



MUNICIPAL/INDUSTRIAL PRODUCTS

- Industrial Pitless
- Custom Pitless
- Pitless Booster
- Monitor Booster Stations
- Protective Well Enclosures
- 8", 10, & 12" Weld-On Adapter



WHY A PITLESS UNIT?

The standard above ground "Well House" or "Well Pit" left much to be desired as solutions to sanitation, convenience and freeze protection.

Monitor (A Division of Baker Manufacturing) developed the first solution to eliminate the "well house and well pit" – with the Pitless Adapter and Pitless System.

The Pitless system allows the water to be directed to the service underground below the frost line, thus preventing any form of surface contamination.

The Pitless Adapter and Pitless Units are designed so you can remove the pump for service and not disturb any of the external piping in the well system.

Monitor units conform to the Recommended Standards for Water Works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers, Water Systems Council and PAS-97 (04) Standards.



133 Enterprise Street
Evansville, WI 53536

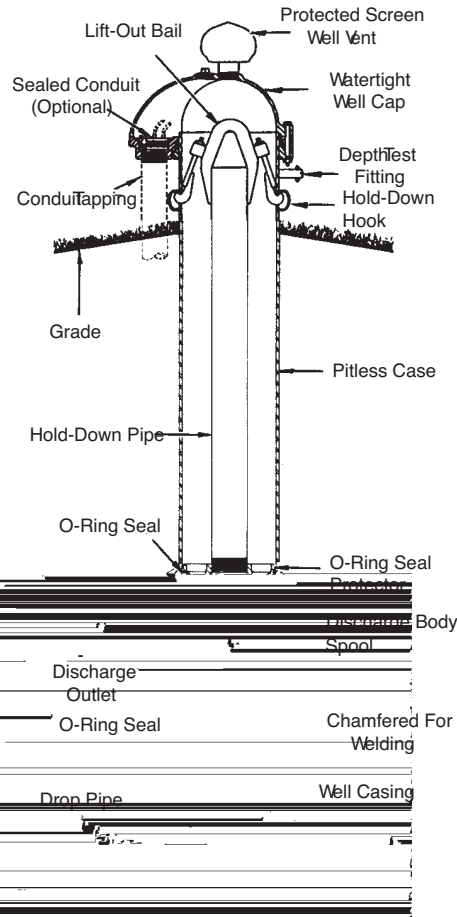


STANDARD INDUSTRIAL PITLESS UNITS

- 6" Industrial Pitless
- 6.6" Industrial Pitless
- 8" Industrial Pitless
- 10" Industrial Pitless
- 12" Industrial Pitless
- 14" Industrial Pitless
- 16" Industrial Pitless

GENERAL INFORMATION

- General Features
- Pitless Engineering Specifications
- Shipping Weights
- Spools & Spool Cable Seals
- O-Ring Selection Guide
- Installation Instructions

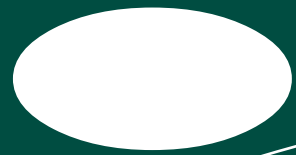


The Monitor PS Industrial Pitless Unit for submersible pumps forms a watertight extension of the well casing which starts below the frostline, where it is buried permanently, and continues upward 12 or more inches above grade, where the pitless case is closed with a watertight cap.

Monitor units conform to the Recommended Standards for Water Works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers, Water Systems Council and PAS-97 (04) Standards.



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SAMPLE ENGINEERING SPECIFICATIONS FOR PITLESS UNITS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

Complete assembled Pitless Unit System including well cap, lift-out bail, hold down hooks, lift out pipe, discharge body with support ring, spool with or without check valves and pressure equalizing passages.

1.02 SUBMITTALS

A. All bidders shall submit as part of their bid:

1. The Manufacturer and Model of the Pitless Unit to be installed.
2. Detailed Specifications with Drawings of the System furnished by the manufacturer.

PART 2 PRODUCTS

2.01 PITLESS UNIT

The Pitless Unit shall be equal to Baker Manufacturing Company, Monitor Division, Model _____.

The unit should be factory assembled, before shipping to the site. The pitless unit must conform to the Recommended Standards for Water Works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers, Health Education Services, Albany, NY., and/or Water Systems Council PAS-97 (04).

2.01.01 WELL CAP

The Watertight Cap shall be secured to the pitless casing with a compression gasket. The top of the cap can be removed without affecting the sealed conduit or wiring. The heavy duty watertight cap will have a separate protected downward facing screened well vent with pipe nipple. Construction of the cap and well vent will be of heavy duty gray cast iron and painted with a green enamel finish.

2.01.02 UPPER CASING

The Upper Casing is factory assembled to the discharge body, and the lift out and hold down mechanism are factory assembled to the spool. Upper casing thickness must conform to the Recommended Standards for Water Works, and be coated with a rust protective coating. The upper casing must provide a watertight connection from the discharge body to the well cap. The discharge port center line to be _____ feet below grade, and the pitless upper casing to extend _____ feet above grade.

2.01.03 SPOOL

The spool shall include _____ NPT per ANSI B 1.20.1 male or female drop pipe connection and shall be constructed of lead-free galvanized heavy duty gray cast iron, ductile iron, or steel with a lead-free galvanized plating on the wetted surface of over .010 inches thick. The spool will have o-ring grooves machined into the spool retaining the o-rings when setting or pulling the system.

The positive pressure o-ring seals shall be constructed of neoprene or equivalent. Spool shall be designed to accommodate probe tubes or water samplers and NPT ports for discharge pressure taps. O-ring protection should be provided to prevent the seals from dragging on the upper casing when the pump is installed or removed.

2.01.04 DISCHARGE BODY

The Discharge Body shall be constructed of lead-free galvanized ductile iron or lead-free galvanized steel. O-ring seat to be designed to prevent crevice and galvanic corrosion, **dissimilar metals should be avoided**. Discharge body designed to be strong enough to prevent distortion due to vertical movement of discharge pipe thereby allowing spool to bind in the discharge body. Minimum I.D. of the discharge body to be equal to or greater than I.D. of the well casing for ease in well servicing.

2.01.05 HOLD-DOWN MECHANISM

The Pitless Unit spool should have a hold down mechanism, factory assembled to spool and capable of preventing rotation of the pitless spool relative to the discharge body, at full rated locked rotor torque of the submersible pump motor. The spool must also have a factory assembled lift out pipe and bail, or spider capable of _____ lbs. rated load, to allow lifting a water filled drop pipe and pump out of the well for service. Components to be constructed of ductile iron or steel with a corrosion resistant coating.

2.01.06 CHECK VALVES (Optional)

Optional Check Valves may or may not be provided in the removable spool of the pitless unit. These should be low pressure drop, self cleaning, swing type check valves, with elastomer seal at seat, and constructed of corrosion resistant materials.

GENERAL INFORMATION: • General Features • Engineering Specifications
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SHIPPING WEIGHTS

Ordering No.	Bury Depth	Shpg. Wt.	Check Valves
PS67WBWE03T3 (6 in. I.D.)	3	211	No
	4	235	
	5	258	
	6	282	
	7	305	
	8	329	
PS67NBWE03T3 (6 in. I.D.) Kwikonect	3	211	No
	4	235	
	5	258	
	6	282	
	7	305	
	8	329	
PS67WBWE23T3 (6 in. I.D.)	3	211	Yes
	4	235	
	5	258	
	6	282	
	7	305	
	8	329	
PS67NBWE23T3 (6 in. I.D.) Kwikonect	3	211	Yes
	4	235	
	5	258	
	6	282	
	7	305	
	8	329	
PS6.67WBWE03T3 (For welding to 7" O.D. only)	3	210	No
	4	234	
	5	257	
	6	281	
	7	304	
	8	328	
PS6.67WBWE23T3 (For welding to 7" O.D. only)	3	210	Yes
	4	234	
	5	257	
	6	281	
	7	304	
	8	328	
PS810WBWE04T4 (8 in. I.D.)	3	428	No
	4	468	
	5	508	
	6	548	
	7	588	
	8	628	

Ordering No.	Bury Depth	Shpg. Wt.	Check Valves
PS810NBWE04T4 (8 in. I.D.) Kwikonect	3	428	No
	4	468	
	5	508	
	6	548	
	7	588	
	8	628	
PS810WBWE24T4 (8 in. I.D.)	3	430	Yes
	4	470	
	5	510	
	6	550	
	7	590	
	8	630	
PS810NBWE24T4 (8 in. I.D.) Kwikonect	3	430	Yes
	4	470	
	5	510	
	6	550	
	7	590	
	8	630	
PS1012WBWE06T6E (10" I.D.) Standard Model	3	532	No
	4	598	
	5	664	
	6	730	
	7	796	
	8	862	
PS1214WBWE06T6E (12 in. I.D.) Standard Model	3	606	No
	4	680	
	5	754	
	6	828	
	7	902	
	8	976	
PS1418WBWE08T8E (14 in. O.D.) Standard Model	3	920	No
	4	1007	
	5	1094	
	6	1181	
	7	1268	
	8	1355	
PS1618WBWE08T8E (16 in. O.D.) Standard Model	3	855	No
	4	942	
	5	1029	
	6	1116	
	7	1203	
	8	1290	

Flowing Wells are available on all industrial units.

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SPOOLS, SPOOL CABLE SEALS & REDUCER BUSHINGS

STANDARD SPOOLS	
Ordering No.	Upper Case Well
7E0PS3	7"
10E0PSA	10"
12E0PSA	12"
14E0PSA	14"

INDUSTRIAL SPOOL CABLE SEALS	
Ordering No.	Cable Range O.D.
UG193	.125 - .186
UG192	.187 - .312
UG255	.312 - .437
UG355	.37 - .50

SILENT CHECK VALVE SPOOLS	
Ordering No.	Upper Case Well
7E2PS3	7"
10E2PSA	10"

FLOWING WELL SILENT CHECK VALVE SPOOLS	
Ordering No.	Upper Case Well
7E2PS3F	7"
10E2PSF	10"

FLOWING WELL SPOOLS	
Ordering No.	Upper Case Well
7E0PS3F	7"
10E0PSF	10"
12E0PSF	12"
14E0PSF	14"

REDUCER BUSHINGS	
Ordering No.	Size
PC335 Galv.	3" x 2"
UK254x29 Galv.	4" x 2"
G18.4x3 Galv.	4" x 3"
UL168 Galv.	6" x 3"
G18.6x4 Galv.	6" x 4"
UL254 Galv.	6" x 5"

FLANGED DISCHARGE KITS		Flange discharge kits convert discharge on 6 x 7 through 16 x 18 (Standard Model) Industrial Pitless Units from threaded to flanged. (Each kit includes 150 lb. raised flange). Swagged nipples also available.
Ordering No.	Discharge Size	
3UC	3"	
4UG	4"	
6UJ	6"	
8UM	8"	

CABLE SEALS For use with 10", 12" & 14" Monitor Premium Watertight caps.

Model	Cable Range	Cable Size	Cable Material
53UK4	.125-.187 O.D.	#14, 12	4 wire Twstd Plastic
54UK4	.187-.312 O.D.	#10, 8, 6	4 wire Twstd Plastic
		#14, 12, 10	4 wire Twstd Rubber
55UK4	.312-.437 O.D.	#8, 6, 4, 3	4 wire Twstd Rubber
56UK4	.437-.500 O.D.	#2	4 wire Twstd Rubber
57UK4	.500-.625 O.D.	#1, 1/0, 2/0	4 wire Twstd Rubber
58UK4	.625-.750 O.D.	#3/0, 4/0	4 wire Twstd Rubber

FOR FURTHER INFORMATION ON ORDER NUMBERS SEE UNIT SPECIFICATIONS

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INSTALLATION INSTRUCTIONS

STANDARD INDUSTRIAL PITLESS UNITS FOR SUBMERSIBLE PUMPS 6" through 16" WELL SIZES

1. All pitless unit cases are joined by welding or threading the unit to the well casing, or kwikonect style by slipping the unit onto the top of the well casing and tightening the bolts.
2. Establish ground level at the well location. It is desirable to have the ground slope away, from pitless unit case, in all directions.
3. The pitless unit case should extend above the ground level according to state well code. To accomplish this the well casing must be cut off at a distance below the ground level equal to the overall pitless unit length less the length unit is to be above the ground.
4. In order to do work, excavate around the well casing according to government regulations where well casing is to be cut off.
5. Cut off the well casing PERPENDICULAR to the well casing center line.
6. Remove the pitless unit cap then loosen the hold-down hooks or spider and remove spool assembly and set aside. NOTE: (the spool assembly includes a spool with two or no silent check valves; two o-ring seals, lift-out pipe and bail, or hold down spider.
7. Lower the pitless case into place and rotate the discharge outlet to the desired location and weld the pitless case to the well casing. THIS JOINT MUST BE WATERTIGHT AND IT IS ESSENTIAL THAT THE CENTER LINE OF THE PITLESS CASE AND WELL CASING BE THE SAME.
8. The submersible motor, pump and cable are attached to the drop pipe and then lowered into the well. When the top of the last section of the drop pipe is one foot or more above the pitless case screw the spool assembly onto the drop pipe.
9. Wipe the rubber o-ring seals with a clean cloth and then coat with a heavy layer of petroleum jelly (vaseline) for proper seating of rings. Lower the spool assembly, drop pipe with motor, pump and cable into place.
10. Install and tighten hold-down hooks/hold down spider.
11. Complete electrical service and install pitless cap.
12. Connect discharge outlet to distribution line and complete all wiring.
13. The unit is now ready to operate under power and should be run a sufficiently long time to see that there are no leaks present.
14. The hole should not be filled in until the unit is running satisfactorily. Care should be exercised to fill under discharge line properly before back filling.

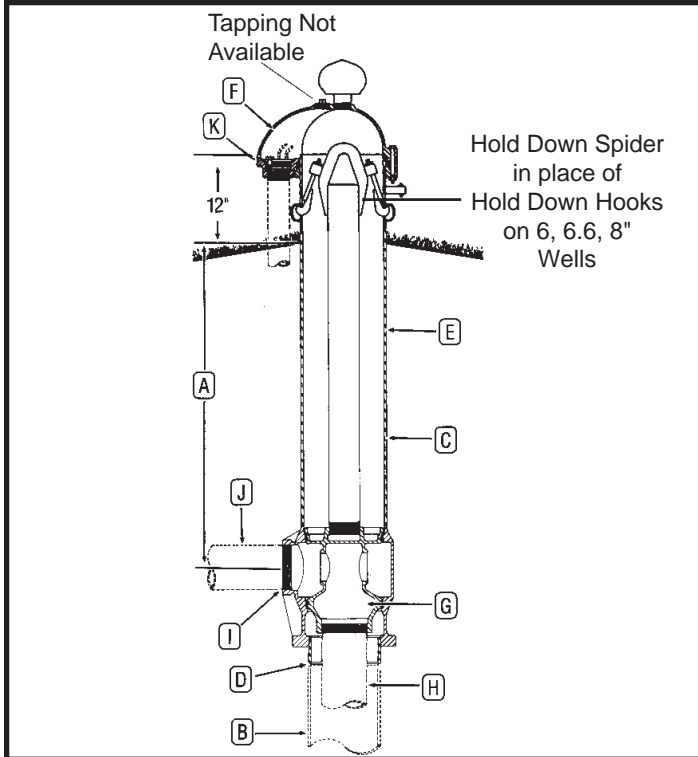
NOTE: Dissimilar metals should be avoided.

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6" I.D. STANDARD INDUSTRIAL PITLESS UNITS



EXPLANATION OF PITLESS UNIT

ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Standard Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number 3PS67WBWE23T3S

- 3** A. The first numeral in the order number indicates the bury depth, in feet. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes. However, any length can be manufactured.
- PS** These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pumps.
- 6** B. This numeral indicates the well casing size, 6" I.D.
- 7** C. This numeral indicates the upper pitless case size, 7" I.D.
- W** D. Indicates the attachment to the well casing is a welded joint ("N" for KwiKonec - 6" I.D. & 8" I.D. only).
- B** E. Indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap with screened vent installed.
- E** G. Indicates spool has pressure equalizing passages, for venting well.
- 2** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool having two silent check valves.
- 3** H. Indicates the size of drop pipe in inches.
- T** I. Indicates the discharge connection is threaded.
- 3** J. Indicates the size of discharge pipe in inches.
- S** K. Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

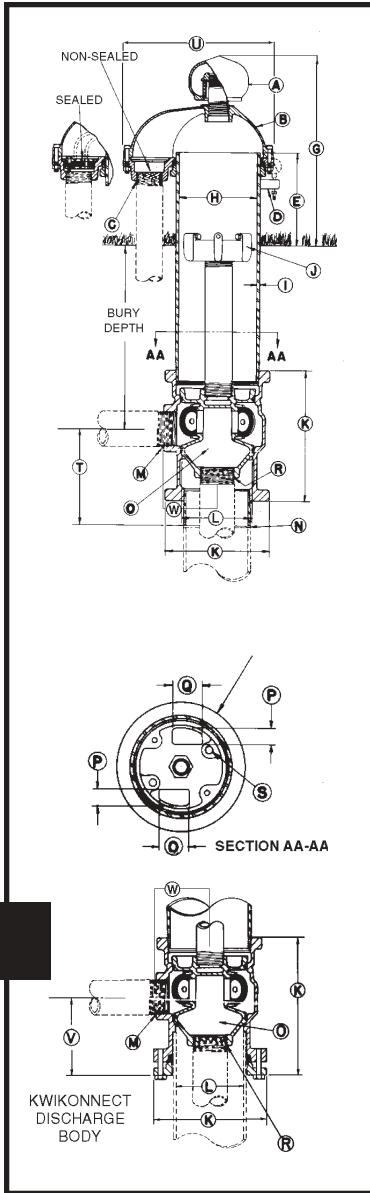
A	3	Bury Depth in Feet
	PS	Pitless Unit for Submersible Pump
B	6	Well Size - Ins.
C	7	Upper Case Size - Ins.
D	W	Attachment to Well Casing W-Welded N-Compression
E	B	Black Upper Case
F	W	Watertight Cap w/Screened Air Vent
	E	Pressure Equalizing Spool Passages
G	2	No. of Check Valves: (0 or 2)
H	3	Drop Pipe I.D. Ins.
	T	Threaded NPT Std. Connection
I		Flange, ASA 150#
		Welded
		Mech. Joint w/transition sleeve
		Accessory Discharge Connections
J	3	Discharge I.D. Ins.
K	S	Elec. Cable Seal (S) O.D. 3 Wire _____ O.D. Grounding Wire _____
OPTIONS		Flowing Well (F)
		Special Provision (X)

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6" I.D. STANDARD INDUSTRIAL SPECIFICATION



- A Screened Well Vent tap size: 1-1/2" NPT
- B Seal Cap: *The Watertight cap bolts to a compression seal ring securing around the pitless case and comes with the screened well vent installed.*
- C Conduit Tapping size: 1-1/2" NPT
Watertight conduit seals for most common cable sizes are available for watertight cap.
- D Depth Tester Tapping: 1/4" NPT
- E Distance from ground level to top of Pitless Case: 12"
- G Distance from ground level to top of
Screened Well Vent: 19-1/2"
- H Pitless Case I.D. size: 7"
- I Pitless Case wall thickness:300"
- J "Hold-Down" - "Lift-Out" Mechanism
Three set screws in a spider atop the "Hold-Down" - "Lift-Out" pipe brace against the interior of the pitless casing, locking the spool in place.
Hold-Down, Lift-Out pipe size (Schedule 80): 2" NPT
Designed "Lift-Out" Mechanism load: 15,000 lbs.
- DISCHARGE BODY - THREADED**
- K Discharge Body outside diameter: 9-11/16"
- K Discharge Body length: 11-1/4"
- DISCHARGE BODY - KWIKONNECT**
- K Discharge Body outside diameter: 10"
- K Discharge Body length: 12-9/32"
- L

*Optional flange, weld or mechanical joint available upon request.

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

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6" I.D. Standard Industrial Parts Breakdown

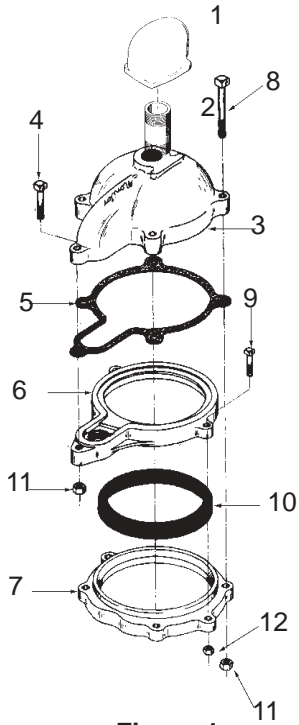


Figure 1

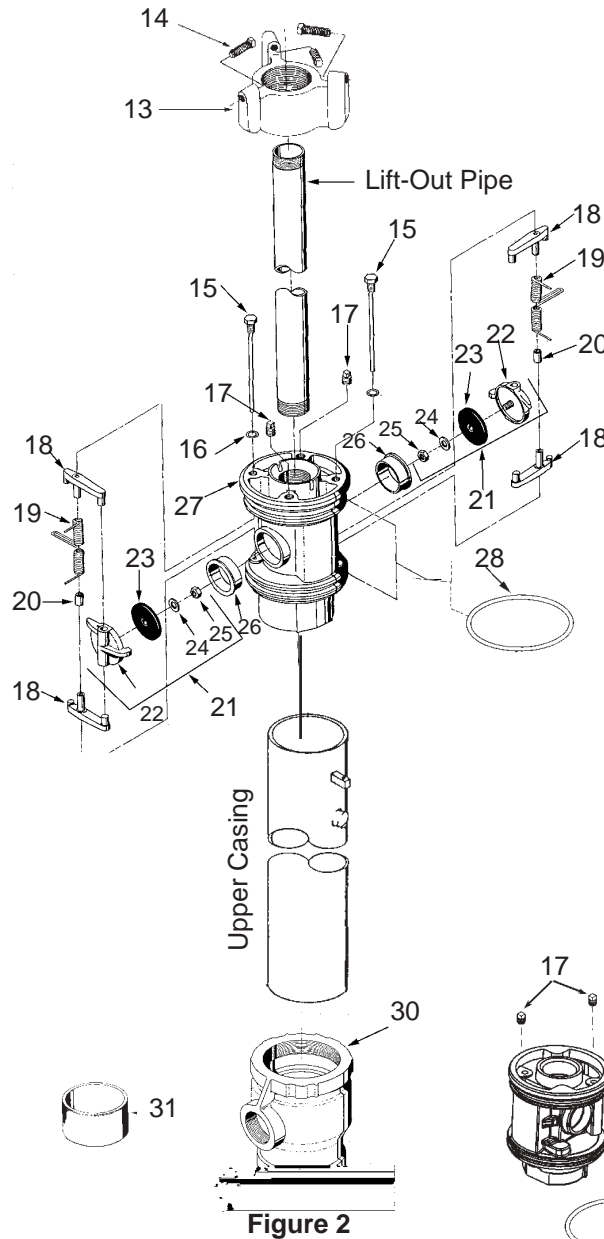


Figure 2

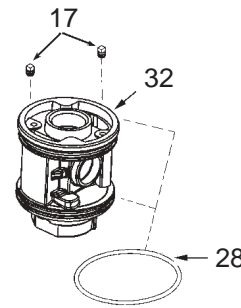


Figure 3



Figure 4-Flowing Well Spool with check Valves includes Key Nos. 18-26. (W/O Check Valves same as Fig. 3)

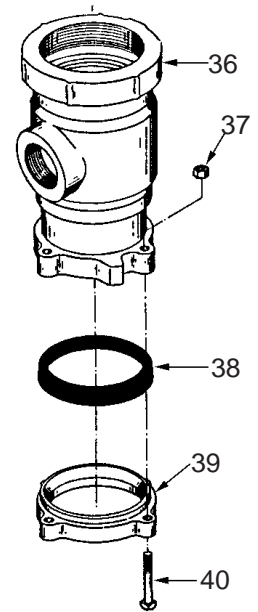


Figure 5

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6" I.D. Standard Industrial Parts Breakdown

The drawings and parts list apply to the model numbers listed below. See drawing on previous page.

Note: Add (F) at end of model number for flowing well unit.

Bury Depth	Unit	Well Size Tap	Case Size	Well Casing Attach.	Upper Case	Cap Style	Spool	Drop Pipe I.D.	Drop Discharge Conn.	Discharge I.D.
1' & Up	PS	6"	7"	W	B	W	E0	3	T	3
1' & Up	PS	6"	7"	W	B	W	E2	3	T	3
1' & Up	PS	6"	7"	N	B	W	E0	3	T	3
1' & Up	PS	6"	7"	N	B	W	E2	3	T	3

All units have a watertight cap with screened vent.

Monitor Pitless Units listed above are equipped with one of the following types of Spools:

- E2 Spool with check valves, Figure No.2
- E0 Spool without check valves, Figure No. 3
- E2 Spool with check valves for Flowing Well, Figure 4
- E0 Spool without check valves for Flowing Well, Figure 4

Note: Optional Cable Seals available.

Key No.	Ordering Number	Description	Quantity
FIGURE 1			
-----	7WPSM	Watertight Cap, includes Key Nos. 1-12	
-----	WBAG2	Pkg. of S.S. bolts & Nuts for Cap	1
1	PS150	Vent Assembly	1
2	PS263	Pipe Nipple	1
3	PS217	Seal Cap & Plug Assembly	1
4	PS93S	Machine Bolt, 3/8-16NC x 2 1/2" L.	1
5	PS197	Gasket	1
6	PS377	Retainer Ring	1
7	PS187	Depression Ring	1
8	PS94S	Machine Bolt, 3/8-16NC x 3 1/2" L.	6
9	PS132S	Machine Bolt, 5/16-18NC x 2" L.	2
10	PS167	Seal Ring	1
11	UB17S	Hex Nut, 3/8-16NC	7
12	PC434S	Hex Nut, 5/16-18NC	2
FIGURE 2			
13	UC129	Hold-Down Assembly, includes Key Nos. 13 & 14 assembled	1
14	UC139	Set Screw, 7/16-14NC X 1 3/4" long	3
15	UC299	Hinge Pin	2
16	UC127	Hinge Pin Gasket	2
17	ZA66	Pipe plug, 3/8-18 NPT	2
18	UC301	Valve Rocker Arm	4
19	UC302	Valve Spring	2
20	UC300	Center Coil Support	2
21	UC296	Check Valve Assembly, includes Key Nos. 22-25 assembled	
22	UC292	Valve Body	2
23	UC295	Rubber Check Valve Facing	2

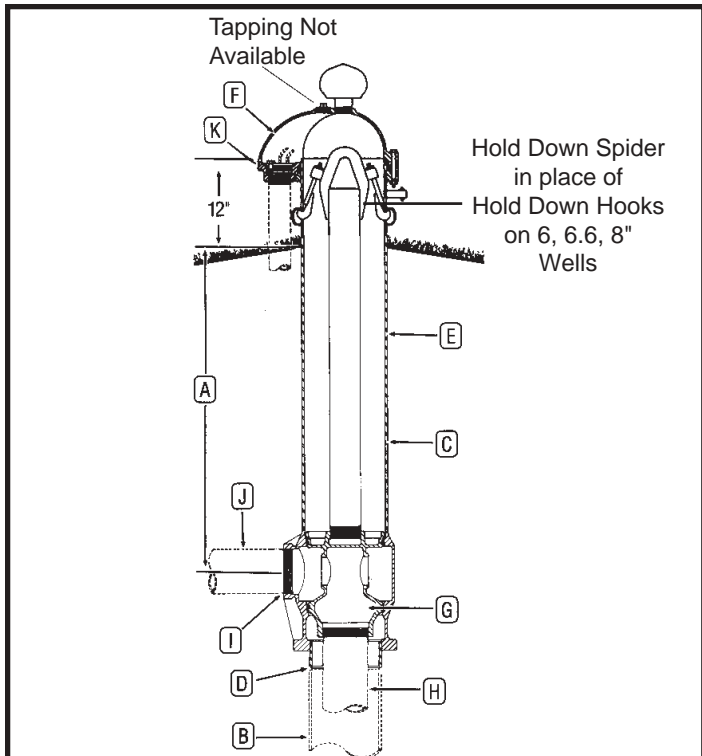
Key No.	Ordering Number	Description	Quantity
24	PS158	Brass Washer	2
25	PS159	Brass Nut, 3/8-16NC x 1/4" thick	2
26	UC293	Check Valve Seat	2
27	UC290	Spool only	1
27	7E2PS3	Alternate spool with check valves includes Key Nos. 15-28 assembled.	
28	UC15	"O" Ring	2
30	UC291	Discharge Body	1
31	6AWN	Welding Nipple	1
FIGURE 3			
32	7E0PS3	Spool without check valves includes Key Nos. 17, 28, 32 assembled	
32	UC142	Spool, also includes Key No. 17 assembled.	1
FIGURE 4			
-----	UC392	Flowing Well Spool with check valves (7E2PS3F - Boxed)	1
34	-----	Cable Seals (See Spools & Cable Seals)	
35	UC393	Flowing Well Spool w/o check valves (7E0PS3F - Boxed)	1
FIGURE 5			
36	UC491	Discharge body for kwikonect Style Units-not available for 6.6"	1
37	PC433	Hex Nut, 1/2"-13NC	6
38	PS166	Seal Ring	1
39	UC285	Depression Ring	1
40	UB201	Machine bolt, 1/2" x 13NC x 4 1/2" L.	6

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6.6" I.D. STANDARD INDUSTRIAL PITLESS UNITS



EXPLANATION OF PITLESS UNIT

ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Standard Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS6.67WBWE23T3S**

- 3** A. The first numeral in the order number indicates the bury depth, in feet. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes. However, any length can be manufactured.
- PS** These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pumps.
- 6.6** B. This numeral indicates the well casing size, 6.6" I.D.
- 7** C. This numeral indicates the upper pitless case size, 7" I.D.
- W** D. Indicates the attachment to the well casing is a welded joint.
- B** E. Indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap with screened vent installed.
- E** G. Indicates spool has pressure equalizing passages, for venting well.
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- 3** H. Indicates the size of drop pipe in inches.
- T** I. Indicates the discharge connection is threaded.
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- S** K. Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

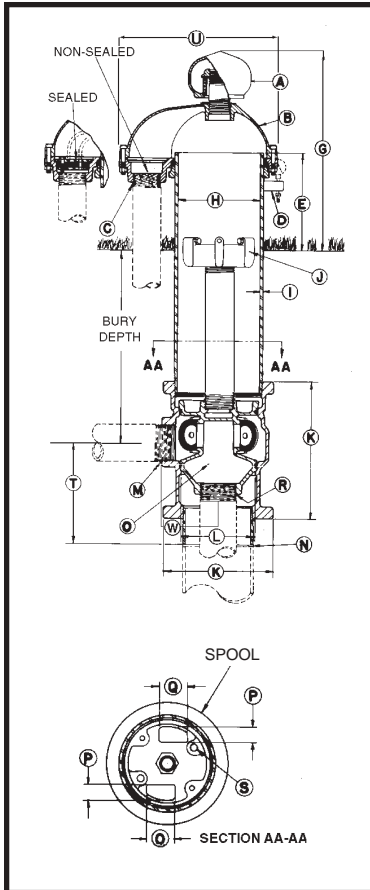
A	3	Bury Depth in Feet
	PS	Pitless Unit for Submersible Pump
B	6.6	Well Size - Ins.
C	7	Upper Case Size - Ins.
D	W	Attachment to Well Casing
E	B	Black Upper Case
F	W	Watertight Cap w/Screened Air Vent
	E	Pressure Equalizing Spool Passages
G	2	No. of Check Valves: (0 or 2)
H	3	Drop Pipe I.D. Ins.
	T	Threaded NPT Std. Connection
I		Flange, ASA 150#
		Welded
		Mech. Joint w/transition sleeve
		Accessory Discharge Connections
J	3	Discharge I.D. Ins.
K	S	Elec. Cable Seal (S) O.D. 3 Wire _____ O.D. Grounding Wire _____
OPTIONS		Flowing Well (F)
		Special Provision (X)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
- 10" Industrial Pitless • 12" Industrial Pitless • 14" Industrial Pitless
- 16" Industrial Pitless • Home • Print This Page

6.6" I.D. STANDARD INDUSTRIAL SPECIFICATION



- A** Screened Well Vent tap size: 1-1/2" NPT
- B** Seal Cap: *The Watertight cap bolts to a compression seal ring securing around the pitless case and comes with the screened well vent installed.*
- C** Conduit Tapping size: 1-1/2" NPT
Watertight conduit seals for most common cable sizes are available for watertight cap.
- D** Depth Tester Tapping: 1/4" NPT
- E** Distance from ground level to top of Pitless Case: 12"
- G** Distance from ground level to top of Screened Well Vent: 19-1/2"
- H** Pitless Case I.D. size: 7"
- I** Pitless Case wall thickness:300"
- J** "Hold-Down" - "Lift-Out" Mechanism
Three set screws in a spider atop the "Hold-Down" - "Lift-Out" pipe brace against the interior of the pitless casing, locking the spool in place.
Hold-Down, Lift-Out pipe size (Schedule 80): 2" NPT
Designed "Lift-Out" Mechanism load: 15,000 lbs.
- DISCHARGE BODY - THREADED**
- K** Discharge Body outside diameter: 9-11/16"
- K** Discharge Body length: 11-1/4"
- L** Pitless Unit minimum inside diameter.: 6-3/8"
- M** Discharge Connection Tapping size: 3" NPT
- N** Pitless Unit to well casing connection I.D.: 6.6" Weld
- O** **SPOOL ASSEMBLY**
Spool Design Load: 15,000 lbs.
- P** **MOTOR CABLE PASSAGES THROUGH SPOOL** 13/16"
- Q** 1-3/4"
- R** Spool to Drop Pipe Connection: 3" NPT
- S** Pressure switch tapping: 3/8" NPT: (2) available
- T** Dimension from center of discharge outlet to bottom of weld nipple: 9-3/8"
- U** Overall length of seal cap: 12-7/8"
- V** Dimension from center of discharge to bottom of discharge body: 7-3/4"
- W** Dimension from center of well casing to end of discharge outlet: 5-25/32"

Specifications are Subject to Change Without Notice.

*Optional flange, weld or mechanical joint available upon request.

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

COMPONENT MATERIALS

- Well Vent - cast iron, green enamel finish.
- Cap & Conduit Box - cast iron, green enamel finish.
- Hold-Down Spider - cast iron, green enamel finish.
- Hold-Down Pipe, 2" or 3" - steel Sch. 80, black.
- Pitless Case - steel, black.
- Spool - cast iron, lead-free galvanized.
- Discharge Body - cast iron, lead-free galvanized.
- Check Valve Body & Arms - brass.
- Check Valve Seat - Brass.
- Check Valve Spring - Monel.
- Compression Seal Ring & Check Valve Facing - Neoprene.
- Electrical Conduit Cable Seal - Neoprene.
- Maximum Rated Discharge Pressure - 300PSI

- GENERAL INFORMATION: • General Features • Engineering Specifications
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



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6.6" I.D. Standard Industrial Parts Breakdown

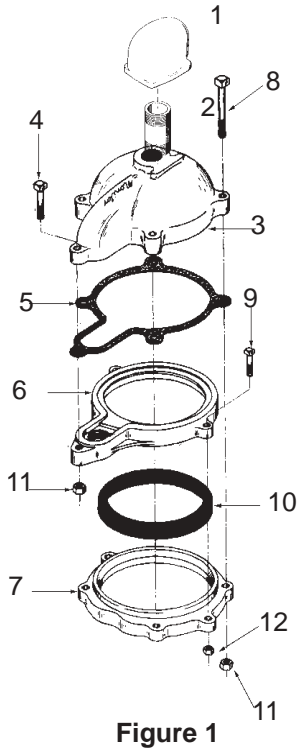


Figure 1

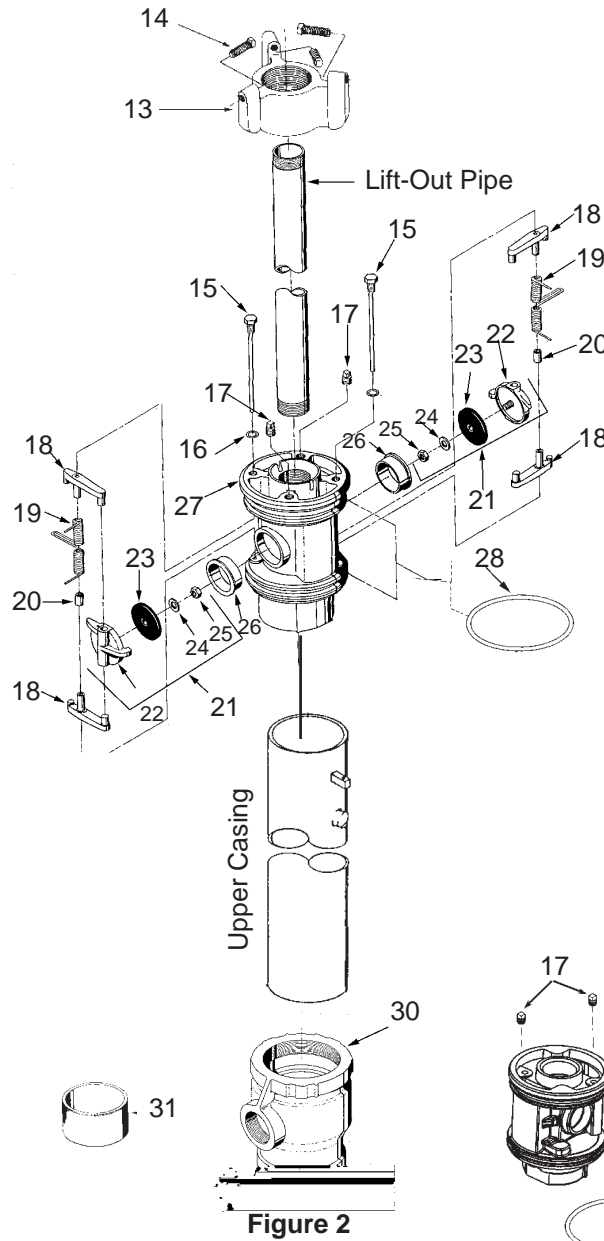


Figure 2

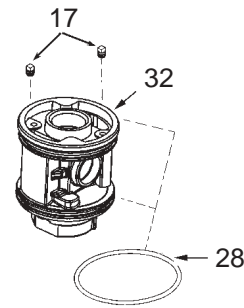


Figure 3

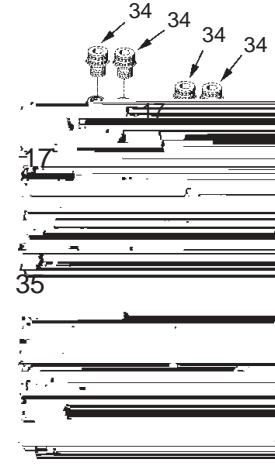


Figure 4-Flowing Well Spool with check Valves includes Key Nos. 18-26. (W/O Check Valves same as Fig. 3)

GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



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- 16" Industrial Pitless • Home • Print This Page

6.6" I.D. Standard Industrial Parts Breakdown

The drawings and parts list apply to the model numbers listed below. See drawing on previous page.

Note: Add (F) at end of model number for flowing well unit.

Bury Depth	Unit	Well Size Tap	Case Size	Well Casing Attach.	Upper Case	Cap Style	Spool	Drop Pipe I.D.	Drop Discharge Conn.	Discharge I.D.
1' & Up	PS	6.6"	7"	W	B	W	E0	3	T	3
1' & Up	PS	6.6"	7"	W	B	W	E2	3	T	3

All units have a watertight cap with screened vent.

Monitor Pitless Units listed above are equipped with one of the following types of Spools:

- E2 Spool with check valves, Figure No.2
- E0 Spool without check valves, Figure No. 3
- E2 Spool with check valves for Flowing Well, Figure 4
- E0 Spool without check valves for Flowing Well, Figure 4

Note: Optional Cable Seals available.

