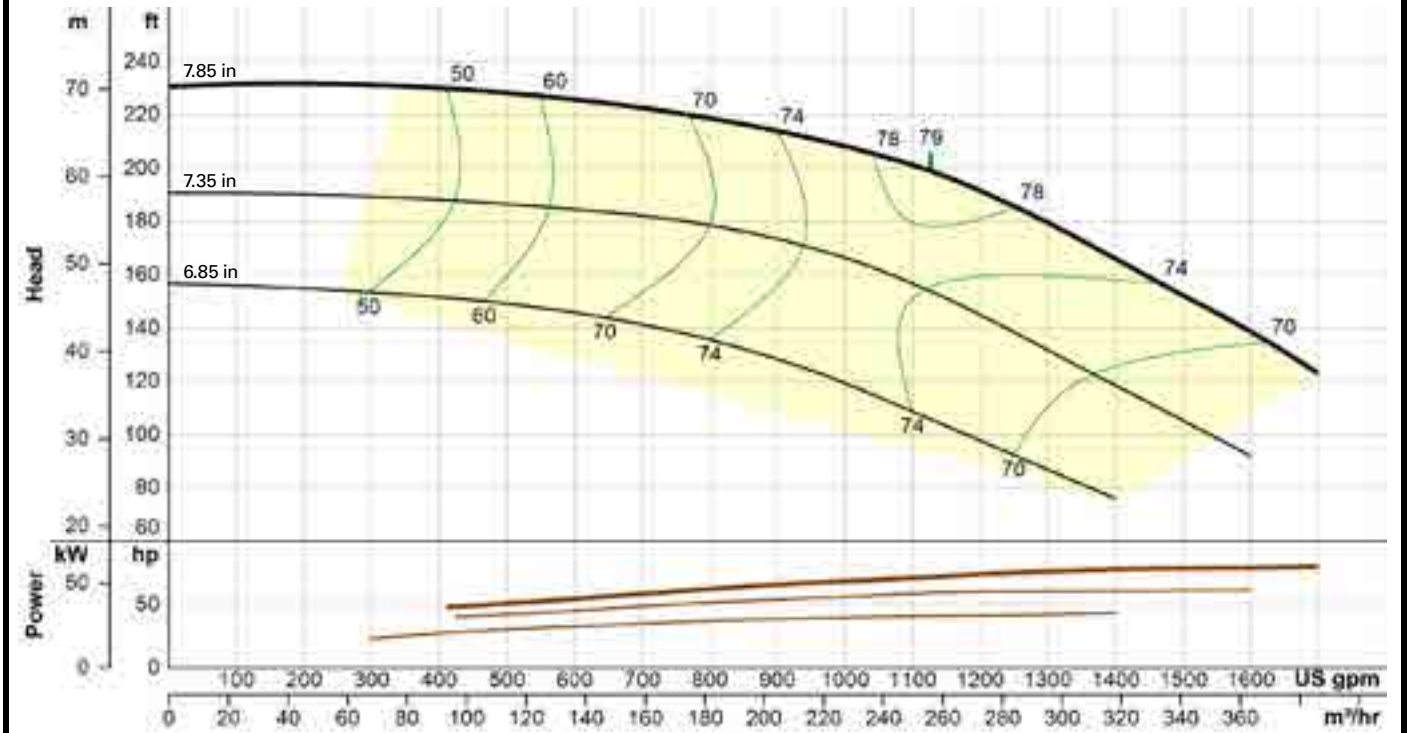
- Bowl Shaft Diameter (in) 1.5
- Disch Sizes Available (in) 6" F - 8" F
- Motor Sizes Available (in) 6, 8, 10
- K factor 5.5
- Runout NPSHr (ft) 55
- 1 stg weight (lbs) 173
- Add stage weight (lbs) 70
- Impeller weight (lbs) 9
- Bowl Diameter (in) 9.75
- Max Diameter w/ Cable Guard (in) 10.75
- 1 stg length (in) 29.875
- Add stage length (in) 8.625



10MM8V

3450RPM

Eff. 1/1/2020



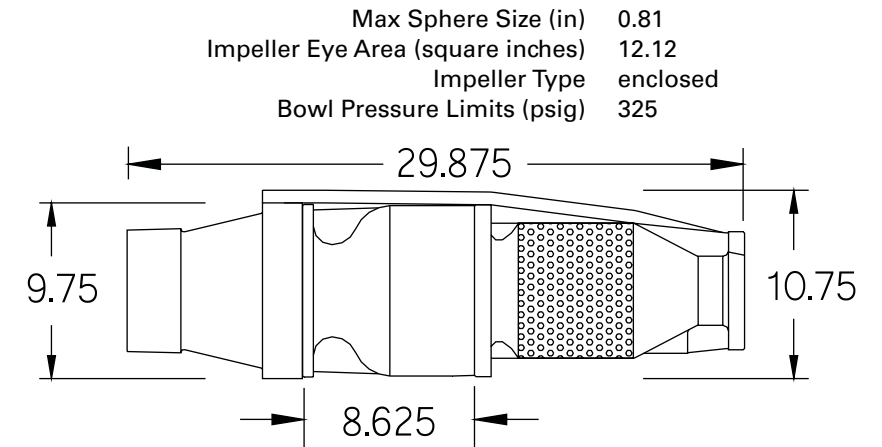
Curve reflects per stage performance for a minimum of 4 stages. For 1-3 stage units, refer to Wolf Pumps online catalog at PumpFlo Connect.