Key No.	Ordering Number	Description	Quantity
FIGURE 1			
-----	7WPSM	Watertight Cap, includes Key Nos. 1-12	
-----	WBAG2	Pkg. of S.S. bolts & Nuts for Cap	1
1	PS150	Vent Assembly	1
2	PS263	Pipe Nipple	1
3	PS217	Seal Cap & Plug Assembly	1
4	PS93S	Machine Bolt, 3/8-16NC x 2 1/2" L.	1
5	PS197	Gasket	1
6	PS377	Retainer Ring	1
7	PS187	Depression Ring	1
8	PS94S	Machine Bolt, 3/8-16NC x 3 1/2" L.	6
9	PS132S	Machine Bolt, 5/16-18NC x 2" L.	2
10	PS167	Seal Ring	1
11	UB17S	Hex Nut, 3/8-16NC	7
12	PC434S	Hex Nut, 5/16-18NC	2
FIGURE 2			
13	UC129	Hold-Down Assembly, includes Key Nos. 13 & 14 assembled	1
14	UC139	Set Screw, 7/16-14NC X 1 3/4" long	3
15	UC299	Hinge Pin	2
16	UC127	Hinge Pin Gasket	2
17	ZA66	Pipe plug, 3/8-18 NPT	2
18	UC301	Valve Rocker Arm	4
19	UC302	Valve Spring	2
20	UC300	Center Coil Support	2
21	UC296	Check Valve Assembly, includes Key Nos. 22-25 assembled	
22	UC292	Valve Body	2
23	UC295	Rubber Check Valve Facing	2

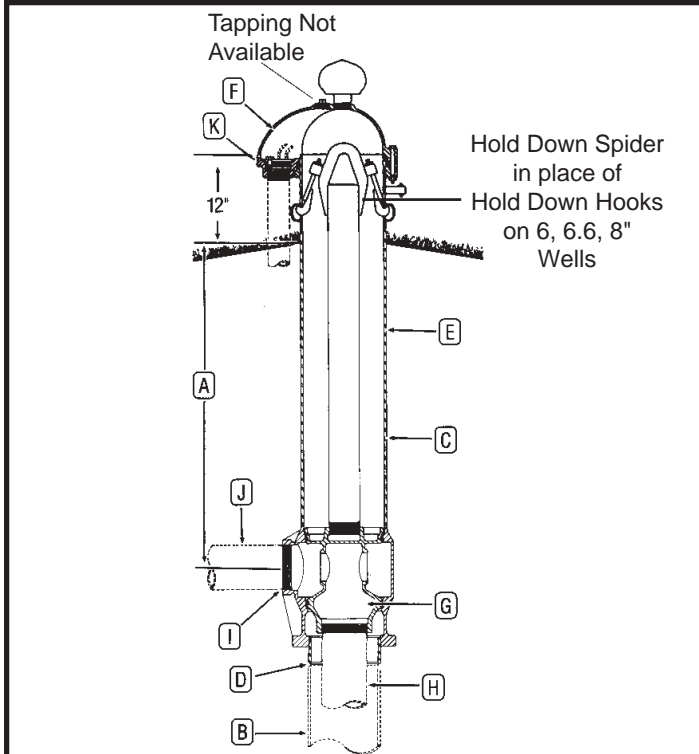
Key No.	Ordering Number	Description	Quantity
24	PS158	Brass Washer	2
25	PS159	Brass Nut, 3/8-16NC x 1/4" thick	2
26	UC293	Check Valve Seat	2
27	UC290	Spool only	1
27	7E2PS3	Alternate spool with check valves includes Key Nos. 15-28 assembled.	
28	UC15	"O" Ring	2
30	UC391	Discharge Body	1
31	7AWN	Welding Nipple	1
FIGURE 3			
32	7E0PS3	Spool without check valves includes Key Nos. 17, 28, 32 assembled	
32	UC142	Spool, also includes Key No. 17 assembled.	1
FIGURE 4			
-----	UC392	Flowing Well Spool with check valves (7E2PS3F - Boxed)	1
34	-----	Cable Seals (See Spools & Cable Seals)	
35	UC393	Flowing Well Spool w/o check valves (7E0PS3F - Boxed)	1

- GENERAL INFORMATION:** • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



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8" I.D. STANDARD INDUSTRIAL PITLESS UNITS



EXPLANATION OF PITLESS UNIT

ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Standard Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS810WBWE24T4S**

- A.** The first numeral in the order number indicates the bury depth, in feet. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes. However, any length can be manufactured.
- 3**
- PS** These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pumps.
- 8** **B.** This numeral indicates the well casing size, 8" I.D.
- 10** **C.** This numeral indicates the upper pitless case size, 10" I.D.
- W** **D.** Indicates the attachment to the well casing is a welded joint.
- B** **E.** Indicates the upper pitless case is black pipe.
- W** **F.** Indicates the unit has a watertight cap with screened vent installed.
- E** **G.** Indicates spool has pressure equalizing passages, for venting well.
- 2** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool having two silent check valves.
- 4** **H.** Indicates the size of drop pipe in inches.
- T** **I.** Indicates the discharge connection is threaded.
- 4** **J.** Indicates the size of discharge pipe in inches.
- S** **K.** Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

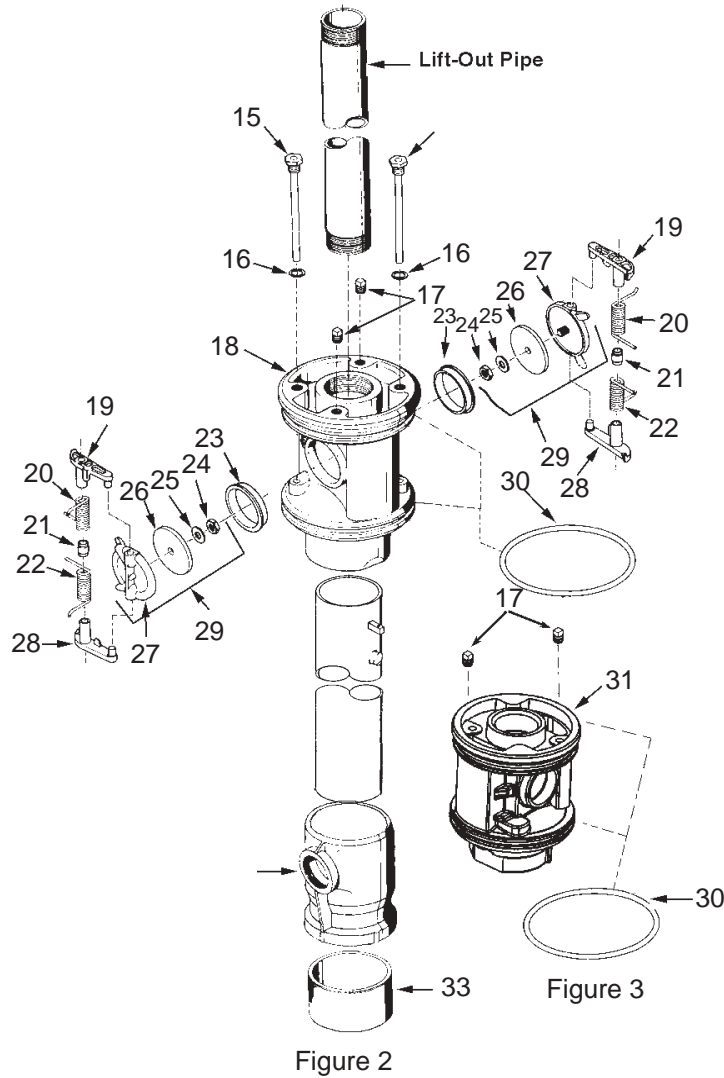
A	3	Bury Depth in Feet
	PS	Pitless Unit for Submersible Pump
B	8	Well Size - Ins.
C	10	Upper Case Size - Ins.
D	W	Attachment to Well Casing <small>W-Welded or N-Compression</small>
E	B	Black Upper Case
F	W	Watertight Cap w/Screened Air Vent
	E	Pressure Equalizing Spool Passages
G	2	No. of Check Valves: (0 or 2)
H	4	Drop Pipe I.D. Ins.
I	T	Threaded NPT Std. Connection
		Flange, ASA 150#
		Welded
		Mech. Joint w/transition sleeve
		Accessory Discharge Connections
J	4	Discharge I.D. Ins.
K	S	Elec. Cable Seal (S) O.D. 3 Wire _____ O.D. Grounding Wire _____
OPTIONS		Probe Tube (P)
		Water Sampler Valve (H)
		Flowing Well (F)
		Special Provision (X)

GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
- 10" Industrial Pitless • 12" Industrial Pitless • 14" Industrial Pitless
- 16" Industrial Pitless • Home • Print This Page

8" I.D. Standard Industrial Parts Breakdown



GENERAL INFORMATION: • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
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8" I.D. Standard Industrial Parts Breakdown

The drawings and parts list apply to the model numbers listed below.

Note: **Add (F)** at end of model number for flowing well unit.

Bury Depth	Unit	Well Size Tap	Case Size	Well Casing Attach.	Upper Case	Cap Style	Spool	Drop Pipe I.D.	Drop Discharge Conn.	Discharge I.D.
1' & Up	PS	8"	10"	W	B	W	E0	4	T	4
1' & Up	PS	8"	10"	N	B	W	E0	4	T	4
1' & Up	PS	8"	10"	W	B	W	E2	4	T	4
1' & Up	PS	8"	10"	N	B	W	E2	4	T	4

All units have a watertight cap with screened vent.

Monitor Pitless Units listed above are equipped with one of the following types of Spools:

- E2 Spool with check valves, Figure No.2
- E0 Spool without check valves, Figure No. 3
- E2 Spool with check valves for Flowing Well, Figure 4
- E0 Spool without check valves for Flowing Well, Figure 4

NOTE: Optional Cap Cable Seals available.

Key No.	Ordering Number	Description	Quantity
FIGURE 1			
----	10W	Watertight Cap, includes Key Nos. 3-12	
1	PS155	Vent Assembly	1
2	PS365	Pipe Nipple	1
3	PS350	Seal Cap	1
4	APC7	Bolt, 1/2 x 3" L.	1
5	PS342	Gasket	1
6	PS341	Retainer Ring	1
7	PS189	Depression Ring	1
8	PS221	Bolt, 1/2 x 4 1/2" L.	6
9	PS111	Bolt, 1/2 x 2 1/2" L.	3
10	PS170	Seal Ring	1
11 & 12	PC433	Nut, 1/2 - 13NC	10
FIGURE 2			
13	UG260	Hold-Down Assembly, includes Key Nos. 13 & 14 assembled	1
14	UG191	Set Screw 7/16-14NC x 2 1/4" L.	3
15	UG29	Hinge Pin	2
16	SW84	Hinge Pin Gasket	2
17	ZA66	Pipe plug 3/8-18NPT	2
18	UG209A	Spool	1
18	10E2PSA	Spool with check valves includes Key Nos. 15-30 assembled	
19	UG147	Rocker Arm Top	2
20	UG146	Valve Spring Top	2
21	UG150	Valve Spring Center	2
22	UG145	Valve Spring Bottom	2
23	UG22	Check Valve Seat	2
24	TP34	Brass Nut 1/2-13NC x 5/16 thick	2
25	UG68	Brass Washer	2
26	UG23	Rubber Check Valve Facing	2
27	UG149	Valve Body	2

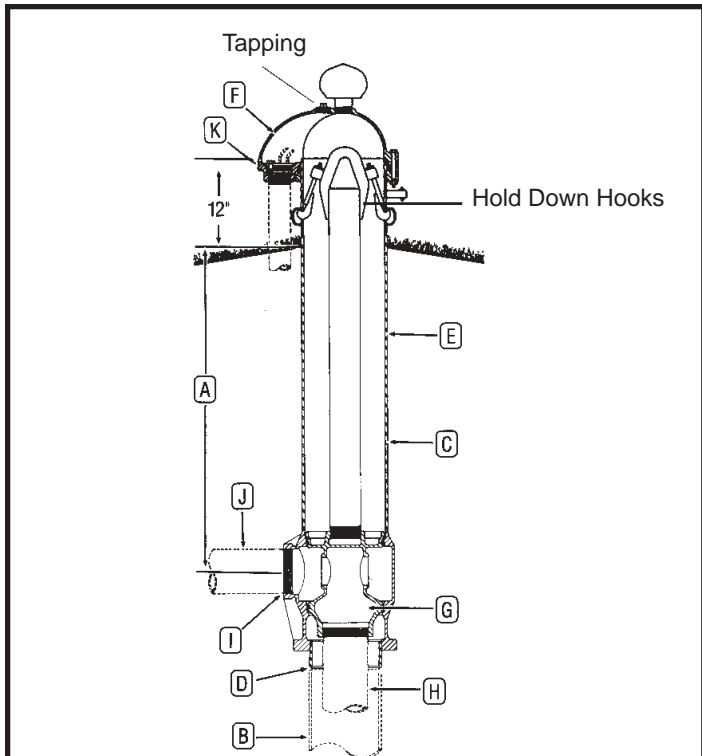
Key No.	Ordering Number	Description	Quantity
28	UG148	Rocker Arm Bottom	2
29	UG323	Check Valve assembly includes Key Nos. 24-27 assembled	
30	UG15	O-Ring	2
32	UG3A	Discharge Body	1
33	UG335	Pipe	1
FIGURE 3			
31	UG42A	Spool	1
31	10E0PSA	Alternate Spool w/o check valves includes Key Nos. 17 & 30 assembled	
FIGURE 4			
34	-----	Spool Cable Seals (See Spools & Cable Seals)	
35	UG254	Flowing Well Spool with check valves (10E2PSF)	1
----	UG273	Flowing Well Spool without check valves (10E0PSF)	1
FIGURE 5			
36	UG333B	Discharge body for kwikonect Style Units	1
37	KG255	Lockwasher	8
38	PS168	Seal Ring	1
39	PS188	Depression Ring	1
40	PS111	Screw, 1/2" x 13NC x 2.5" L.	6

- GENERAL INFORMATION:** • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



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10" I.D. STANDARD INDUSTRIAL PITLESS UNITS



DESCRIPTION - ORDERING NUMBERS

A	3	Bury Depth in Feet	
	PS	Pitless Unit for Submersible Pump	
B	10	Well Size - Ins.	
C	12	Upper Case Size - Ins.	
D	W	Attachment to Well Casing is Welded	
E	B	Black Upper Case	
F	W	Watertight Cap w/Screened Air Vent	
	E	Pressure Equalizing Spool Passages	
G	0	No. of Check Valves: (0)	
H	6	Drop Pipe I.D. Ins.	
	T	Threaded NPT Std. Connection	
I		Flange, ASA 150#	Accessory Discharge Connections
		Welded	
		Mech. Joint w/transition sleeve	
J	6	Discharge I.D. Ins.	
	E	Std. Industrial	
K	S	Elec. Cable Seal (S) O.D. 3 Wire _____ O.D. Grounding Wire _____	
OPTIONS		Probe Tube (P)	
		Water Sampler Valve (H)	
		Flowing Well (F)	
		Special Provision (X)	

EXPLANATION OF PITLESS UNIT

ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Standard Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS1012WBWE06T6ES**

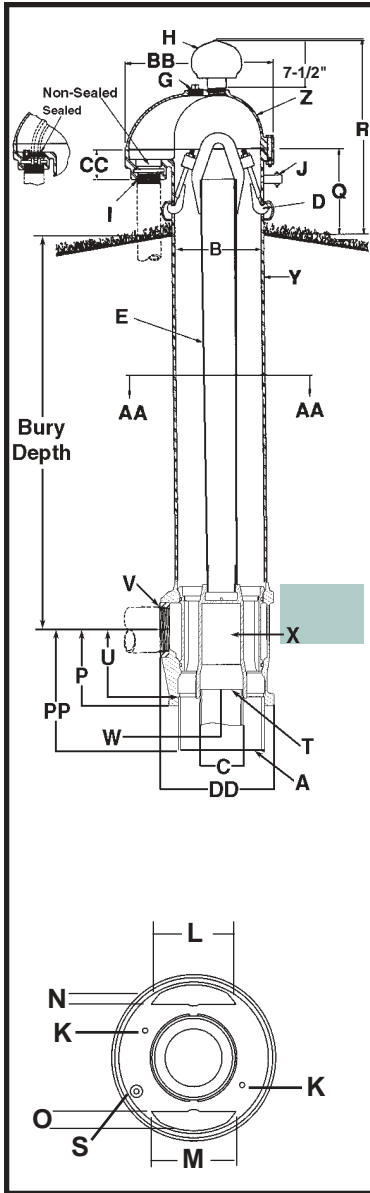
- 3** A. The first numeral in the order number indicates the bury depth, in feet. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes. However, any length can be manufactured.
- PS** These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pumps.
- 10** B. This numeral indicates the well casing size, 10" I.D.
- 12** C. This numeral indicates the upper pitless case size, 12" I.D.
- W** D. Indicates the attachment to the well casing is a welded joint.
- B** E. Indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap with screened vent installed.
- E** G. Indicates spool has pressure equalizing passages, for venting well.
- 0** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool having no silent check valves.
- 6** H. Indicates the size of drop pipe in inches.
- T** I. Indicates the discharge connection is threaded.
- 6** J. Indicates the size of discharge pipe in inches.
- E** Indicates Standard Industrial
- S** K. Sealed Conduit Connection. (Optional)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



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- 10" Industrial Pitless • 12" Industrial Pitless • 14" Industrial Pitless
- 16" Industrial Pitless • Home • Print This Page

10" I.D. STANDARD INDUSTRIAL SPECIFICATIONS



- A Pitless Unit to Well Casing Connection: Chamfered for butt weld
 B Pitless Unit with black upper case: 12" I.D. X 12-3/4" O.D.
 C Discharge body minimum I.D. 11"
 D Hold-down Mechanism: Locks spool in place and prevents lifting and turning during pump start-up. Two adjustable hooks on lift-out pipe hook into side of pitless case.
 E Lift-out pipe with lifting bail: 4" NPT assembly designed for a 48,000 lb. load
 G Tap Size: 2" NPT
 H Well vent: Screws into a 2-1/2" NPT tap
 I Conduit tappings: 3" NPT Watertight conduit seals for most common cable sizes are available.
 J Depth tester block tappings: 1/4" NPT
 K Pressure switch tap: (2) 3/8" NPT
 L **MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)**
 Will clear rigid rod parallel to casing 1.39"
 M 6"
 N Some restrictions apply 1-5/16"
 O 1-5/16"
 P Dimension from center of discharge outlet to bottom of discharge Body: 11-7/8"
 PP Dimension from center of discharge outlet to bottom of weld nipple: 15-7/16"
 Q Distance from ground level to top of the pitless case: 12"
 R Distance from ground level to top of the screened well vent: 28-1/2"
 S Water sampler tapping: Optional
 T **SPOOL TO DROP PIPE CONNECTION:** .6" NPT tapping Spool designed for 48,000 lb. load
 U Dimension from center of discharge outlet to bottom of spool: 9-5/8"
 V Discharge connection tapping size: 6" NPT
 W Dimension from center of well casing to the end of discharge outlet: 9-1/8"
 X **SPOOL ASSEMBLY**
 Y Pitless case wall thickness:375"
 Z **SEAL CAP:** Watertight cap bolts to a gasketed surface securing around the pitless casing and comes installed with 2-1/2" screened well vent.
 BB Overall length of seal Cap: 22-1/2"
 CC 2-15/16"
 DD 17"

COMPONENT MATERIALS

- Well Vent:** cast iron, green enamel finish.
Cap: cast iron, green enamel finish.
Hold-Down & Lift-Out Mechanism: Black Steel
Hold-Down Pipe: Steel, corrosion resistant coating.
Pitless Case: Steel, corrosion resistant coating.
Spool: Lead-Free Galvanized cast iron.
Discharge Body: Lead-Free Galvanized ductile iron.
Electrical Conduit Cable Seal: Neoprene
Maximum rated discharge pressure - 300 PSI

*Optional flange, weld or mechanical joint available upon request.

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

- GENERAL INFORMATION:** • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
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10" I.D. Standard Industrial Parts Breakdown

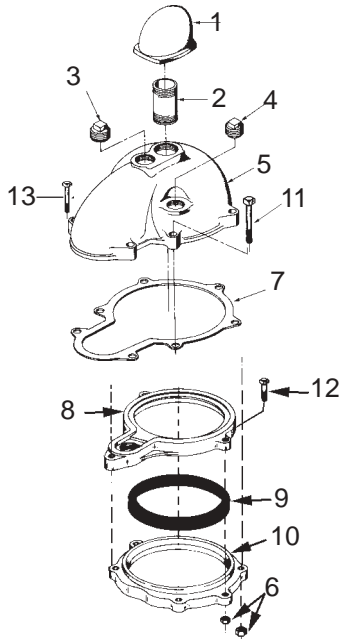


Figure 1

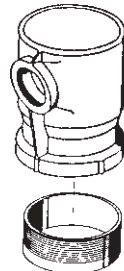
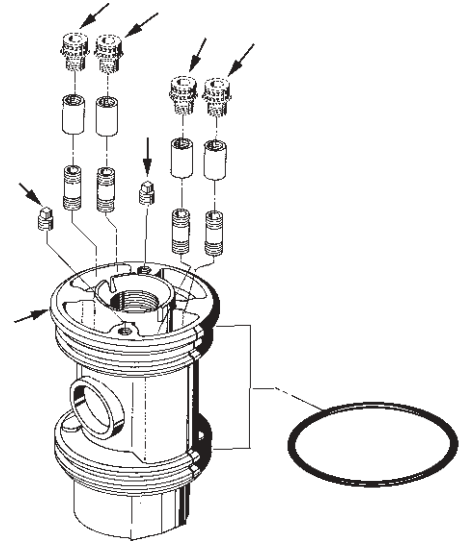


Figure 5

GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



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- 16" Industrial Pitless • Home • Print This Page

10" I.D. Standard Industrial Parts Breakdown

The drawings and parts list apply to the model numbers listed below.
 Note: Add (F) at end of model number for flowing well unit.

Bury Depth	Unit	Well Size Tap	Case Size	Well Casing Attach.	Upper Case	Cap Style	Spool	Drop Pipe I.D.	Drop Discharge Conn.	Discharge I.D.	Std. Model
1' & Up	PS	10"	12"	W	B	W	E0	6	T	6	E

All units have a watertight cap with screened vent.
 This Monitor Pitless Unit listed above is equipped with the following type of spool:
 Spool without check valves, Figure No. 3
 Spool without check valves for Flowing Well, Figure 4

NOTE: Optional Cap Cable Seals available.

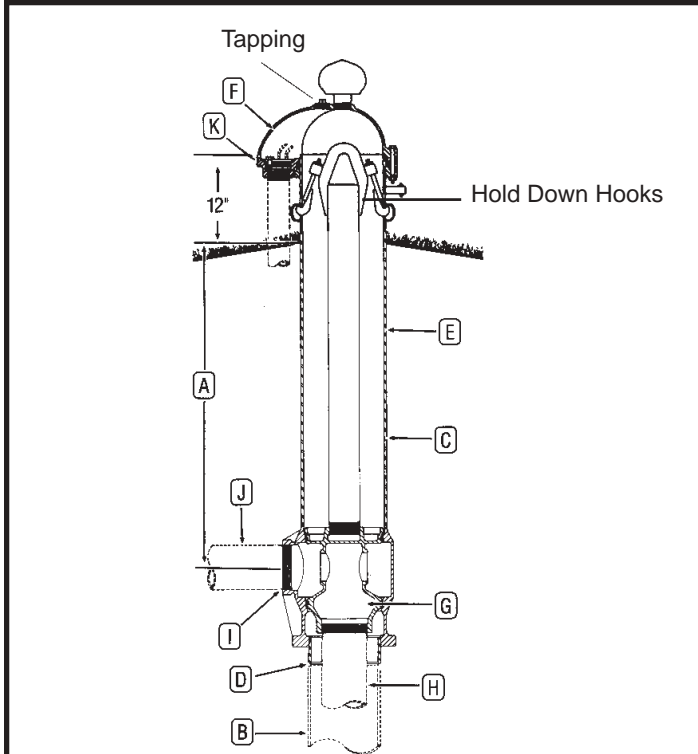
Key No.	Ordering Number	Description	Quantity
FIGURE 1			
-----	12W	Watertight Cap, includes Key Nos. 3-13 plus (1) 74PS Vent	
1	PS155	Vent Assembly	1
2	PS365	Pipe nipple, 2 1/2" NPT x 6" L.	1
3	UJ50	Pipe plug, 2" NPT	1
4	UG54	Pipe plug, 1 1/2" NPT	1
5	UK12	Seal cap	1
6	PC286	Hex nut, 5/8-11NC	10
7	UK72	Gasket	1
8	UJ174	Retainer ring	1
9	UJ176	Seal ring	1
10	UJ175	Depression ring	1
11	KP145	Hex head cap screw, 5/8-11NC x 6" L.	5
12	UJ177	Hex head cap screw, 5/8-11NC x 3 1/2" L.	3
13	LK4	Hex head cap screw, 5/8-11NC x 4 3/4" L.	2
FIGURE 2			
14	PC286	Hex nut, 5/8-11NC	2

GENERAL INFORMATION: • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
- 10" Industrial Pitless • 12" Industrial Pitless • 14" Industrial Pitless
- 16" Industrial Pitless • Home • Print This Page

12" I.D. STANDARD INDUSTRIAL PITLESS UNITS



DESCRIPTION - ORDERING NUMBERS

A	3	Bury Depth in Feet	
	PS	Pitless Unit for Submersible Pump	
B	12	Well Size - Ins.	
C	14	Upper Case Size - Ins.	
D	W	Attachment to Well Casing is Welded	
E	B	Black Upper Case	
F	W	Watertight Cap w/Screened Air Vent	
	E	Pressure Equalizing Spool Passages	
G	0	No. of Check Valves: (0)	
H	6	Drop Pipe I.D. Ins.	
I	T	Threaded NPT Std. Connection	Accessory Discharge Connections
		Flange, ASA 150#	
		Welded	
		Mech. Joint w/transition sleeve	
J	6	Discharge I.D. Ins.	
	E	Std. Industrial	
K	S	Elec. Cable Seal (S) O.D. 3 Wire _____ O.D. Grounding Wire _____	
OPTIONS		Probe Tube (P)	
		Water Sampler Valve (H)	
		Flowing Well (F)	
		Special Provision (X)	

EXPLANATION OF PITLESS UNIT

ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Standard Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS1214WBWE06T6ES**

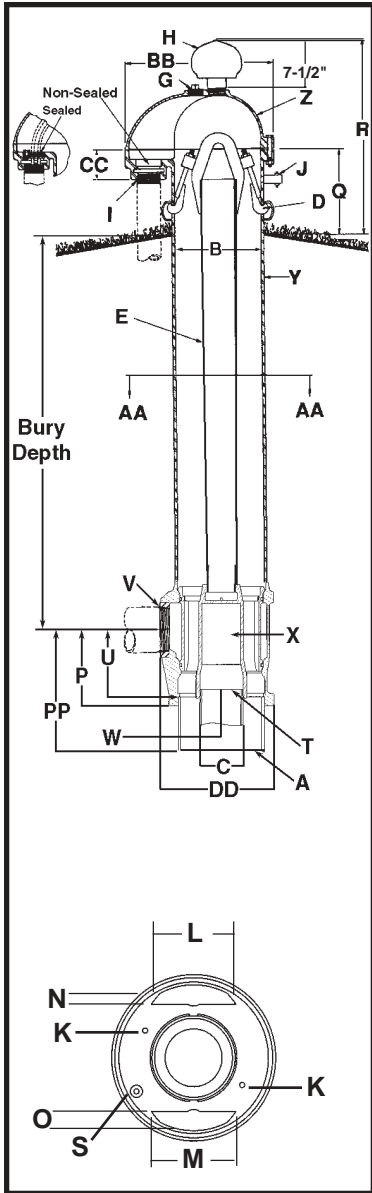
- 3** A. The first numeral in the order number indicates the bury depth, in feet. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes. However, any length can be manufactured.
- PS** These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pumps.
- 12** B. This numeral indicates the well casing size, 12" I.D.
- 14** C. This numeral indicates the upper pitless case size, 14" I.D.
- W** D. Indicates the attachment to the well casing is a welded joint.
- B** E. Indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap with screened vent installed.
- E** G. Indicates spool has pressure equalizing passages, for venting well.
- 0** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool having no silent check valves.
- 6** H. Indicates the size of drop pipe in inches.
- T** I. Indicates the discharge connection is threaded.
- 6** J. Indicates the size of discharge pipe in inches.
- E** Indicates Standard Industrial
- S** K. Sealed Conduit Connection. (Optional)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
- 10" Industrial Pitless • 12" Industrial Pitless • 14" Industrial Pitless
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12" I.D. STANDARD INDUSTRIAL SPECIFICATIONS



A	Pitless Unit to Well Casing Connection:	Chamfered for butt weld
B	Pitless Unit with black upper case:	13-1/8" I.D., 14" O.D.
C	Discharge body minimum I.D.	12"
D	Hold-down Mechanism:	Locks spool in place and prevents lifting and turning during pump start-up. Two adjustable hooks on lift-out pipe hook into side of pitless case.
E	Lift-out pipe with lifting bail:	4" NPT assembly designed for a 48,000 lb. load
G	Tap Size:	2" NPT
H	Well vent:	Screws into a 2-1/2" NPT tap
I	Conduit tappings:	2" & 1" NPT std. Also available with single 2", 3" or 4" NPT
J	Depth tester block tappings:	1/4" NPT
K	Pressure switch tap:	(2) 3/8" NPT
L	MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)	
	Will clear rigid rod parallel to casing	1.77"
M		4-1/2"
N	Some restrictions apply	1-1/2"
O		1-1/2"
P	Dimension from center of discharge outlet to bottom of discharge Body:	11-7/8"
PP	Dimension from center of discharge outlet to bottom of weld nipple:	17-1/4"
Q	Distance from ground level to top of the pitless case:	12"
R	Distance from ground level to top of the screened well vent:	27-9/16"
S	Water sampler tapping:	Optional
T	SPOOL TO DROP PIPE CONNECTION: .6" NPT tapping Spool designed for 48,000 lb. load	
U	Dimension from center of discharge outlet to bottom of spool:	10-1/2"
V	Discharge connection tapping size:	6" NPT
W	Dimension from center of well casing to the end of discharge outlet: -1/8	9-1/16"
X	SPOOL ASSEMBLY	
Y	Pitless case wall thickness:	.375"
Z	SEAL CAP: Watertight cap bolts to a gasketed surface securing around the pitless casing and comes installed with 2-1/2" screened well vent.	
BB	Overall length of seal Cap:	22-1/2"
CC		4-5/8"
DD		17"

COMPONENT MATERIALS

- Well Vent:** cast iron, green enamel finish.
- Cap:** cast iron, green enamel finish.
- Hold-Down & Lift-Out Mechanism:** Black Steel
- Hold-Down Pipe:** Steel, corrosion resistant coating.
- Pitless Case:** Steel, corrosion resistant coating.
- Spool:** Lead-Free Galvanized cast iron.
- Discharge Body:** Lead-Free Galvanized ductile iron.
- Electrical Conduit Cable Seal:** Neoprene
- Maximum rated discharge pressure - 300 PSI**

*Optional flange, weld or mechanical joint available upon request.

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

- GENERAL INFORMATION: • General Features • Engineering Specifications
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



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12" I.D. Standard Industrial Parts Breakdown

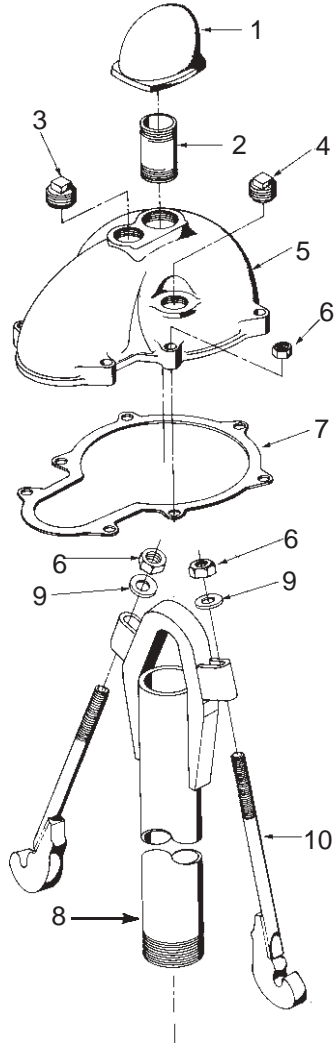


Figure 1

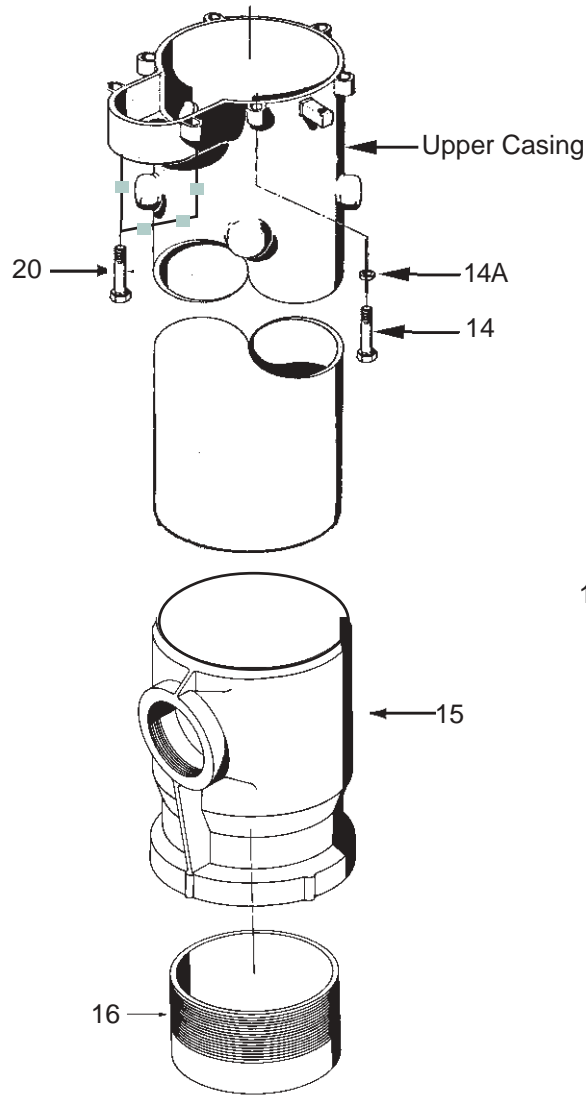


Figure 3

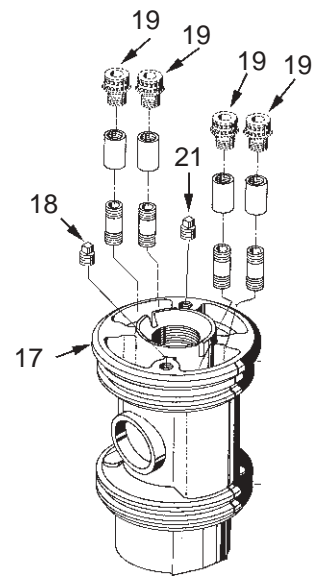


Figure 4

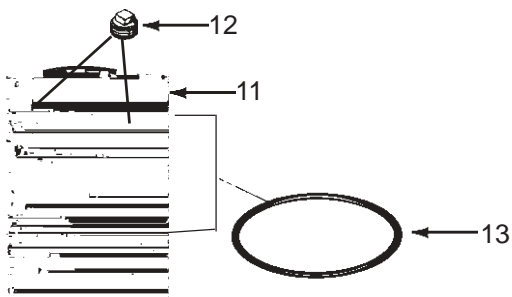


Figure 2

GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



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12" I.D. Standard Industrial Parts Breakdown

The drawings and parts list apply to the model numbers listed below.

Note: **Add (F) at end of model number for flowing well unit.**

Bury Depth	Unit	Well Size Tap	Case Size	Well Casing Attach.	Upper Case	Cap Style	Spool	Drop Pipe I.D.	Drop Discharge Conn.	Discharge I.D.	Std. Model
1' & Up	PS	12"	14"	W	B	W	E0	6	T	6	E

All units have a watertight cap with screened vent.

This Monitor Pitless Unit listed above is equipped with the following type of spool:

Spool without check valves, Figure No. 2

Spool without check valves for Flowing Well, Figure 4

NOTE: See Index for Optional Cap Cable Seals

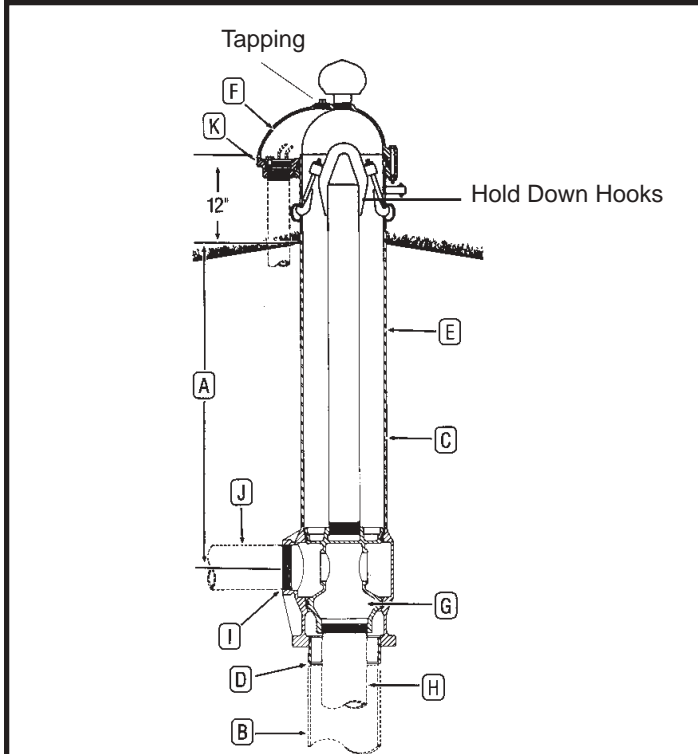
Key No.	Ordering Number	Description	Qty.
FIGURE 1			
1	PS155	Protected Screen Vent 2 1/2" NPT	1
2	PS365	Pipe Nipple 2 1/2" NPT x 6" L.	1
3	UJ50	Pipe Plug 2" NPT	1
4	UG54	Pipe plug 1 1/2" NPT	1
5	UK12	Seal Cap	1
6	PC286	Hex nut 5/8" - 11NC	9
7	UK72	Gasket	1
8	-----	Lift out bail & Lift out pipe assembly (Order by bury depth)	1
9	PC417	Washer	2
10	UJ7	Hold-down hook	2
Figure 2			
11	UK659A	Spool - without check valves (14E0PSA)	1
12	UN122	Pipe plug, 3/8" - 18 NPT	2
13	UK15	Static seal ring	2
Figure 3			
14	UN73	Hex head cap screw 5/8" - 11NC x 4 3/4" L.	5
14A	UN81	Washer	5
15	UK60E	Discharge Body only	1
16	12AWN	Welding Nipple	1
20	LK4	Locking Bolt - 5/8" x 4 3/4" L.	2
Figure 4			
17	UK6S4EF	Flowing Well Spool - without checks (14E0PSF)	1
18	UN122	Pipe plug - 3/8" - 18NPT	2
19	-----	Spool Cable Seals (See Spools & Cable Seals)	2
21	UN120	Pipe Plug - 1"	1

- GENERAL INFORMATION:** • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



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14" I.D. STANDARD INDUSTRIAL PITLESS UNITS



DESCRIPTION - ORDERING NUMBERS

A	3	Bury Depth in Feet	
	PS	Pitless Unit for Submersible Pump	
B	14	Well Size - Ins.	
C	18	Upper Case Size - Ins.	
D	W	Attachment to Well Casing is Welded	
E	B	Black Upper Case	
F	W	Watertight Cap w/Screened Air Vent	
	E	Pressure Equalizing Spool Passages	
G	0	No. of Check Valves: (0)	
H	8	Drop Pipe I.D. Ins.	
I	T	Threaded NPT Std. Connection	Accessory Discharge Connections
		Flange, ASA 150#	
		Welded	
		Mech. Joint w/transition sleeve	
J	8	Discharge I.D. Ins.	
	E	Std. Industrial	
K	S	Elec. Cable Seal (S)	
		O.D. 3 Wire _____ O.D. Grounding Wire _____	
OPTIONS		Probe Tube (P)	
		Water Sampler Valve (H)	
		Flowing Well (F)	
		Special Provision (X)	

EXPLANATION OF PITLESS UNIT

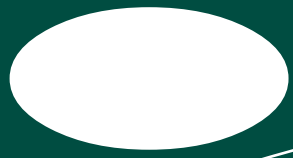
ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Standard Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS1418WBWE08T8ES**

- 3** A. The first numeral in the order number indicates the bury depth, in feet. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes. However, any length can be manufactured.
- PS** These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pumps.
- 14** B. This numeral indicates the well casing size, 14" I.D.
- 18** C. This numeral indicates the upper pitless case size, 18" I.D.
- W** D. Indicates the attachment to the well casing is a welded joint.
- B** E. Indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap with screened vent installed.
- E** G. Indicates spool has pressure equalizing passages, for venting well.
- 0** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool having no silent check valves.
- 8** H. Indicates the size of drop pipe in inches.
- T** I. Indicates the discharge connection is threaded.
- 8** J. Indicates the size of discharge pipe in inches.
- E** Indicates Standard Industrial
- S** K. Sealed Conduit Connection. (Optional)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions





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14" I.D. Standard Industrial Parts Breakdown

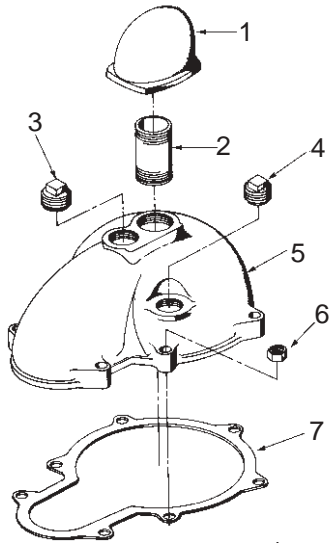


Figure 1

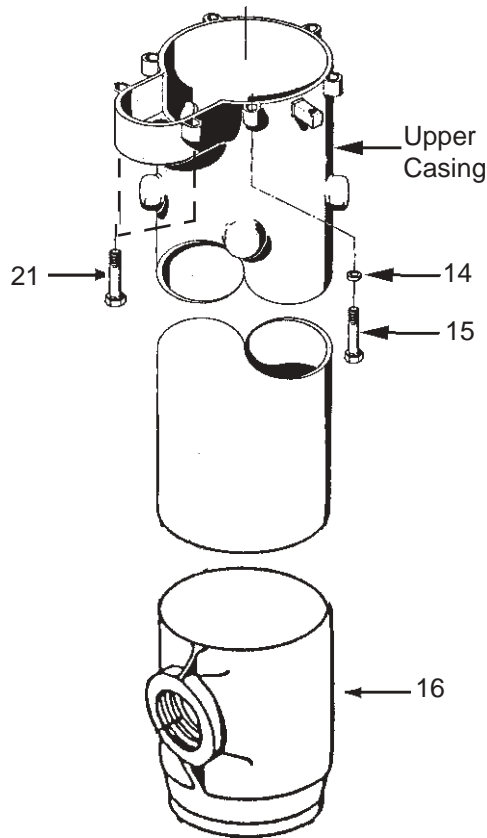


Figure 3

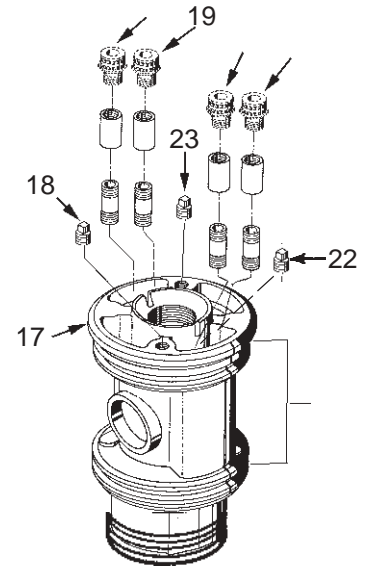


Figure 4

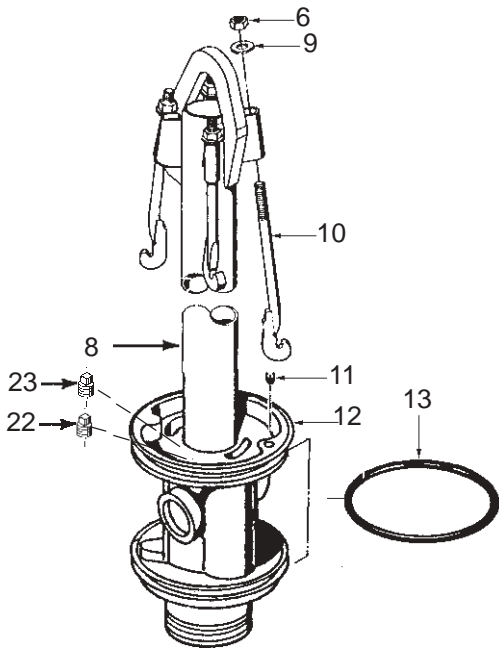


Figure 2

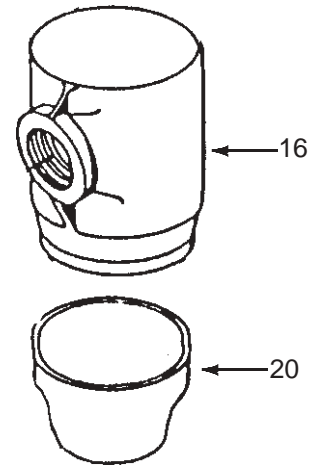


Figure 5

- GENERAL INFORMATION:** • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
- 10" Industrial Pitless • 12" Industrial Pitless • 14" Industrial Pitless
- 16" Industrial Pitless • Home • Print This Page

14" I.D. Standard Industrial Parts Breakdown

The drawings and parts list apply to the model numbers listed below.

Note: **Add (F) at end of model number for flowing well unit.**

Bury Depth	Unit	Well Size Tap	Case Size	Well Casing Attach.	Upper Case	Cap Style	Spool	Drop Pipe I.D.	Drop Discharge Conn.	Discharge I.D.	Std. Model
3' to 8'	PS	14"	18"	W	B	W	E0	8	T	8	E

All units have a watertight cap with screened vent.

This Monitor Pitless Unit listed above is equipped with the following type of spool:

Spool without check valves, Figure No. 2

Spool without check valves for Flowing Well, Figure 4

NOTE: Optional Cap Cable Seals Available

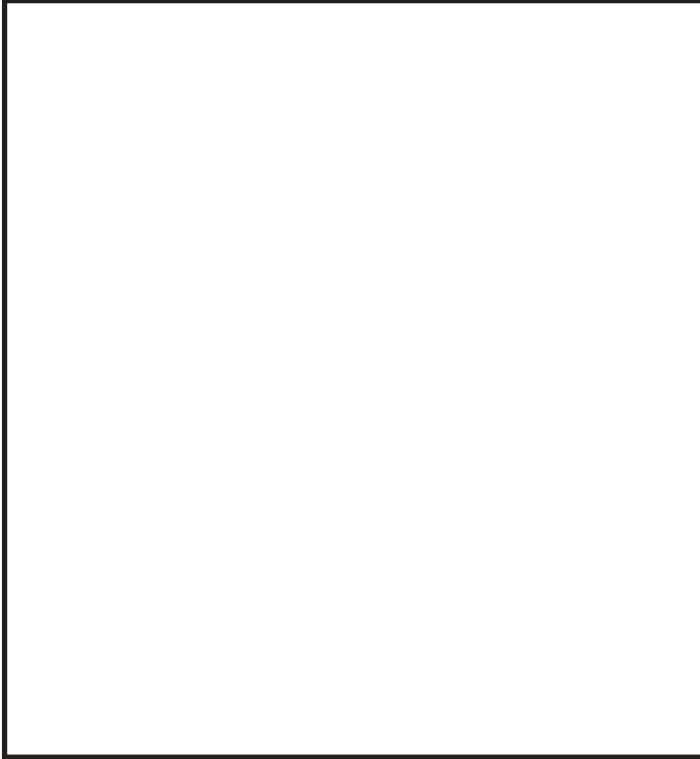
Key No.	Ordering Number	Description	Quantity
FIGURE 1			
1	PS155	Protected Screen Vent 2 1/2" NPT	1
2	PS365	Pipe Nipple, 2 1/2" NPT x 6" L.	1
3	UJ50	Pipe Plug, 2" NPT	1
4	UG54	Pipe Plug, 1 1/2" NPT	1
5	UM1	Seal Cap	1
6	PC286	Hex Nut, 5/8-11NC	12
7	UM72	Gasket	1
FIGURE 2			
8	-----	Spool & lift-out assembly w/o check valves. Order by bury depth	1
9	PC417	Washer	4
10	UM7	Hold-down hook	4
11	UN122	Pipe plug 3/8"-18NPT	1
12	E0188EFR	Spool without check valves	1
13	UM15	Static seal ring	2
22	UJ91	Pipe Plug 3/4"	1
23	UG54G	Pipe Plug 1 1/2"	1
FIGURE 3			
14	UN81	Washer	8
15	UN73	Hex head cap screw, 5/8-11NC x 4 3/4" L	6
16	UM60E	Discharge Body	1
21	LK4	Lock Bolt - 5/8" x 4 3/4" L.	2
FIGURE 4			
17	UM8S4EF	Flowing Well Spool without check valves	1
18	UN122	Pipe plug - 3/8"-18NPT	1
19	-----	Spool Cable Seals (See Spools & Cable Seals)	
22	UJ91	Pipe Plug 3/4"	1
FIGURE 5			
20	UJ32X22	16"x14" Concentric Reducer	1

GENERAL INFORMATION: • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
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16" I.D. STANDARD INDUSTRIAL PITLESS UNITS



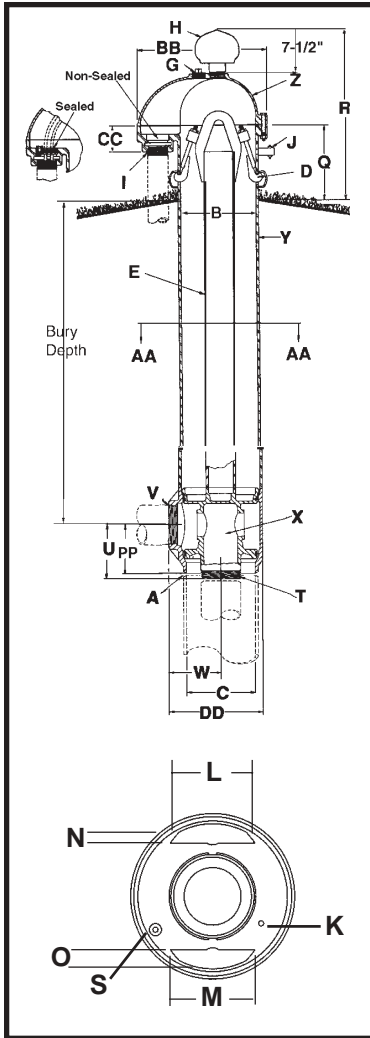
Typical Order Number **3PS1618WBWE08T8ES**

A. The first numeral in the order number indicates the bury depth, in feet. Bury depth on all units is measured from the



- 6" Industrial Pitless • 6.6" Industrial Pitless • 8" Industrial Pitless
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- 16" Industrial Pitless • Home • Print This Page

16" I.D. STANDARD INDUSTRIAL SPECIFICATIONS



- A Pitless Unit to Well Casing Connection: Chamfered for butt weld
- B Pitless Unit with black upper case: 17-1/4" I.D., 18" O.D.
- C Discharge body minimum I.D. 15-1/4"
- D Hold-down Mechanism: Locks spool in place and prevents lifting and turning during pump start-up. Two adjustable hooks on lift-out pipe hook into side of pitless case.
- E Lift-out pipe with lifting bail: 5" NPT assembly designed for a 103,000 lb. load
- G Tap Size: 2" NPT
- H Well vent: Screws into a 2-1/2" NPT tap
- I Conduit tappings: 2" & 1" NPT std. Also available with single 2", 3" or 4" NPT
- J Depth tester block tappings: 1/4" NPT
- K Pressure switch tap: (1) 3/8" NPT
- L **MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)**
Will clear rigid rod parallel to casing 1.93"
- M 4-9/16"
- N Some restrictions apply 1-1/8"
- O 2"
- PP Dimension from center of discharge outlet to bottom of weld ring: 13-11/16"
- Q Distance from ground level to top of the pitless case: 12"
- R Distance from ground level to top of the screened well vent: 28-1/4"
- S Water sampler tapping (optional): 3/4" NPT
- T **SPOOL TO DROP PIPE CONNECTION:** 8" male NPT tapping Spool designed for 103,000 lb. load
- U Dimension from center of discharge outlet to bottom of spool: 12-5/16"
- V Discharge connection tapping size: 8" NPT
- W Dimension from center of well casing to the end of discharge outlet: 11"
- X **SPOOL ASSEMBLY**
- Y Pitless case wall thickness:375"
- Z **SEAL CAP:** Watertight cap bolts to a gasketed surface securing around the pitless casing and comes installed with 2-1/2" screened well vent.
- BB Overall length of seal Cap: 25-3/8"
- CC 6-1/4"
- DD 20-1/8"

*Optional flange, weld or mechanical joint available upon request.

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 standards.

COMPONENT MATERIALS

- Well Vent:** cast iron, green enamel finish.
- Cap:** cast iron, green enamel finish.
- Hold-Down & Lift-Out Mechanism:** Black Steel
- Hold-Down Pipe:** Steel, corrosion resistant coating.
- Pitless Case:** Steel, corrosion resistant coating.
- Spool:** Lead-Free Galvanized ductile iron.
- Discharge Body:** Lead-Free Galvanized ductile iron.
- Electrical Conduit Cable Seal:** Neoprene
- Maximum rated discharge pressure - 300 PSI**

- GENERAL INFORMATION: • General Features • Engineering Specifications
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



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16" I.D. Standard Industrial Parts Breakdown

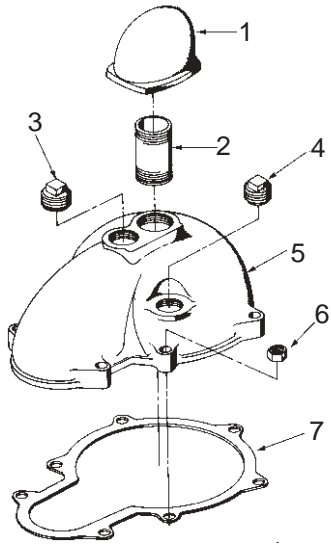


Figure 1

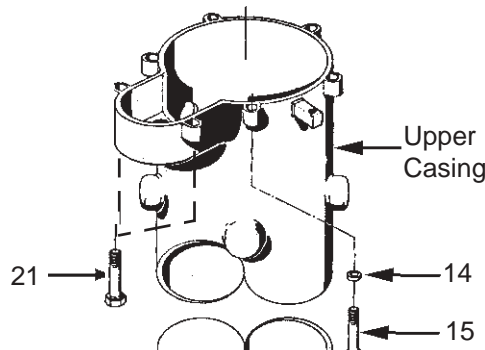


Figure 3

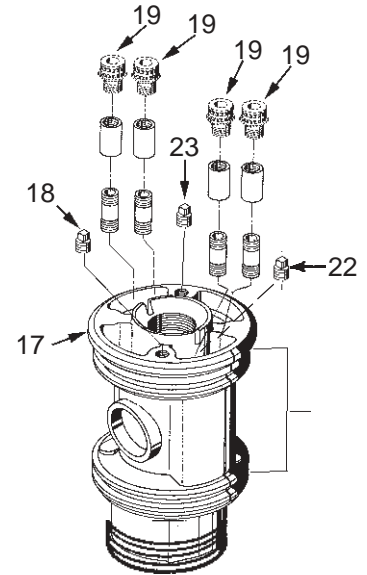


Figure 4

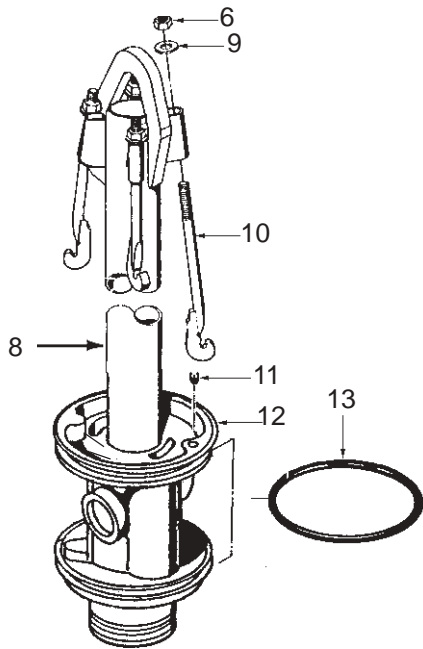


Figure 2

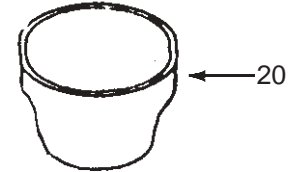
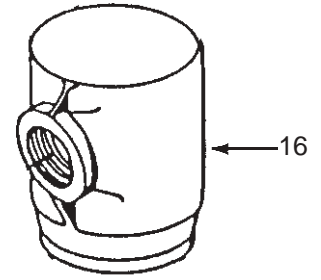
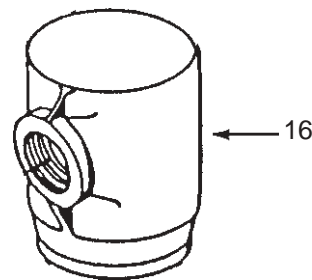


Figure 5

GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions

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16" I.D. Standard Industrial Parts Breakdown

GENERAL INFORMATION: • [General Features](#) • [Engineering Specifications](#)
• [Shipping Weights](#) • [Spools & Spool Cable Seals](#)
• [O-Ring Selection Guide](#) • [Installation Instructions](#)

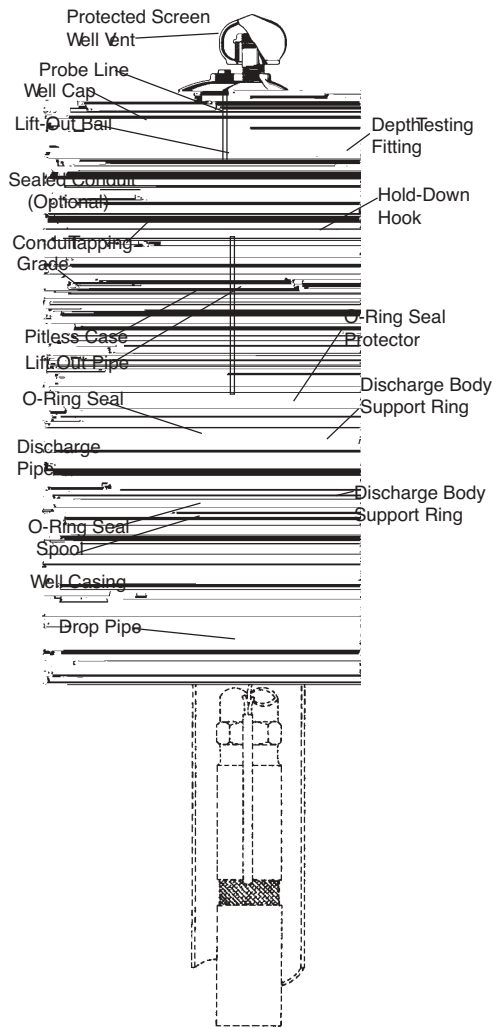


CUSTOM INDUSTRIAL PITLESS UNITS

- 10" Custom Pitless
- 12" Custom Pitless
- 14" Custom Pitless
- 16" Custom Pitless
- 18" Custom Pitless
- 20" Custom Pitless
- 24" Custom Pitless
- 26" Custom Pitless
- 30" Custom Pitless

GENERAL INFORMATION

- General Features
- Pitless Engineering Specifications
- Shipping Weights
- Spools & Spool Cable Seals
- O-Ring Selection Guide
- Installation Instructions
- Sealed Conduit
- Water Sampler



The Monitor PS Custom Industrial Pitless Unit for submersible pumps forms a watertight extension of the well casing which starts below the frost line, where it is buried permanently, and continues upward 12 or more inches above grade, where the pitless case is closed with a watertight cap.

Monitor units conform to the Recommended Standards for Water Works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers, Water Systems Council and PAS-97 (04) Standards.



133 Enterprise Street
Evansville, WI 53536



- 10" Custom Pitless • 12" Custom Pitless • 14" Custom Pitless
- 16" Custom Pitless • 18" Custom Pitless • 20" Custom Pitless
- 24" Custom Pitless • 26" Custom Pitless • 30" Custom Pitless
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CUSTOM INDUSTRIAL PITLESS UNITS FOR SUBMERSIBLE PUMPS 10", 12", 14", 16", 18", 20", 24", 26 & 30" WELL SIZES

The Monitor PS Custom Industrial Pitless Unit for submersible pumps forms a watertight extension of the well casing which starts below the frost line, where it is buried permanently, and continues upward 12 or more inches above grade, where the pitless case is closed with a watertight cap.

FEATURES:

FROST PROOF . . . No heating is required. All water passages are below the frost line.

QUICK TO INSTALL . . . A quality pump installation can be made easily and economically without delay for masonry or building construction.

EASY TO SERVICE . . . Well cap can be removed without disconnecting electric cables. O-ring seals on spool permit withdrawal of the entire inner assembly simply by releasing hold-downs and lifting out. Replacement is equally simple. Spool support eliminates vertical adjustment and any possibility of dropping the inner assembly into the well.

RELIABLE SEALS . . . Neoprene O-rings between accurately machined hot-dipped lead free galvanized surfaces on the spool and within the unit provide positive seals.

O-RING SEAL PROTECTION . . . Monitor seal protection prevents seal damage during installation and servicing.

WATERTIGHT WELL CAP WITH SCREENED VENT & LOCKING BOLTS . . . Designed to permit removal without disconnecting cables. Separate Junction Box is eliminated. Watertight cable and conduit sealing is optional.

WATER SAMPLING VALVE- FROST PROOF...(Optional).

CORROSION PROTECTION...All water passages are either hot-dipped lead free galvanized or constructed of corrosion resistant material.

LIFT-OUT BAIL . . . Standard on all units.

HOLD-DOWN . . . Supplied with each unit. Hold-down pipe also serves as lift-out pipe for installation and servicing.

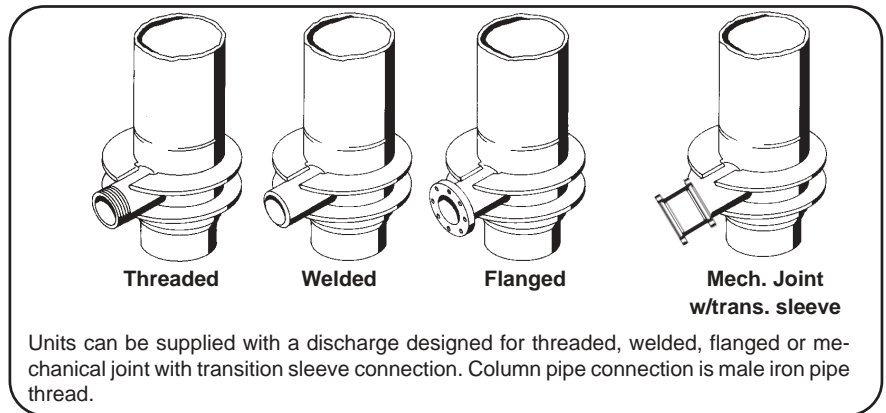
ALL CUSTOM PITLESS UNITS ARE AVAILABLE IN STAINLESS STEEL UPON REQUEST

TO INSTALL A PS CUSTOM INDUSTRIAL UNIT:

An excavation around the well casing below the frost line is made and well casing cut off at a prescribed level. The well cap is removed, the hold-down hooks and spool assembly are lifted out of the pitless case with a hoist and set aside.* The pitless case is welded (watertight) to the well casing. The submersible motor, pump, and cable are attached to the drop pipe which is lowered into the well with a hoist; when the top of the last section of the drop pipe is one foot or more above the pitless case, the spool assembly is screwed onto the drop pipe. The spool assembly and drop pipe with motor, pump, and cable are lowered into place; then finally, the hold-down hooks, electrical service, and well cap are installed.

*The spool assembly includes: a spool with two o-ring seals; lift-out pipe and bail.

ALTERNATIVE DISCHARGE CONNECTIONS



DEPTH TESTS BLOCKS . . . Standard on all units.

PROTECTED SCREEN VENT . . . Standard on all units.

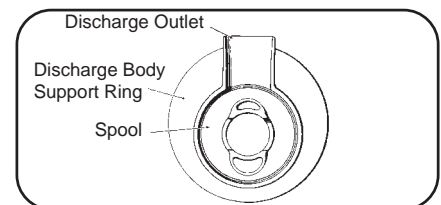
PROBE TUBE . . . Standard on all units.

SUPPORT RINGS . . . Prevent distortion of the Discharge Body due to vertical movement of Discharge Pipe.

FLOWING WELLS . . . Units available for most well sizes.

LOCKING BOLTS on all units.

SPOOL STYLES



NO VALVES SPOOL

GENERAL INFORMATION: • General Features • Engineering Specifications

- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



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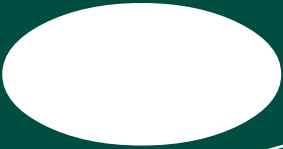
INSTALLATION INSTRUCTIONS

CUSTOM INDUSTRIAL PITLESS UNITS FOR SUBMERSIBLE PUMPS 10" through 30" WELL SIZES

1. All pitless unit cases are joined by welding or threading the unit to the well casing.
2. Establish ground level at the well location. It is desirable to have the ground slope away, from pitless unit case, in all directions.
3. The pitless unit case should extend above the ground level according to state well code. To accomplish this the well casing must be cut off at a distance below the ground level equal to the overall pitless unit length less the length unit is to be above the ground.
4. In order to do work, excavate around the well casing according to government regulations, where well casing is to be cut off.
5. Cut off the well casing PERPENDICULAR to the well casing center line.
6. Remove the pitless unit cap then loosen the hold-down hooks or spider and remove spool assembly and set aside. NOTE: (the spool assembly includes a spool with two or no silent check valves; two o-ring seals, lift-out pipe and bail.
7. Lower the pitless case into place and rotate the discharge outlet to the desired location and weld the pitless case to the well casing. THIS JOINT MUST BE WATERTIGHT AND IT IS ESSENTIAL THAT THE CENTER LINE OF THE PITLESS CASE AND WELL CASING BE THE SAME.
8. The submersible motor, pump and cable are attached to the drop pipe and then lowered into the well. When the top of the last section of the drop pipe is one foot or more above the pitless case screw the spool assembly onto the drop pipe.
9. Wipe the rubber o-ring seals with a clean cloth and then coat with a heavy layer of petroleum jelly (vaseline) for proper seating of rings. Lower the spool assembly, drop pipe with motor, pump and cable into place.
10. Install and tighten hold-down hooks/hold down spider.
11. Complete electrical service and install pitless cap.
12. Connect discharge outlet to distribution line and complete all wiring.
13. The unit is now ready to operate under power and should be run a sufficiently long time to see that there are no leaks present.
14. The hole should not be filled in until the unit is running satisfactorily. Care should be exercised to fill under discharge line properly before back filling.

NOTE: Dissimilar metals should be avoided.

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10" CUSTOM PITLESS SPECIFICATIONS

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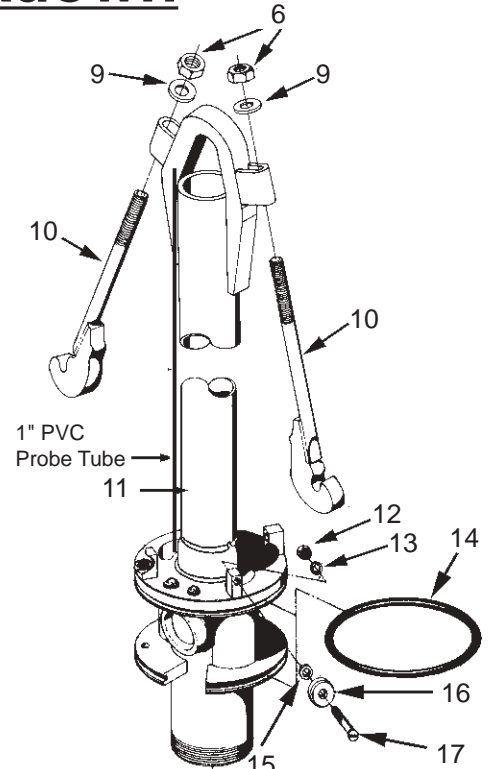
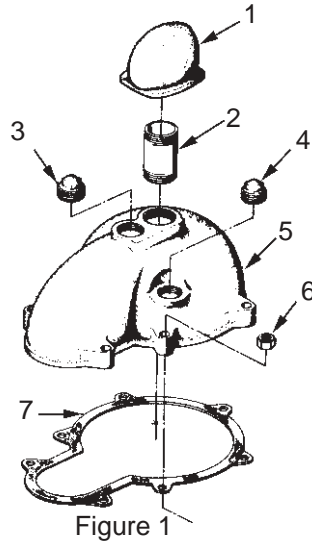
General Features • Engineering Specifications
 Pool Cable Seals
 Installation Instructions



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10" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UJ50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	UK12
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	UK72
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	UJ7
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	UK15
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

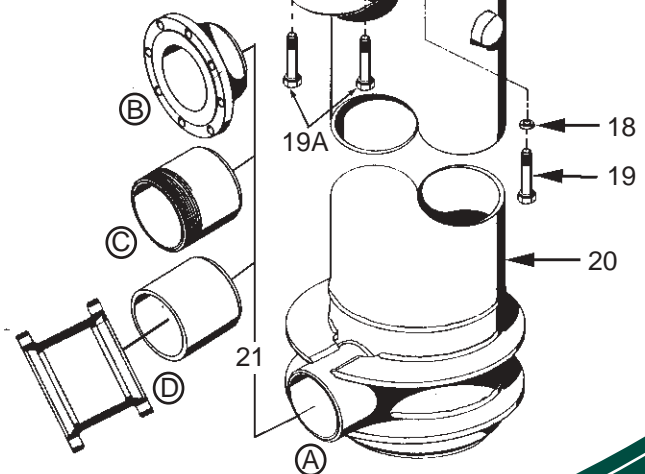


Figure 2

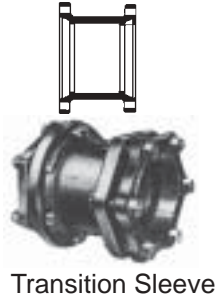
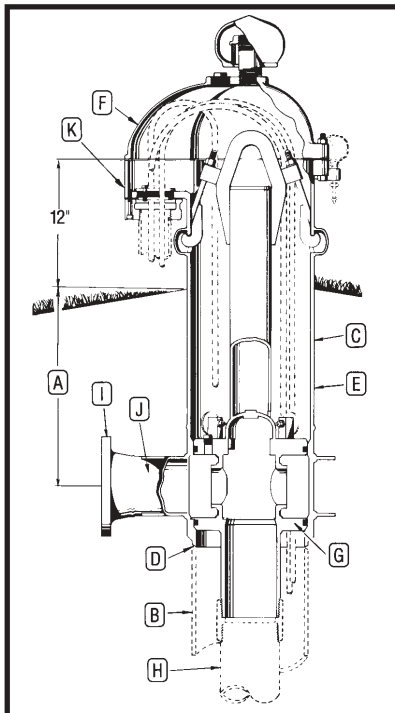
*Flowing Well Spools Available upon request

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12" CUSTOM PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 30" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Custom Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS1214WBWE06F6S**

- 3** A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PS** These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pump.
- 12** B. Indicates the well casing size is 12"
- 14** C. Indicates the upper pitless case size is 14".
- W** D. Indicates the attachment to the well casing is a welded joint.
- B** E. Indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap with screened vent installed.
- E** G. Indicates spool has pressure equalizing passages.
- 0** Indicates this type of spool has no check valves.
- 6** H. Indicates the size of drop pipe in inches.
- F** I. Indicates the discharge connection is Flanged. Other options are Welded, Threaded and Mechanical Joint with transition sleeve.
- 6** J. Indicates the size of discharge pipe in inches.
- S** K. Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

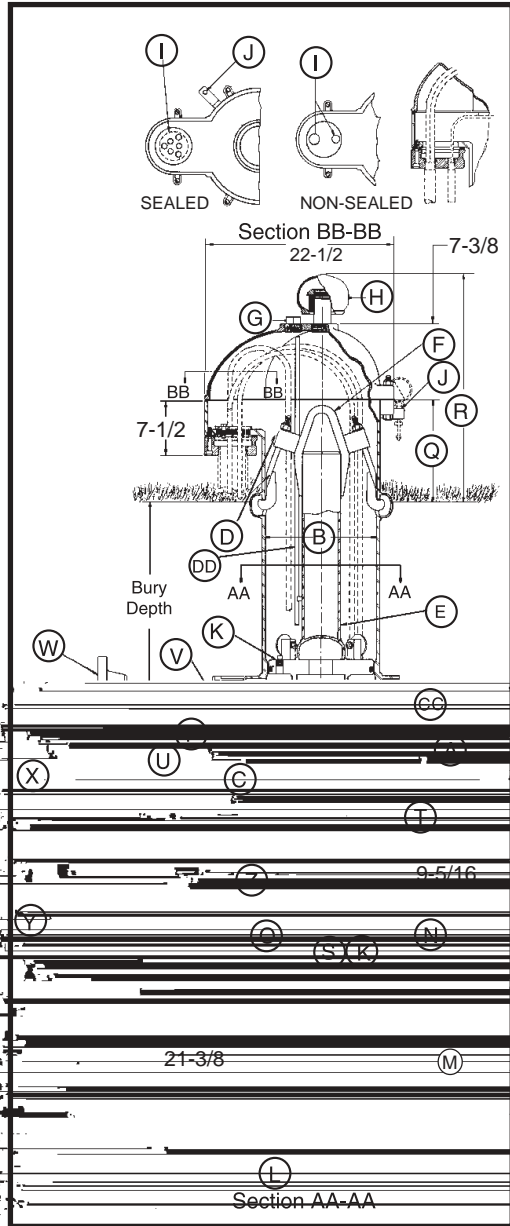
A	3	Bury Depth in Feet
	PS	Pitless Unit for Submersible Pump
B	12	Well Size - Ins.
C	14	Upper Case Size - Ins.
D	W	Attachment to Well Casing-Welded
E	B	Black Upper Case
F	W	Watertight Cap w/Screened Air Vent
	E	Pressure Equalizing Spool Passages
G	0	Standard Spool
H	6	Drop Pipe I.D. Ins. (4", 5" or 6")
I		Welded
	F	Flange, ASA 150#
		Threaded NPT
		Mech. Joint
		w/Transition Sleeve
J	6	Discharge I.D. Ins. (4", 5" or 6")
K	S	Elec. Cable Seal (S) O.D. 3 Wire ____ O.D. Grounding Wire ____
		Water Sampler Valve (H)
OPTIONS		Flowing Well (F)
		Special Provision (X)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
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12" CUSTOM PITLESS SPECIFICATIONS



- A Pitless Unit to well casing connection:** Chamfered for butt weld.
- B Pitless Unit with Black Upper Case:** 13-1/8 in. I.D., 14 in. O.D.
- C Discharge Body minimum I.D. 12":** Large enough to permit insertion of 12-1/4" O.D. X1/8" wall tube during well servicing.
- D Hold-Down Mechanism:** Locks spool in place and prevents lifting and turning during pump start-up. Two adjustable hooks on lift-out pipe hook into side of pitless case.
- DD Probe Tube Standard** 1 in. PVC Pipe. (Standard).
- E Lift-Out Pipe:** 4 in. NPT with standard lift-out bail.
- F Lift-Out Bail:** Lift-out pipe and bail assembly designed for a 68,000 lb. load.
- G** 2 in. NPT Tapping.
- H Well Vent:** Screws into a 2-1/2 in. NPT Tapping.
- CAP CABLE SEALS (SECTION BB-BB)**
- I Conduit Tapping:** 2 in. and 1 in. Std. Also available with single 2 in., 3 in., or 4 in. NPT. All tapping sizes available with or without electrical cable seal.
- J Depth Tester Block Tappings:** 1/4 in. NPT Std.
- K** 1 in. NPT Tapping ported to Drop Pipe.
- L Pressure switch tapping:** 3/8 in. NPT Std.
- MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)**
- M** 4 in.
- N** 1-1/2 in.
- O** 1 in.
- P Dimension from center of Discharge Outlet to bottom of Discharge Body:** 15-3/4 in.
- Q Distance from ground level to top of the pitless case:** 12 in.
- R Distance from ground level to top of the vent cap:** 28-1/2 in. (Vent Height may be increased if necessary).
- S 3/4 in. NPT Tapping:** used for optional Water Sampler.
- T SPOOL TO DROP PIPE THREAD SIZES:**
- | | 4 in. NPT | 5 in. NPT | 6 in. NPT |
|--|-------------|-------------|------------|
| U Dimension from center of discharge outlet to bottom of Spool: | 13-7/16 in. | 14-7/16 in. | 14-1/2 in. |
- DISCHARGE CONNECTIONS AND SIZES:**
- | | 4 in. I.D. | 5 in. I.D. | 6 in. I.D. |
|---|-------------|---------------|--------------|
| V For Butt Weld (IPS): | 4 in. I.D. | 5 in. I.D. | 6 in. I.D. |
| W For Flanged (A.S.A. Std. 150 lb.): | 4 in. I.D. | 5 in. I.D. | 6 in. I.D. |
| X For Threaded (NPT): | 4 in. I.D. | 5 in. I.D. | 6 in. I.D. |
| Y For Transition Sleeve (IPS): | 4 in. I.D. | Not Available | 6 in. I.D. |
| Z Dimension from center of Well Casing to the end of Discharge Outlet: | | | |
| With [V] Butt Weld Discharge: | 18-1/2 in. | 18-1/2 in. | 12-15/16 in. |
| With [W] Flanged Discharge: | 21-1/2 in. | 22 in. | 16-7/16 in. |
| With [X] Threaded Discharge: | 21-7/16 in. | 21-7/16 in. | 16-15/16 in. |
| With [Y] Transition Sleeve: | 30-1/2 in. | Not Available | 24-15/16 in. |
- CC SPOOL ASSEMBLY - WITHOUT CHECK VALVES -**
- | | 25.12 sq. in. | 25.12 sq. in. | 25.12 sq. in. |
|---|---------------|---------------|---------------|
| Area of Water Passage(s): | 25.12 sq. in. | 25.12 sq. in. | 25.12 sq. in. |
| Percent area of water passages to area of drop pipe | 195% | 125% | 87% |

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Cap** - cast iron, green enamel finish.
- Conduit Box** - steel, corrosion resistant coating.
- Electrical Cable Seal** - cast iron, green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism** - lead free galvanized.
- Hold-Down Pipe** - steel, corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.
- Probe Tube** - 1" PVC

NOTE: Any combination between Drop Pipe and Discharge Outlet size is possible, if required.

NOTE: Maximum rated discharge pressure = 300 PSI

GENERAL INFORMATION: • General Features • Engineering Specifications

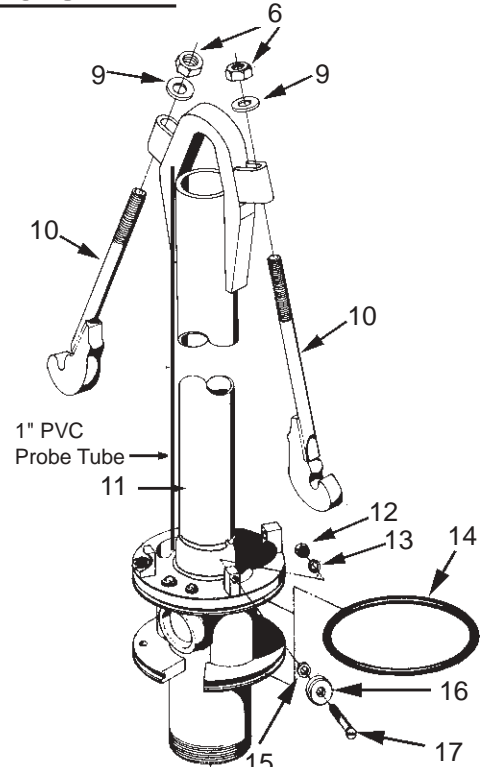
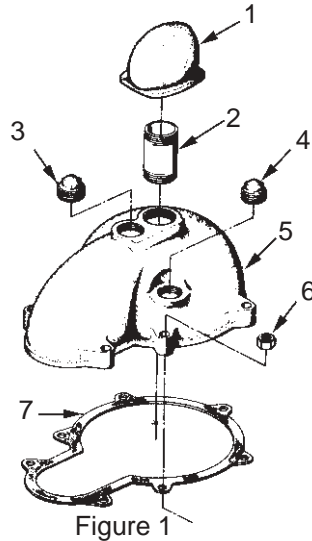
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



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12" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UJ50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	UK12
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	UK72
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	UJ7
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	UK15
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

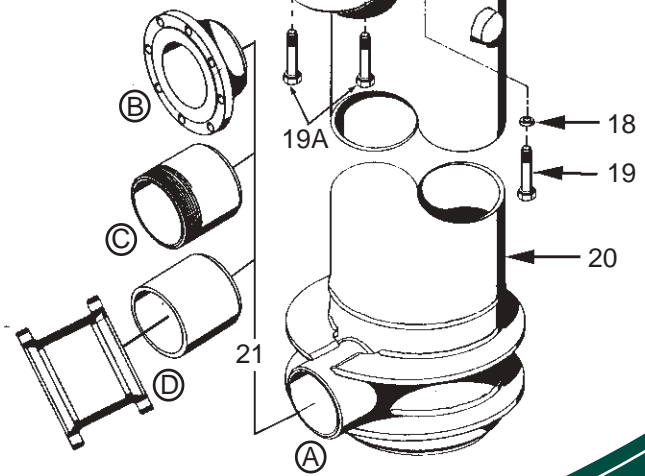
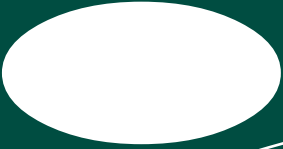


Figure 2

*Flowing Well Spools Available upon request

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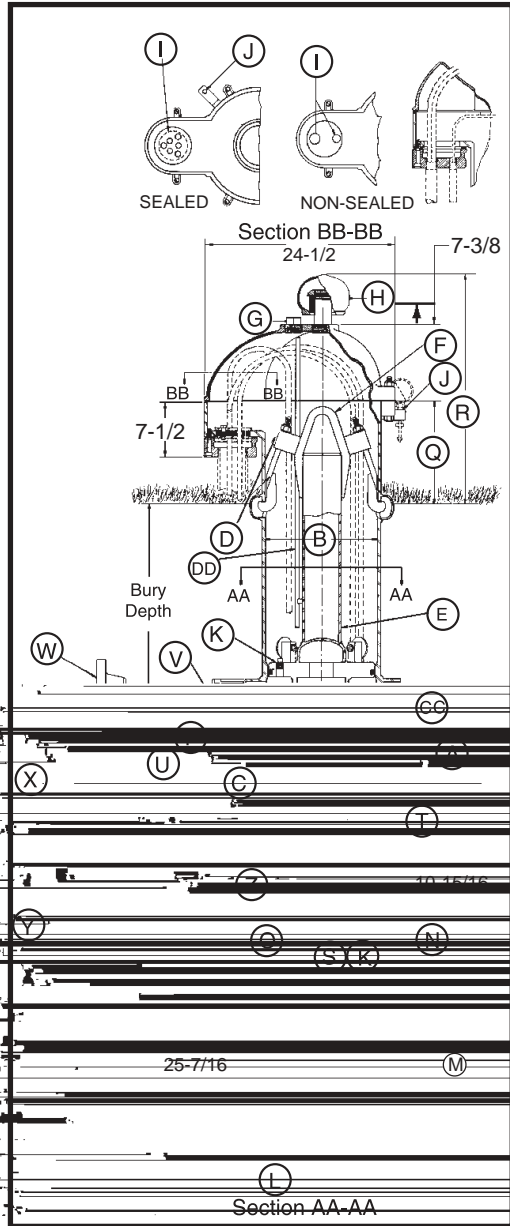
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14" CUSTOM PITLESS SPECIFICATIONS



- A Pitless Unit to well casing connection:** Chamfered for butt weld.
- B Pitless Unit with Black Upper Case:** 15-1/4 in. I.D., 16 in. O.D.
- C Discharge Body minimum I.D. 13-1/4":** Large enough to permit insertion of 14 in. O.D. tubing to this point for well servicing.
- D Hold-Down Mechanism:** Locks spool in place and prevents lifting and turning during pump start-up. Two adjustable hooks on lift-out pipe hook into side of pitless case.
- DD Probe Tube Standard 1 in. PVC Pipe.** (Standard).
- E Lift-Out Pipe:** 5 in. NPT with standard lift-out bail.
- F Lift-Out Bail:** Lift-out pipe and bail assembly designed for a 110,000 lb. load.
- G 2 in. NPT Tapping.**
- H Well Vent:** Screws into a 2-1/2 in. NPT Tapping.
- CAP CABLE SEALS (SECTION BB-BB)**
- I Conduit Tapping:** 2 in. and 1 in. Std. Also available with single 2 in., 3 in., or 4 in. NPT. All tapping sizes available with or without electrical cable seal.
- J Depth Tester Block Tappings:** 1/4 in. NPT Std.
- K Two 1 in. NPT Tappings ported to Drop Pipe.**
- L Pressure switch tapping:** 3/8 in. NPT Std.
- MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)**
- M 4 in.**
- N 1-7/8 in.**
- O 1-1/4 in.**
- P Dimension from center of Discharge Outlet to bottom of Discharge Body:** 11-1/16 in.
- Q Distance from ground level to top of the pitless case:** 12 in.
- R Distance from ground level to top of the vent cap:** 28-15/16 in. (Vent Height may be increased if necessary).
- S 3/4 in. NPT Tapping:** used for optional Water Sampler.
- | | | | |
|--|------------------|------------------|------------------|
| T SPOOL TO DROP PIPE THREAD SIZES: | 5 in. NPT | 6 in. NPT | 8 in. NPT |
| U Dimension from center of discharge outlet to bottom of Spool: | 16-3/16 in. | 21-13/16 in. | 15-13/16 in. |
- DISCHARGE CONNECTIONS AND SIZES:**
- | | | | |
|---|------------|------------|------------|
| V For Butt Weld (IPS): | 5 in. I.D. | 6 in. I.D. | 8 in. I.D. |
| W For Flanged (A.S.A. Std. 150 lb.): | 5 in. I.D. | 6 in. I.D. | 8 in. I.D. |
| X For Threaded (NPT): | 5 in. I.D. | 6 in. I.D. | 8 in. I.D. |
| Y For Transition Sleeve (IPS): | 5 in. I.D. | 6 in. I.D. | 8 in. I.D. |
- Z Dimension from center of Well Casing to the end of Discharge Outlet.**
- | | | | |
|-------------------------------|---------------|-------------|------------|
| With [V] Butt Weld Discharge: | 20-9/16 in. | 20-9/16 in. | 14-1/2 in. |
| With [W] Flanged Discharge: | 24-1/16 in. | 24-1/16 in. | 18-1/2 in. |
| With [X] Threaded Discharge: | 23-9/16 in. | 24-9/16 in. | 18-1/2 in. |
| With [Y] Transition Sleeve: | Not Available | 32-9/16 in. | 26-1/2 in. |
- CC SPOOL ASSEMBLY - WITHOUT CHECK VALVES -**
- | | | | |
|---|--------------|--------------|--------------|
| Area of Water Passage(s): | 19.6 sq. in. | 39.2 sq. in. | 39.2 sq. in. |
| Percent area of water passages to area of drop pipe | 100% | 138% | 78.2% |

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Cap** - cast iron, green enamel finish.
- Conduit Box** - steel, corrosion resistant coating.
- Electrical Cable Seal** - cast iron, green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism** - lead free galvanized.
- Hold-Down Pipe** - steel, corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.
- Probe Tube** - 1" PVC

NOTE: Any combination between Drop Pipe and Discharge Outlet size is possible, if required.