TABLED PERFORMANCE DATA

GPM	7.85"		7.35"		6.85"	
	TDH/STG	HP/STG	TDH/STG	HP/STG	TDH/STG	HP/STG
970	209.8	68.3	168.5	56.3	122.3	40
1020	206.8	69.5	164.8	57.3	117	40.5
1125	199	72.5	154	59.8	106	41.5
1250	185.8	76	137.8	60.8	92.3	42.3

Mechanical Data

- Bowl Shaft Diameter (in) 1.5
- Disch Sizes Available (in) 6" F - 8" F
- Motor Sizes Available (in) 6, 8, 10
- K factor 5.3
- Runout NPSHr (ft) 60
- 1 stg weight (lbs) 173
- Add stage weight (lbs) 70
- Impeller weight (lbs) 9
- Bowl Diameter (in) 9.75
- Max Diameter w/ Cable Guard (in) 10.75
- 1 stg length (in) 29.875
- Add stage length (in) 8.625



Accessories

pages 46-48



INVENTORY ON HAND FOR ANY NEED

Your Peace of Mind is Our Top Priority®

In most cases, Wolf can take an order and ship within 48 hours, truly delivering on our promise:

Right Pump. Right Now. *What you need, when you need it.*



Right Pump. Right Now.®

McCrometer Propeller Flowmeter

Standard features include:

- a magnetically-coupled drive
- instantaneous flow rate indicator
- straight-reading, six-digit totalizer.

Typical Applications:

- Water and wastewater management
- Center pivot systems
- Sprinkler irrigation systems
- Drip irrigation systems
- Golf course and park water management
- Gravity turnouts from underground pipelines
- Commercial nurseries

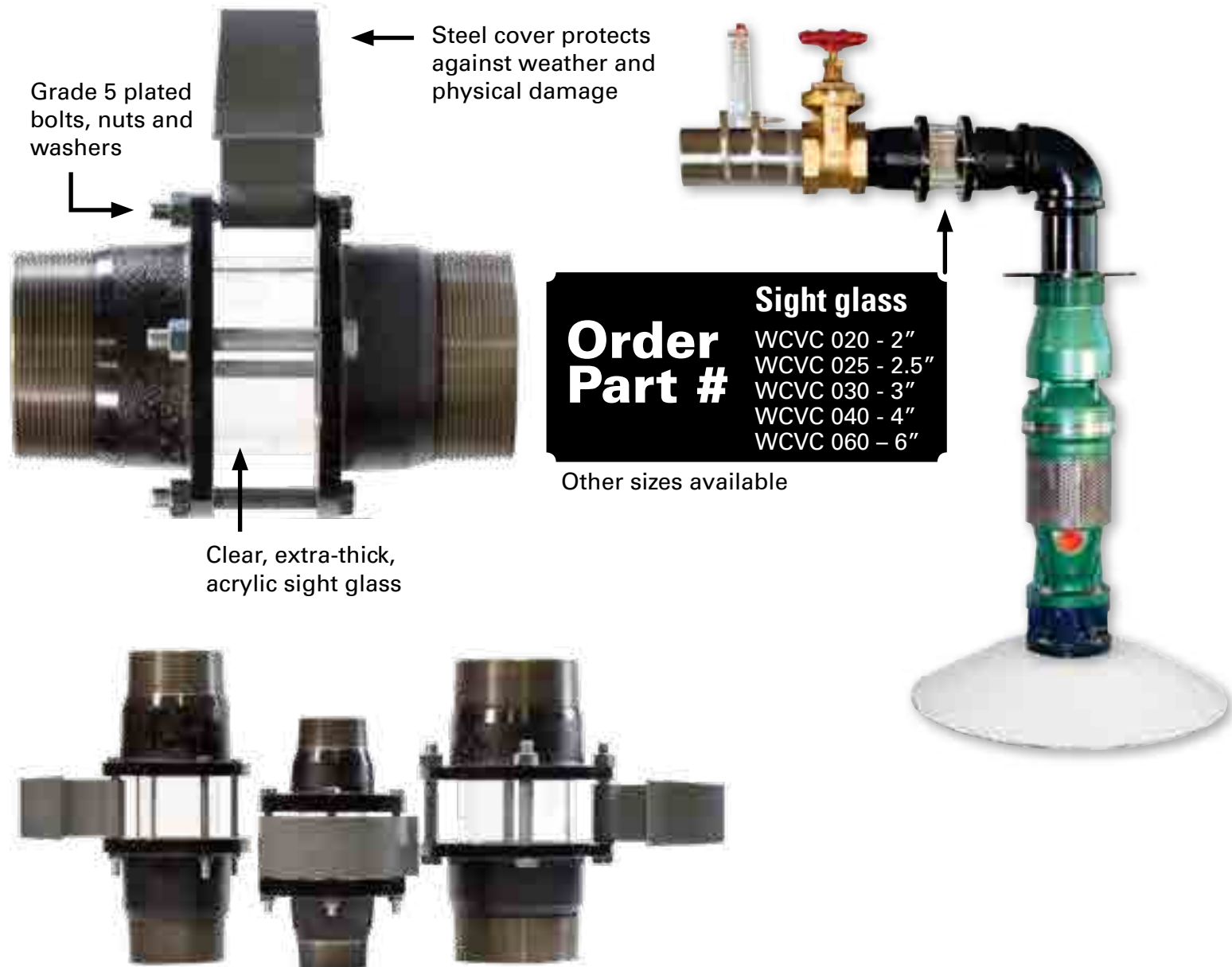


Accessories

Accessories

Clearview Sight Glass Nipple

Right Pump. Right Now.[®]



Accessories

Allows operators to observe water stream during pump operation.

- Clear, extra-thick, acrylic sight glass
- Grade 5 plated bolts, nuts and washers
- Close grained cast iron ends with NPT male connections
- O-ring on end of acrylic to prevent leakage
- Steel cover protects against weather and physical damage
- Available in 3" and 4" male NPT connections standard (other sizes available)

Submittal Documents

pages 49-53

Right Pump. Right Now. *What you need, when you need it.*



Wolf is a family-owned, American company, born in the most abrasive, deep well water conditions of west Texas, delivering durable, custom pump solutions when and where you need them.

Wolf Pumps delivers:

- Customized, precision pump solutions
- Personal attention and quick shipping
- A 65-year reputation of excellence

That's the right solution, right when you need it.

To find the right pump for your application,
see our Sizing Tool at WolfPumps.com,
call (800) 886-2606
or email info@WolfPumps.com



Wolf Pumps • PO Box 490, 18014 N. I-27 Hwy • Abemathy, TX 79311 • WolfPumps.com

Submersible Turbine Pump Specifications

WP0056
0420
Replaces
NEW

Right Pump. Right Now.