NOTE: Maximum rated discharge pressure = 300 PSI

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

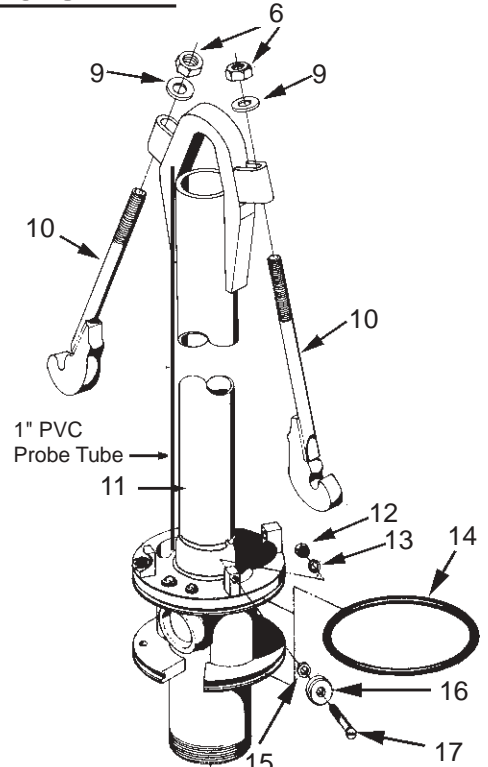
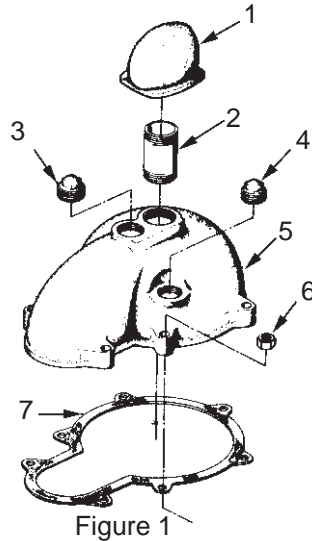
GENERAL INFORMATION: • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 10" Custom Pitless • 12" Custom Pitless • 14" Custom Pitless
- 16" Custom Pitless • 18" Custom Pitless • 20" Custom Pitless
- 24" Custom Pitless • 26" Custom Pitless • 30" Custom Pitless
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14" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UJ50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	UL1
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	UL102
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	UK7
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	UL15
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

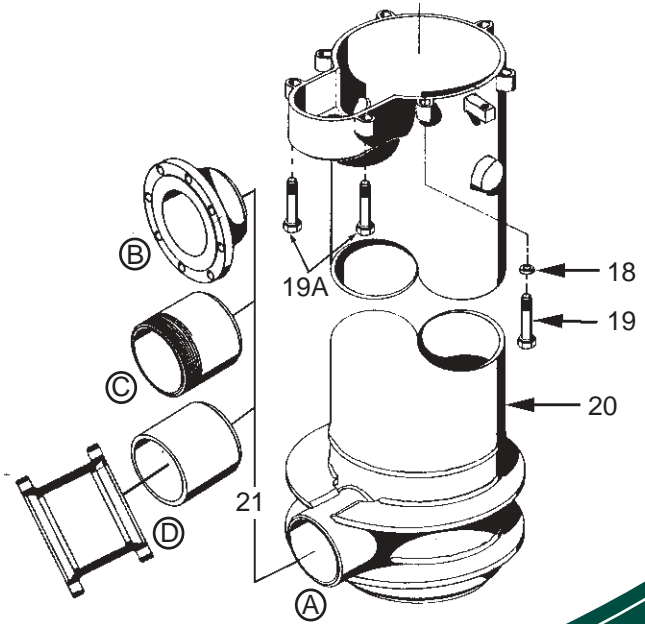


Figure 2

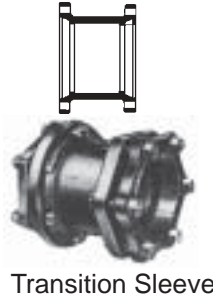
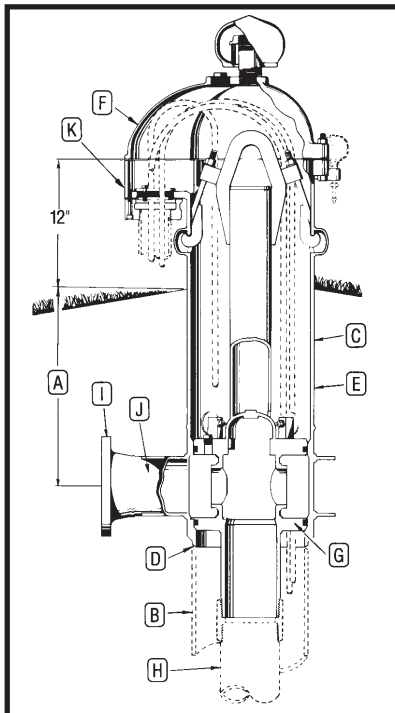
*Flowing Well Spools Available upon request

- GENERAL INFORMATION: • General Features • Engineering Specifications
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



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16" CUSTOM PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 30" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Custom Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS1618WBWE08F8S**

A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.

3

PS

These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pump.

16

B. Indicates the well casing size is 16"

18

C. Indicates the upper pitless case size is 18".

W

D. Indicates the attachment to the well casing is a welded joint.

B

E. Indicates the upper pitless case is black pipe.

W

F. Indicates the unit has a watertight cap with screened vent installed.

E

G. Indicates spool has pressure equalizing passages.

0

Indicates this type of spool has no check valves.

8

H. Indicates the size of drop pipe in inches.

F

I. Indicates the discharge connection is Flanged. Other options are Welded, Threaded and Mechanical Joint with transition sleeve.

8

J. Indicates the size of discharge pipe in inches.

S

K. Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

A	3	Bury Depth in Feet	
	PS	Pitless Unit for Submersible Pump	
B	16	Well Size - Ins.	
C	18	Upper Case Size - Ins.	
D	W	Attachment to Well Casing-Welded	
E	B	Black Upper Case	
F	W	Watertight Cap w/Screened Air Vent	
	E	Pressure Equalizing Spool Passages	
G	0	Standard Spool	
H	8	Drop Pipe I.D. Ins. (5", 6" or 8")	
I		Welded	Discharge Connection (Select One)
	F	Flange, ASA 150#	
		Threaded NPT	
		Mech. Joint w/Transition Sleeve	
J	8	Discharge I.D. Ins. (5", 6" or 8")	
K	S	Elec. Cable Seal (S) O.D. 3 Wire ____ O.D. Grounding Wire ____	
OPTIONS		Water Sampler Valve (H)	
		Flowing Well (F)	
		Special Provision (X)	

- GENERAL INFORMATION:** • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- [10" Custom Pitless](#) • [12" Custom Pitless](#) • [14" Custom Pitless](#)
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- [24" Custom Pitless](#) • [26" Custom Pitless](#) • [30" Custom Pitless](#)
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16" CUSTOM PITLESS SPECIFICATIONS

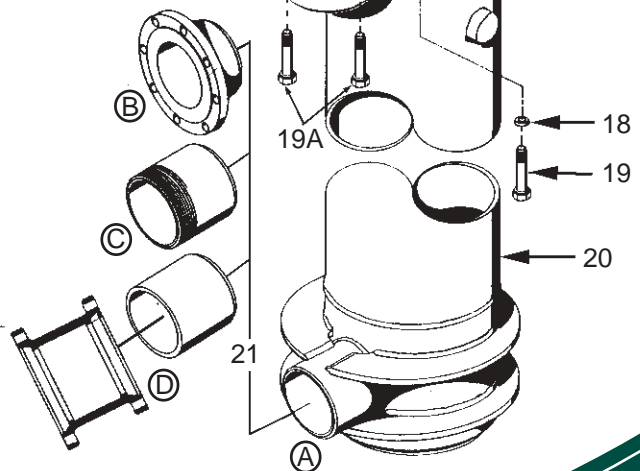
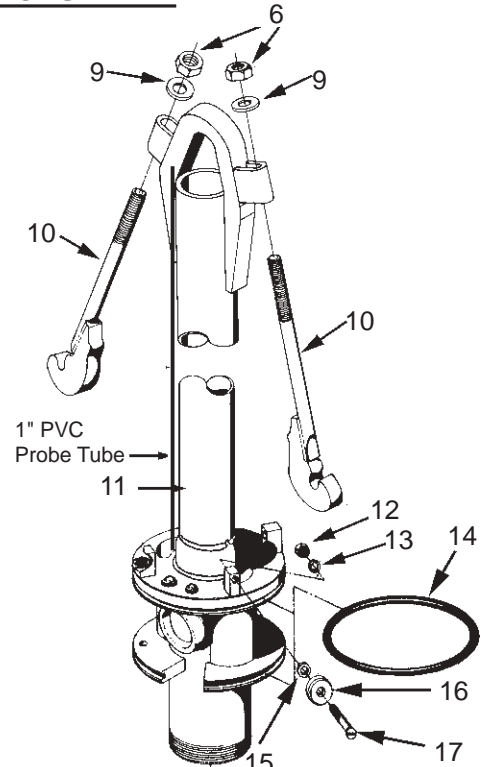
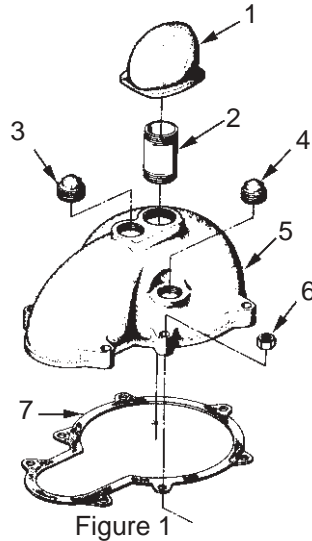
- GENERAL INFORMATION: • [General Features](#) • [Engineering Specifications](#)
• [Shipping Weights](#) • [Spools & Spool Cable Seals](#)
• [O-Ring Selection Guide](#) • [Installation Instructions](#)



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16" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UJ50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	UM1
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	UM72
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	UM7
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	UM15
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

*Flowing Well Spools Available upon request

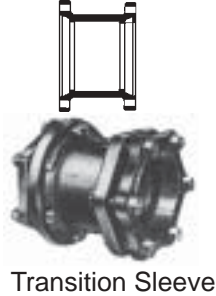
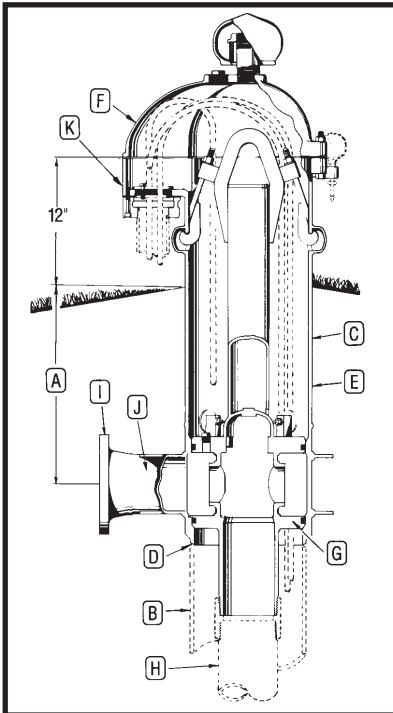
Figure 2

- GENERAL INFORMATION: • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 10" Custom Pitless • 12" Custom Pitless • 14" Custom Pitless
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18" CUSTOM PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 30" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Custom Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS1820WBWE010F10S**

A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.

3

PS

These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pump.

18

B. Indicates the well casing size is 18"

20

C. Indicates the upper pitless case size is 20".

W

D. Indicates the attachment to the well casing is a welded joint.

B

E. Indicates the upper pitless case is black pipe.

W

F. Indicates the unit has a watertight cap with screened vent installed.

E

G. Indicates spool has pressure equalizing passages.

0

Indicates this type of spool has no check valves.

10

H. Indicates the size of drop pipe in inches.

F

I. Indicates the discharge connection is Flanged. Other options are Welded, Threaded and Mechanical Joint with transition sleeve.

10

J. Indicates the size of discharge pipe in inches.

S

K. Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

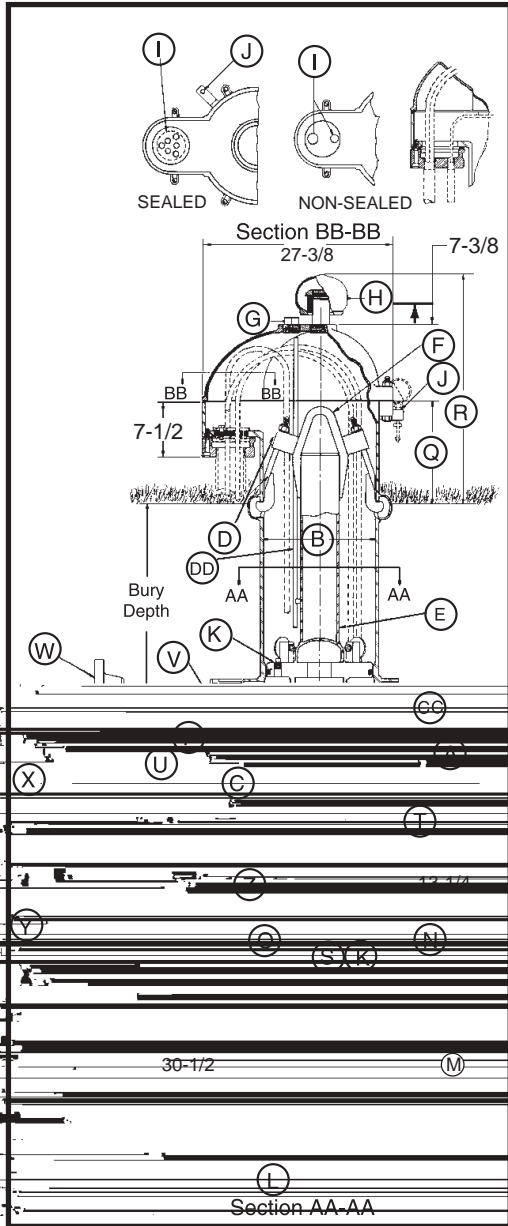
A	3	Bury Depth in Feet
	PS	Pitless Unit for Submersible Pump
B	18	Well Size - Ins.
C	20	Upper Case Size - Ins.
D	W	Attachment to Well Casing-Welded
E	B	Black Upper Case
F	W	Watertight Cap w/Screened Air Vent
	E	Pressure Equalizing Spool Passages
G	0	Standard Spool
H	10	Drop Pipe I.D. Ins. (6", 8" or 10")
I		Welded
	F	Flange, ASA 150#
		Threaded NPT
		Mech. Joint
		w/Transition Sleeve
J	10	Discharge I.D. Ins. (6", 8" or 10")
K	S	Elec. Cable Seal (S) O.D. 3 Wire ____ O.D. Grounding Wire ____
		Water Sampler Valve (H)
OPTIONS		Flowing Well (F)
		Special Provision (X)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Custom Pitless • 12" Custom Pitless • 14" Custom Pitless
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18" CUSTOM PITLESS SPECIFICATIONS



- A Pitless Unit to well casing connection:** Chamfered for butt weld.
- B Pitless Unit with Black Upper Case:** 19-1/4 in. I.D., 20 in. O.D.
- C Discharge Body minimum I.D. 17-1/4":** Large enough to permit insertion of 18 in. O.D. tubing to this point for well servicing.
- D Hold-Down Mechanism:** Locks spool in place and prevents lifting and turning during pump start-up. Four adjustable hooks on lift-out pipe hook into side of pitless case.
- DD Probe Tube Standard 1 in. PVC Pipe.** (Standard).
- E Lift-Out Pipe:** 6 in. NPT with standard lift-out bail.
- F Lift-Out Bail:** Lift-out pipe and bail assembly designed for a 142,000 lb. load.
- G 2 in. NPT Tapping.**
- H Well Vent:** Screws into a 2-1/2 in. NPT Tapping.
- CAP CABLE SEALS (SECTION BB-BB)**
- I Conduit Tapping:** 2 in. and 1 in. Std. Also available with single 2 in., 3 in., or 4 in. NPT. All tapping sizes available with or without electrical cable seal.
- J Depth Tester Block Tappings:** 1/4 in. NPT Std.
- K Two 1 in. NPT Tappings ported to Drop Pipe.**
- L Pressure switch tapping:** 3/8 in. NPT Std.
- MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)**
- M 6 in.**
- N 2-5/8 in.**
- O 1-1/2 in.**
- P Dimension from center of Discharge Outlet to bottom of Discharge Body:** 12-13/16 in.
- Q Distance from ground level to top of the pitless case:** 12 in.
- R Distance from ground level to top of the vent cap:** 28-1/4 in. (Vent Height may be increased if necessary).
- S 3/4 in. NPT Tapping:** used for optional Water Sampler.
- | T SPOOL TO DROP PIPE THREAD SIZES: | 6 in. NPT | 8 in. NPT | 10 in. NPT |
|--|------------------|------------------|-------------------|
| U Dimension from center of discharge outlet to bottom of Spool: | 24-1/16 in. | 24-1/16 in. | 19-3/32 in. |
- DISCHARGE CONNECTIONS AND SIZES:**
- | | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
|---|-------------------|-------------------|--------------------|
| V For Butt Weld (IPS): | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| W For Flanged (A.S.A. Std. 150 lb.): | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| X For Threaded (NPT): | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| Y For Transition Sleeve (IPS): | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| Z Dimension from center of Well Casing to the end of Discharge Outlet: | | | |
| With [V] Butt Weld Discharge: | 25-1/2 in. | 25-1/2 in. | 18-1/2 in. |
| With [W] Flanged Discharge: | 29 in. | 29-1/2 in. | 22-1/2 in. |
| With [X] Threaded Discharge: | 29-1/2 in. | 29-1/2 in. | 23-5/8 in. |
| With [Y] Transition Sleeve: | 37-9/16 in. | 37-9/16 in. | 30-9/16 in. |
- CC SPOOL ASSEMBLY - WITHOUT CHECK VALVES -**
- | | 33.18 sq. in. | 66.36 sq. in. | 66.36 sq. in. |
|--|----------------------|----------------------|----------------------|
| Area of Water Passage(s): | 33.18 sq. in. | 66.36 sq. in. | 66.36 sq. in. |
| Percent area of water passages to area of drop pipe | 115% | 132% | 85% |

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Cap** - cast iron, green enamel finish.
- Conduit Box** - steel, corrosion resistant coating.
- Electrical Cable Seal** - cast iron, green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism** - lead free galvanized.
- Hold-Down Pipe** - steel, corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.
- Probe Tube** - 1" PVC

- NOTE:** Any combination between Drop Pipe and Discharge Outlet size is possible, if required.
- NOTE:** Maximum rated discharge pressure = 300 PSI

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

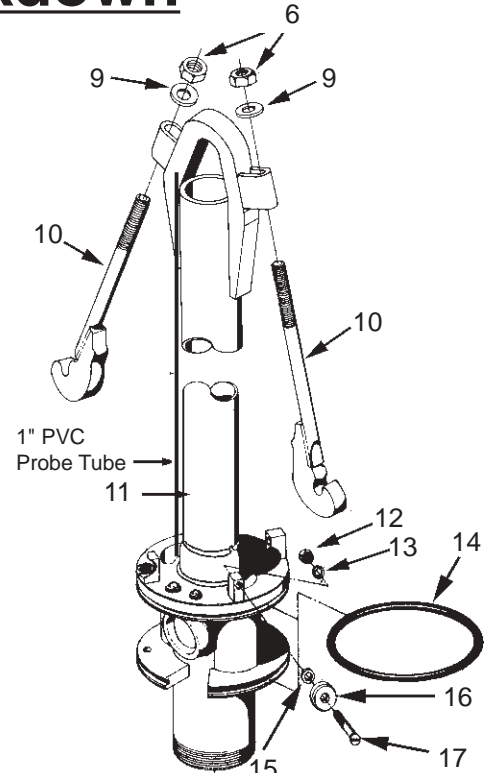
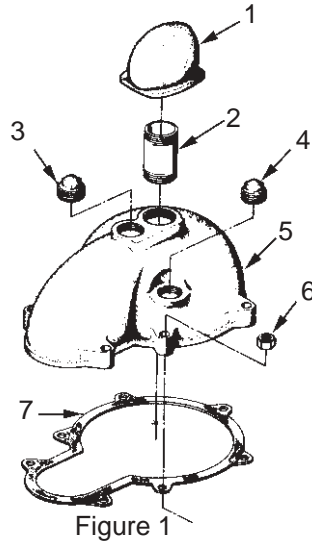
- GENERAL INFORMATION:** • General Features • Engineering Specifications
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18" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UJ50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	UN1
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	UN72
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	UN7
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	UN15
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

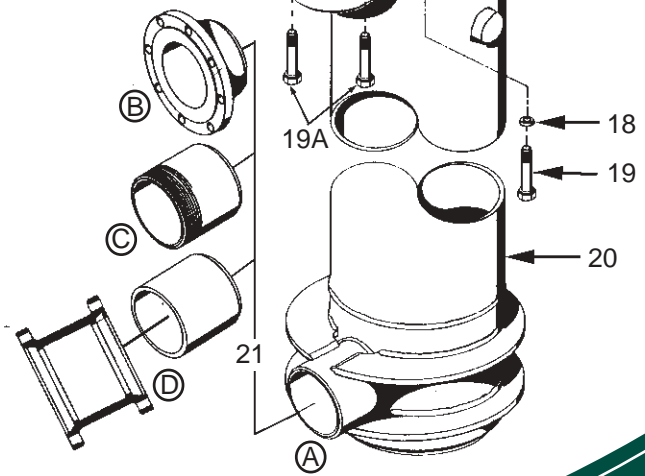


Figure 2

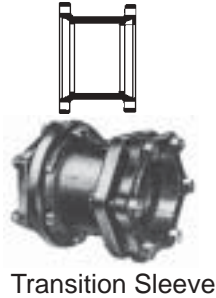
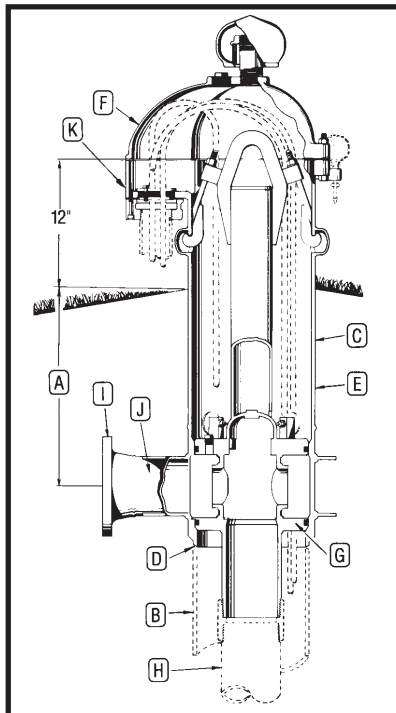
*Flowing Well Spools Available upon request

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20" CUSTOM PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 30" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Custom Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS2022WBWE010F10S**

A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.

3

PS

These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pump.

20

B. Indicates the well casing size is 20"

22

C. Indicates the upper pitless case size is 22".

W

D. Indicates the attachment to the well casing is a welded joint.

B

E. Indicates the upper pitless case is black pipe.

W

F. Indicates the unit has a watertight cap with screened vent installed.

E

G. Indicates spool has pressure equalizing passages.

0

Indicates this type of spool has no check valves.

10

H. Indicates the size of drop pipe in inches.

F

I. Indicates the discharge connection is Flanged. Other options are Welded, Threaded and Mechanical Joint with transition sleeve.

10

J. Indicates the size of discharge pipe in inches.

S

K. Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

A	3	Bury Depth in Feet
	PS	Pitless Unit for Submersible Pump
B	20	Well Size - Ins.
C	22	Upper Case Size - Ins.
D	W	Attachment to Well Casing-Welded
E	B	Black Upper Case
F	W	Watertight Cap w/Screened Air Vent
	E	Pressure Equalizing Spool Passages
G	0	Standard Spool
H	10	Drop Pipe I.D. Ins. (6", 8" or 10")
I		Welded
	F	Flange, ASA 150#
		Threaded NPT
		Mech. Joint
		w/Transition Sleeve
J	10	Discharge I.D. Ins. (6", 8" or 10")
K	S	Elec. Cable Seal (S) O.D. 3 Wire ____ O.D. Grounding Wire ____
		Water Sampler Valve (H)
OPTIONS		Flowing Well (F)
		Special Provision (X)

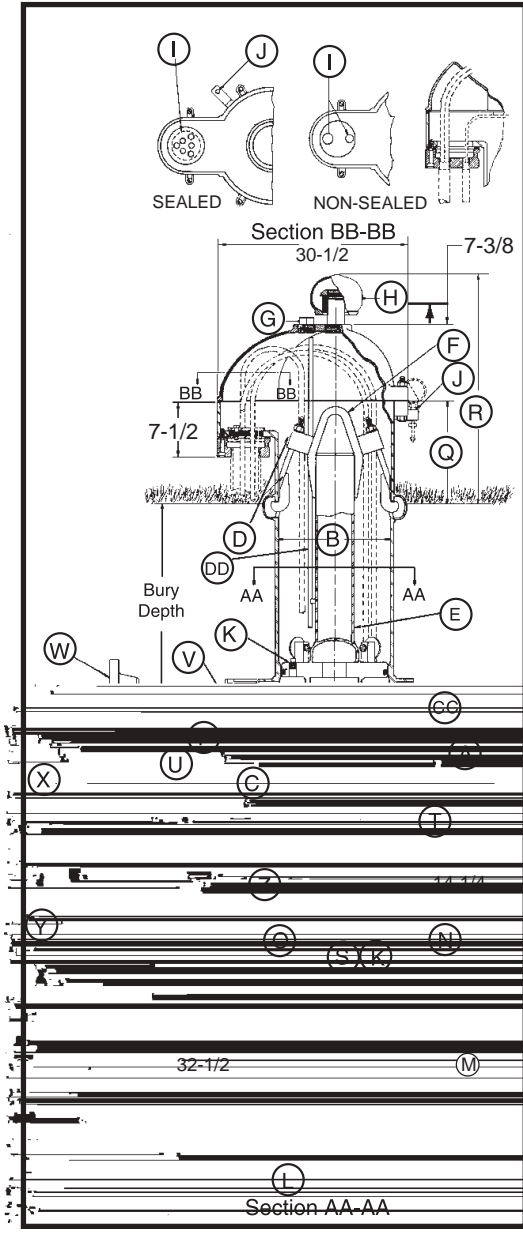
Discharge
Connection
(Select One)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
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20" CUSTOM PITLESS SPECIFICATIONS



- A Pitless Unit to well casing connection: Chamfered for butt weld.
 - B Pitless Unit with Black Upper Case: 21 in. I.D., 22 in. O.D.
 - C Discharge Body minimum I.D.: 19"
 - D Hold-Down Mechanism: Locks spool in place and prevents lifting and turning during pump start-up. Four adjustable hooks on lift-out pipe hook into side of pitless case.
 - DD Probe Tube Standard 1 in. PVC Pipe. (Standard).
 - E Lift-Out Pipe: 6 in. IPS with standard lift-out bail.
 - F Lift-Out Bail: Lift-out pipe and bail assembly designed for a 142,000 lb. load.
 - G 2 in. NPT Tapping.
 - H Well Vent: Screws into a 2-1/2 in. NPT Tapping.
 - CAP CABLE SEALS (SECTION BB-BB)**
 - I Conduit Tapping: 2 in. and 1 in. Std. Also available with single 2 in., 3 in., or 4 in. NPT. All tapping sizes available with or without electrical cable seal.
 - J Depth Tester Block Tappings: 1/4 in. NPT Std.
 - K Three 1 in. NPT Tappings ported to Drop Pipe.
 - L Pressure switch tapping: 3/8 in. NPT Std.
 - MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)**
 - M 6-3/4 in.
 - N 3-3/8 in.
 - O 2 in.
 - P Dimension from center of Discharge Outlet to bottom of Discharge Body: 13-3/4 in.
 - Q Distance from ground level to top of the pitless case: 12 in.
 - R Distance from ground level to top of the vent cap: 28-1/4 in. (Vent Height may be increased if necessary).
 - S 3/4 in. NPT Tapping: used for optional Water Sampler.
 - T **SPOOL TO DROP PIPE THREAD SIZES:**
 - U Dimension from center of discharge outlet to bottom of Spool:
 - DISCHARGE CONNECTIONS AND SIZES:**
 - V For Butt Weld (IPS):
 - W For Flanged (ASA Std. 150 lb.):
 - X For Threaded (NPT):
 - Y For Transition Sleeve (IPS):
 - Z Dimension from center of Well Casing to the end of Discharge Outlet
 - CC **SPOOL ASSEMBLY - WITHOUT CHECK VALVES -**
- | | 6 in. NPT | 8 in. NPT | 10 in. NPT |
|----|---------------|---------------|---------------|
| U | 24-9/16 in. | 24-9/16 in. | 19-11/16 in. |
| V | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| W | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| X | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| Y | 6 in. I.D. | 8 in. I.D. | 10 in. I.D. |
| Z | 26-1/2 in. | 26-1/2 in. | 19-1/2 in. |
| Z | 30 in. | 30-1/2 in. | 23-1/2 in. |
| Z | 30-9/16 in. | 30-9/16 in. | 31-9/16 in. |
| Z | 38-9/16 in. | 38-9/16 in. | 31-1/2 in. |
| CC | 33.18 sq. in. | 66.36 sq. in. | 66.36 sq. in. |
| | 115% | 132% | 85% |

COMPONENT MATERIALS

- Well Vent - cast iron, green enamel finish.
- Cap - cast iron, green enamel finish.
- Conduit Box - steel, corrosion resistant coating.
- Electrical Cable Seal - cast iron, green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism - lead free galvanized.
- Hold-Down Pipe - steel, corrosion resistant coating.
- Pitless Case - steel, corrosion resistant coating.
- Discharge Body - steel, lead free galvanized.
- Spool - steel, lead free galvanized.
- Probe Tube - 1" PVC

NOTE: Any combination between Drop Pipe and Discharge Outlet size is possible, if required.

NOTE: Maximum rated discharge pressure = 300 PSI

Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

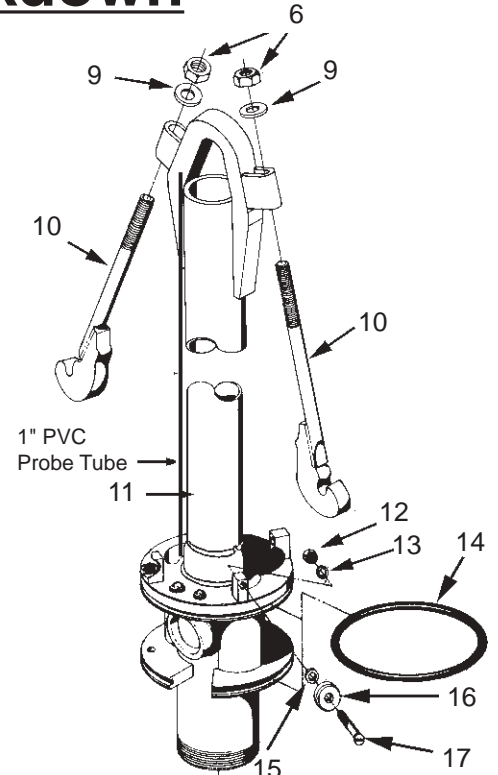
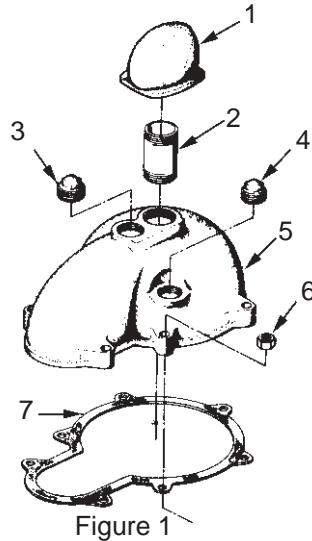
- GENERAL INFORMATION: • General Features • Engineering Specifications
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



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20" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UK50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	UQ1
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	UQ72
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	UQ7A
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	UQ15A
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

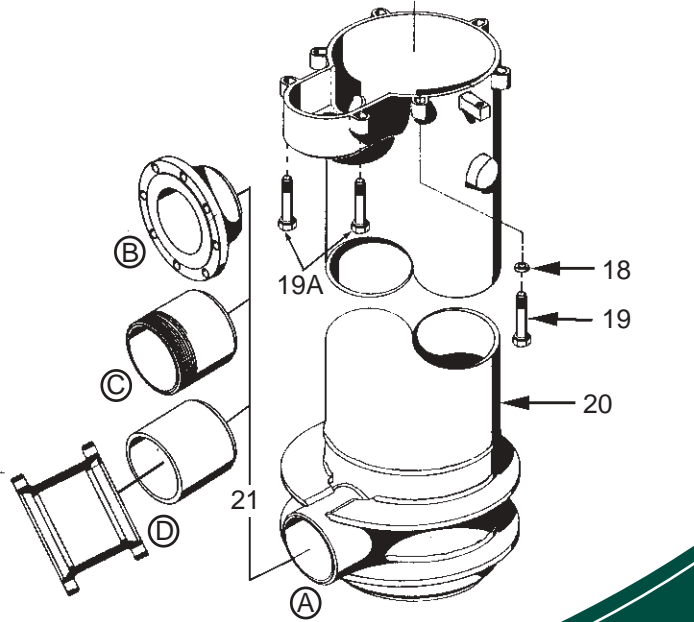
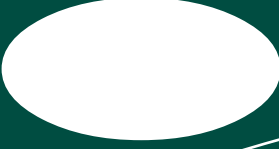


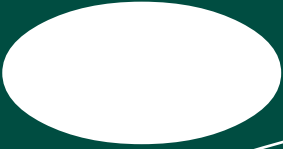
Figure 2

*Flowing Well Spools Available upon request

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- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions

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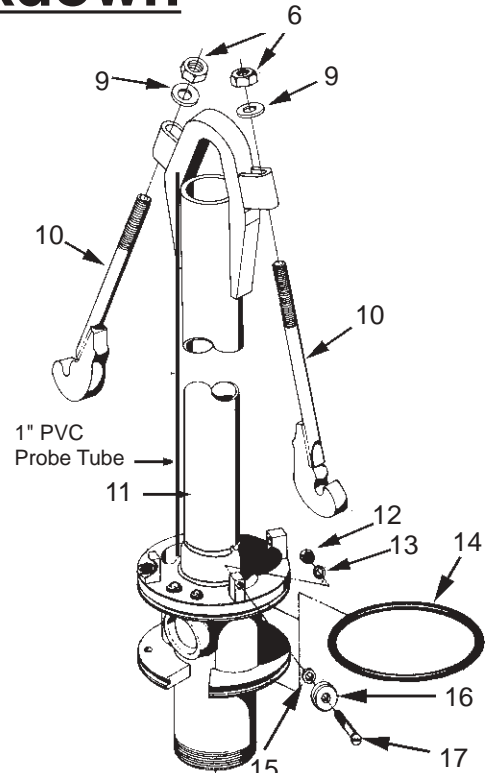
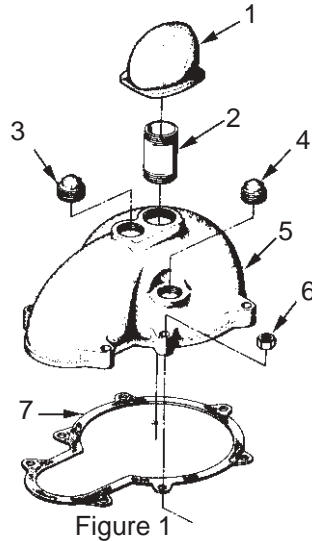
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24" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UK50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	UR1
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	UR72
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	UR7A
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	UR15A
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

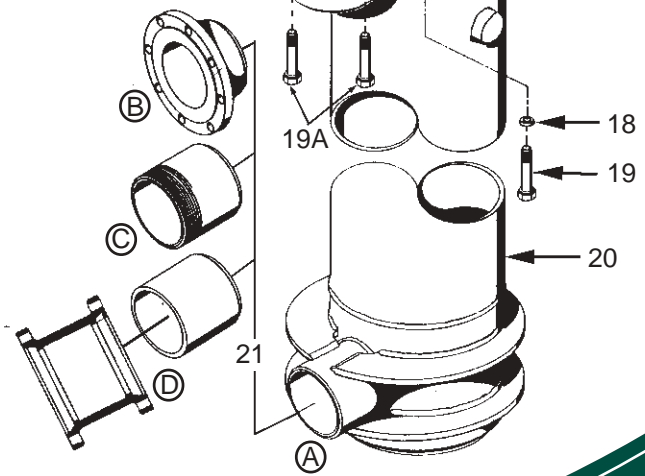


Figure 2

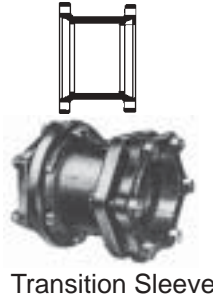
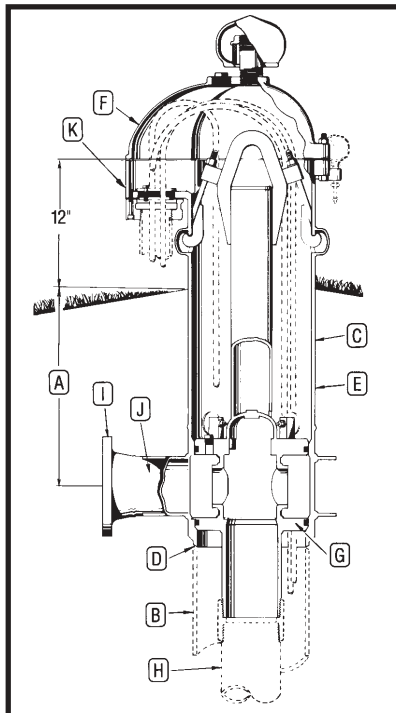
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26" CUSTOM PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 30" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Custom Industrial Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PS2628WBWE012F12S**

A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.

3

PS

These letters indicate the type of pump the pitless unit is designed for. The unit shown is a PS for submersible pump.

26

B. Indicates the well casing size is 26"

28

C. Indicates the upper pitless case size is 28".

W

D. Indicates the attachment to the well casing is a welded joint.

B

E. Indicates the upper pitless case is black pipe.

W

F. Indicates the unit has a watertight cap with screened vent installed.

E

G. Indicates spool has pressure equalizing passages.

0

Indicates this type of spool has no check valves.

12

H. Indicates the size of drop pipe in inches.

F

I. Indicates the discharge connection is Flanged. Other options are Welded, Threaded and Mechanical Joint with transition sleeve.

12

J. Indicates the size of discharge pipe in inches.

S

K. Sealed Conduit Connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

A	3	Bury Depth in Feet
	PS	Pitless Unit for Submersible Pump
B	26	Well Size - Ins.
C	28	Upper Case Size - Ins.
D	W	Attachment to Well Casing-Welded
E	B	Black Upper Case
F	W	Watertight Cap w/Screened Air Vent
	E	Pressure Equalizing Spool Passages
G	0	Standard Spool
H	12	Drop Pipe I.D. Ins. (8", 10" or 12")
I		Welded
	F	Flange, ASA 150#
		Threaded NPT
		Mech. Joint
		w/Transition Sleeve
J	12	Discharge I.D. Ins. (8", 10" or 12")
K	S	Elec. Cable Seal (S) O.D. 3 Wire ____ O.D. Grounding Wire ____
OPTIONS		Water Sampler Valve (H)
		Flowing Well (F)
		Special Provision (X)

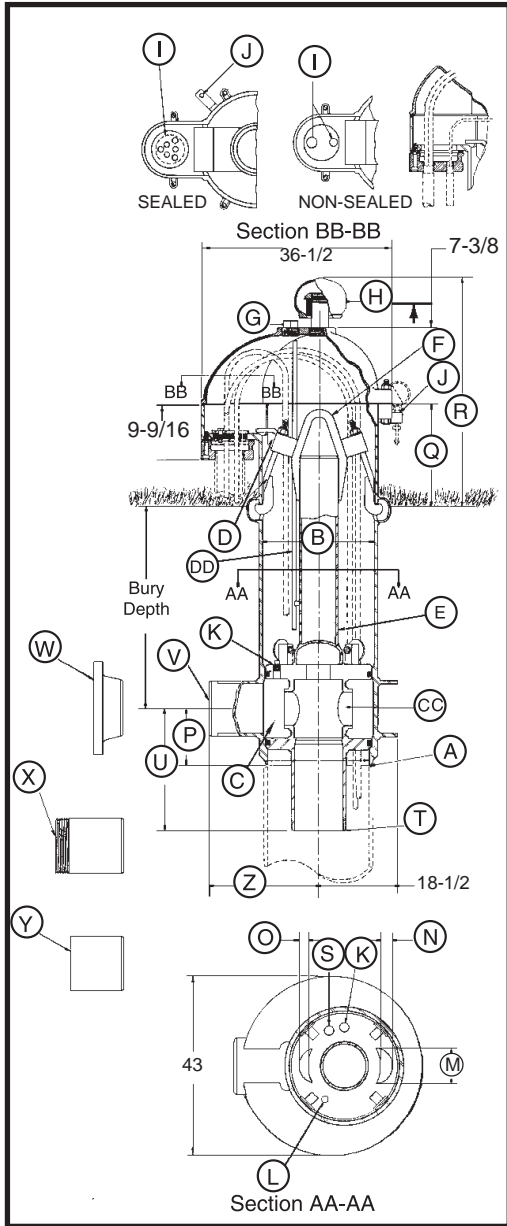
Discharge
Connection
(Select One)

- GENERAL INFORMATION:** • General Features • Engineering Specifications
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26" CUSTOM PITLESS SPECIFICATIONS



Note: Pitless units conform to the Recommended Standards for Water works, Great Lakes Upper Mississippi River Board of State Public Health & Environmental Managers and Water Systems Council PAS-97 (04) Standards.

- A Pitless Unit to well casing connection:** Chamfered for butt weld.
B Pitless Unit with Black Upper Case: 27 in. I.D., 28 in. O.D.
C Discharge Body minimum I.D. 25".
D Hold-Down Mechanism: Locks spool in place and prevents lifting and turning during pump start-up. Four adjustable hooks on lift-out pipe hook into side of pitless case.
DD Probe Tube Standard 1 in. PVC Pipe. (Standard).
E Lift-Out Pipe: 8 in. IPS with standard lift-out bail.
F Lift-Out Bail: Lift-out pipe and bail assembly designed for a 218,000 lb. load.
G 2 -1/2 in. NPT Tapping.
H Well Vent: Screws into a 2-1/2 in. NPT Tapping.
I Conduit Tapping: 2 in. and 1 in. Std. Also available with single 2 in., 3 in., or 4 in. NPT. All tapping sizes available with or without electrical cable seal.
J Depth Tester Block Tappings: 1/4 in. NPT Std.
K Three 1 in. NPT Tappings ported to Drop Pipe.
L Pressure switch tapping: 3/8 in. NPT Std.
MOTOR CABLE PASSAGES THROUGH SPOOL (SECTION AA-AA)
M 7-3/16 in.
N 3-3/8 in.
O 2 in.
P Dimension from center of Discharge Outlet to bottom of Discharge Body: 17-7/16 in.
Q Distance from ground level to top of the pitless case: 12 in.
R Distance from ground level to top of the vent cap: 30-13/16 in. (Vent Height may be increased if necessary).
S 3/4 in. NPT Tapping: used for optional Water Sampler.
T SPOOL TO DROP PIPE THREAD SIZES:
- | | 8 in. NPT | 10 in. NPT | 12 in. NPT |
|--|--------------|--------------|--------------|
| U Dimension from center of discharge outlet to bottom of Spool: | 18-13/16 in. | 20-15/16 in. | 22-15/16 in. |
- DISCHARGE CONNECTIONS AND SIZES:**
- | | 8 in. I.D. | 10 in. I.D. | 12 in. I.D. |
|---|-------------|-------------|-------------|
| V For Butt Weld (IPS): | 8 in. I.D. | 10 in. I.D. | 12 in. I.D. |
| W For Flanged (A.S.A. Std. 150 lb.): | 8 in. I.D. | 10 in. I.D. | 12 in. I.D. |
| X For Threaded (NPT): | 8 in. I.D. | 10 in. I.D. | 12 in. I.D. |
| Y For Transition Sleeve (IPS): | 8 in. I.D. | 10 in. I.D. | 12 in. I.D. |
| Z Dimension from center of Well Casing to the end of Discharge Outlet. | | | |
| With [V] Butt Weld Discharge: | 34-1/4 in. | 34-1/4 in. | 26-1/4 in. |
| With [W] Flanged Discharge: | 38-5/16 in. | 38-5/16 in. | 30-3/4 in. |
| With [X] Threaded Discharge: | 38-5/16 in. | 39-5/16 in. | 33-5/16 in. |
| With [Y] Transition Sleeve: | 46-1/4 in. | 46-1/4 in. | 38-1/4 in. |
- CC SPOOL ASSEMBLY - WITHOUT CHECK VALVES -**
- | | 120.26 sq. in. | 120.26 sq. in. | 120.26 sq. in. |
|---|----------------|----------------|----------------|
| Area of Water Passage(s): | 120.26 sq. in. | 120.26 sq. in. | 120.26 sq. in. |
| Percent area of water passages to area of drop pipe ... | 240% | 152% | 106% |

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Cap** - cast iron, green enamel finish.
- Conduit Box** - steel, corrosion resistant coating.
- Electrical Cable Seal** - cast iron, green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism** - lead free galvanized.
- Hold-Down Pipe** - steel, corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.
- Probe Tube** - 1" PVC

- NOTE:** Any combination between Drop Pipe and Discharge Outlet size is possible, if required.
NOTE: Maximum rated discharge pressure = 300 PSI

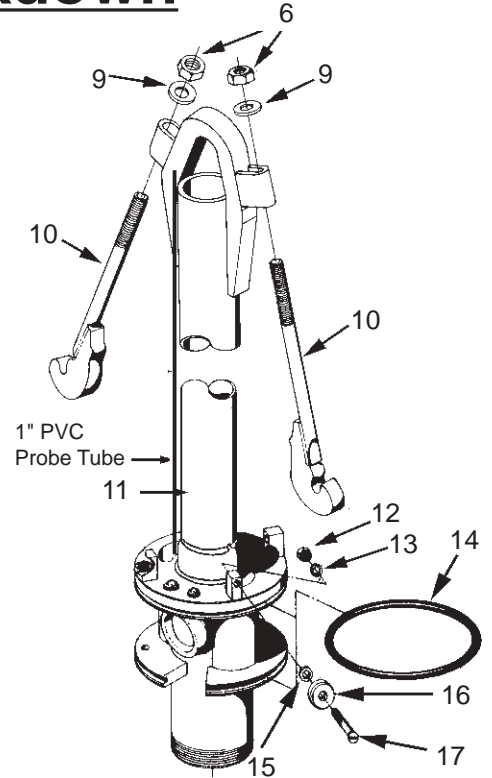
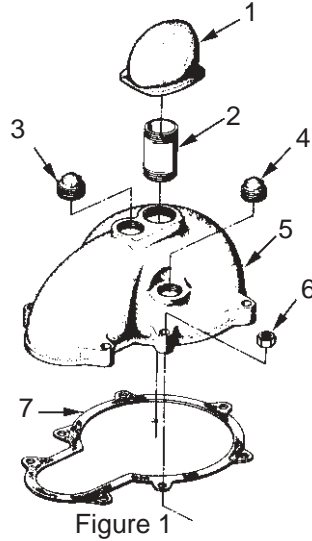
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26" Custom Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Quantity	Description	Ord. No
FIGURE 1			
1	1	Protected Screen Well Vent 2 1/2" NPT	PS155
2	1	Pipe Nipple 2 1/2" NPT x 6" L.	PS365
3	1	Plug Plug 2" NPT	UK50
4	1	Pipe Plug 1 1/2" NPT	UG54
5	1	Seal Cap	US1
6	9	Hex Nut 5/8-11NC	PC286
7	1	Gasket	US72
FIGURE 2			
9	2	Washer	PC417
10	2	Hold-Down Hook	US7A
11	1	*Spool & Lift-Out Assembly (Serial No. Required)	-----
12	4	Hex Nut 3/8-16NC	UB17
13	4	Lockwasher	TX31
14	2	Static Seal Ring	US15
15	4	Washer	SW68
16	4	Washer	UL95
17	4	Machine Screw, 3/8-16NC x 2 1/4" L.	UM222
18	7	Washer	UN81
19	5	Hex Head cap screw, 5/8-11NC x 5" L.	UN73
19A	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	LK4
20	1	Discharge Body & Upper Casing Assembly (Serial No. Required)	-----
21	---	(4) different discharge connections are available, (A) Welded, (B) Flanged, (C) Threaded or (D) Mechanical Joint with or without Transition Sleeve	

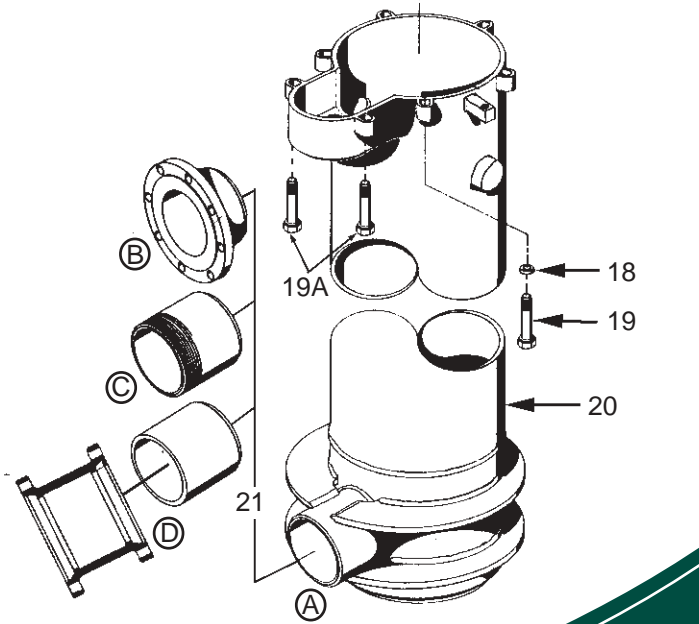
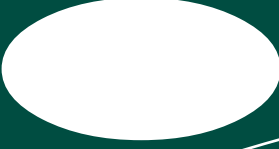


Figure 2

*Flowing Well Spools Available upon request

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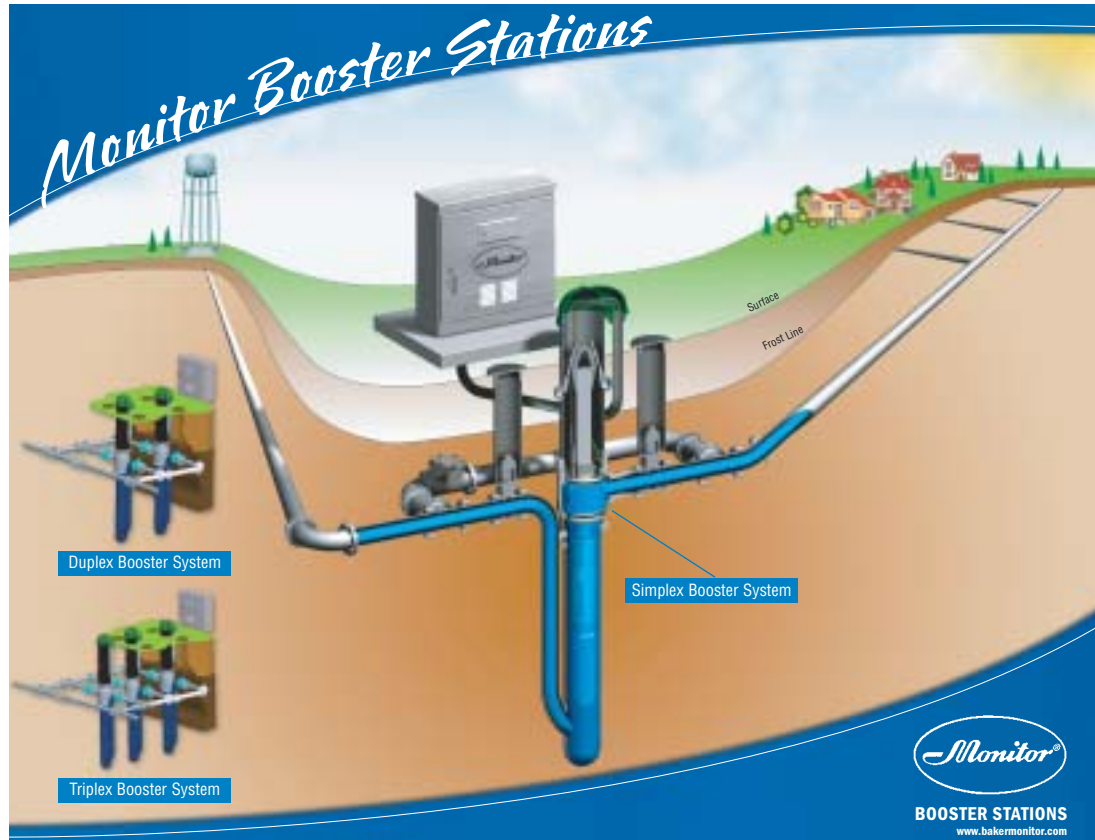


PITLESS BOOSTERS

- 5" Pitless Booster
- 6" Pitless Booster
- 8" Pitless Booster
- 10" Pitless Booster
- 12" Pitless Booster
- 16" Pitless Booster

GENERAL INFORMATION

- General Features
- Pitless Booster Engineering Specifications
- Shipping Weights
- Spools & Spool Cable Seals
- O-Ring Selection Guide
- Installation Instructions



Ever increasing public demands for water may cause reductions in pressure in municipal supply systems.

"The purpose of the Booster Pump is to increase the pressure and cause water to flow at increased velocity.

The Monitor Booster System is ideal for rural water lines, condominiums, subdivisions, Industrial parks, or anywhere water pressure problems exist.

The Monitor Booster System is:

- Quiet
- Does not detract from the landscape. (anywhere that esthetics are important)
- Economical - Sanitary vs underground vault
- Pumps and motors are immune to flood damage. Air vent can be extended above flood level.
- Easy to service



133 Enterprise Street
Evansville, WI 53536



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PITLESS BOOSTER UNITS FOR SUBMERSIBLE PUMPS 5", 6", 8", 10", 12" and 16" TANK SIZES

FEATURES:

EASY ACCESS TO SERVICE . . . Well cap can be removed without disconnecting cables. O-ring seals on spool permit withdrawal of the entire inner assembly simply by lifting. Replacement is equally simple. Spool support eliminates vertical adjustment allowing service above ground.

CORROSION PROTECTION . . . Spool and Discharge Body are either lead hot-dipped galvanized or constructed of corrosion resistant material for longer life, less service.

RELIABLE SEAL . . . Neoprene O-rings between accurately machined lead free hot-dipped galvanized surfaces on the spool and within the unit provide positive seals to ensure maintenance free performance.

O-RING SEAL PROTECTION . . . Monitor seal protection prevents seal damage during installation and service eliminating potential service costs.

QUICK TO INSTALL . . . A quality booster pump installation can be made easily and economically without delay for masonry or building construction creating a sound cost savings solution.

ALTERNATIVE SPOOLS (6x7 and 8x10 only) . . . Spools are available plain or with silent check valves. The Monitor silent check valve has its operating parts automatically exposed when the spool is withdrawn. Spools are supplied with tappings for pressure controls.

WATERTIGHT WELL CAP . . . Designed to permit removal without disconnecting cables. Watertight cable and conduit sealing is available for additional protection.

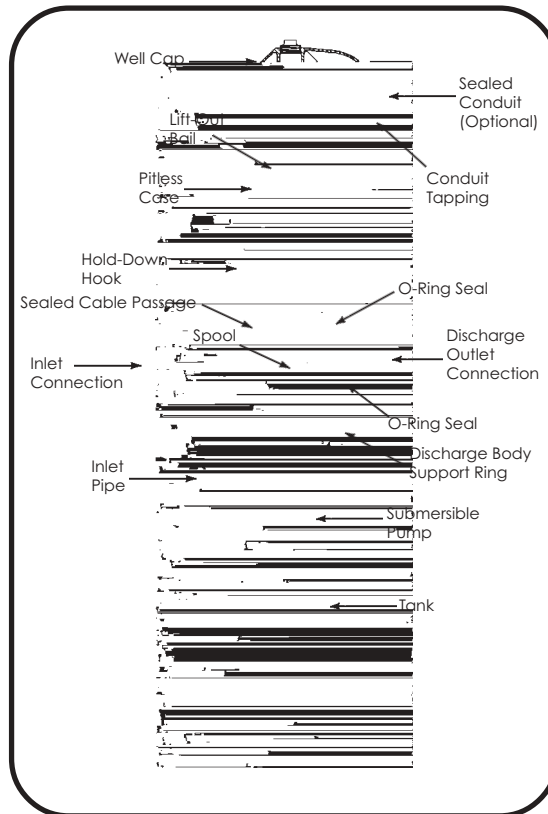
HOLD DOWN . . . Supplied with each unit. Hold-down pipe also serves as lift-out pipe for installation and allowing speedy service.

FROST PROOF . . . No heating is required. All water passages are below the frost line.

ALTERNATIVE DISCHARGE & INLET CONNECTIONS . . . Are available to meet your requirements.

**BOOSTER UNITS ARE AVAILABLE THROUGH
30" TANK SIZES UPON REQUEST**

**ALL PITLESS BOOSTER UNITS ARE AVAILABLE IN
STAINLESS STEEL UPON REQUEST**



- GENERAL INFORMATION:** • General Features • Engineering Specifications
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- 6" Pitless Booster • 8" Pitless Booster
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- 16" Pitless Booster • Home • Print This Page

SAMPLE ENGINEERING SPECIFICATIONS PITLESS BOOSTER STATION

Completely assembled Pitless Booster Station for submersible pump including well cap, lift out bail, hold down hooks, lift out pipe, spool with or without check valves, specified inlet and outlet connections and reservoir tank.

SUBMITTALS: All bidders shall submit as part of their bid:

1. The Manufacturer and Model of the pitless booster station to be installed.
2. Detailed specifications with drawings of the Booster system furnished by the manufacturer.
3. Detailed specifications on the submersible pump and submersible wire to be used in conjunction with the Booster Station.
4. System to be assembled and pressure tested without submersible pump prior to shipping.

SUBMERSIBLE PUMP: Manufacturer _____ Model No. _____.

The submersible pump will be designed for _____ GPM @ _____ TDH (includes _____ # incoming pressure), with a _____ HP _____ Volt _____ phase motor. _____ ft. of No. _____ submersible wire will be furnished with the system. The unit should be factory assembled, and tested, before shipping to the site.

SUBMERSIBLE BOOSTER STATION: The Submersible Booster Station shall be equal to Baker Manufacturing Company, Monitor Division, Model _____.

WELL CAP: The Watertight Cap shall be secured to the pitless casing with a compression gasket. The top of the cap can be removed without affecting the sealed conduit or wiring. Construction of the cap will be of heavy duty gray cast iron and painted with a green enamel finish. The well cap will be watertight to 46 feet of head. All wall thickness, including upper casing and reservoir to conform to steel well casing per the recommended standards for water works, Great Lakes Upper Mississippi River Board of State Public Health and Environmental Managers, Health Education Services, Albany, NY.

UPPER CASING: The Upper Casing is factory assembled to the discharge body, and the lift out and hold down mechanism are factory assembled to the spool. The upper casing must provide a water tight connection from the discharge body to the well cap. The inlet and discharge center line to be _____ feet below grade, and the booster station upper casing to extend _____ feet above grade.

SPOOL: The spool shall be _____ inches per ANSI B 1.20.1 with male drop pipe connection and shall be constructed of heavy duty gray cast iron, ductile iron, or steel with a lead free galvanized plating on the wetted surface of over .010 inches thick. The spool will have o-ring grooves machined into the spool, retaining the o-rings when setting or pulling the system. Spool to include cable seals to seal specified wires up to the specified inlet pressure.

DISCHARGE BODY: The Discharge Body shall be constructed of lead-free galvanized ductile iron or lead-free galvanized steel. O-ring seat to be designed to prevent crevice and galvanic corrosion, dissimilar metals should be avoided. Discharge outlet port to be _____ inches, _____ type. (flanged, threaded, welded or transition)

RESERVOIR TANK: The Reservoir Tank is to be constructed of heavy duty steel, coated with a rust protective coating of non-toxic black paint. The I.D. of the tank to be _____ inches. Suction inlet to be _____ inches, _____ type. (flanged, threaded, welded or transition) Tank length to accommodate _____ ft. long pump and motor.

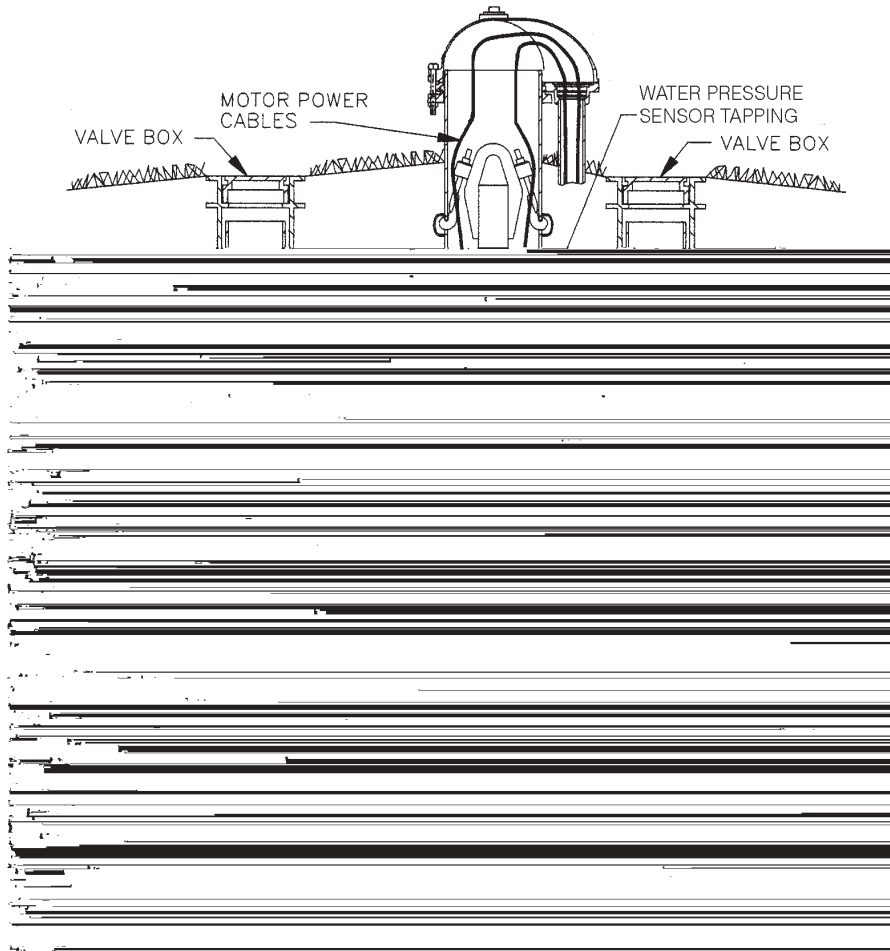
GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 6" Pitless Booster • 8" Pitless Booster
- 10" Pitless Booster • 12" Pitless Booster
- 16" Pitless Booster • Home • Print This Page

TYPICAL PITLESS BOOSTER INSTALLATION

PITLESS BOOSTER UNITS FOR SUBMERSIBLE PUMPS
5" through 30" TANK SIZES



- GENERAL INFORMATION: • General Features • Engineering Specifications
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 - O-Ring Selection Guide • Installation Instructions



- 5" Pitless Booster • 6" Pitless Booster
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- 12" Pitless Booster • 16" Pitless Booster
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5" PITLESS BOOSTER UNIT

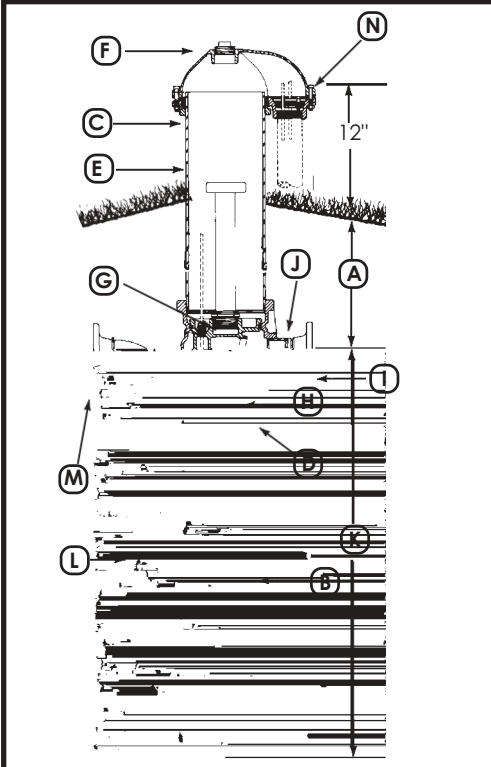
UNITS AVAILABLE BY QUOTATION ONLY
5" THROUGH 30" TANK SIZES

EXPLANATION OF PITLESS BOOSTER UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Pitless Booster Unit ordering number. A typical order number and the pitless booster unit it stands for are shown.

Typical Order Number **6PS56TBWX02F262FS**

- 6** A. This first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PS** These letters indicate the type of pump the Pitless Booster Station is designed for. The unit shown is a PS for Submersible Pumps.
- 5** B. This numeral indicates the reservoir tank size. 5 is for an 5" I.D. diameter tank.
- 6** C. This numeral indicates the upper pitless case size, 6 is for a 6" diameter case.
- T** D. This letter indicates the attachment to the reservoir tank is threaded.
- B** E. The presence of the letter "B" in the order number indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap.
- X** G. Indicates spool passages are closed.
- 0** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool that has no check valves.
- 2** H. Indicates the size of drop pipe in inches.
- F** I. Indicates the discharge connection is flanged.
- 2** J. Indicates the size of discharge pipe in inches.
- 6** K. Indicates the length of the reservoir tank in feet, and is measured from the center of the discharge line to the bottom of the unit.
- 2** L. Indicates the inlet pipe size in inches.
- F** M. Indicates the inlet pipe connection is flanged.
- S** N. Sealed conduit connection. (Optional)



DESCRIPTION - ORDERING NUMBERS

A	6	Bury Depth in Feet
	PS	Pitless Booster for Submersible Pump
B	5	Reservoir Tank Size - Ins.
C	6	Upper Case Size - Ins.
D	T	Threaded Joint
E	B	Black Upper Case
F	W	Watertight Cap
G	X	Motor Cable Passages - Sealed
	0	Check Valves
H	2	Size of Drop Pipe in Ins.(2" std)
I	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w/trans. sleeve
		Discharge Connection (Select One)
J	2	Size of Discharge Pipe - Ins.(2" std)
K	6	Length of Reservoir Tank - Feet
L	2	Inlet Pipe Size - Ins.(2" std)
M	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w. trans. sleeve
		Inlet Pipe Connection (Select One)
N	S	Elec. Cable Seal(S)
		O.D. 3 Wire _____ O.D. Ground Wire _____
		Special Provision (X)

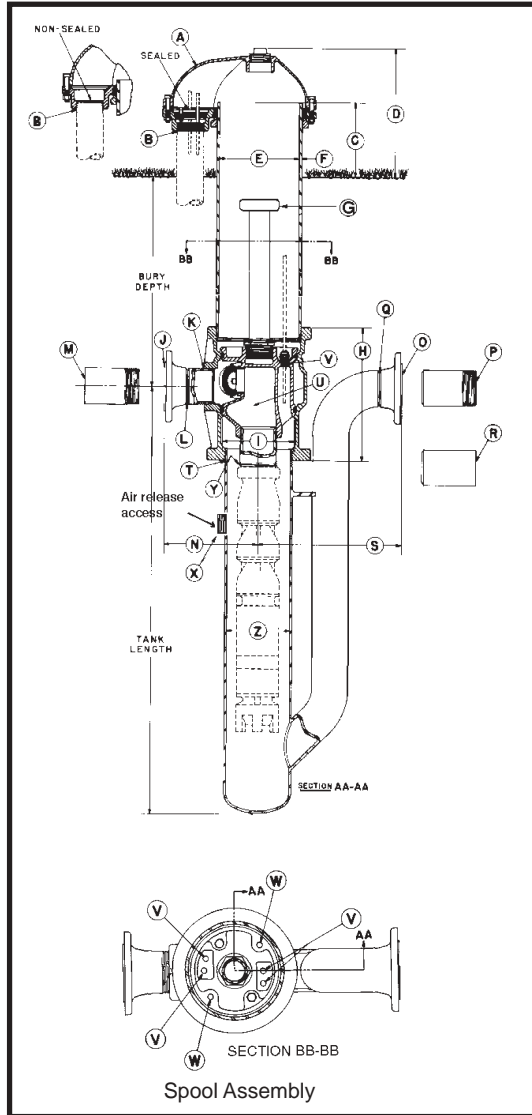
GENERAL INFORMATION: • General Features • Engineering Specifications

- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



- 5" Pitless Booster • 6" Pitless Booster
- 8" Pitless Booster • 10" Pitless Booster
- 12" Pitless Booster • 16" Pitless Booster
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5" PITLESS BOOSTER SPECIFICATIONS



- A** Seal Cap: The watertight cap bolts to a compression seal ring securing around the pitless casing.
- B** Conduit Tapping Size (Standard): 1-1/2" NPT
Watertight conduit seals for most common cable sizes are available.
- C** Distance from ground level to top of Pitless Case 12 in.
- D** Distance from ground level to top of Well Cap 14-3/4 in.
- E** Pitless Case Size 6 in.
- F** Pitless Case wall thickness280 in.
- G** "Hold Down-Lift Out Assembly": positions & clamps spool to Discharge Body to prevent rotation during pump start up
Hold-Down, Lift-Out Pipe size: 1-1/4"
Designed "Lift-Out" assembly load: 4700 lbs.
- H** Discharge Body Size: 8-3/4 in. O.D.x 8-15/16 in. long
- I** Pitless Unit minimum I.D.: 6 in.
- DISCHARGE CONNECTIONS AND SIZES**
- J** For Flanged (ASA Std. 150 lbs.): 2 in. I.D.
- K** For Threaded Nipple (NPT): 2 in. I.D.
- L** For Butt Weld (IPS): 2 in. I.D.
- M** For Transition Sleeve (IPS): 2 in. I.D.
- N** Dimension from center of Booster Unit to end of discharge outlet.
With **J** Flanged Discharge: 9-1/4 in.
With **K** Threaded Discharge: 4-7/16 in.
With **L** Welded Discharge: 6-3/4 in.
With **M** Transition Discharge: 15-3/4 in.
- INLET CONNECTIONS AND SIZES**
- O** For Flanged (ASA Std. 150 lbs.): 2 in. I.D.
- P** For Threaded Nipple (NPT): 2 in. I.D.
- Q** For Butt Weld (IPS): 2 in. I.D.
- R** For Transition Sleeve (IPS): 2 in. I.D.
- S** Dimension from center of Booster Unit to end of Inlet Connection.
With **O** Flanged Inlet: 10-21/32 in.
With **P** Threaded Inlet: 11-5/32 in.
With **Q** Welded Inlet: 8-5/32 in.
With **R** Transition Inlet: 20-5/32 in.
- T** Discharge Body to tank pipe connection: 5 in. NPT
- U** SPOOL ASSEMBLY
Spool design load: 4200 lbs.
- V** Motor Cable tappings through spool (w/cable connectors): (4) 3/8 in. NPT
Maximum allowable (4) 3/8 in. NPT
- W** Tapping into Pressure Zone: 3/8 in. NPT
(Furnished with square head plug)
- X** Tapping into Suction Zone 1"
(Furnished with square head plug)
- Y** Spool to drop pipe nipple connection: 2 in. NPT
- Z** Tank Pipe Size: 5 in. I.D.

COMPONENT MATERIALS

- Cap & Conduit Box** - Cast iron, Green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism** -
- Hold-Down Pipe** - Steel, corrosion resistant coating.
- Pitless Case** - Steel, black corrosion resistant coating.
- Spool** - Cast iron, lead free galvanized.
- Discharge Body** - Cast Iron, lead free galvanized.
- Conduit Seal & O-Rings** - Neoprene.
- Tank & Inlet Pipes** - Steel, black corrosion resistant coating.
- NOTE:** Inlet pipe & tank pipe tested to 200 P.S.I., spool discharge pressure tested to 300 P.S.I.

Specifications subject to change without notice

- GENERAL INFORMATION:** • General Features • Engineering Specifications
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions

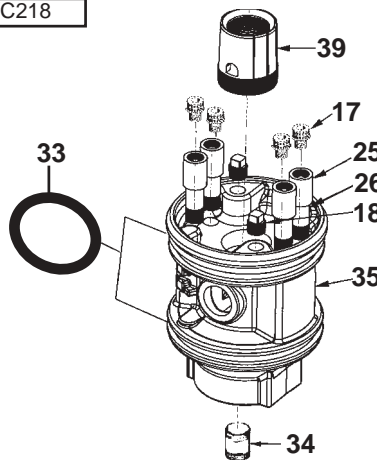
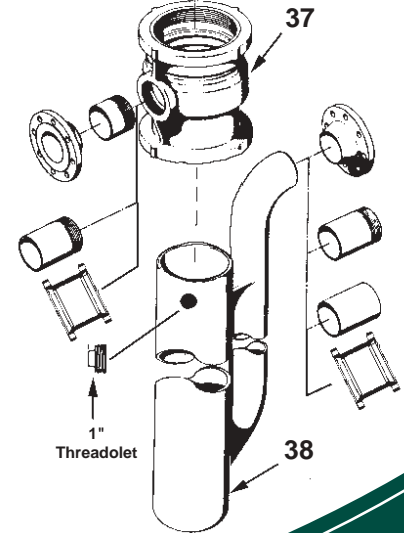
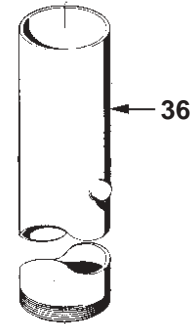
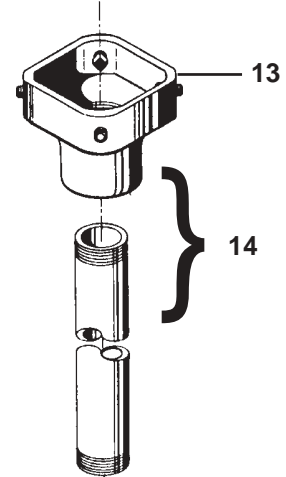
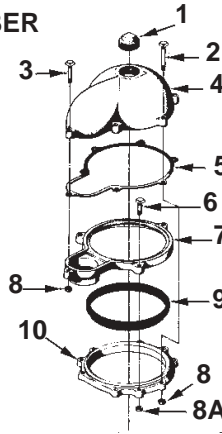


- 5" Pitless Booster • 6" Pitless Booster
- 8" Pitless Booster • 10" Pitless Booster
- 12" Pitless Booster • 16" Pitless Booster
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5" Pitless Booster Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER

Key No.	Qty	Description	Ord. No.
1	1	Pipe Plug, 1 1/4" NPT	HD71G
2	5	Machine Bolt, 3/8-16NCx3 1/2" L	PS94
3	1	Machine Bolt, 3/8-16NCx2 1/2" L.	PS93
4	1	Seal Cap	PS136
5	1	Gasket	PS196
6	2	Machine bolt, 5/16-18NCx2" L.	PS132
7	1	Retainer Ring	PS376
8	6	Hex Nut, 3/8-16NC	UB17
8A	2	Hex Nut, 5/16-18NC	PC434
9	1	Seal Ring	PS166
10	1	Depression Ring	PS186
13	1	Spider only	10UE
14	1	Lift-Out Pipe & Hold Down Assy Note: Must be ordered by description & unit Serial Number	-----
17	4	Cable Connectors Note: Must be ordered by description & unit Serial Number	-----
18	2	Pipe Plug, 3/8-18 NPT	UN122
25	4	Coupling 3/8-18NPT	PS182
26	4	Nipple 3/8x2-1/2 NPT	N3
33	2	Static Seal Ring	NC15
34	1	Pipe Nipple, 2" NPT x 4" L.	PS265
35	1	Spool	YC321
---	1	Spool Assy. less check valves Includes key nos 18, 25, 26, 33, 35 & 39	6S4PSF
36	1	Casing	-----
37	1	Discharge Body, FIP discharge outlet standard. Note: Must be ordered by description & unit Serial Number.	UE44
38	1	Tank & Inlet Pipe Assy. Note: Must be ordered by description & unit Serial Number	-----
39	1	Spool Plug	YC218



- GENERAL INFORMATION:**
- General Features • Engineering Specifications
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 - O-Ring Selection Guide • Installation Instructions



- 5" Pitless Booster • 6" Pitless Booster
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6" PITLESS BOOSTER UNIT

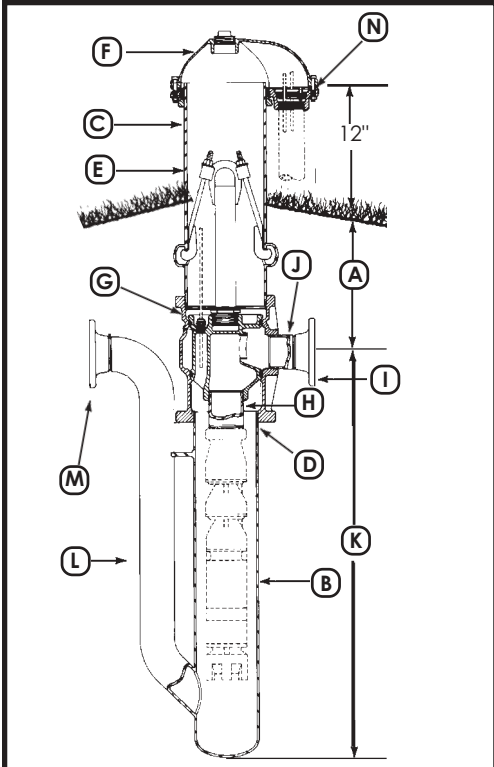
UNITS AVAILABLE BY QUOTATION ONLY
5" THROUGH 30" TANK SIZES

EXPLANATION OF PITLESS BOOSTER UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Pitless Booster Unit ordering number. A typical order number and the pitless booster unit it stands for are shown.