A. Scope

i. This specification covers a water well submersible turbine pump set including bowl assembly, column pipe, well head, driver, and submersible cable. The pump shall be designed, manufactured, and tested in accordance with the latest applicable Hydraulic Institute and AWWA standards.

B. Acceptable Manufacturers

i. The pump shall be the product of Wolf Pumps, Inc. of Abernathy, TX. Other manufacturers may be considered if proven to be equal in all respects. The successful manufacturer shall demonstrate the ability to conduct an in-house performance test for flow, head, horsepower, vibration, and efficiency prior to shipment.

C. Conditions of Service

- i. Flow: _____ Gallons per minute
- ii. TDH: _____ Feet
- iii. Minimum Efficiency: _____ Percent
- iv. Setting (Column length): _____ Feet
- v. Column pipe diameter: _____ Feet
- vi. Pumping Water Level: _____ Feet
- vii. Well diameter: _____ Inches

D. Pump Construction

i. **Bowl Assembly:** Intermediate bowls shall be screw together type and made of ASTM A48 Class 30 cast iron with porcelain enamel lined water passages or unlined ASTM A536 65-45-12 ductile iron. All intermediate bowls shall be fitted with sleeve bushings of ASTM B584 C932 bronze, Vesconite HiLube, or Nitrile rubber NBR/Buna-N materials. An NPT threaded discharge bowl to connect the pump end to the column pipe shall be furnished with an enclosed bearing bore [or a threaded discharge collar], and provisions shall be made to protect against excessive shaft vertical up thrust with a thrust ring made of ASTM B584 C932 bronze or UHMW Polyethylene, or with a thrust bolt assembly.

ii. **Impellers:** Impellers shall be either enclosed or semi-open investment cast stainless steel ASTM A351-00/A743-06/A744-06, or bronze ASTM B584 C932. They shall be dynamically balanced to grade G6.3 of ISO 1940 as a minimum and shall be attached to a pump shaft of stainless steel ASTM A582 S41600, chrome plated C1045 steel, or ionized stainless steel using tapered collets of ASTM A582 S41600 stainless steel.

iii. **Motor Bracket:** The ductile iron ASTM A536 Gr. 60-40-18 motor bracket shall be furnished with an extra-long sleeve bushing of ASTM B584 C932 bronze or Vesconite HiLube material and shall be fitted with a 304SS strainer with a net open area of at least four times the eye of the impeller.

iv. **Sand Collar:** A sand collar of ASTM B584 C932 bronze shall be provided between the motor bracket bearing housing and the pump/motor coupling.

v. **Coupling:** A shaft coupling of ASTM A582 S41600 shall be provided. This coupling will be capable of transmitting the total torque of the bowl assembly in either direction of rotation.

vi. **Cable Guard:** A 304SS cable guard shall be provided to protect the motor leads between the motor mounting flange and the top of the bowl assembly. The cable guard shall be fastened to the bowl assembly with 304SS cable clamps of an appropriate size depending upon the maximum outside diameter of the bowl assembly.

E. Column Pipe

i. Column pipe shall be ASTM A53 standard wall thickness steel pipe furnished in lengths not to exceed 20 feet and connected by NPT steel couplings. Pipe shall be sized so that friction losses do not exceed 5 percent at the rated capacity of the pump.

F. Submersible Cable

i. Water and oil resistant submersible drop cable shall be sized to limit the voltage drop to 5% or less. The cable should have three separate conductors and a ground and shall be jacketed.

G. Discharge Head

i. The discharge head shall be made of fabricated steel and incorporate a long radius elbow welded to an ANSI class 150 flange. Discharge head shall be designed to accommodate the total weight of the pump, motor, discharge pipe, cable, and column of water. The base plate shall include a cable seal of adequate size to accommodate the cable, well vent, and water level indicator.

H. Submersible Motor

i. The motor shall be of the submersible type, capable of continuous operation at nameplate rating submerged under water at a maximum temperature of 3-5 degrees C ambient water temperature with a minimum of 1/2 foot per second cooling flow velocity past the motor. The motor must be suitable for "across the line" starting.

ii. The motor shall be rated at _____ HP, 3 phase, 60 Hz, _____ volt, 3600 RPM with a minimum Service Factor of 1.15. Minimum efficiency at full load shall be _____% inclusive of fully loaded thrust bearing. Minimum Power Factor at full load shall be _____%. The maximum actual motor diameter shall not exceed 5½ inch diameter at the stator casing.

iii. The motor shall be of the water filled, dry winding, encapsulated type. The winding shall be encapsulated in a high dielectric strength epoxy compound and hermetically sealed by a stainless-steel inner liner or can.

iv. The motor shall be filled with a 50/50 solution of clean, clear, potable water and FDA approved Food Grade propylene-glycol.

v. Motor material of construction shall be a 304ss stator casing with baked epoxy coated, cast iron mounting bracket and bottom end cover. The shaft shall be 410ss and all external fasteners shall be 304ss.

vi. The motor is to be totally enclosed, utilizing an elastomer expansion diaphragm for the equalization of internal and external pressure.

vii. The motor shall be equipped with a double rubber type seal to seal the motor at the point that the shaft extends through the mount bracket.

viii. Replaceable carbon composite sleeve type radial bearings shall be provided at each end of the rotor.