Typical Order Number 6PS67TBWX23F363FS

- 6** A. This first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PS** These letters indicate the type of pump the Pitless Booster Station is designed for. The unit shown is a PS for Submersible Pumps.
- 6** B. This numeral indicates the reservoir tank size. 6 is for an 6" I.D. diameter tank.
- 7** C. This numeral indicates the upper pitless case size, 7 is for a 7" diameter case.
- T** D. This letter indicates the attachment to the reservoir tank is threaded.
- B** E. The presence of the letter "B" in the order number indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap.
- X** G. Indicates spool passages are closed.
- 2** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool having two silent check valves. Available with 6 and 8 inch tanks only.
- 3** H. Indicates the size of drop pipe in inches.
- F** I. Indicates the discharge connection is flanged.
- 3** J. Indicates the size of discharge pipe in inches.
- 6** K. Indicates the length of the reservoir tank in feet, and is measured from the center of the discharge line to the bottom of the unit.
- 3** L. Indicates the inlet pipe size in inches.
- F** M. Indicates the inlet pipe connection is flanged.
- S** N. Sealed conduit connection. (Optional)



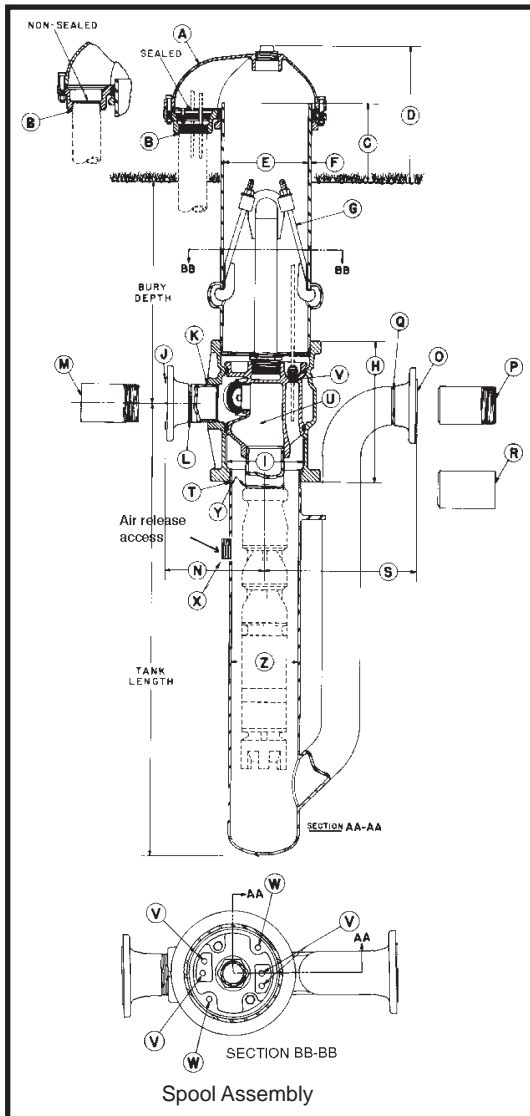
DESCRIPTION - ORDERING NUMBERS		
A	6	Bury Depth in Feet
	PS	Pitless Booster for Submersible Pump
B	6	Reservoir Tank Size - Ins.
C	7	Upper Case Size - Ins.
D	T	Threaded Joint
E	B	Black Upper Case
F	W	Watertight Cap
G	X	Motor Cable Passages - Sealed
	2	Check Valves: 0 or 2
H	3	Size of Drop Pipe in Ins.(3" std)
I	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w/trans. sleeve
		Discharge Connection (Select One)
J	3	Size of Discharge Pipe - Ins.(3" std)
K	6	Length of Reservoir Tank - Feet
L	3	Inlet Pipe Size - Ins.(3" std)
M	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w. trans. sleeve
		Inlet Pipe Connection (Select One)
N	S	Elec. Cable Seal(S)
		O.D. 3 Wire _____ O.D. Ground Wire _____
		Special Provision (X)

- GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 5" Pitless Booster • 6" Pitless Booster
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6" PITLESS BOOSTER SPECIFICATIONS



- A** Seal Cap: The watertight cap bolts to a compression seal ring securing around the pitless casing.
- B** Conduit Tapping Size (Standard): 1-1/2" NPT
Watertight conduit seals for most common cable sizes are available.
- C** Distance from ground level to top of Pitless Case 12 in.
- D** Distance from ground level to top of Well Cap 14-3/4 in.
- E** Pitless Case Size 7 in.
- F** Pitless Case wall thickness300 in.
- G** "Hold Down-Lift Out Assembly": positions & clamps spool to Discharge Body to prevent rotation during pump start up
Hold-Down, Lift-Out Pipe size: 1-1/4"
Designed "Lift-Out" assembly load: 8400 lbs.
- H** Discharge Body Size: 9-11/16 in. O.D.x 11-1/4 in. long
- I** Pitless Unit minimum I.D.: 6-3/8 in.
- DISCHARGE CONNECTIONS AND SIZES**
- J** For Flanged (ASA Std. 150 lbs.): 3 in. I.D.
- K** For Threaded Nipple (NPT): 3 in. I.D.
- L** For Butt Weld (IPS): 3 in. I.D.
- M** For Transition Sleeve (IPS): 3 in. I.D.
- N** Dimension from center of Booster Unit to end of discharge outlet.
With **J** Flanged Discharge: 10-5/8 in.
With **K** Threaded Discharge: 5-25/32 in.
With **L** Welded Discharge: 7-7/8 in.
With **M** Transition Discharge: 12-1/2 in.
- INLET CONNECTIONS AND SIZES**
- O** For Flanged (ASA Std. 150 lbs.): 3 in. I.D.
- P** For Threaded Nipple (NPT): 3 in. I.D.
- Q** For Butt Weld (IPS): 3 in. I.D.
- R** For Transition Sleeve (IPS): 3 in. I.D.
- S** Dimension from center of Booster Unit to end of Inlet Connection.
With **O** Flanged Inlet: 15-5/8 in.
With **P** Threaded Inlet: 15-7/8 in.
With **Q** Welded Inlet: 12-7/8 in.
With **R** Transition Inlet: 18-7/8 in.
- T** Discharge Body to tank pipe connection: 6 in. NPT
- U** SPOOL ASSEMBLY
Spool design load: 64,000 lbs.
- WITHOUT CHECK VALVES -**
Area of water passages: 10 sq. in.
Percent area of water passages to area of Drop Pipe: 135%
- WITH TWO CHECK VALVES -**
Area of valve passages: 6.28 sq. in.
Percent area of valve passages to area of Drop Pipe: 89%
- V** Motor Cable tappings through spool (w/cable connectors): (4) 3/8 in. NPT
Maximum allowable (4) 3/8 in. NPT
- W** Tapping into Pressure Zone: 3/8 in. NPT
(Furnished with square head plug)
- X** Tapping into Suction Zone 1"
(Furnished with square head plug)
- Y** Spool to drop pipe nipple connection: 3 in. NPT
- Z** Tank Pipe Size: 6 in. I.D.

COMPONENT MATERIALS

- Cap & Conduit Box** - Cast iron, Green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism** - lead free galvanized
- Hold-Down Pipe** - Steel, corrosion resistant coating.
- Pitless Case** - Steel, black corrosion resistant coating.
- Spool** - Cast iron, lead free galvanized.
- Discharge Body** - Ductile or Cast Iron, lead free galvanized.
- Check Valve Body & Arms** - Brass.
- Check Valve Seat** - Brass.
- Check Valve Spring** - Monel.
- Compression Seal Ring & Check Valve Facing** - Neoprene.
- Conduit Seal & O-Rings** - Neoprene.
- Tank & Inlet Pipes** - Steel, black corrosion resistant coating.

NOTE: Inlet pipe & tank pipe tested to 200 P.S.I., spool discharge pressure tested to 300 P.S.I.

Specifications subject to change without notice

- GENERAL INFORMATION:** • General Features • Engineering Specifications
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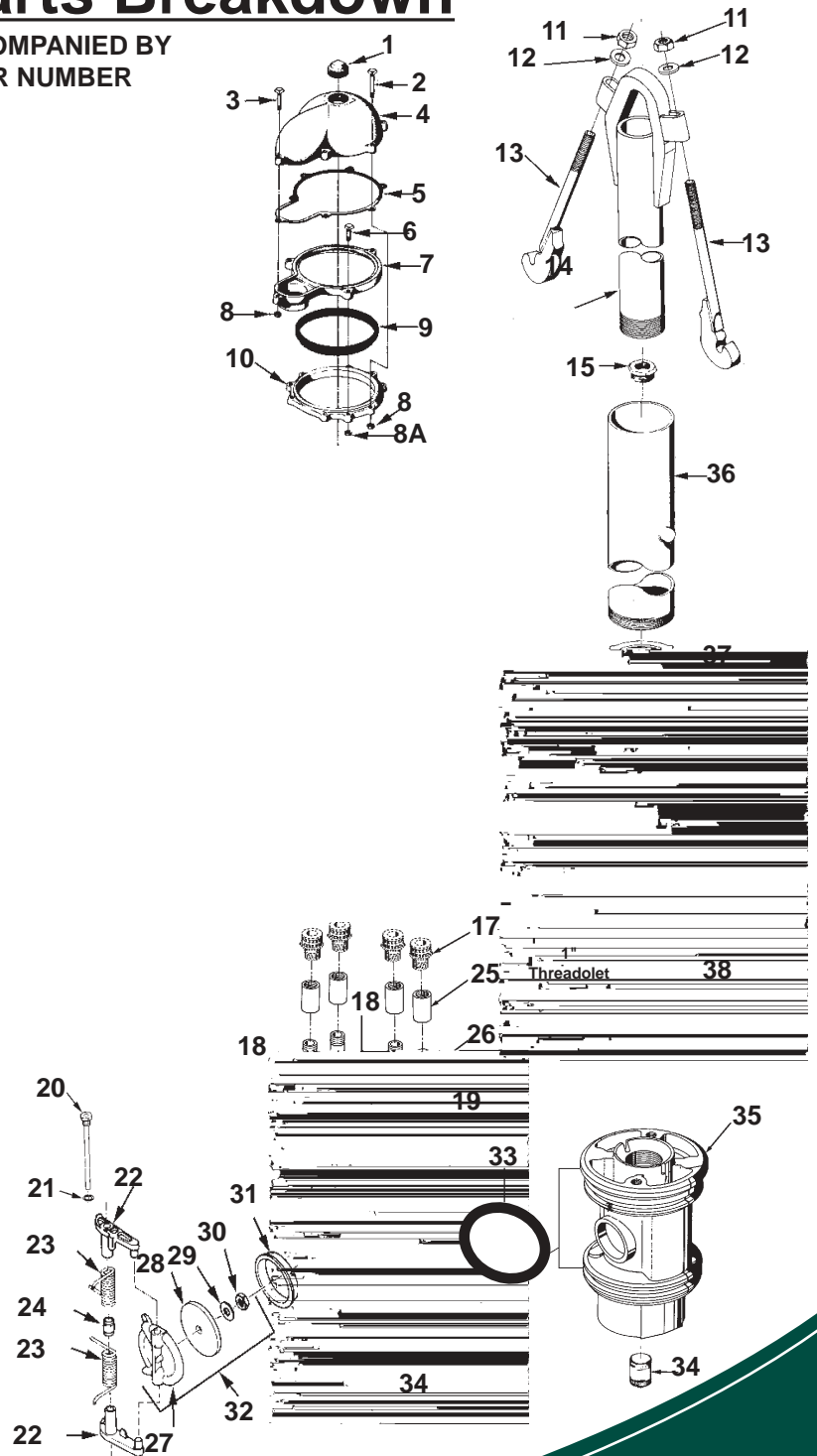


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6" Pitless Booster Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER

Key No.	Qty	Description	Ord. No.
1	1	Pipe Plug, 1 1/2" NPT	UG54
2	6	Machine Bolt, 3/8-16NCx3 1/2" L	PS94
3	1	Machine Bolt, 3/8-16NCx2 1/2" L.	PS93
4	1	Seal Cap & Plug Assy.	PS217
5	1	Gasket	PS197
6	2	Machine bolt, 5/16-18NCx2" L.	PS132
7	1	Retainer Ring	PS377
8	7	Hex Nut, 3/8-16NC	UB17
8A	2	Hex Nut, 5/16-18NC	PC434
9	1	Seal Ring	PS167
10	1	Depression Ring	PS187
11	2	Hex Nut, 5/8-11NC	PC286
12	2	Washer	PC417
13	2	Hold-Down Hook	UJ7B
14	1	Lift-Out Pipe & Bail Assembly Note: Must be ordered by description & unit Serial Number	-----
15	1	Reducer Bushing, 2x1 1/4	PC330
17	4	Cable Connectors Note: Must be ordered by description & unit Serial Number	-----
18	2	Pipe Plug, 3/8-18 NPT	UN122
19	1	Spool (7E0PS3F)	UC271
--	1	Spool Assy. w/check valves, inc. Key Nos. 18 -33 except 25, 26,35 (7E2PS3F)	UC393
20	2	Hinge Pin	UC299
21	2	Hinge Pin Gasket	UC127A
22	4	Rocker Arm	UC301
23	2	Valve Spring	UC302
24	2	Valve Spring Center Support	UC300
25	4	Coupling 3/8-18NPT	PS182
26	4	Nipple 3/8-18 NPT	PS181
27	2	Valve Body	UC292
28	2	Rubber Check Valve Facing	UC295
29	2	Brass Washer	UG217
30	2	Brass Nut, 3/8-13NC	PS159
31	2	Check Valve Seat	UC293
32	2	Check Valve Assy. includes Key Nos. 27 thru 30	UC296
33	2	Static Seal Ring	UC15
34	1	Pipe Nipple, 3" NPT x 6" L.	UK351
35	1	Spool	UC287
---	1	Spool Assy. less check valves Includes key nos 18, 25, 26, 33 & 35	UC392
36	1	Casing	-----
37	1	Discharge Body, FIP discharge outlet standard. Note: Must be ordered by description & unit Serial Number.	UC291
38	1	Tank & Inlet Pipe Assy. Note: Must be ordered by description & unit Serial Number	-----



- GENERAL INFORMATION:**
- General Features • Engineering Specifications
 - Shipping Weights • Spools & Spool Cable Seals
 - O-Ring Selection Guide • Installation Instructions



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8" PITLESS BOOSTER UNIT

UNITS AVAILABLE BY QUOTATION ONLY
5" THROUGH 30" TANK SIZES

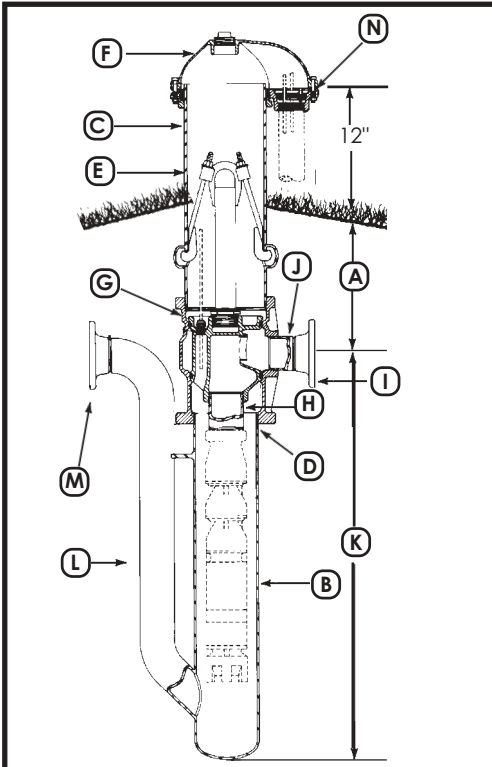
EXPLANATION OF PITLESS BOOSTER UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Pitless Booster Unit ordering number. A typical order number and the pitless booster unit it stands for are shown.

Typical Order Number

6PS810WBWX24F464FS

- 6** A. This first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PS** These letters indicate the type of pump the Pitless Booster Station is designed for. The unit shown is a PS for Submersible Pumps.
- 8** B. This numeral indicates the reservoir tank size. 8 is for an 8" I.D. diameter tank.
- 10** C. This numeral indicates the upper pitless case size, 10 is for a 10" diameter case.
- W** D. This letter indicates the attachment to the reservoir tank is a welded joint on 8" - 30".
- B** E. The presence of the letter "B" in the order number indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap.
- X** G. Indicates spool passages are closed.
- 2** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool having two silent check valves. Available with 6 and 8 inch tanks only.
- 4** H. Indicates the size of drop pipe in inches.
- F** I. Indicates the discharge connection is flanged.
- 4** J. Indicates the size of discharge pipe in inches.
- 6** K. Indicates the length of the reservoir tank in feet, and is measured from the center of the discharge line to the bottom of the unit.
- 4** L. Indicates the inlet pipe size in inches.
- F** M. Indicates the inlet pipe connection is flanged.
- S** N. Sealed conduit connection. (Optional)



DESCRIPTION - ORDERING NUMBERS

A	6	Bury Depth in Feet	
	PS	Pitless Booster for Submersible Pump	
B	8	Reservoir Tank Size - Ins.	
C	10	Upper Case Size - Ins.	
D	W (W) Welded		
E	B	Black Upper Case	
F	W	Watertight Cap	
G	X	Motor Cable Passages - Sealed	
	2	Check Valves: <u>0</u> or <u>2</u>	
H	4	Size of Drop Pipe in Ins.(4" std)	
I	F	Welded	Discharge Connection (Select One)
		Flange, ASA 150#	
		Threaded NPT	
		Mech. Joint w/trans. sleeve	
J	4	Size of Discharge Pipe - Ins.(4" std)	
K	6	Length of Reservoir Tank - Feet	
L	4	Inlet Pipe Size - Ins.(4" std)	
M	F	Welded	Inlet Pipe Connection (Select One)
		Flange, ASA 150#	
		Threaded NPT	
		Mech. Joint w. trans. sleeve	
N	S	Elec. Cable Seal(S)	
		O.D. 3 Wire _____ O.D. Ground Wire _____	
		Special Provision (X)	

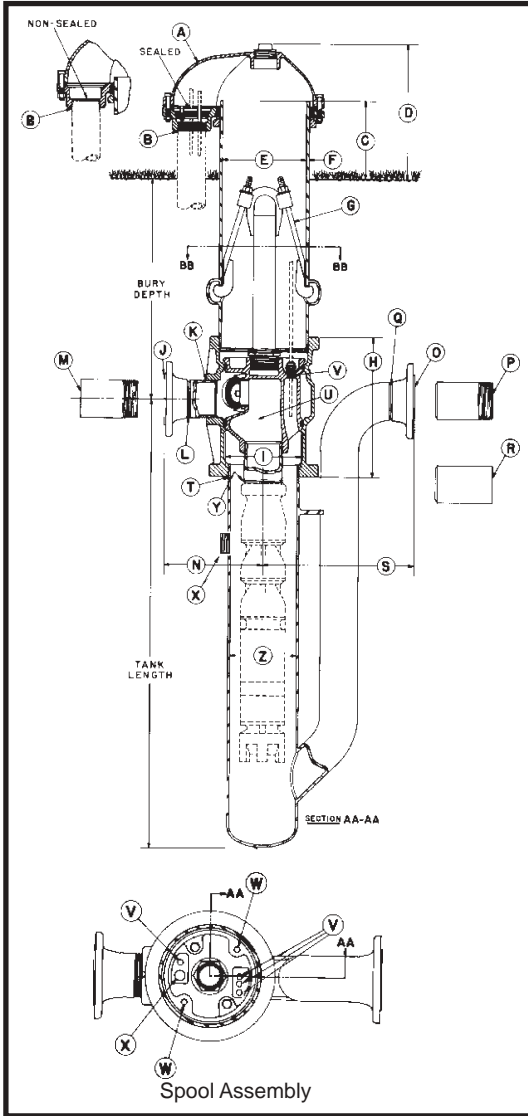
GENERAL INFORMATION: • General Features • Engineering Specifications

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8" PITLESS BOOSTER SPECIFICATIONS



- A** Seal Cap: The watertight cap bolts to a compression seal ring securing around the pitless casing.
- B** Conduit Tapping Size (Standard): 3" NPT
Watertight conduit seals for most common cable sizes are available.
- C** Distance from ground level to top of Pitless Case 12 in.
- D** Distance from ground level to top of Well Cap 18-7/8 in.
- E** Pitless Case Size 10 in.
- F** Pitless Case wall thickness365 in.
- G** "Hold-Down-Lift Out Assembly": positions & clamps spool to Discharge Body to prevent rotation during pump start up
Hold-Down, Lift-Out Pipe size: 2"
Designed "Lift-Out" assembly load: 15,000 lbs.
- H** Discharge Body Size: 14-1/8 in. O.D.x 13-1/2 in. long
- I** Pitless Unit minimum I.D.: 9-1/8 in.
- DISCHARGE CONNECTIONS AND SIZES**
- J** For Flanged (ASA Std. 150 lbs.): 4 in. I.D.
- K** For Threaded Nipple (NPT): 4 in. I.D.
- L** For Butt Weld (IPS): 4 in. I.D.
- M** For Transition Sleeve (IPS): 4 in. I.D.
- N** Dimension from center of Booster Unit to end of discharge outlet.
With **J** Flanged Discharge: 12 in.
With **K** Threaded Discharge: 6-15/16 in.
With **L** Welded Discharge: 9 in.
With **M** Transition Discharge: 13-31/32 in.
- INLET CONNECTIONS AND SIZES**
- O** For Flanged (ASA Std. 150 lbs.): 4 in. I.D.
- P** For Threaded Nipple (NPT): 4 in. I.D.
- Q** For Butt Weld (IPS): 4 in. I.D.
- R** For Transition Sleeve (IPS): 4 in. I.D.
- S** Dimension from center of Booster Unit to end of Inlet Connection.
With **O** Flanged Inlet: 18-3/16 in.
With **P** Threaded Inlet: 18-3/16 in.
With **Q** Welded Inlet: 15-3/16 in.
With **R** Transition Inlet: 21-3/16 in.
- T** Discharge Body to tank pipe connection: Welded
- U** SPOOL ASSEMBLY
Spool design load: 88,000 lbs.
- WITHOUT CHECK VALVES -**
Area of water passages: 15.8 sq. in.
Percent area of water passages to area of Drop Pipe: 124%
- WITH TWO CHECK VALVES -**
Area of valve passages: 12.6 sq. in.
Percent area of valve passages to area of Drop Pipe: 100%
- V** Motor Cable tappings through spool (w/cable connectors): (4) 1/2 in. NPT
Maximum allowable (6) 1/2 in. NPT
- W** Tapping into Pressure Zone: 3/8 in. NPT
(Furnished with square head plug)
- X** Tapping into Suction Zone 1 in. NPT
(Furnished with square head plug)
- Y** Spool to drop pipe nipple connection: 4 in. NPT
- Z** Tank Pipe Size: 8 in. I.D.

COMPONENT MATERIALS

- Cap & Conduit Box** - Cast iron, Green enamel finish.
- Combination Hold-Down & Lift-Out Mechanism** - lead free galvanized
- Hold-Down Pipe** - Steel, corrosion resistant coating.
- Pitless Case** - Steel, black corrosion resistant coating.
- Spool** - Cast iron, lead free galvanized.
- Discharge Body** - Ductile or Cast Iron, lead free galvanized.
- Check Valve Body & Arms** - Brass.
- Check Valve Seat** - Brass.
- Check Valve Spring** - Monel.
- Compression Seal Ring & Check Valve Facing** - Neoprene.
- Conduit Seal & O-Rings** - Neoprene.
- Tank & Inlet Pipes** - Steel, black corrosion resistant coating.
- NOTE:** Inlet pipe & tank pipe tested to 200 P.S.I., spool discharge pressure tested to 300 P.S.I.

Specifications subject to change without notice

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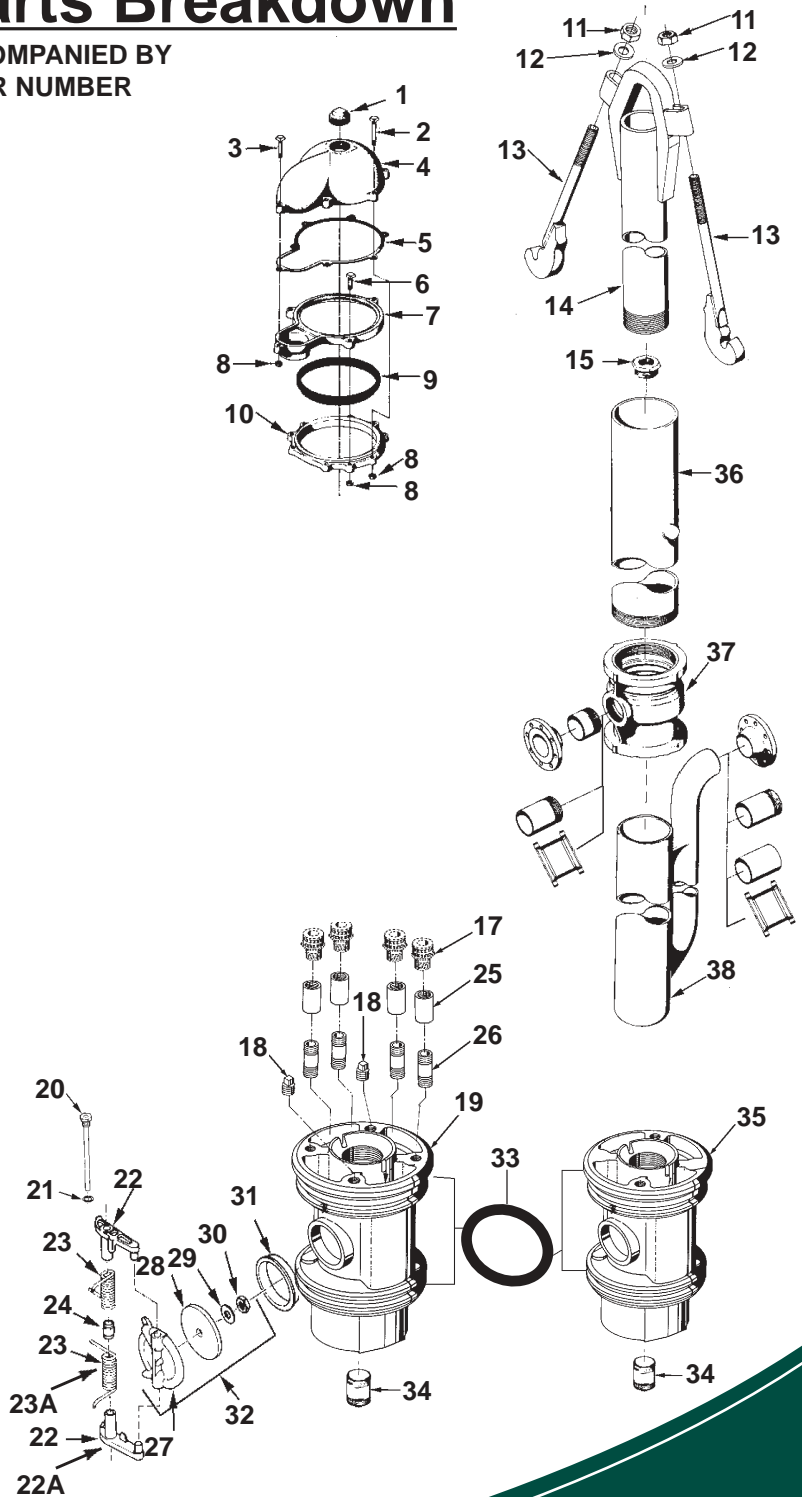


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8" Pitless Booster Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER

Key No.	Qty	Description	Ord. No.
1	1	Pipe Plug, 2 1/2" NPT	UK50
2	6	Machine Bolt, 1/2-13NCx4 1/2" L.	PS220
3	1	Machine Bolt, 1/2-13NCx3 1/2" L.	UE201
4	1	Seal Cap & Plug Assy.	PS350
5	1	Gasket	PS342
6	3	Machine bolt, 1/2-13NCx 2 1/2" L.	PS111
7	1	Retainer Ring	PS341
8	10	Hex Nut, 1/2-13NC	PC433
9	1	Seal Ring	PS170
10	1	Depression Ring	PS189
11	2	Hex Nut, 5/8-11NC	PC286
12	2	Washer	PC417
13	2	Hold-Down Hook	UG7
14	1	Lift-Out Pipe & Bail Assembly Note: Must be ordered by description & unit Serial Number	-----
16	1	Pipe Plug, 1" NPT-Galv.	UN120
17	4	Cable Connectors Note: Must be ordered by description & unit Serial Number	-----
18	2	Pipe Plug, 3/8-18 NPT	UN122
19	1	Spool (10E0PSF)	UG204
--	1	Spool Assy. w/check valves, includes Key Nos. 19 thru 31 (10E2PSF)	UG208
20	2	Hinge Pin	UG29
21	2	Hinge Pin Gasket	SW84
22	2	Rocker Arm-Right Hand	UG147
22A	2	Rocker Arm-Left Hand	UG148
23	2	Valve Spring-Right Hand	UG145
23A	2	Valve Spring-Left Hand	UG146
24	2	Valve Spring Center Support	UG150
25	2	Coupling 1/2-18NPT	PS182
26	2	Nipple 1/2-18NPT	PS181
27	2	Valve Body	UG149
28	2	Rubber Check Valve Facing	UG23
29	2	Brass Washer	UG68
30	2	Brass Nut, 1/2-13NC	TP34
31	2	Check Valve Seat	UG22
32	2	Check Valve Assy. includes Key Nos. 27 thru 30	UG323
33	2	Static Seal Ring	UG15
34	1	Pipe Nipple, 4" NPTx6" L.	UK251
35	1	Spool	UG244
---	1	Spool Assy. less check valves Includes key nos 16-18, 25-26 & 35	UG253
36	1	Casing	-----
37	1	Discharge Body, FIP discharge outlet standard. Note: Must be ordered by description & unit Serial Number.	UG3
38	1	Tank & Inlet Pipe Assy. Note: Must be ordered by description & unit Serial Number	-----



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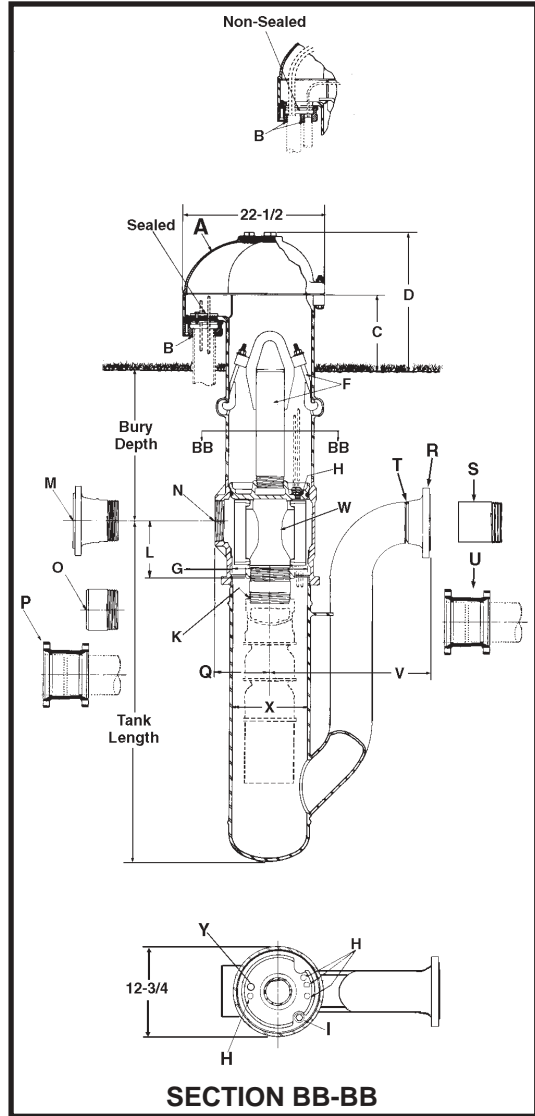


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10" PITLESS BOOSTER SPECIFICATIONS



SECTION BB-BB

COMPONENT MATERIALS

Tank & Inlet Pipes - Steel, black corrosion resistant coating.
Cap - Cast iron, green enamel finish.

Conduit Box - Steel, black corrosion resistant coating.

Conduit Connector - Cast iron, green enamel finish.

Combination Hold-Down & Lift-Out Assembly - Galvanized

Hold-Down Pipe - Steel, black corrosion resistant coating.

Pitless Case - Steel, black corrosion resistant coating.

Discharge Body - Ductile iron, lead free galvanized.

Spool - Steel, lead free galvanized.

NOTE: Inlet pipe & tank pipe tested to 200 P.S.I., spool discharge pressure tested to 300 P.S.I.

NOTE: Any combination between Drop Pipe and Discharge Outlet size is possible, if required.

- A** Seal Cap: The watertight cap bolts on top of the upper casing forming a watertight connection with a gasket.
- B** Conduit Tapping Sizes: 3" NPT with sealed conduit connection. Watertight conduit seals for most common cable sizes are available..
- C** Distance from ground level to top of Pitless Case: 12".
- D** Distance from ground level to top of Seal Cap: 23".
- E** Pitless Case size: 12" I.D. 12-3/4" O.D.
- F** "Hold Down-Lift Out Assembly: Positions and clamps spool to discharge body to prevent rotation during pump start up. Hold Down-Lift-Out pipe size 4" IPS. Designed Lift-Out assembly load: 60,000 lbs. (2) Hold-Down hooks supplied.

G Pitless Unit minimum I.D.: 10"

H Motor cable tappings through spool: (4) 1/2" NPT (with cable connectors)

I Tapping into Pressure Zone: 1" 3/8" NPT. (Furnished with square head plug)

K Spool to Drop Pipe connection sizes: **4" NPT** **5" NPT** **6" NPT**

L Dimension from center of discharge outlet to bottom of spool: 10-11/16" 10-9/16" 9-5/8"

DISCHARGE CONNECTIONS & SIZES

M For Flanged (ASA Std. 150 lbs.): 4" I.D. 5" I.D. 6" I.D.

N For Threaded Nipple (NPT): 4" I.D. 5" I.D. 6" I.D.

O For Butt Weld (IPS): 4" I.D. 5" I.D. 6" I.D.

P For Transition Sleeve (IPS): 4" I.D. N.A. 6" I.D.

Q Dimension from center of Booster Unit to end of discharge outlet.
 With **M** Flanged Discharge: 15-1/4" 15-1/2" 15-9/16"
 With **N** Threaded Discharge: 10-9/32" 10-5/32" 9-1/8"
 With **O** Welded Discharge 12-7/32" 12-1/32" 12-1/16"
 With **P** Transition Discharge 17-7/32" N.A. 16-1/16"

INLET CONNECTIONS & SIZES

R For Flanged (ASA Std. 150 lbs.): 4" I.D. 5" I.D. 6" I.D.

S For Threaded Nipple (NPT): 4" I.D. 5" I.D. 6" I.D.

T For Butt Weld (IPS): 4" I.D. 5" I.D. 6" I.D.

U For Transition Sleeve (IPS): 4" I.D. N.A. 6" I.D.

V Dimension from center of Booster Unit to end of Inlet Connection.
 With **R** Flanged Inlet: 30 3/16" 30-11/16" 25-3/16"
 With **S** Threaded Inlet: 30-3/16" 30-3/16" 25-11/16"
 With **T** Welded Inlet: 27-3/16" 27-3/16" 21-11/16"
 With **U** Transition Inlet 33-3/16" N.A. 27-11/16"

W SPOOL ASSEMBLY

Area of water passages 25.12 Sq. In. 25.12 Sq. In. 25.12 Sq. In.

Percent area of water passages to area of drop pipe 197% 125% 87%

X Tank Pipe size: 10" I.D. 10" I.D. 10" I.D.

Y Tapping into Suction Zone 1" NPT 1" NPT 1" NPT

Specifications subject to change without notice

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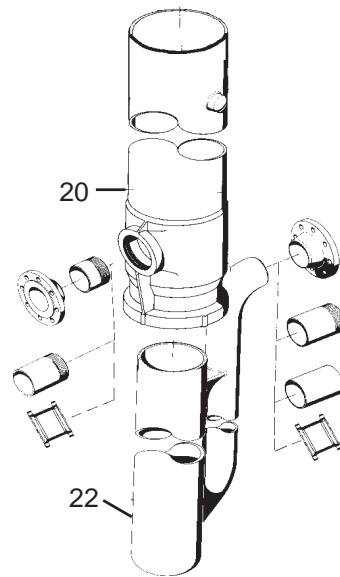
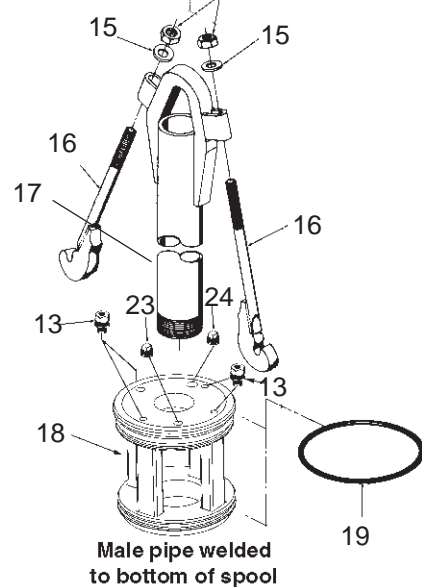
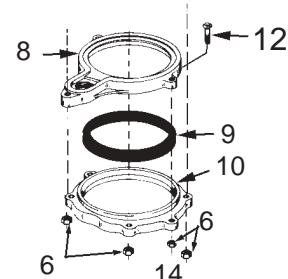
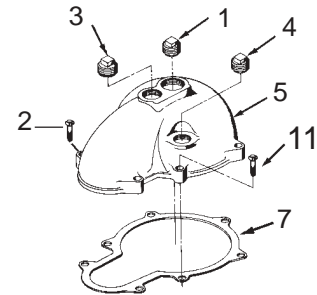


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10" Pitless Booster Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER

Key No.	Quantity	Description	Ord. No.
1	1	Pipe Plug, 2 1/2"	UK50
2	2	Lock Bolt, 5/8-11NC x 4 3/4" L.	UK4
3	1	Pipe plug, 2" NPT	UJ50
4	1	Pipe plug, 1 1/2" NPT	UG54
5	1	Seal Cap (UK850)	UK12
6	10	Hex nut, 5/8-11NC	PC286
7	1	Gasket	UK72
8	1	Retainer Ring	UJ174
9	1	Seal Ring	UJ176
10	1	Depression Ring	UJ175
11	5	Hex head cap screw, 5/8-11NC x 6" L	KP145
12	3	Hex head cap screw, 5/8-11NC x 3 1/2" L.	UJ177
13	4	Cable Connectors (Note: Must be ordered by description & Unit Serial No.)	-----
14	2	Hex nut, 5/8-11NC	PC286
15	2	Washer	PC417
16	2	Hold down Hook	UJ7B
17	1	Lift-out pipe & bail assy. (Order by bury depth)	-----
18	1	Spool - without check valves (12E0PSF)	UJ241
19	2	Static seal ring	UJ15
20	1	Discharge body & upper case assy. (Order by bury depth)	-----
22	1	Tank & Inlet pipe Assy. (Note: Must be ordered by description & Serial No.)	-----
23	1	Pipe plug, 3/8-18 NPT	UN12
24	1	Pipe plug, 1" NPT	UN120

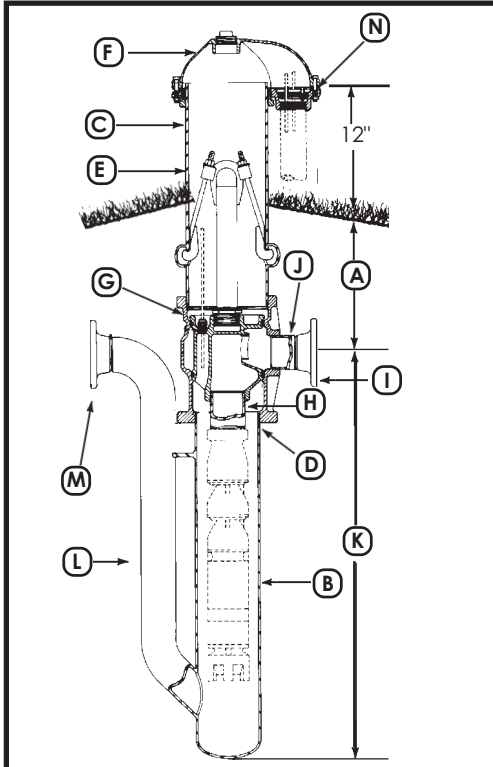


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12" PITLESS BOOSTER UNIT



UNITS AVAILABLE BY QUOTATION ONLY
5" THROUGH 30" TANK SIZES

EXPLANATION OF PITLESS BOOSTER UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Pitless Booster Unit ordering number. A typical order number and the pitless booster unit it stands for are shown.