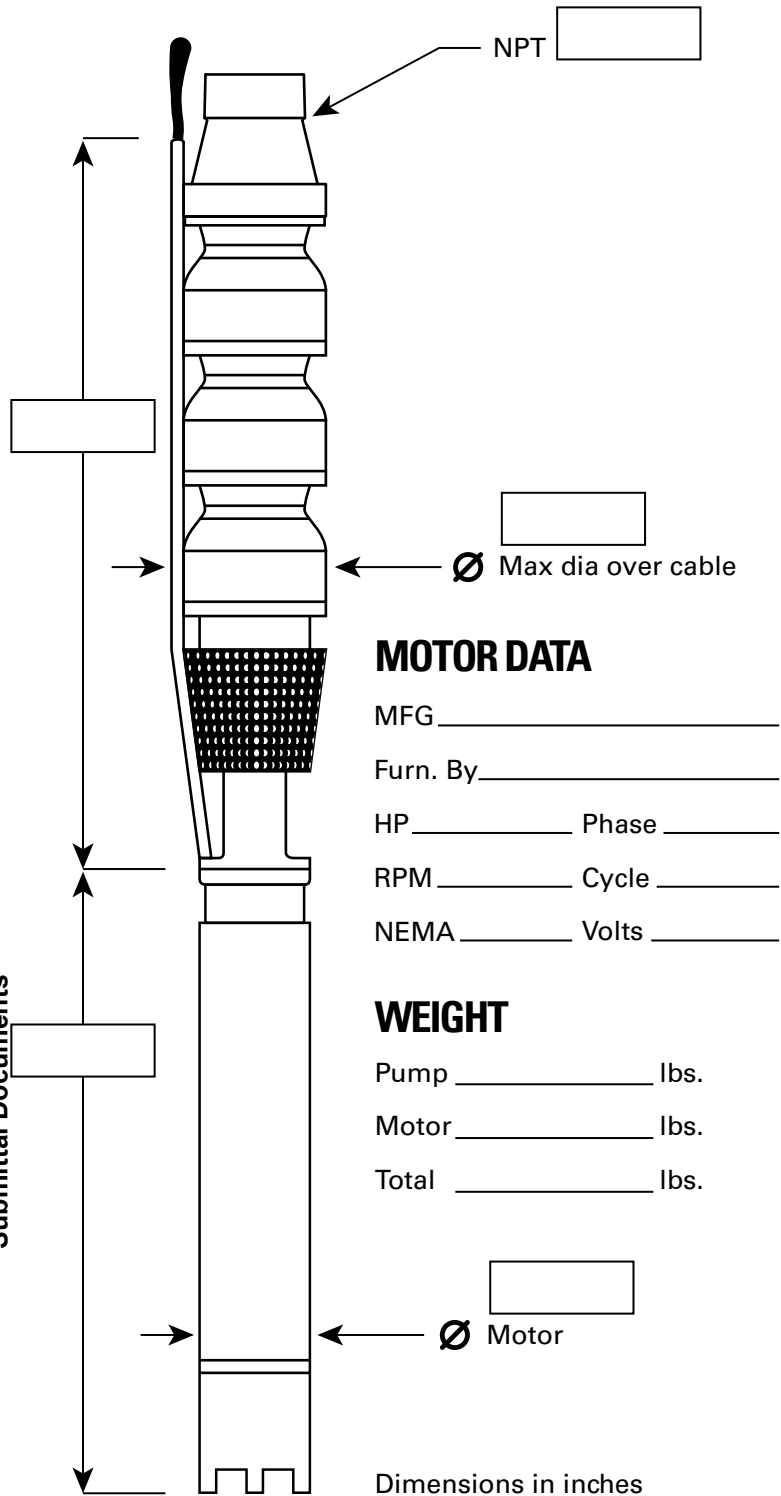
ix. The motor shall be equipped with a pivotal shoe type thrust bearing, with a carbon composite pad, capable of carrying the weight of all rotating elements plus the hydraulic thrust of the pump at shutoff head.

x. The motor shall be equipped for a plug-in type lead assembly. The lead assembly shall seal the lead conductors and the motor terminals from the surrounding environment. The assembly shall consist of one (1) set of three separate, continuous leads, and a grounding conductor. The motor leads shall have a minimum length of 15'.

xi. The 5 HP through 30 HP, 3-phase motors shall be dual voltage units equipped with a voltage plug connection to allow the rated voltage to be set at 230 volt or 460V by changing the voltage plug.

Dimensional Drawing Vertical Submersible

WP0057
0420
replaces
NEW



Customer: _____
Customer PO: _____
Branch Order No.: _____
Item: _____

Pump Size	Stages	Imp. Dia.	BHP	Quantity
Liquid	GPM	TDH	Sp. Gr.	Temperature

Bowl Bearing	Bowl Shaft Dia.	Col. Size	No. of Col.

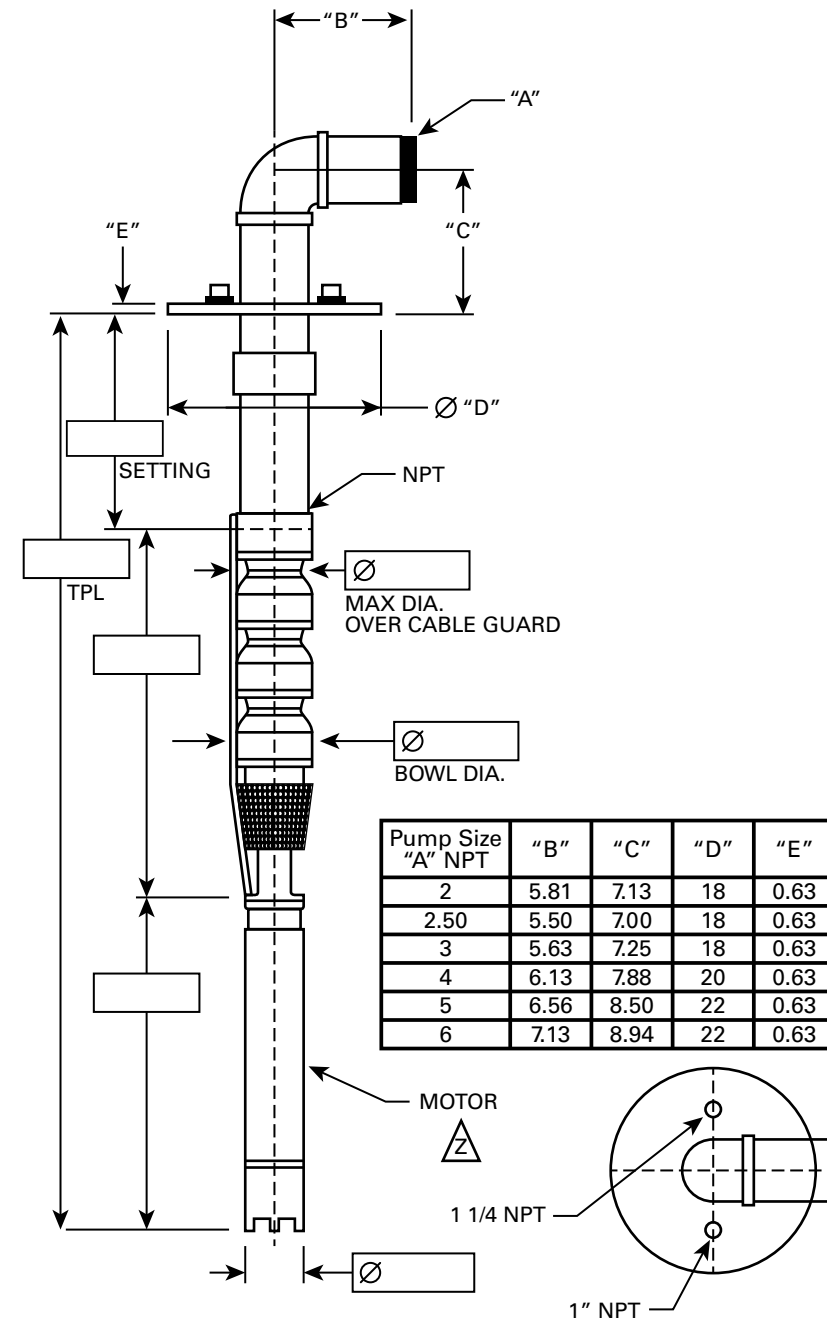
Special Construction

Certified Correct

For Approval
 For Record

By _____ Date _____

Dimensional Drawing Vertical Submersible



MOTOR DATA

MFG _____
Furn. By _____
HP _____ Phase _____
RPM _____ Cycle _____
NEMA _____ Volts _____

WEIGHT

Pump _____ lbs.
Motor _____ lbs.
Total _____ lbs.

Certified Correct

For Approval
 For Record

By _____ Date _____

Customer: _____
Customer PO: _____
Branch Order No.: _____
Item: _____
Service: _____

Pump Size	Stages	Imp. Dia.	BHP	Quantity
Liquid	GPM	TDH	Sp. Gr.	Temperature

Bowl Bearing	Bowl Shaft Dia.	Col. Size	No. of Col.

No. _____ NOTES

1. All dimensions are in inches unless otherwise stated
2. Velocity passed motor to insure proper cooling
= _____ Ft./sec.

Special Construction

Certified Correct

For Approval
 For Record

By _____ Date _____

Submittal Documents

Submittal Documents

TESTED, PAINTED, AND PACKED



Right Pump. Right Now. What you need, when you need it.



Right Pump. Right Now.®

Submersible
Cable Chart

CABLE CHART – 60° C

Three Phase 60° C Cable, 60 Hz (Service Entrance to Motor) Maximum Length in Feet

Motor Rating		60° C Insulation - AWG Copper Wire Size														
Volts	HP	14	12	10	8	6	4	2	1	1/0	2/0	3/0	4/0	250	350	500
230V 60 Hz. Three Phase 3 Lead	5	140	230	370	590	920	1430	2190	2690	3290	4030	4850	5870	6650	8460	
	7.5	0	150	250	410	640	1010	1540	1900	2310	2840	3400	4120	4660	5910	7440
	10	0	0	180	300	470	740	1140	1410	1720	2110	2550	3090	3510	4500	5710
	15	0	0	0	200	320	510	790	970	1180	1450	1760	2120	2410	3080	3900
	20	0	0	0	0	240	390	600	750	920	1130	1370	1670	1900	2440	3100
	25	0	0	0	0	0	310	490	600	730	900	1100	1330	1510	1950	2480
	30	0	0	0	0	0	250	390	490	590	730	890	1080	1230	1580	2030

460V 60 Hz. Three Phase 3 Lead	5	590	950	1500	2360	3700	5750									
	7.5	410	670	1060	1670	2610	4060	6200	7610							
	10	300	480	770	1220	1910	2980	4580	5630	6900						
	15	0	330	530	840	1320	2070	3160	3890	4760	5840	7040				
	20	0	0	400	640	1020	1600	2460	3020	3710	4560	5500				
	25	0	0	0	520	810	1280	1960	2410	2960	3640	4400	5350			
	30	0	0	0	410	650	1030	1570	1950	2390	2940	3560	4330	4940		
	40	0	0	0	0	500	790	1220	1500	1840	2270	2730	3320	3760		
	50	0	0	0	0	0	610	940	1170	1430	1750	2110	2560	2910	3700	4690
	60	0	0	0	0	0	540	830	1020	1250	1540	1860	2250	2550	3260	4120
	75	0	0	0	0	0	0	660	820	1000	1230	1480	1810	2050	2640	3360
	100	0	0	0	0	0	0	0	610	750	930	1120	1360	1540	1990	2520
	125	0	0	0	0	0	0	0	0	0	770	920	1040	1270	1620	2040
	150	0	0	0	0	0	0	0	0	0	0	750	910	1040	1330	1680
	200	0	0	0	0	0	0	0	0	0	0	0	0	840	1070	1370

230V 60 Hz. Single Phase	5	0	0	170	260	430	680	1060	1330	1660	2070	2560			
	7.5	0	0	0	200	310	490	760	940	1150	1420	1740			
	10	0	0	0	0	220	340	520	660	810	1020	1250	1540		
	15	0	0	0	0	0	230	370	450	560	700	870	1080		

Lengths not in bold type meet the U.S. National Electrical Code ampacity for either individual conductors or jacketed 60° C cable. Lengths in bold type meet the National Electric Code ampacity only for individual conductor 60° C cable, in free air or water. If other cable is used, the National Electric Code as well as the local codes should be observed.