Typical Order Number

6PS1214WBWX06F666FES

- 6** A. This first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PS** These letters indicate the type of pump the Pitless Booster Station is designed for. The unit shown is a PS for Submersible Pumps.
- 12** B. This numeral indicates the reservoir tank size. 12 is for an 12" I.D. diameter tank.
- 14** C. This numeral indicates the upper pitless case size, 14 is for a 14" diameter case.
- W** D. This letter indicates the attachment to the reservoir tank is a welded joint on 8" - 30".
- B** E. The presence of the letter "B" in the order number indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap.
- X** G. Indicates spool passages are closed.
- 0** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool that has no check valves.
- 6** H. Indicates the size of drop pipe in inches.
- F** I. Indicates the discharge connection is flanged.
- 6** J. Indicates the size of discharge pipe in inches.
- 6** K. Indicates the length of the reservoir tank in feet, and is measured from the center of the discharge line to the bottom of the unit.
- 6** L. Indicates the inlet pipe size in inches.
- F** M. Indicates the inlet pipe connection is flanged.
- E** Indicates this is a standard unit.
- S** N. Sealed conduit connection. (Optional)

DESCRIPTION - ORDERING NUMBERS

A	6	Bury Depth in Feet
PS		Pitless Booster for Submersible Pump
B	12	Reservoir Tank Size - Ins.
C	14	Upper Case Size - Ins.
D	W (T)	Threaded Joint (W) Welded
E	B	Black Upper Case
F	W	Watertight Cap
G	X	Motor Cable Passages - Sealed
	0	Check Valves: 0
H	6	Size of Drop Pipe in Ins.(4",5" or 6")
I	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w/trans. sleeve
Discharge Connection (Select One)		
J	6	Size of Discharge Pipe - Ins.
K	6	Length of Reservoir Tank - Feet
L	6	Inlet Pipe Size - Ins.
M	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w. trans. sleeve
Inlet Pipe Connection (Select One)		
	E	Standard Unit
N	S	Elec. Cable Seal(S)
		O.D. 3 Wire _____ O.D. Ground Wire _____
		Special Provision (X)

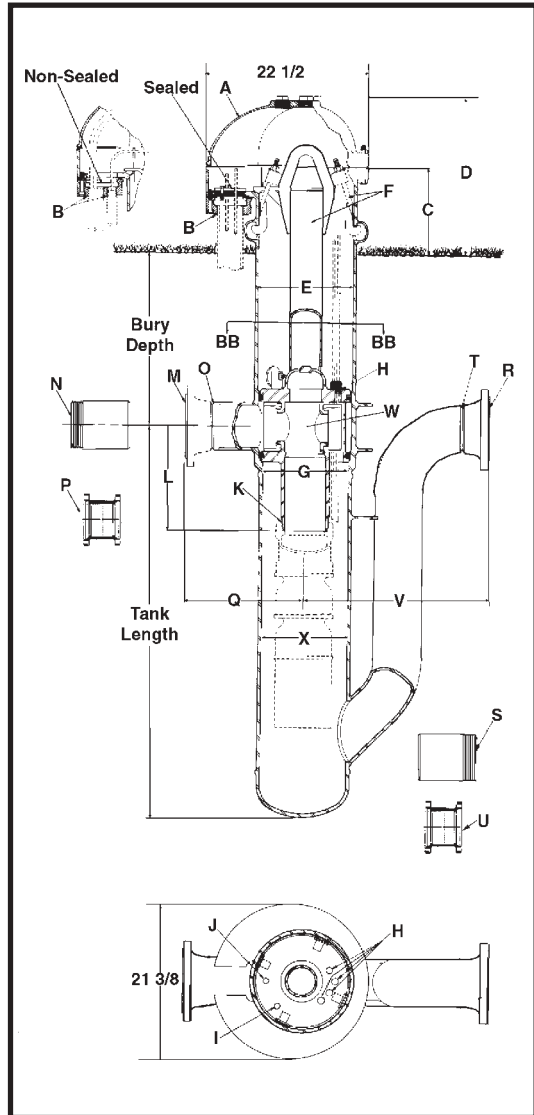
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12" PITLESS BOOSTER SPECIFICATIONS



- A** Seal Cap: The watertight cap bolts on top of the upper casing forming a watertight connection with a gasket.
- B** Conduit Tapping Sizes: 2" & 1" NPT without sealed conduit connection; 2" & 1", 2", or 4" NPT with sealed conduit connection. Watertight conduit seals for most common cable sizes are available.
- C** Distance from ground level to top of Pitless Case: 12".
- D** Distance from ground level to top of Seal Cap: 22-1/16".
- E** Pitless Case size: 13-1/8" I.D. 14" O.D.
- F** "Hold Down-Lift Out Assembly: Positions and clamps spool to discharge body to prevent rotation during pump start up. Hold Down-Lift-Out pipe size 4" IPS. Designed Lift-Out assembly load: 60,000 lbs. (2) Hold-Down hooks supplied.
- G** Pitless Unit minimum I.D.: 12"
- H** Motor cable tappings through spool: (4) 1/2" NPT. (with cable connectors)
- I** Tapping into Pressure Zone: 3/8" NPT. (Furnished with square head plug)
- J** Tapping into Suction Zone: 1" NPT. (Furnished with square head plug).
- K** Spool to Drop Pipe connection sizes: **4" NPT** **5" NPT** **6" NPT**
- L** Dimension from center of discharge outlet to bottom of spool: 13-7/16" 14-7/16" 14-1/2"
- DISCHARGE CONNECTIONS & SIZES**
- M** For Flanged (ASA Std. 150 lbs.): 4" I.D. 5" I.D. 6" I.D.
- N** For Threaded Nipple (NPT): 4" I.D. 5" I.D. 6" I.D.
- O** For Butt Weld (IPS): 4" I.D. 5" I.D. 6" I.D.
- P** For Transition Sleeve (IPS): 4" I.D. 5" I.D. 6" I.D.
- Q** Dimension from center of Booster Unit to end of discharge outlet.
- With **M** Flanged Discharge: 21-1/2" 22" 16-7/16"
- With **N** Threaded Discharge: 21-7/16" 21-7/16" 16-15/16"
- With **O** Welded Discharge 18-1/2" 18-1/2" 12-15/16"
- With **P** Transition Discharge 24-1/2" N.A. 18-15/16"
- INLET CONNECTIONS & SIZES**
- R** For Flanged (ASA Std. 150 lbs.): 4" I.D. 5" I.D. 6" I.D.
- S** For Threaded Nipple (NPT): 4" I.D. 5" I.D. 6" I.D.
- T** For Butt Weld (IPS): 4" I.D. 5" I.D. 6" I.D.
- U** For Transition Sleeve (IPS): 4" I.D. 5" I.D. 6" I.D.
- V** Dimension from center of Booster Unit to end of Inlet Connection.
- With **R** Flanged Inlet: 30 1/8" 30-5/8" 25-1/16"
- With **S** Threaded Inlet: 30-1/8" 30-1/8" 25-9/16"
- With **T** Welded Inlet: 27-1/16" 27-1/16" 21-9/16"
- With **U** Transition Inlet 33-1/8" N.A. 27-5/8"
- W** **SPOOL ASSEMBLY**
- Area of water passages 25.12 Sq. In. 25.12 Sq. In. 25.12 Sq. In.
- Percent area of water passages to area of drop pipe 100% 125% 87%
- X** Tank Pipe size: 12" I.D. 12" I.D. 12" I.D.

COMPONENT MATERIALS

Tank & Inlet Pipes - Steel, black corrosion resistant coating.

Cap - Cast iron, green enamel finish.

Conduit Box - Steel, black corrosion resistant coating.

Conduit Connector - Cast iron, green enamel finish.

Combination Hold-Down & Lift-Out Assembly - Galvanized

Hold-Down Pipe - Steel, black corrosion resistant coating.

Pitless Case - Steel, black corrosion resistant coating.

Discharge Body - Ductile iron, lead free galvanized.

Spool - Steel, lead free galvanized.

NOTE: Inlet pipe & tank pipe tested to 200 P.S.I., spool discharge pressure tested to 300 P.S.I.

NOTE: Any combination between Drop Pipe and Discharge Outlet size is possible, if required.

Specifications subject to change without notice

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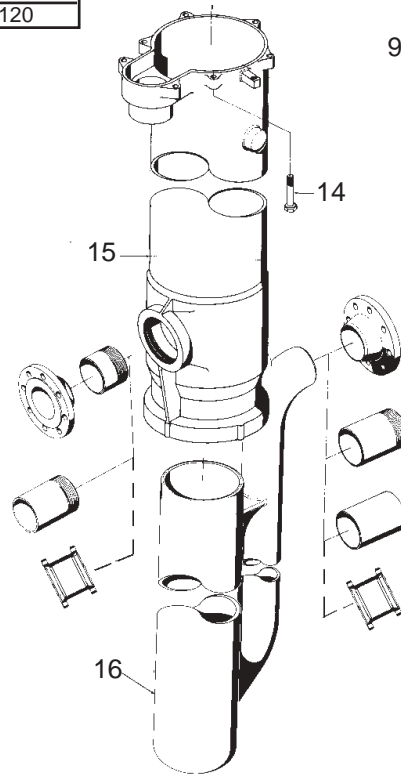
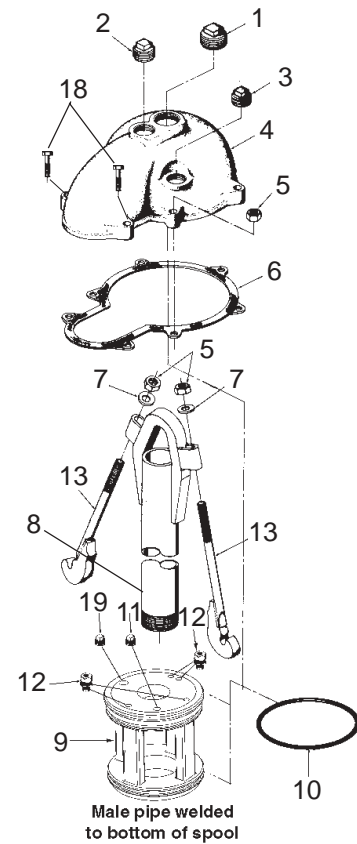


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12" Pitless Booster Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER

Key No.	Quantity	Description	Ord. No.
1	1	Pipe Plug, 2 1/2"	UK50
2	1	Pipe Plug, 2" NPT	UJ50
3	1	Pipe Plug, 1 1/2" NPT	UG54
4	1	Seal Cap (UK850)	UK12
5	9	Hex Nut, 5/8-11NC	PC286
6	1	Gasket	UK72
7	2	Washer	PC417
8	1	Lift Out Bail & Lift Out Pipe Assy. (Order by bury depth)	-----
9	1	Spool (14E0PSF)	UK6S4EF
10	2	Static Seal Ring	UK15
11	1	Pipe Plug, 3/8-18 NPT	UN122
12	4	Cable Connectors (Note: Must be ordered by description & unit Serial No.)	-----
13	2	Hold-Down Hook	UJ7B
14	5	Hex Hd. Cap Screw, 5/8-11HCx 5" L	UN73
15	1	Discharge Body & Upper Casing Assy. (Order by bury depth)	-----
16	1	Inlet pipe and tank assembly. (Note: Must be ordered by description & unit Serial No.)	-----
18	2	Lock Bolt - 5/8 x 4 3/4" L.	LK4
19	1	Pipe Plug - 1" NPT	UN120



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16" PITLESS BOOSTER UNIT

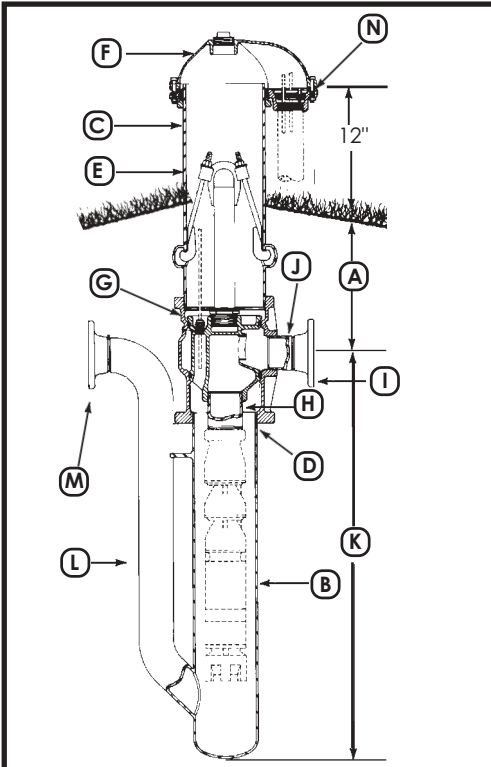
UNITS AVAILABLE BY QUOTATION ONLY
6" THROUGH 16" TANK SIZES

EXPLANATION OF PITLESS BOOSTER UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Pitless Booster Unit ordering number. A typical order number and the pitless booster unit it stands for are shown.

Typical Order Number

6PS1618WBWX08F868FES



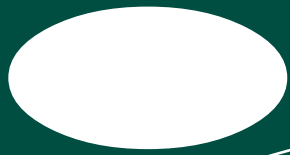
DESCRIPTION - ORDERING NUMBERS

A	6	Bury Depth in Feet
	PS	Pitless Booster for Submersible Pump
B	16	Reservoir Tank Size - Ins.
C	18	Upper Case Size - Ins.
D	W (T)	Threaded Joint (W) Welded
E	B	Black Upper Case
F	W	Watertight Cap
G	X	Motor Cable Passages - Sealed
	0	Check Valves: 0
H	8	Size of Drop Pipe in Ins.(5",6" or 8")
I	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w/trans. sleeve
		Discharge Connection (Select One)
J	8	Size of Discharge Pipe - Ins.
K	6	Length of Reservoir Tank - Feet
L	8	Inlet Pipe Size - Ins.
M	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint w. trans. sleeve
		Inlet Pipe Connection (Select One)
	E	Standard Unit
N	S	Elec. Cable Seal(S)
		O.D. 3 Wire _____ O.D. Ground Wire _____
		Special Provision (X)

- 6** A. This first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PS** These letters indicate the type of pump the Pitless Booster Station is designed for. The unit shown is a PS for Submersible Pumps.
- 16** B. This numeral indicates the reservoir tank size. 16 is for an 16" I.D. diameter tank.
- 18** C. This numeral indicates the upper pitless case size, 18 is for a 18" diameter case.
- W** D. This letter indicates the attachment to the reservoir tank is a welded joint on 8" - 30".
- B** E. The presence of the letter "B" in the order number indicates the upper pitless case is black pipe.
- W** F. Indicates the unit has a watertight cap.
- X** G. Indicates spool passages are closed.
- 0** This numeral indicates the type of spool which the pitless unit has. In this case it is a spool that has no check valves.
- 8** H. Indicates the size of drop pipe in inches.
- F** I. Indicates the discharge connection is flanged.
- 8** J. Indicates the size of discharge pipe in inches.
- 6** K. Indicates the length of the reservoir tank in feet, and is measured from the center of the discharge line to the bottom of the unit.
- 8** L. Indicates the inlet pipe size in inches.
- F** M. Indicates the inlet pipe connection is flanged.
- E** Indicates this is a standard unit.
- S** N. Sealed conduit connection. (Optional)

GENERAL INFORMATION: • General Features • Engineering Specifications

- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



GENERAL INFORMATION: • General Features • Engineering Specifications
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions

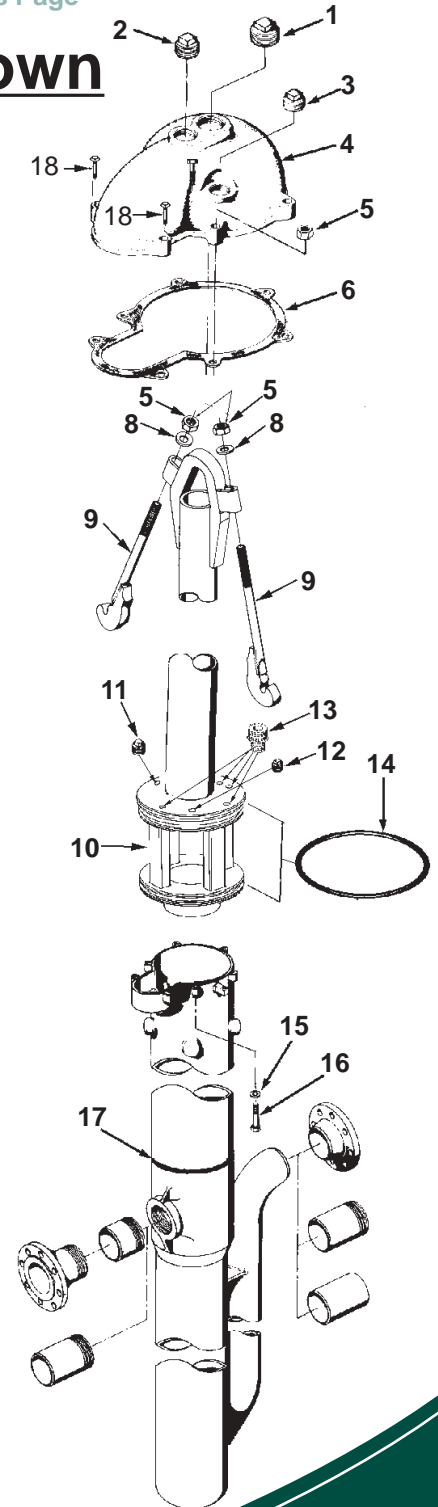


- 5" Pitless Booster • 6" Pitless Booster
- 8" Pitless Booster • 10" Pitless Booster
- 12" Pitless Booster • 16" Pitless Booster
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16" Pitless Booster Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER

Key No.	Quantity	Description	Ord. No.
1	1	Pipe Plug, 2 1/2"	UK50
2	1	Pipe Plug, 2" NPT	UJ50
3	1	Pipe Plug, 1-1/2" NPT	UG54
4	1	Seal Cap (UM850)	UM1
5	12	Hex Nut, 5/8-11NC	PC286
6	1	Gasket	UM72
8	4	Washer	PC417
9	4	Hold-Down Hook	UM7
10	1	Spool & Lift-Out Assy. (Order by description & serial no.)	-----
11	1	Pipe plug, 1" x 11 1/2" NPT	UN120
12	1	Pipe plug 3/8"-18 NPT	UN122
13	4	Cable Connectors (Note: Must be ordered by description & unit Serial No.)	-----
14	2	Static Seal Ring	UM15
15	8	Washer	UN81
16	6	Head Head cap screw 5/8-11NC x 5" L	UN73
17	1	Inlet pipe, tank, discharge body & upper case assembly	-----
18	2	Lock Bolt - 5/8 x 4 3/4" L.	LK4



GENERAL INFORMATION: • General Features • Engineering Specifications
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless
- 12" Turbine Pitless
- 14" Turbine Pitless
- 16" Turbine Pitless
- 18" Turbine Pitless
- 20" Turbine Pitless

GENERAL INFORMATION

- General Features
- Shipping Weights
- Spools & Spool Cable Seals
- O-Ring Selection Guide
- Installation Instructions

TURBINE PITLESS UNITS



The Monitor PT Industrial Pitless Unit for Line Shaft Turbine Pumps forms a watertight extension of the well casing which starts below the frostline, where it is buried permanently, and continues upward 12 or more inches above grade, where the pitless case is flanged to receive a motor support and motor. The completed assembly of the motor support and motor closes the Pitless Case making a watertight installation.



133 Enterprise Street
Evansville, WI 53536



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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INDUSTRIAL PITLESS UNITS FOR LINE SHAFT TURBINE PUMPS 10", 12", 14", 16", 18" and 20" WELL SIZES

FEATURES:

CORROSION PROTECTION . . .
All water passages are either hot-dipped lead free galvanized or constructed of corrosion resistant material.

EASY TO SERVICE . . . The inner parts of the pitless unit and the column pipe may be removed without digging up the discharge pipe. The Pitless unit and the pump or well may then be serviced. This easy removal, by lifting, is made possible due to the o-ring seals in the spool. Replacement is equally simple.

RELIABLE SEALS . . . Neoprene O-rings between accurately machined hot-dipped lead free galvanized surfaces on the spool and within the unit provide positive seals.

O-RING SEAL PROTECTION . . . Monitor seal protection prevents seal damage during installation and service.

FROST PROOF . . . No heating is required. All water passages are below the frost line.

QUICK TO INSTALL . . . A quality pump installation can be made easily and economically without delay for masonry or building construction.

PROTECTED SCREEN VENT . . . standard on all units.

SUPPORT RINGS . . .
Prevent distortion of the discharge body due to vertical movement of discharge pipe.

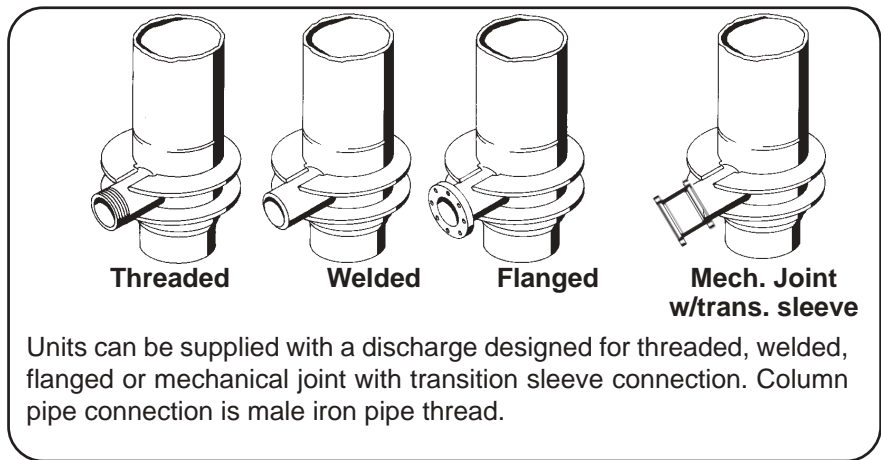
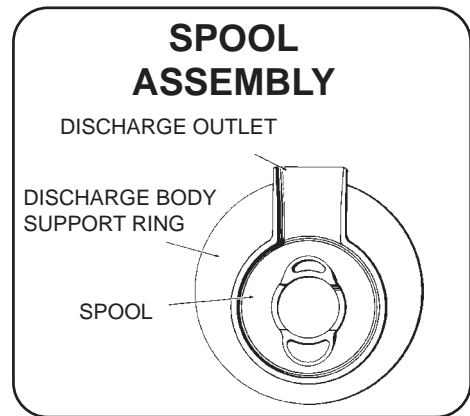
ACCURATE ALIGNMENT . . . Precision machining assures accurate alignment.

OPTIONS:

EPOXY PAINTING . . . can be done, if required, for extra protection in certain soil types.

ADDITIONAL TAPPING IN SPOOL . . . is available upon request.

TRANSITION SLEEVE FOR MECHANICAL JOINT . . . is available upon request.



- GENERAL INFORMATION:**
- General Features
 - Shipping Weights • Spools & Spool Cable Seals
 - O-Ring Selection Guide • Installation Instructions



- [10" Turbine Pitless](#) • [12" Turbine Pitless](#)
- [14" Turbine Pitless](#) • [16" Turbine Pitless](#)
- [18" Turbine Pitless](#) • [20" Turbine Pitless](#)
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INSTALLATION INSTRUCTIONS

INDUSTRIAL PITLESS UNITS FOR WATER LUBRICATED TURBINE PUMPS 14" UPPER CASE SIZE AND LARGER

1. All pitless unit cases are joined by welding the unit to the well casing.
2. Establish ground level at the well location. It is desirable to have the ground slope away, from pitless unit case, in all directions.
3. The pitless unit case should extend above the ground level according to state well code. To accomplish this the well casing must be cut off at a distance below the ground level equal to the overall pitless unit length less the length the unit is to be above the ground.
4. In order to do work, excavate around the well casing according to government regulations where well casing is to be cut off.
5. Cut off the well casing PERPENDICULAR to the well casing center line.
6. Remove the motor support stand and then the spool assembly, using lift-out hooks assembled, and set aside. NOTE: (The spool assembly includes a spool with two o-ring seals, lift-out pipe and support plate.)
7. Lower the pitless case into place and rotate the discharge outlet to the desired location. Weld the pitless case to the well casing. **THIS JOINT MUST BE WATERTIGHT AND IT IS ESSENTIAL THAT THE CENTER LINE OF THE PITLESS CASE AND WELL CASING BE THE SAME.**
8. Attach the turbine pumps to the column pipe and lower into well making drive shaft etc., connections while lowering. When the last section of column pipe, shaft etc., is one foot or more above the pitless case, lower the spool assembly over the shaft and screw onto the column pipe.
9. Wipe the rubber o-ring seals with a clean cloth and then coat with a heavy layer of petroleum jelly (vaseline) for proper seating of rings. Lower the spool assembly into place.
10. Install motor support stand and upper shaft seal.
11. Connect discharge outlet to distribution line.
12. Mount turbine motor onto motor support plate making all necessary shaft assemblies.
13. After all wiring has been completed the unit is ready to operate under power and should be run a sufficiently long time to see that there are no leaks present.
14. The hole should not be filled in until the unit is running satisfactorily. Care should be exercised to fill under the discharge line properly before back filling.

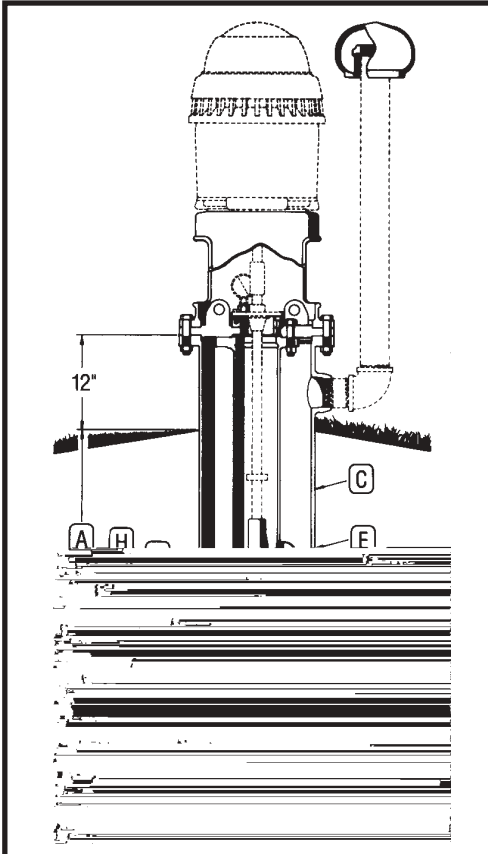
NOTE: Dissimilar metals should be avoided.

GENERAL INFORMATION: • [General Features](#) • [Engineering Specifications](#)
• [Shipping Weights](#) • [Spools & Spool Cable Seals](#)
• [O-Ring Selection Guide](#) • [Installation Instructions](#)



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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10" TURBINE PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 20" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Turbine Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PT1014WBE06F6W**

- 3** A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PT** B. The type of pump the pitless unit is designed for. The unit shown is a PT for Line Shaft Turbine Pumps.
- 10** C. The well casing size is for 10" wells.
- 14** D. The upper pitless case size is 14".
- W** E. The attachment to the well casing is a welded joint.
- B** F. The upper pitless case is black pipe.
- E** G. The spool has pressure equalizing passages.
- 0** H. The type of spool has no silent check valves.
- 6** I. The size of column pipe in inches.
- F** J. The discharge connection is flanged.
- 6** K. The size of discharge line in inches.
- W** L. The type of Line Shaft Turbine the unit is designed for, "W" water-lubricated.

DESCRIPTION - ORDERING NUMBERS

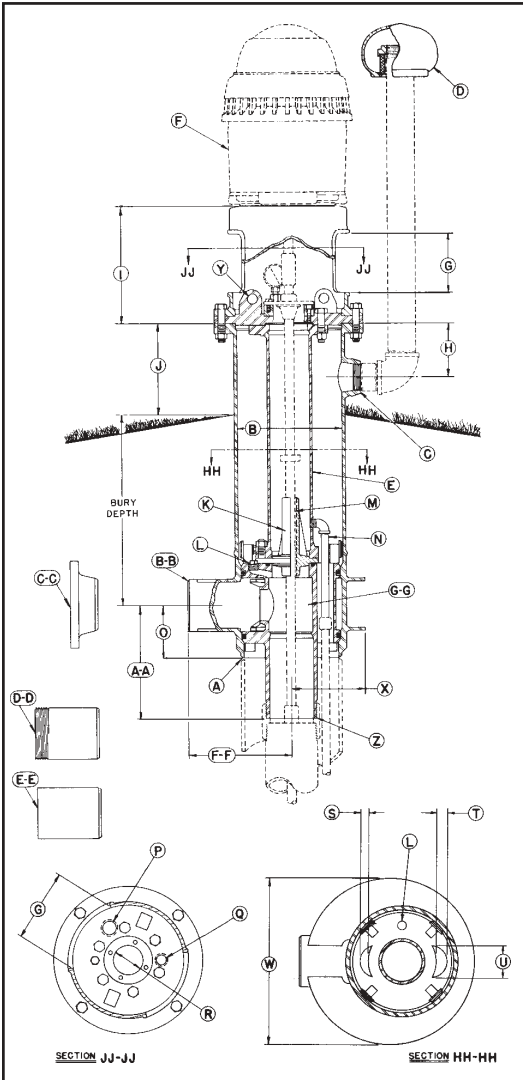
A	3	Bury Depth in Feet
	PT	Pitless Unit for Turbine Pump
B	10	Well Size - Ins.
C	14	Upper Case Size - Ins.
D	W	Attachment to Well Casing- W elded
E	B	Black Upper Case
F	E	Pressure Equalizing Spool Passages
	0	Standard Spool
G	6	Size of Column Pipe - Ins.(4",5",or 6")
H	F	Welded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint
		Discharge Connection (Select One)
		Accessory - Transition Sleeve
I	6	Discharge Size-Ins. (4",5", or 6")
	W	Waterlube
		Special Provision (X)

- GENERAL INFORMATION:** • General Features
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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10" TURBINE PITLESS UNIT SPECIFICATIONS



- A** Unit minimum I.D. 10 in.: chamfered for butt weld to well casing.
- B** Pitless Unit with Black Upper Case Std.: 13-1/4 in. I.D., 14 in. O.D.
- C** 2-1/2 in. NPT Tapping for Well Vent.
- D** 2-1/2 in. Protected Screen Well Vent.
- E** Lift-Out Pipe: 5 in. IPS.
- F** Turbine Motor having a maximum base diameter of 12 in. *(Supplied by others)*
- G** Motor Mount Access Openings: (2) openings measuring 9 in. wide x 8-1/2 in. high.
- H** 6-7/8 in.
- I** 15 in.
- J** 12 in.
- K** Shaft Bearing Housing.
- L** 1 in. N.P.T. Tapping ported to Column Pipe.
- M** Shaft Bearings *(Supplied by pump manufacturer)*: Total length of bearing to be 10 in. and a maximum O.D. of 1-5/8 in.
- N** 3/4 in. drain.
- O** Dimension from center of Discharge Outlet to bottom of Discharge Body: 15-3/4 in.
- P** 1-1/2 in. NPT Tapping for optional Water Sampler.
- Q** 1 in. NPT Tapping.
- R** Rabbet Fit for Upper Grease Seal Bearing Housing: Minimum O.D. of 3 in. and maximum O.D. of 4 in.; maximum Bolt Circle of Bearing Housing - 5-1/4 in. *(Bearing & Bearing Housing supplied by others)*
- S** 1 in.
- T** 1-1/2 in.
- U** 4 in.
- W** 21-3/8 in.
- X** 9-5/16 in.
- Y** Lifting Lug: (2) Lugs for inserting or removal of inner well parts.
- Z** **SPOOL TO DROP PIPE CONNECTION SIZES:** **4 in. NPT** **5 in. NPT** **6 in. NPT**
The Standard Spool is designed for a 65,000 lb. ... (3/4 Taper) (3/4 Taper) (3/4 Taper) maximum load. Spools are available to sustain higher loads.
- AA** Dimension from center of Discharge Outlet to bottom of Spool: 13-7/16 in. 14-7/16 in. 14-1/2 in.
- DISCHARGE CONNECTIONS & SIZES:**
For **[BB]** Butt Weld (IPS): 4 in. I.D. 5 in. I.D. 6 in. I.D.
For **[CC]** Flanged (ASA Std. 150 lb.): 4 in. I.D. 5 in. I.D. 6 in. I.D.
For **[DD]** Threaded Nipple (NPT): 4 in. I.D. 5 in. I.D. 6 in. I.D.
For **[EE]** Transition Sleeve (IPS): 4 in. I.D. N.A. 6 in. I.D.
- FF** Dimension from center of Well Casing to the end of Discharge Outlet.
With **[BB]** Butt Weld Discharge: 18-1/2 in. 18-1/2 in. 12-15/16 in.
With **[CC]** Flanged Discharge: 21-1/2 in. 22 in. 16-7/16 in.
With **[DD]** Threaded Discharge: 21-7/16 in. 21-7/16 in. 16-15/16 in.
With **[EE]** Transition Sleeve Discharge: 24-1/2 in. N.A. 18-15/16 in.
- GG** **SPOOL ASSEMBLY**
Area of Water Passage(s): 12.56 sq. in. 25.12 sq. in. 25.12 sq. in.
Percent Area of Water Passage(s) to Area of Drop Pipe: 100% 125% 87%

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Motor Support** - cast iron, black corrosion resistant coating.
- Combination Hold-Down & Lift-Out Mechanism** - steel, black corrosion resistant coating.
- Hold-Down Pipe** - steel, black corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.
- NOTE:** Provision for prelubrication not available.
- NOTE:** Units are designed for motors having an RPM of 1800 or less and a 10" or 12" base diameter having a 9-1/8" bolt circle. Maximum bury depth will be 9 feet. For units requiring exceptions to these conditions of design, special specifications must be used.
- NOTE:** Any combination between Column Pipe and Discharge Outlet size is possible, if required.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

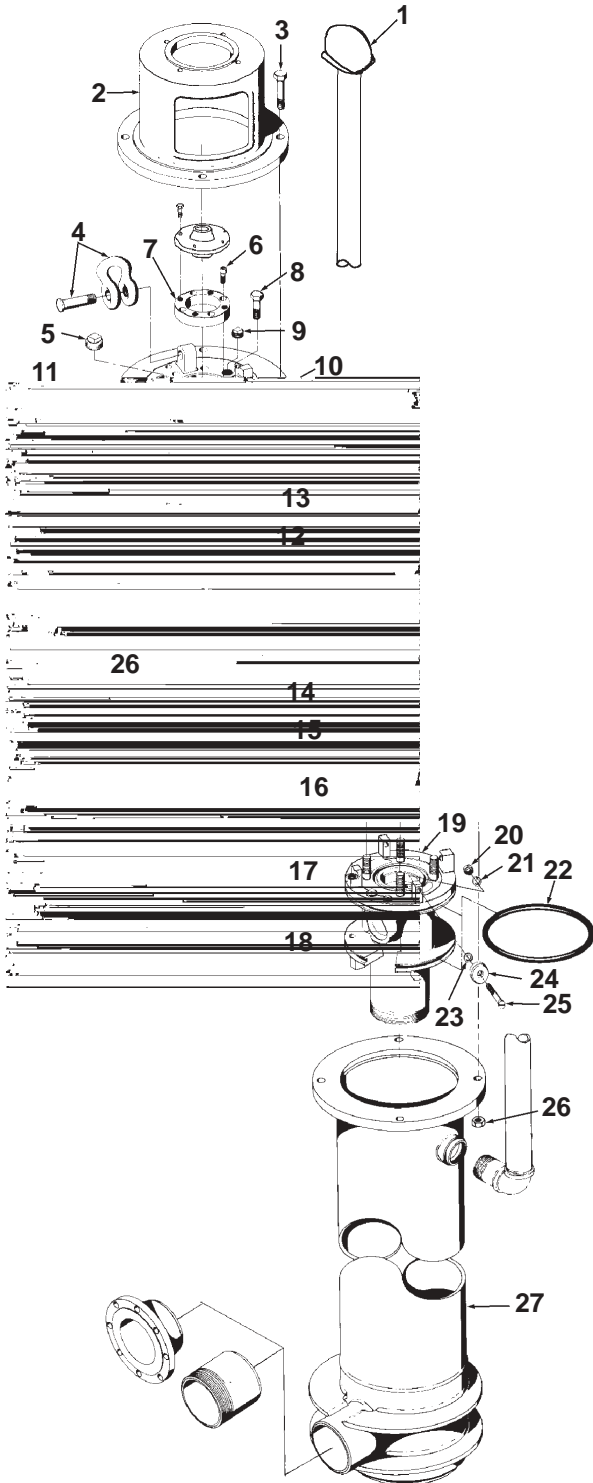
- GENERAL INFORMATION: • General Features
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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10" Turbine Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



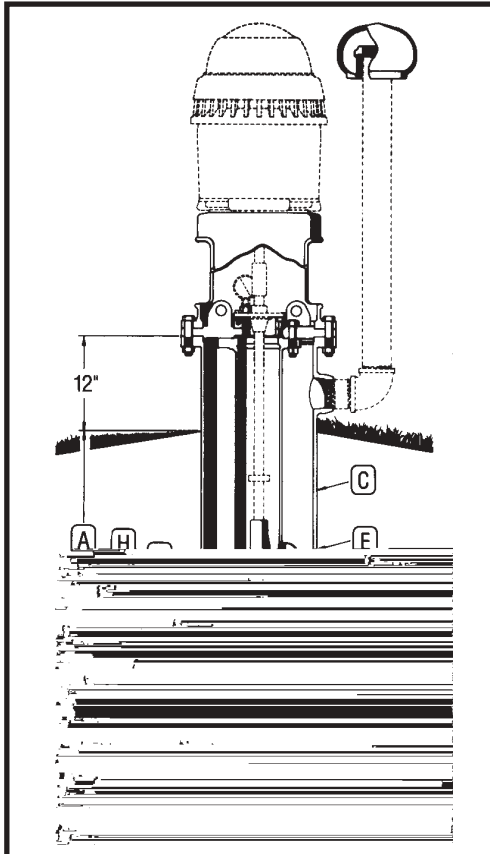
Key No.	Qty	Description	Ord. No.
1	1	Screen Well Vent 2 1/2" NPT	PS155
2	1	Motor Support Stand	UK400
3	4	Hex Head Cap Screw 3/4"-10NCx4" L.	UK470
4	2	Screw Pin Anchor Shackle-1 1/8" Bow Size	UK469
5	1	Pipe Plug 1 1/2x11 1/2" NPT	UG54
6	4	Hex Socket Cap Screw-1/2-13NCx 1 1/2" L.	UK468
7	1	Upper Bearing Seal Housing (Machined to customer specifications)	UK564
8	6	Hex Head Cap Screw-7/8-9NCx3 1/2" L.	UK471
9	1	Pipe Plug, 1"-11 1/2"NPT	SW33
10	1	Motor Support Plate	UK550
11	1	Air Test Adapter	UK180
12	1	Lift-Out Pipe Assembly	UK157
13	10	Hex Nut, 7/8-11NC	UK188
14	1	Elbow, 3/4" IPx 3/4"-Plastic	UM149
15	1	Pipe Clamp - 3/4"	UM147
16	1	Drain Pipe	UM142
17	1	Bearing Seal Housing	UK183
18	1	Static Seal Ring	PS575A
19	1	Spool Assembly (Order by description & Unit Serial No.)	-----
20	4	Hex Nut, 3/8-16NC	UB17
21	4	Lockwasher	TX31
22	2	Static Seal Rings for spool	UK15
23	4	Washer	SW68
24	4	Washer	UL95
25	4	Machine Screw, 3/8-16NCx2 1/4" L	UM222
26	4	Hex Nut, 3/4-10NC	UM33
27	1	Discharge Body & Upper Case Assembly (Order by description & Unit Serial No.)	-----

GENERAL INFORMATION: • General Features
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- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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12" TURBINE PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 20" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Turbine Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PT1214WBE06F6W**

- 3** A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PT** The type of pump the pitless unit is designed for. The unit shown is a PT for Line Shaft Turbine Pumps.
- 12** B. The well casing size is for 12" wells.
- 14** C. The upper pitless case size is 14".
- W** D. The attachment to the well casing is a welded joint.
- B** E. The upper pitless case is black pipe.
- E** F. The spool has pressure equalizing passages.
- 0** The type of spool has no silent check valves.
- 6** G. The size of column pipe in inches.
- F** H. The discharge connection is flanged.
- 6** I. The size of discharge line in inches.
- W** The type of Line Shaft Turbine the unit is designed for, "W" water-lubricated.

DESCRIPTION - ORDERING NUMBERS

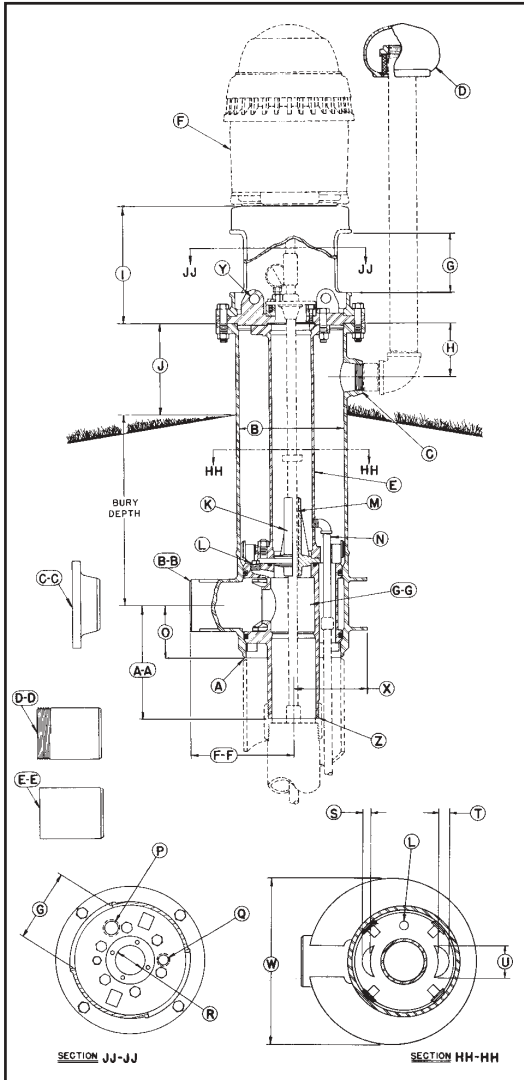
A	3	Bury Depth in Feet
	PT	Pitless Unit for Turbine Pump
B	12	Well Size - Ins.
C	14	Upper Case Size - Ins.
D	W	Attachment to Well Casing- W elded
E	B	Black Upper Case
F	E	Pressure Equalizing Spool Passages
	0	Standard Spool
G	6	Size of Column Pipe - Ins.(4",5",or 6")
H	F	W elded
		Flange, ASA 150#
		Threaded NPT
		M ech. Joint
		Discharge Connection (Select One)
		Accessory - Transition Sleeve
I	6	Discharge Size-Ins. (4",5", or 6")
	W	Waterlube
		Special Provision (X)

- GENERAL INFORMATION:** • General Features
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
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12" TURBINE PITLESS UNIT SPECIFICATIONS



- A** Unit minimum I.D. 12 in.: chamfered for butt weld to well casing.
- B** Pitless Unit with Black Upper Case Std.: 13-1/4 in. I.D., 14 in. O.D.
- C** 2-1/2 in. NPT Tapping for Well Vent.
- D** 2-1/2 in. Protected Screen Well Vent.
- E** Lift-Out Pipe: 5 in. IPS.
- F** Turbine Motor having a maximum base diameter of 12 in. (Supplied by others)
- G** Motor Mount Access Openings: (2) openings measuring 9 in. wide x 8-1/2 in. high.
- H** 6-7/8 in.
- I** 15 in.
- J** 12 in.
- K** Shaft Bearing Housing.
- L** 1 in. NPT Tapping ported to Column Pipe.
- M** Shaft Bearings (Supplied by pump manufacturer): Total length of bearing to be 10 in. and a maximum O.D. of 1-5/8 in.
- N** 3/4 in. drain.
- O** Dimension from center of Discharge Outlet to bottom of Discharge Body: 7-11/16 in.
- P** 1-1/2 in. NPT Tapping for optional Water Sampler.
- Q** 1 in. NPT Tapping.
- R** Rabbet Fit for Upper Grease Seal Bearing Housing: Minimum O.D. of 3 in. and maximum O.D. of 4 in.; maximum Bolt Circle of Bearing Housing - 5-1/4 in. (Bearing & Bearing Housing supplied by others)
- S** 1 in.
- T** 1-1/2 in.
- U** 4 in.
- W** 21-3/8 in.
- X** 9-5/16 in.
- Y** Lifting Lug: (2) Lugs for inserting or removal of inner well parts.

Z **SPOOL TO DROP PIPE CONNECTION SIZES:** **4 in. NPT** **5 in. NPT** **6 in. NPT**
 The Standard Spool is designed for a 65,000 lb. (3/4 Taper) (3/4 Taper) (3/4 Taper)
 maximum load. Spools are available to sustain higher loads.

AA Dimension from center of Discharge Outlet to bottom of Spool: 14-7/16 in. 14-7/16 in. 14-1/2 in.

DISCHARGE CONNECTIONS & SIZES:

For **[BB]** Butt Weld (IPS): 4 in. I.D. 5 in. I.D. 6 in. I.D.
 For **[CC]** Flanged (ASA Std. 150 lb.): 4 in. I.D. 5 in. I.D. 6 in. I.D.
 For **[DD]** Threaded nipple (NPT): 4 in. I.D. 5 in. I.D. 6 in. I.D.
 For **[EE]** Transition Sleeve (IPS): 4 in. I.D. N.A. 6 in. I.D.