Submersible Cable Chart

CABLE CHART – 75° C

Three Phase 75° C Cable, 60 Hz (Service Entrance to Motor) Maximum Length in Feet

Motor Rating		75° C Insulation - AWG Copper Wire Size														
Volts	HP	14	12	10	8	6	4	2	1	1/0	2/0	3/0	4/0	250	350	500
230V 60 Hz. Three Phase 3 Lead	5	140	230	370	590	920	1430	2190	2690	3290	4030	4850	5870	6650	8460	
	7.5	0	150	250	410	640	1010	1540	1900	2310	2840	3400	4120	4660	5910	7440
	10	0	0	180	300	470	740	1140	1410	1720	2110	2550	3090	3510	4500	5710
	15	0	0	0	200	320	510	790	970	1180	1450	1760	2120	2410	3080	3900
	20	0	0	0	150	240	390	600	750	920	1130	1370	1670	1900	2440	3100
	25	0	0	0	0	190	310	490	600	730	900	1100	1330	1510	1950	2480
30	0	0	0	0	0	250	390	490	590	730	890	1080	1230	1580	2030	

460V 60 Hz. Three Phase 3 Lead	5	590	950	1500	2360	3700	5750									
	7.5	410	670	1060	1670	2610	4060	6200	7610							
	10	300	480	770	1220	1910	2980	4580	5630	6900						
	15	0	330	530	840	1320	2070	3160	3890	4760	5840	7040				
	20	0	0	400	640	1020	1600	2460	3020	3710	4560	5500				
	25	0	0	320	520	810	1280	1960	2410	2960	3640	4400	5350			
	30	0	0	0	410	650	1030	1570	1950	2390	2940	3560	4330	4940		
	40	0	0	0	320	500	790	1220	1500	1840	2270	2730	3320	3760		
	50	0	0	0	0	390	610	940	1170	1430	1750	2110	2560	2910	3700	4690
	60	0	0	0	0	0	540	830	1020	1250	1540	1860	2250	2550	3260	4120
	75	0	0	0	0	0	430	660	820	1000	1230	1480	1810	2050	2640	3360
	100	0	0	0	0	0	0	490	610	750	930	1120	1360	1540	1990	2520
	125	0	0	0	0	0	0	0	0	620	770	920	1040	1270	1620	2040
	150	0	0	0	0	0	0	0	0	0	620	750	910	1040	1330	1680
200	0	0	0	0	0	0	0	0	0	0	610	740	840	1070	1370	

230V 60 Hz. Single Phase	5	0	100	170	260	430	680	1060	1330	1660	2070	2560	3190			
	7.5	0	0	120	200	310	490	760	940	1150	1420	1740	2120			
	10	0	0	0	140	220	340	520	660	810	1020	1250	1540			
	15	0	0	0	0	140	230	370	450	560	700	870	1080			

Lengths not in bold type meet the U.S. National Electrical Code ampacity for either individual conductors or jacketed 75° C cable.
 Lengths in bold type meet the National Electric Code ampacity only for individual conductor 75° C cable, in free air or water.
 If other cable is used, the National Electric Code as well as the local codes should be observed.

Friction Loss Tables

COLUMN FRICTION LOSS STEEL

SUBMERSIBLE PUMPS – Loss in Feet Per 100 Feet of Column – 0-2000 GPM

U.S. Gallons Per Min.	COLUMN SIZE – INCHES										U.S. Gallons Per Min.
	2½	3	4	5	6	8	10	12			
25											25
30											30
35	1.15										35
40	1.47										40
45	1.84										45
50	2.23	0.76									50
60	3.14	1.06									60
70	4.18	1.41									70
80	5.36	1.82									80
90	6.70	2.26									90
100	8.19	2.76	0.72								100
120	11.50	3.88	1.10								120
140	15.50	5.19	1.35								140
160	20.00	6.69	1.71	0.56							160
180	25.20	8.40	2.41	0.70							180
200	30.70	10.25	2.61	0.85							200
220	37.10	12.30	3.13	1.01	0.41						220
240	43.8	14.5	3.69	1.19	0.48						240
260		16.9	4.30	1.38	0.56						260
280		19.5	4.95	1.55	0.65						280
300		22.1	5.62	1.82	0.73						300
350		30.0	7.54	2.43	0.98						350
400			9.75	3.13	1.25	0.32					400
450			12.25	3.91	1.56	0.40					450
500			14.95	4.78	1.91	0.48					500
600				6.76	2.69	0.69					600
700				9.10	3.60	0.92	0.29				700
800				11.75	4.63	1.17	0.38				800
900				14.82	5.81	1.46	0.47	0.20			900
1000				18.15	7.10	1.79	0.58	0.24			1000
1100					8.52	2.15	0.69	0.29			1100
1200					10.10	2.53	0.81	0.34			1200
1300					11.70	2.94	0.94	0.40			1300
1400					13.58	3.39	1.10	0.46			1400
1500						3.88	1.23	0.52			1500
1600						4.39	1.39	0.59			1600
1700						4.93	1.56	0.66			1700

COLUMN FRICTION LOSS PVC

GPM	3"		4"		6"		8"		10"	
	Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.	Ft.	Lbs.
1										
2										
3										
4										
5										
6										
8										
10										
15										
20	0.13	0.056								
25	0.19	0.083								
30	0.26	0.114								
35	0.35	0.151	0.09	0.041						
40	0.44	0.191	0.12	0.052						
45	0.55	0.239	0.15	0.064						
50	0.66	0.288	0.17	0.076						
60	0.93	0.406	0.25	0.107						
70	1.24	0.540	0.33	0.143						
80	1.58	0.687	0.41	0.180						
90	1.98	0.861	0.52	0.224						
100	2.42	1.05	0.63	0.272	0.08	0.036				
125	3.80	1.65	0.95	0.415	0.13	0.055				
150	5.15	2.24	1.33	0.580	0.18	0.077				
175	6.90	3.00	1.78	0.774	0.23	0.102				
200	8.90	3.87	2.27	0.985	0.30	0.130				
250			3.36	1.460	0.45	0.195	0.12	0.051		
300			4.85	2.11	0.63	0.275	0.17	0.072		
350			6.53	2.84	0.84	0.367	0.22	0.095		
400					1.08	0.471	0.28	0.121		
500					1.66	0.720	0.42	0.182	0.14	0.059
550					1.98	0.861	0.50	0.219	0.16	0.071
600					2.35	1.02	0.59	0.258	0.19	0.083
700							0.79	0.343	0.26	0.112
800							1.02	0.443	0.33	0.143
900							1.27	0.554	0.41	0.179
950									0.46	0.198
1000									0.50	0.218

UNITS OF FLOW

Units	U.S. Gallons Per Minute	Million U.S. Gallons Per Day	Cubic Feet Per Second	Cubic Meters Per Hour	Liters Per Second
1 U.S. Gallon Per Minute	1	.001440	.00223	.2270	.0631
1 Million U.S. Gallons Per Day	694.5	1	1.547	157.73	43.8
1 Cubic Foot Per Second	448.8	.646	1	101.9	28.32
1 Cubic Meter Per Hour	4.403	.00634	.00981	1	.2778
1 Liter Per Second	15.85	.0228	.0353	3.60	1

UNITS OF POWER

Units	Horsepower	Ft. – Lbs. Per Minute	Watts	Kilowatts	Metric Horsepower	B.T.U. Per Minute
1 Horsepower	1	33,000	746	.746	1.014	42.4
1 Ft. – Lb. Per Minute	.0000303	1	.0226	.0000226	.0000307	.001285
1 Watt	.001340	44.2	1	.001	.001360	.0568
1 Kilowatt	1.341	44.250	1000	1	1.360	56.8
1 Metric Horsepower	.986	32,550	736	.736	1	41.8
1 B.T.U. Per Minute	.0236	778.4	176	.0176	.0239	1

UNITS OF LENGTH

Reference

Units	1 Centimeter	1 Inch	1 Foot	1 Yard	1 Mile	1 Meter	1 Kilometer
1 Centimeter	1	.3937	.0328	.01094	.000006214	.01	.00001
1 Inch	2.54	1	.0833	.0278	.00001578	.0254	.0000254
1 Foot	30.48	12	1	.333	.0001894	.3048	.0003048
1 Yard	91.44	36	3	1	.0005682	.9144	.0009144
1 Mile	160,934.4	63,360	5,280	1,760	1	1,609	1.61
1 Meter	100	39.37	3.281	10.93613	.0006214	1	.001
1 Kilometer	100,000	39,370.08	3,280.84	1,093.613	.621371	1,000	1

UNITS OF PRESSURE AND HEAD

Units	Lbs. Per Square Inch	Feet of Water	Meters of Water	Inches of Mercury	Atmospheres	Kilograms Per Sq. C.M.
1 Lb. Per Square Inch	1	2.31	.704	2.04	.0681	.0703
1 Foot of Water	.433	1	.305	.882	.02947	.0305
1 Meter of Water	1.421	3.28	1	2.89	.0967	.1
1 Inch of Mercury	.491	1.134	.3456	1	.0334	.0345
1 Atmosphere (at Sea Level)	14.70	33.93	10.34	29.92	1	1.033
1 Kilogram Per Sq. C.M.	14.22	32.8	10	28.96	.968	1

Equivalent units are based on density of fresh water from 32° to 62° F.
 Equivalent units are based on density of mercury from 32° to 62° F, sufficient accuracy.
 Each 1,000 feet of ascent decreases pressure about ½ lb./square inch.

UNITS OF VOLUME AND WEIGHT

Units	U.S. Gallons	Imperial Gallons	Cubic Inches	Cubic Feet	Acre Feet	Pounds	Cubic Meters
1 U.S. Gallon	1	.833	231	.1337	.00000307	8.35	.003785
1 Imperial Gallon	1.201	1	277.4	.1605	.00000369	10.02	.004546
1 Cubic Inch	.00433	.00360	1	.000579	—	.0361	—
1 Cubic Foot	7.48	6.23	1728	1	.0000230	62.4	.02832
1 Acre-Foot	325.850	271,335	—	43,560	1	—	1233.5
1 Pound*	.120	.0998	27.7	.0160	—	1	—
1 Cubic Meter	264.2	220	61,023	35.314	.000811	2205	1
1 Liter	.2642	.220	61.023	.0353	—	2.205	—

* Weights shown based on maximum density of fresh water at 39° F.

UNITS OF SURFACE AREA

Units	Square Inch	Square Feet	Square Yard	Acres	Square Miles	Square Centimeters	Square Meters	Hectares
1 Square Inch	1	.00694	.00077	—	—	6.452	—	—
1 Square Foot	144	1	.111	—	—	929	.0929	—
1 Square Yard	1296	9	1	.000207	—	8361	.0836	—
1 Acre	—	43.500	4840	1	.00156	—	4049	0.405
1 Square Mile	—	27.9 x 10 ⁶	3,097,600	640	1	—	2.58 x 10 ⁶	258
1 Square Centimeter	.155	.001076	—	—	—	1	.0001	1 x 10 ⁸
1 Square Meter	1549	10.76	1.196	.000247	—	10.000	1	.0001
1 Hectare	—	107.639	11.960	2.471	.00386	1 x 10 ⁸	10.000	1

Reference

Company Policy

pages 60-63



**From our family to yours,
thank you for your business.**

Credit Terms and Payments

GENERAL

Credit terms are subject to the approval of the Credit Department. The Credit Department will do everything possible to assist our valued customers.

CREDIT LINES

Most customers will have a line of credit established through the use of any or a combination of the following:

- Financial statement analysis
- Dunn & Bradstreet rating and payment record or Manufacturers Clearing House records.
- Bank references
- Trade references
- Other references or measure, if necessary.

PAYMENT TERMS

All items shipped are subject to the terms as stated on the face of the invoice. The due date is to be calculated from the invoice date.

DISPOSITION OF ORDERS

Payment arrangements for past due balances must be made with the Credit Department. We retain the right to suspend shipments until an equitable payment agreement has been reached.

INVOICE ADJUSTMENT

In order to maintain the account in a current status, all invoices should be paid by the due date. Pending adjustments should be deducted on the remittance, with an explanation for the deduction attached to the remittance advice.

Return Goods - New Products

GENERAL

This policy outlines the procedures for material returned for credit to assist in a prompt, accurate credit.

QUALIFICATION

All products returned in like-new condition are subject to inspection. Products must be securely packaged to reach the destination without damage.

A notice will be mailed to the customer when returned products are received. Unauthorized or unacceptable returns will be scrapped if the customer does not reply about disposition within 30 days of the notice.

RETURN PROCEDURE

Products may be returned if:

- Prior written consent of the Customer Service Manager or National Sales Manager.
- Transportation costs are paid by the purchaser.
- The normal restocking charge is 20% of the net invoice or \$25.00 minimum.
- Product returned does not exceed 10% of previous year's net purchases.

The following materials are not returnable for credit:

- Special items manufactured to order.
- Obsolete items not carried in inventory.
- Items shipped one year or more prior to date of request for permission to return.

MISTAKES - SHIPPED IN ERROR

If a mistake is made by:

- Wolf Pump - Customer must advise Wolf within 30 days. A credit will be issued for all shipping and handling expenses for return.
- Customer - Returns will be accepted if shipped back prepaid and subject to 20% restocking charge, authorization and routing instructions.

WOLF PUMPS' LIMITED WARRANTY AND LIABILITY WAIVER

Wolf Pumps warrants to the original consumer of the products (if manufacturer's) that the products will be free from defects in material and workmanship for the warranty period of one year from date of installation, or 18 months from shipment, whichever occurs first.

Our warranty will not apply to any product that has been subject to negligence, misapplication, improper installation or maintenance.

Buyer's only remedy and Wolf Pumps' only duty is to repair or replace defective products (at Wolf Pumps' choice). For avoidance of doubt, Wolf Pumps' warranty liability shall not exceed the total cost of the product. Buyer agrees to pay all labor and shipping charges associated with this warranty and to request warranty service through the installing dealer as soon as a problem is discovered. If warranty service is requested more than 30 days after the warranty period has ended, it will not be honored. Wolf Pumps reserves the right to inspect all warranty claim products prior to authorizing credit or replacement.

WOLF PUMPS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR CONTINGENT DAMAGES WHATSOEVER.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED WARRANTIES. IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE WARRANTY PERIOD PROVIDED HERIN.

Certain states do not permit the exclusion or limitation of incidental or consequential damages or the placing of limitations on the duration of an implied warranty, therefore, the limitations or exclusions herein may not apply. This warranty sets forth specific legal rights and obligations, however, additional rights may exist, which may vary from state to state.

Neither Company nor its suppliers shall be liable, whether in contract or in tort or under any other legal theory, for loss of use, revenue or profit, or for cost of capital or of substitute use or performance, or for incidental, indirect, or special or consequential damages, or for any other loss or cost of similar type, or for claims by Purchaser for damages of Purchaser's customers. Likewise, Company shall not under any circumstances be liable for the fault, negligence, or wrongful acts of Purchaser or Purchaser's employees, or Purchaser other contractors or suppliers

WOLF PUMPS
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Freight and Shipping Policy

FREIGHT TERMS AND CONDITIONS

The term F.O.B. (Freight on Board) will mean the following for all orders shipped from the factory or the distribution centers:

- F.O.B. Shipping Point - Without regard to who pays any freight charges, the risk of loss lies with the customer. Wolf Pump will always ship F.O.B. shipping point unless stipulated otherwise by the Customer Service Manager or National Sales Manager.
- F.O.B. Destination - Without regard to who pays any freight charges, Wolf Pump assumes risk of loss until goods are delivered at the designated destination.

Note that payment of freight charges has been separated from the risk of loss. This is incumbent upon the purchasing party to make certain all shipments leaving the factory or the distribution center as "F.O.B. Shipping Point" are adequately insured, and that proper inspections, etc. are effected upon delivery of goods. Unless otherwise noted on quote or order confirmation, freight charges will be prepaid and added to the invoice.

Payment of freight charges will fall into one of the following classifications depending upon circumstances regardless of the F.O.B. option specified.

- Pre-paid (PPD) - Wolf Pump pays all freight charges for orders classified PPD. Examples are stock orders meeting the minimum qualifying amounts or special orders where Wolf Pump assumes payment responsibility.
- Pre-paid and Added to Invoice (PPA) - Wolf Pump pays the freight charges upon shipment. However, the charges will be included on the invoice for the items shipped and the customer will then reimburse Wolf Pump.
- Collect (COL) - Wolf Pump will not pay any freight charges for the shipment. The receiving party will pay the charges when the goods are delivered.

SHIPMENT ROUTING

Prepaid shipments will be routed via contract carriers. Collect shipments will be routed via contract carriers unless otherwise specified by customer. Routing must be specified at time of order submission. Best service and volume discount will be obtained if the selection of carrier is left to Wolf Pump Distribution Services. Routing requests are also limited by the capabilities and limitations of the various modes of transportation. All transit times are approximations.

INSURANCE

Common carriers are obligated to assume responsibility for goods they carry. The dollar limit varies by the carrier. For example: UPS orders greater than \$100.00 are not covered (they are a small package carrier) unless we declare the value when shipping.

F.O.B. Origin (Common Carrier) - The common carrier assumes responsibility for the goods he transports and customers must recover damages from the carrier.

LOST SHIPMENTS

Wolf Pump's responsibility on all surface and air freight shipments extends to actual shipping of the order. Tracing or follow up is the responsibility of the customer and the carrier. Nevertheless, you may always expect our full cooperation in helping to locate lost material. After allowing a reasonable amount of time for delivery, contact the Customer Service Department for tracing assistance.

- Truck Shipment - Wolf Pump will provide you with the pro number, tracer number and details for the customer to trace the shipments through the carrier at the destination.
- Air Freight and Air Express - Wolf Pump will provide the waybill number and details for tracing through the carrier at the destination.
- UPS - Wolf Pump will initiate tracers through UPS. Tracers normally require thirty (30) days.

WOLF®

CUSTOMIZED PUMPS



As a family-owned, American company, born in the most abrasive, deep well water conditions of west Texas, Wolf focuses on each customer to build perfectly matched pumps to their exact requirements. With our expertise, world-class testing, speed of delivery and personal attention, Wolf delivers durable, custom pump solutions when and where you need them.

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WOLF®
CUSTOMIZED PUMPS
Right Pump. Right Now.®