FF Dimension from center of Well Casing to the end of Discharge Outlet.
 With **[BB]** Butt Weld Discharge: 18-1/2 in. 18-1/2 in. 12-15/16 in.
 With **[CC]** Flanged Discharge: 21-1/2 in. 22 in. 16-7/16 in.
 With **[DD]** Threaded Discharge: 21-7/16 in. 21-7/16 in. 16-15/16 in.
 With **[EE]** Transition Sleeve Discharge: 24-1/2 in. N.A. 18-15/16 in.

GG **SPOOL ASSEMBLY**

Area of Water Passage(s): 12.56 sq. in. 25.12 sq. in. 25.12 sq. in.
 Percent Area of Water Passage(s) to Area of Drop Pipe: 100% 125% 87%

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Motor Support** - cast iron, black corrosion resistant coating.
- Combination Hold-Down & Lift-Out Mechanism** - steel, black corrosion resistant coating.
- Hold-Down Pipe** - steel, black corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.

NOTE: Provision for prelubrication not available.
NOTE: Units are designed for motors having an RPM of 1800 or less and a 10" or 12" base diameter having a 9-1/8" bolt circle. Maximum bury depth will be 9 feet. For units requiring exceptions to these conditions of design, special specifications must be used.

NOTE: Any combination between Column Pipe and Discharge Outlet size is possible, if required.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

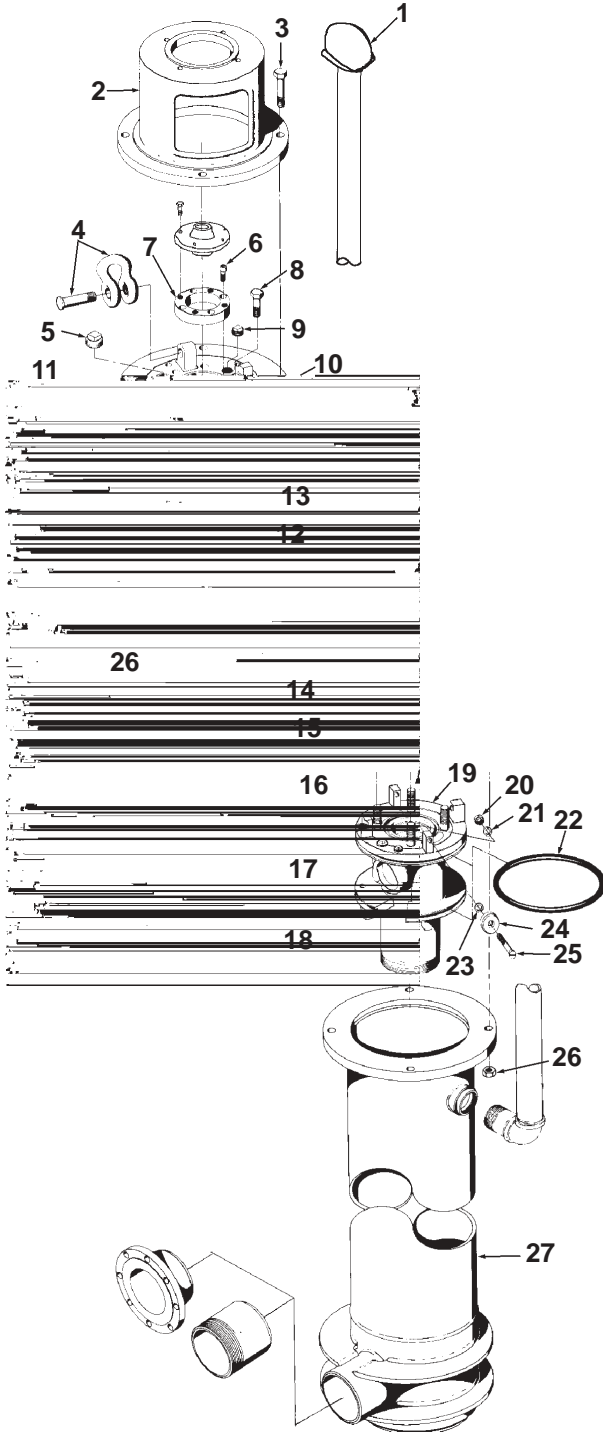
- GENERAL INFORMATION:** • General Features
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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12" Turbine Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



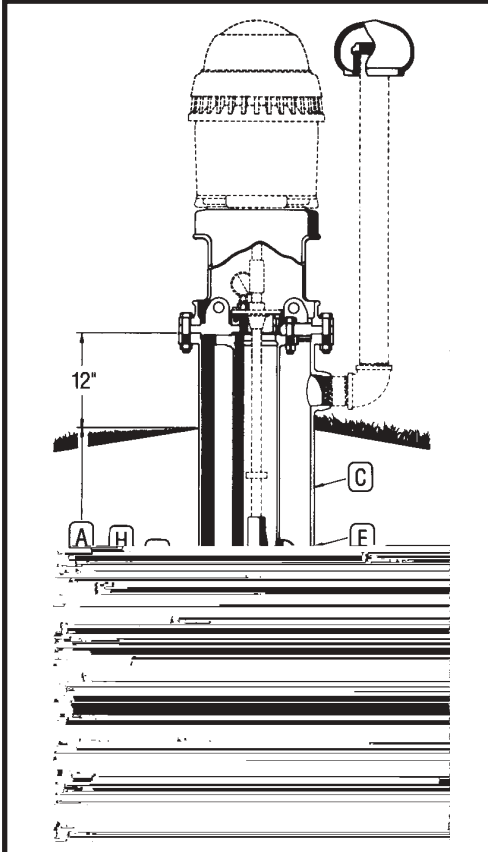
Key No.	Qty	Description	Ord. No.
1	1	Screen Well Vent 2 1/2" NPT	PS155
2	1	Motor Support Stand	UK400
3	4	Hex Head Cap Screw 3/4"-10NCx4" L.	UK470
4	2	Screw Pin Anchor Shackle-1 1/8" Bow Size	UK469
5	1	Pipe Plug 1 1/2x11 1/2" NPT	UG54
6	4	Hex Socket Cap Screw-1/2-13NCx 1 1/2" L.	UK468
7	1	Upper Bearing Seal Housing (Machined to customer specifications)	UK564
8	6	Hex Head Cap Screw-7/8-9NCx3 1/2" L.	UK471
9	1	Pipe Plug, 1"-11 1/2"NPT	SW33
10	1	Motor Support Plate	UK550
11	1	Air Test Adapter	UK180
12	1	Lift-Out Pipe Assembly	UK157
13	10	Hex Nut, 7/8-11NC	UK188
14	1	Elbow, 3/4" IPx 3/4"-Plastic	UM149
15	1	Pipe Clamp - 3/4"	UM147
16	1	Drain Pipe	UM142
17	1	Bearing Seal Housing	UK183
18	1	Static Seal Ring	PS575A
19	1	Spool Assembly (Order by description & Unit Serial No.)	-----
20	4	Hex Nut, 3/8-16NC	UB17
21	4	Lockwasher	TX31
22	2	Static Seal Rings for spool	UK15
23	4	Washer	SW68
24	4	Washer	UL95
25	4	Machine Screw, 3/8-16NCx2 1/4" L	UM222
26	4	Hex Nut, 3/4-10NC	UM33
27	1	Discharge Body & Upper Case Assembly (Order by description & Unit Serial No.)	-----

GENERAL INFORMATION: • General Features
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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14" TURBINE PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 20" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Turbine Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PT1416WBE06F6W**

- 3** A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PT** B. The type of pump the pitless unit is designed for. The unit shown is a PT for Line Shaft Turbine Pumps.
- 14** C. The well casing size is for 14" wells.
- 16** D. The upper pitless case size is 16".
- W** E. The attachment to the well casing is a welded joint.
- B** F. The upper pitless case is black pipe.
- E** G. The spool has pressure equalizing passages.
- 0** H. The type of spool has no silent check valves.
- 6** I. The size of column pipe in inches.
- F** J. The discharge connection is flanged.
- 6** K. The size of discharge line in inches.
- W** L. The type of Line Shaft Turbine the unit is designed for, "W" water-lubricated.

DESCRIPTION - ORDERING NUMBERS

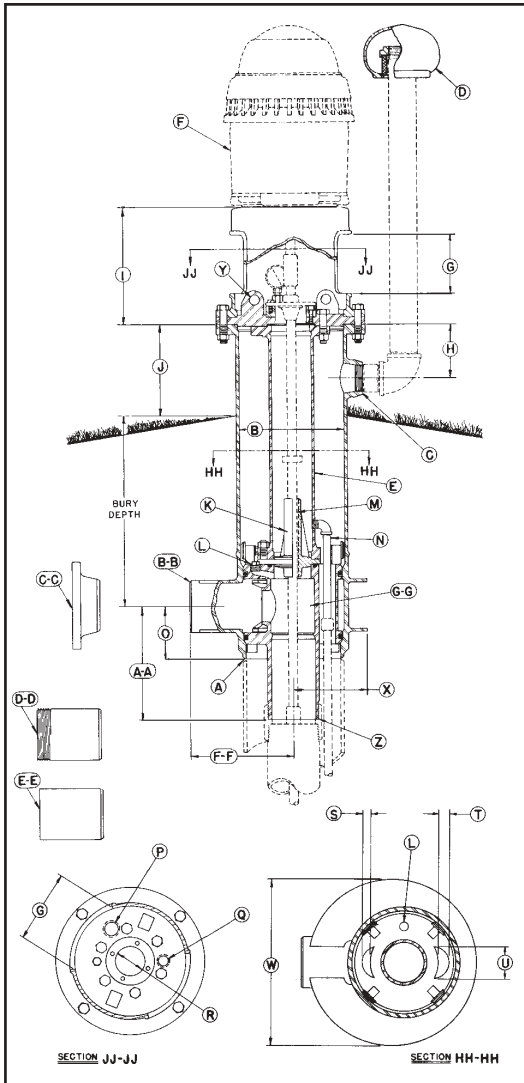
A	3	Bury Depth in Feet
	PT	Pitless Unit for Turbine Pump
B	14	Well Size - Ins.
C	16	Upper Case Size - Ins.
D	W	Attachment to Well Casing- W elded
E	B	Black Upper Case
F	E	Pressure Equalizing Spool Passages
	0	Standard Spool
G	6	Size of Column Pipe - Ins.(5",6",or 8")
H	F	W elded
		Flange, ASA 150#
		Threaded NPT
		Mech. Joint
		Discharge Connection (Select One)
		Accessory - Transition Sleeve
I	6	Discharge Size-Ins. (5",6", or 8")
	W	Waterlube
		Special Provision (X)

GENERAL INFORMATION: • General Features
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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14" TURBINE PITLESS UNIT SPECIFICATIONS



- A** Unit minimum I.D. 13-1/4 in.: chamfered for butt weld to well casing.
- B** Pitless Unit with Black Upper Case Std.: 15-1/4 in. I.D., 16 in. O.D.
- C** 2-1/2 in. NPT Tapping for Well Vent.
- D** 2-1/2 in. Protected Screen Well Vent.
- E** Lift-Out Pipe: 6 in. IPS.
- F** Turbine Motor having a maximum base diameter of 16-1/2 in. *(Supplied by others)*
- G** Access Openings: (2) openings measuring 9 in. wide x 8-1/2 in. high.
- H** 7-1/8 in.
- I** 15 in.
- J** 12 in.
- K** Shaft Bearing Housing.
- L** Two 1 in. NPT Tappings ported to Column Pipe.
- M** Shaft Bearings *(Supplied by pump manufacturer)*: Total length of bearing to be 10 in. and a maximum O.D. of 2-1/2 in.
- N** 3/4 in. drain.
- O** Dimension from center of Discharge Outlet to bottom of Discharge Body: 9-3/4 in.
- P** 1-1/2 in. NPT Tapping for optional Water Sampler.
- Q** 1 in. NPT Tapping.
- R** Rabbet Fit for Upper Grease Seal Bearing Housing: Minimum O.D. of 3 in. and maximum O.D. of 4 in.; maximum Bolt Circle of Bearing Housing - 5-1/4 in. *(Bearing & Bearing Housing supplied by others)*
- S** 1-1/4 in.
- T** 2 in.
- U** 4 in.
- W** 25-7/16 in.
- X** 10-15/16 in.
- Y** Lifting Lug: (2) Lugs for inserting or removal of inner well parts.

Z **SPOOL TO DROP PIPE CONNECTION SIZES:** **5 in. NPT** **6 in. NPT** **8 in. NPT**
 The Standard Spool is designed for a 120,000 lb. (3/4 Taper) (3/4 Taper) (3/4 Taper) maximum load. Spools are available to sustain higher loads.

AA Dimension from center of Discharge Outlet to bottom of Spool: 16-3/16 in. 21-13/16 in. 15-13/16 in.

DISCHARGE CONNECTIONS & SIZES:

For [BB] Butt Weld (IPS):	5 in. I.D.	6 in. I.D.	8 in. I.D.
For [CC] Flanged (ASA Std. 150 lb.):	5 in. I.D.	6 in. I.D.	8 in. I.D.
For [DD] Threaded Nipple (NPT):	5 in. I.D.	6 in. I.D.	8 in. I.D.
For [EE] Transition Sleeve (IPS):	N.A.	6 in. I.D.	8 in. I.D.

FF Dimension from center of Well Casing to the end of Discharge Outlet.

With [BB] Butt Weld Discharge:	20-9/16 in.	20-9/16 in.	14-1/2 in.
With [CC] Flanged Discharge:	24-1/16 in.	24-1/16 in.	18-1/2 in.
With [DD] Threaded Discharge:	23-9/16 in.	24-9/16 in.	18-1/2 in.
With [EE] Transition Sleeve Discharge:	N.A.	26-9/16 in.	20-1/2 in.

GG **SPOOL ASSEMBLY ****

Area of Water Passage(s):	19.6 sq. in.	39.2 sq. in.	39.2 sq. in.
Percent Area of Water Passage(s) to Area of Drop Pipe:	100%	138%	78.2%

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Motor Support** - cast iron, black corrosion resistant coating.
- Combination Hold-Down & Lift-Out Mechanism** - steel, black corrosion resistant coating.
- Hold-Down Pipe** - steel, black corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.

NOTE: Provision for prelubrication not available.
NOTE: Units are designed for motors having an RPM of 1800 or less and a 16-1/2" base diameter having a 14-3/4" bolt circle. Maximum bury depth will be 9 feet. For units requiring exceptions to these conditions of design, special specifications must be used.
NOTE: Any combination between Column Pipe and Discharge Outlet size is possible, if required.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

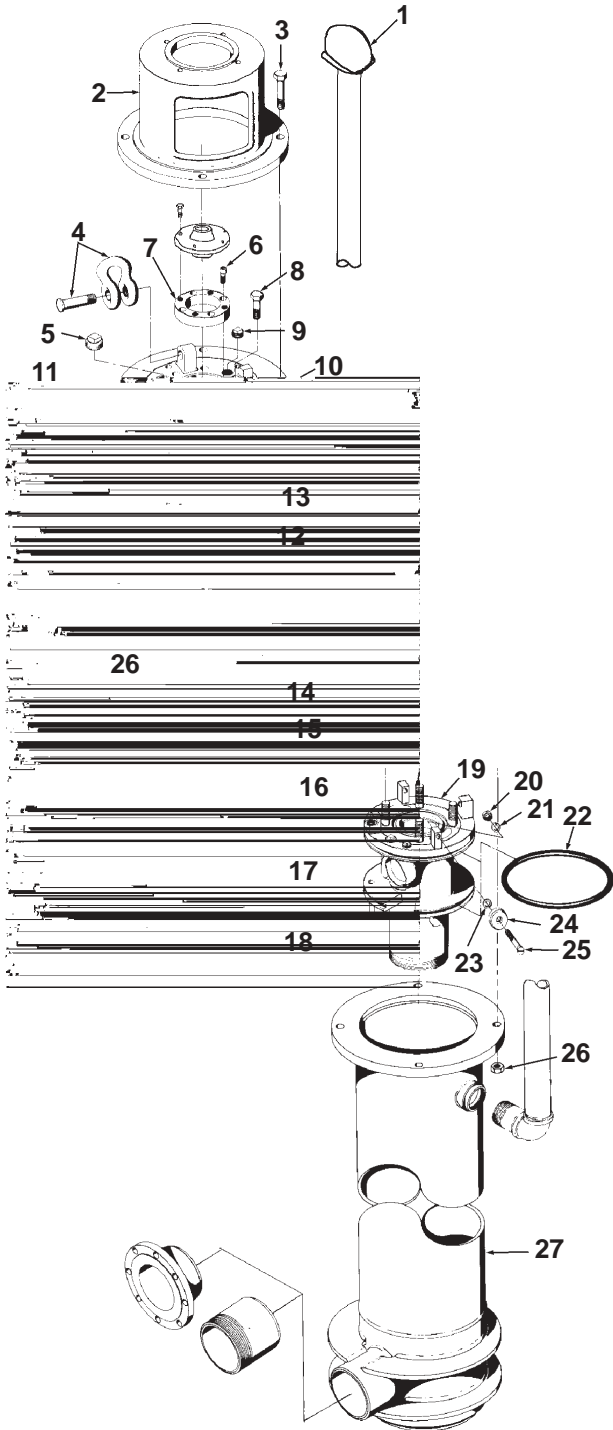
- GENERAL INFORMATION:** • General Features
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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14" Turbine Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



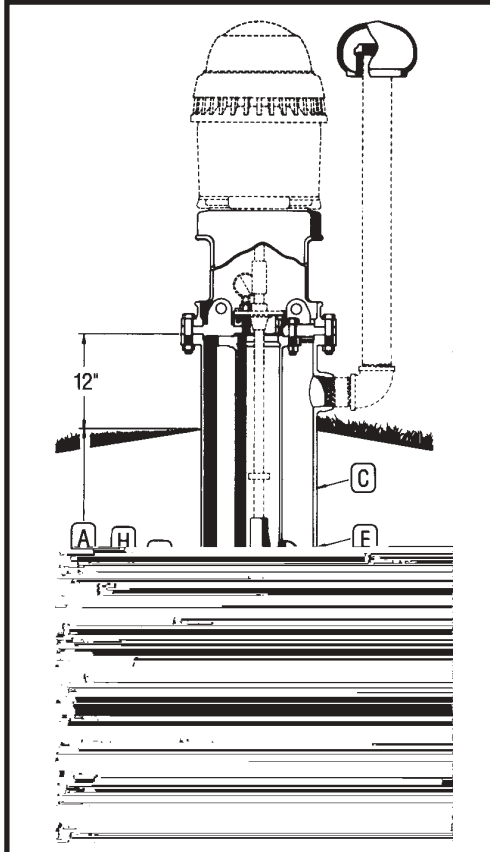
Key No.	Qty	Description	Ord. No.
1	1	Screen Well Vent 2 1/2" NPT	PS155
2	1	Motor Support Stand	UL400
3	4	Hex Head Cap Screw 1"-8NCX4-1/2" L.	UL173
4	2	Screw Pin Anchor Shackle-1 3/8" Bow Size	UL175
5	1	Pipe Plug 1 1/2x11 1/2" NPT	UG54
6	4	Hex Socket Cap Screw-1/2-13NCx 1 1/2" L.	UK468
7	1	Upper Bearing Seal Housing (Machined to customer specifications)	UK564
8	6	Hex Head Cap Screw-7/8-9NCx3 1/2" L.	UK471
9	1	Pipe Plug, 1"-11 1/2"NPT	SW33
10	1	Motor Support Plate	UL550
11	1	Air Test Adapter	UK180
12	1	Lift-Out Pipe Assembly	UL563
13	10	Hex Nut, 7/8-11NC	UK188
14	1	Elbow, 3/4" IPx 3/4"-Plastic	UM149
15	1	Pipe Clamp - 3/4"	UM147
16	1	Drain Pipe	UL88
17	1	Bearing Seal Housing	UM83
18	1	Static Seal Ring	PS575A
19	1	Spool Assembly (Order by description & Unit Serial No.)	-----
20	4	Hex Nut, 3/8-16NC	UB17
21	4	Lockwasher	TX31
22	2	Static Seal Rings for spool	UL15
23	4	Washer	SW68
24	4	Washer	UL95
25	4	Machine Screw, 3/8-16NCx2 1/4" L	UM222
26	4	Hex Nut, 3/4-10NC	UM140
27	1	Discharge Body & Upper Case Assembly (Order by description & Unit Serial No.)	-----

GENERAL INFORMATION: • General Features
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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16" TURBINE PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 20" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Turbine Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PT1618WBE06F6W**

- 3** A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PT** The type of pump the pitless unit is designed for. The unit shown is a PT for Line Shaft Turbine Pumps.
- 16** B. The well casing size is for 16" wells.
- 18** C. The upper pitless case size is 18".
- W** D. The attachment to the well casing is a welded joint.
- B** E. The upper pitless case is black pipe.
- E** F. The spool has pressure equalizing passages.
- 0** The type of spool has no silent check valves.
- 6** G. The size of column pipe in inches.
- F** H. The discharge connection is flanged.
- 6** I. The size of discharge line in inches.
- W** The type of Line Shaft Turbine the unit is designed for, "W" water-lubricated.

DESCRIPTION - ORDERING NUMBERS

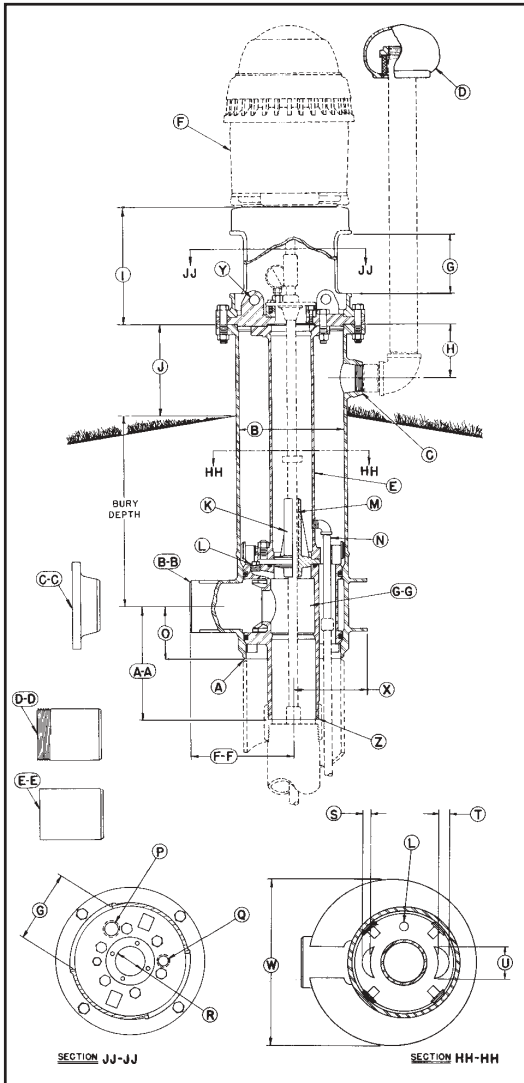
A	3	Bury Depth in Feet
	PT	Pitless Unit for Turbine Pump
B	16	Well Size - Ins.
C	18	Upper Case Size - Ins.
D	W	Attachment to Well Casing- W elded
E	B	Black Upper Case
F	E	Pressure Equalizing Spool Passages
	0	Standard Spool
G	6	Size of Column Pipe - Ins. (5", 6", or 8")
H	F	W elded
		F lange, ASA 150#
		T hreaded NPT
		M ech. Joint
		Discharge Connection (Select One)
		Accessory - Transition Sleeve
I	6	Discharge Size-Ins. (5", 6", or 8")
	W	Waterlube
		Special Provision (X)

- GENERAL INFORMATION:** • General Features
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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16" TURBINE PITLESS UNIT SPECIFICATIONS



- A Unit minimum I.D. 15-1/4 in.: chamfered for butt weld to well casing.
- B Pitless Unit with Black Upper Case Std.: 17-1/4 in. I.D., 18 in. O.D.
- C 2-1/2 in. NPT Tapping for Well Vent.
- D 2-1/2 in. Protected Screen Well Vent.
- E Lift-Out Pipe: 6 in. IPS.
- F Turbine Motor having a maximum base diameter of 18-5/8 in. (Supplied by others)
- G Motor Mount Access Openings: (2) openings measuring 8-3/4 in. wide x 8-1/4 in. high.
- H 7-5/32 in.
- I 14 in.
- J 12 in.
- K Shaft Bearing Housing.
- L Two 1 in. NPT Tappings ported to Column Pipe.
- M Shaft Bearings (Supplied by pump manufacturer): Total length of bearing to be 10 in. and a maximum O.D. of 2-1/2 in.
- N 3/4 in. drain.
- O Dimension from center of Discharge Outlet to bottom of Discharge Body: 11-1/16 in.
- P 1-1/2 in. NPT Tapping for optional Water Sampler.
- Q 1 in. NPT Tapping.
- R Rabbet Fit for Upper Grease Seal Bearing Housing: Minimum O.D. of 3 in. and maximum O.D. of 4 in.; maximum Bolt Circle of Bearing Housing - 5-1/4 in. (Bearing & Bearing Housing supplied by others)
- S 1-1/4 in.
- T 2-1/4 in.
- U 5 in.
- W 27-7/16 in.
- X 11-15/16 in.

Z SPOOL TO DROP PIPE CONNECTION SIZES: **5 in. NPT** **6 in. NPT** **8 in. NPT**
 The Standard Spool is designed for a 120,000 lb. (3/4 Taper) (3/4 Taper) (3/4 Taper)
 maximum load. Spools are available to sustain
 higher loads.

AA Dimension from center of Discharge Outlet to
 bottom of Spool: 16-1/4 in. 21-7/8 in. 15-13/16 in.

DISCHARGE CONNECTIONS & SIZES:

For [BB] Butt Weld (IPS): 4 in. I.D. 5 in. I.D. 6 in. I.D.
 For [CC] Flanged (ASA Std. 150 lb.): 4 in. I.D. 5 in. I.D. 6 in. I.D.
 For [DD] Threaded nipple (NPT): 4 in. I.D. 5 in. I.D. 6 in. I.D.
 For [EE] Transition Sleeve (IPS): N.A. 5 in. I.D. 6 in. I.D.

FF Dimension from center of Well Casing to the end
 of Discharge Outlet.
 With [BB] Butt Weld Discharge: 23 in. 23 in. 17 in.
 With [CC] Flanged Discharge: 26-1/2 in. 26-1/2 in. 21 in.
 With [DD] Threaded Discharge: 26 in. 27 in. 21 in.
 With [EE] Transition Sleeve Discharge: N.A. 29 in. 23 in.

GG SPOOL ASSEMBLY
 Area of Water Passage(s): 19.6 sq. in. 39.2 sq. in. 39.2 sq. in.
 Percent Area of Water Passage(s) to Area of
 Drop Pipe: 100% 138% 78.2%

COMPONENT MATERIALS

- Well Vent** - cast iron, green enamel finish.
- Motor Support** - cast iron, black corrosion resistant coating.
- Combination Hold-Down & Lift-Out Mechanism** - steel, black corrosion resistant coating.
- Hold-Down Pipe** - steel, black corrosion resistant coating.
- Pitless Case** - steel, corrosion resistant coating.
- Discharge Body** - steel, lead free galvanized.
- Spool** - steel, lead free galvanized.
- NOTE:** Provision for prelubrication not available.
- NOTE:** Units are designed for motors having an RPM of 1800 or less and a 18-5/8" base diameter having a 14-3/4" bolt circle. Maximum bury depth will be 9 feet. For units requiring exceptions to these conditions of design, special specifications must be used.
- NOTE:** Any combination between Column Pipe and Discharge Outlet size is possible, if required.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

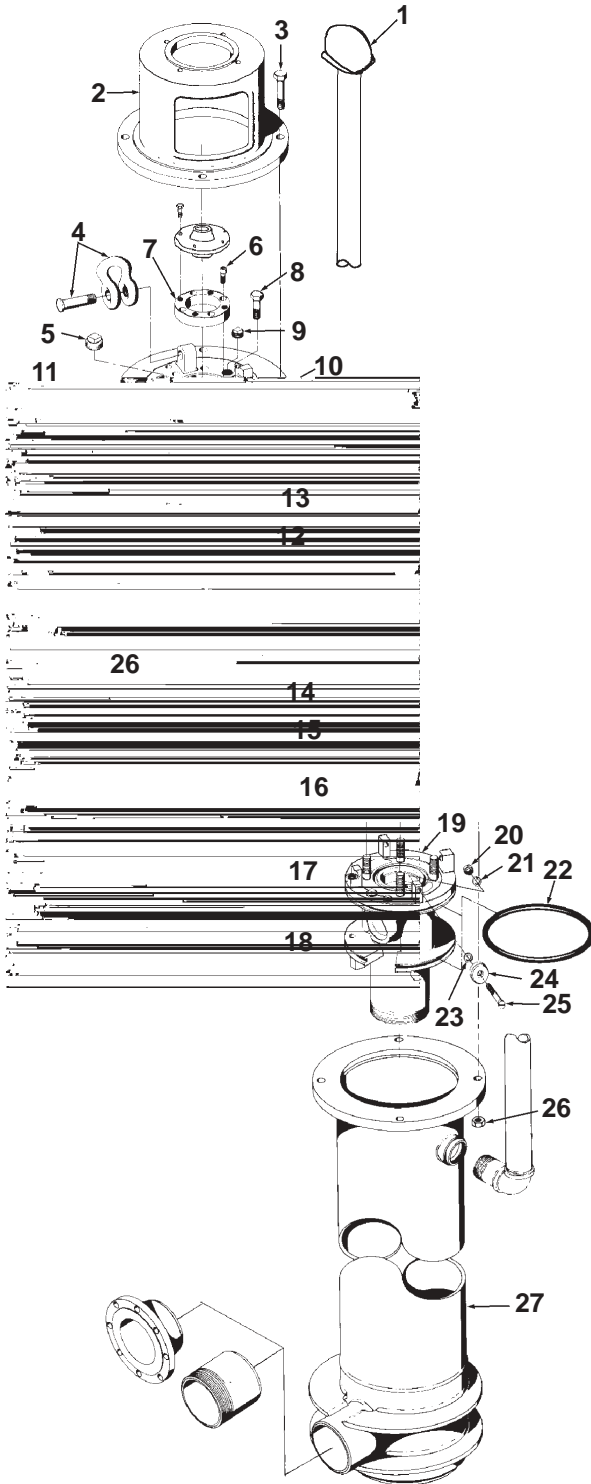
- GENERAL INFORMATION: • General Features
- Shipping Weights • Spools & Spool Cable Seals
- O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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16" Turbine Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Qty	Description	Ord. No.
1	1	Screen Well Vent 2 1/2" NPT	PS155
2	1	Motor Support Stand*	UM400
3	4	Hex Head Cap Screw 1"-8NCX4-1/2" L.	-----
4	2	Screw Pin Anchor Shackle-1 3/8" Bow Size	-----
5	1	Pipe Plug 1 1/2x11 1/2" NPT	UG54
6	4	Hex Socket Cap Screw-1/2-13NCx 1 1/2" L.	UK468
7	1	Upper Bearing Seal Housing (Machined to customer specifications)	UK564
8	6	Hex Head Cap Screw-7/8-9NCx3 1/2" L.	UK471
9	1	Pipe Plug, 1"-11 1/2"NPT	SW33
10	1	Motor Support Plate*	UM400
11	1	Air Test Adapter	UK180
12	1	Lift-Out Pipe Assembly	UM563
13	10	Hex Nut, 7/8-11NC	UK188
14	1	Elbow, 3/4" IPx 3/4"-Plastic	UM149
15	1	Pipe Clamp - 3/4"	UM147
16	1	Drain Pipe	UL88
17	1	Bearing Seal Housing	UM83
18	1	Static Seal Ring	PS575A
19	1	Spool Assembly (Order by description & Unit Serial No.)	-----
20	4	Hex Nut, 3/8-16NC	UB17
21	4	Lockwasher	TX31
22	2	Static Seal Rings for spool	UM15
23	4	Washer	SW68
24	4	Washer	UL95
25	4	Machine Screw, 3/8-16NCx2 1/4" L	UM222
26	4	Hex Nut, 3/4-10NC	UM140
27	1	Discharge Body & Upper Case Assembly (Order by description & Unit Serial No.)	-----

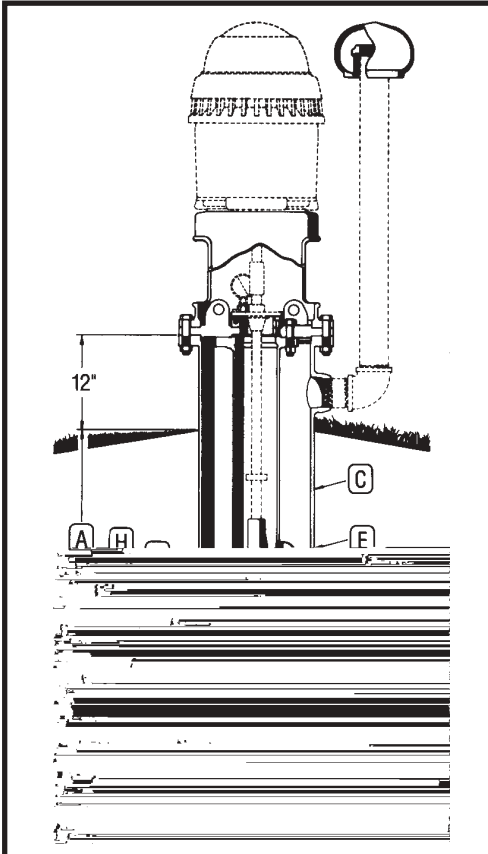
*NOTE: On 16" units the Motor Support Stand and the Motor Support Plate are one piece construction. (Key Nos. 2 and 10)

- GENERAL INFORMATION: • General Features
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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18" TURBINE PITLESS UNIT



**UNITS AVAILABLE BY QUOTATION ONLY
10" THROUGH 20" WELL SIZES**

EXPLANATION OF PITLESS UNIT ORDERING NUMBERS

The diagram illustrates the meaning of the various letters and numerals used in Monitor Turbine Pitless Unit ordering numbers. A typical order number and the pitless unit it stands for are shown.

Typical Order Number **3PT1820WBE06F6W**

- 3** A. The first numeral in the order number indicates the bury depth, in feet, of the unit. Bury depth on all units is measured from the center of the discharge line to ground level. The top of the pitless case extends 12" above ground level as is required by many codes.
- PT** The type of pump the pitless unit is designed for. The unit shown is a PT for Line Shaft Turbine Pumps.
- 18** B. The well casing size is for 18" wells.
- 20** C. The upper pitless case size is 20".
- W** D. The attachment to the well casing is a welded joint.
- B** E. The upper pitless case is black pipe.
- E** F. The spool has pressure equalizing passages.
- 0** The type of spool has no silent check valves.
- 6** G. The size of column pipe in inches.
- F** H. The discharge connection is flanged.
- 6** I. The size of discharge line in inches.
- W** The type of Line Shaft Turbine the unit is designed for, "W" water-lubricated.

DESCRIPTION - ORDERING NUMBERS

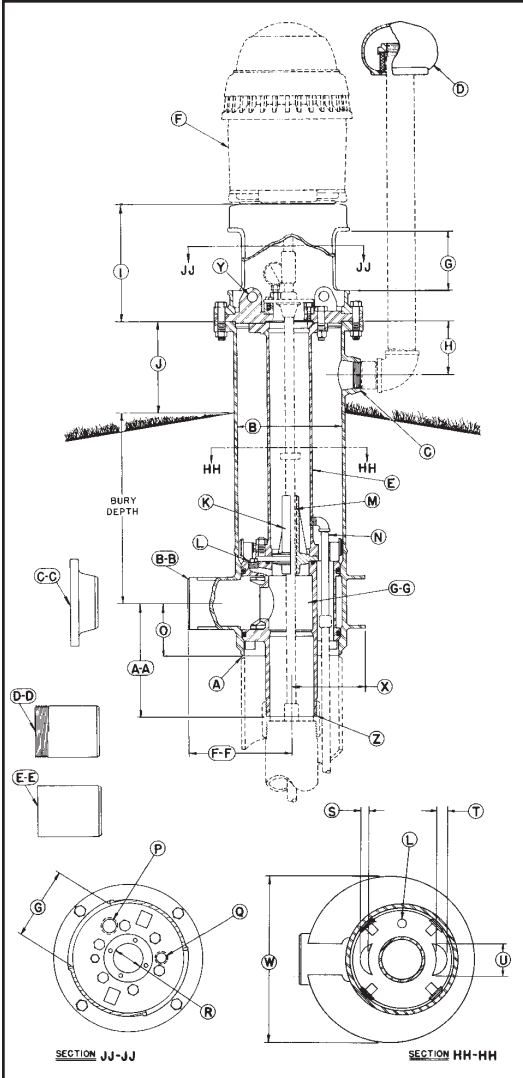
A	3	Bury Depth in Feet
	PT	Pitless Unit for Turbine Pump
B	18	Well Size - Ins.
C	20	Upper Case Size - Ins.
D	W	Attachment to Well Casing- W elded
E	B	Black Upper Case
F	E	Pressure Equalizing Spool Passages
	0	Standard Spool
G	6	Size of Column Pipe - Ins.(6",8",or 10")
H	F	W elded
		F lange, ASA 150#
		T hreaded NPT
		M ech. Joint
		Discharge Connection (Select One)
		Accessory - Transition Sleeve
I	6	Discharge Size-Ins. (6",8", or 10")
	W	Waterlube
		Special Provision (X)

- GENERAL INFORMATION:** • General Features
• Shipping Weights • Spools & Spool Cable Seals
• O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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18" TURBINE PITLESS UNIT SPECIFICATIONS



- A** Unit minimum I.D. 17-1/4 in.: chamfered for butt weld to well casing.
- B** Pitless Unit with Black Upper Case Std.: 19-1/4 in. I.D., 20 in. O.D.
- C** 2-1/2 in. NPT Tapping for Well Vent.
- D** 2-1/2 in. Protected Screen Well Vent.
- E** Lift-Out Pipe: 7 in. IPS.
- F** Turbine Motor having a maximum base diameter of 20 in. (*Supplied by others*)
- G** Mtor Mount Access Openings: (2) openings measuring 12-3/8 in. wide x 8-1/2 in. high.
- H** 7-1/8 in.
- I** 15 in.
- J** 12 in.
- K** Shaft Bearing Housing.
- L** Two 1 in. NPT Tappings ported to Column Pipe.
- M** Shaft Bearings (*Supplied by pump manufacturer*): Total length of bearing to be 10 in. and a maximum O.D. of 3-1/4 in.
- N** 3/4 in. drain.
- O** Dimension from center of Discharge Outlet to bottom of Discharge Body: 10-15/16 in.
- P** 1-1/2 in. NPT Tapping for optional Water Sampler.
- Q** 1 in. NPT Tapping.
- R** Rabbet Fit for Upper Grease Seal Bearing Housing: Minimum O.D. of 3 in. and maximum O.D. of 4 in.; maximum Bolt Circle of Bearing Housing - 5-1/4 in. (*Bearing & Bearing Housing supplied by others*)
- S** 1-1/2 in.
- T** 2-5/8 in.
- U** 6 in.
- W** 30-1/2 in.
- X** 13-1/4 in.
- Y** Lifting Lug: (2) Lugs for inserting or removal of inner well parts.
- Z** **SPOOL TO DROP PIPE CONNECTION SIZES:** **6 in. NPT** **8 in. NPT** **10 in. NPT**
The Standard Spool is designed for a 150,000 lb. (3/4 Taper) (3/4 Taper) (3/4 Taper)
maximum load. Spools are available to sustain higher loads.

AA Dimension from center of Discharge Outlet to bottom of Spool:	24-1/16 in.	24-1/16 in.	19-3/32 in.
DISCHARGE CONNECTIONS & SIZES:			
For [BB] Butt Weld (IPS):	6 in. I.D.	8 in. I.D.	10 in. I.D.
For [CC] Flanged (ASA Std. 150 lb.):	6 in. I.D.	8 in. I.D.	10 in. I.D.
For [DD] Threaded nipple (NPT):	6 in. I.D.	8 in. I.D.	10 in. I.D.
For [EE] Transition Sleeve (IPS):	6 in. I.D.	8 in. I.D.	10 in. I.D.
FF Dimension from center of Well Casing to the end of Discharge Outlet.			
With [BB] Butt Weld Discharge:	25-1/2 in.	25-1/2 in.	18-1/2 in.
With [CC] Flanged Discharge:	29 in.	29-1/2 in.	22-1/2 in.
With [DD] Threaded Discharge:	29-1/2 in.	29-1/2 in.	23-5/8 in.
With [EE] Transition Sleeve Discharge:	31-9/16 in.	31-9/16 in.	24-9/16 in.
GG SPOOL ASSEMBLY			
Area of Water Passage(s):	33.18 sq. in.	66.36 sq. in.	66.36 sq. in.
Percent Area of Water Passage(s) to Area of Drop Pipe:	115%	132%	85%

COMPONENT MATERIALS
Well Vent - cast iron, green enamel finish.
Motor Support - cast iron, black corrosion resistant coating.
Combination Hold-Down & Lift-Out Mechanism - steel, black corrosion resistant coating.
Hold-Down Pipe - steel, black corrosion resistant coating.
Pitless Case - steel, corrosion resistant coating.
Discharge Body - steel, lead free galvanized.
Spool - steel, lead free galvanized.
NOTE: Provision for prelubrication not available.
NOTE: Units are designed for motors having an RPM of 1800 or less and a 20" base diameter having a 14-3/4" bolt circle. Maximum bury depth will be 9 feet. For units requiring exceptions to these conditions of design, special specifications must be used.
NOTE: Any combination between Column Pipe and Discharge Outlet size is possible, if required.

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

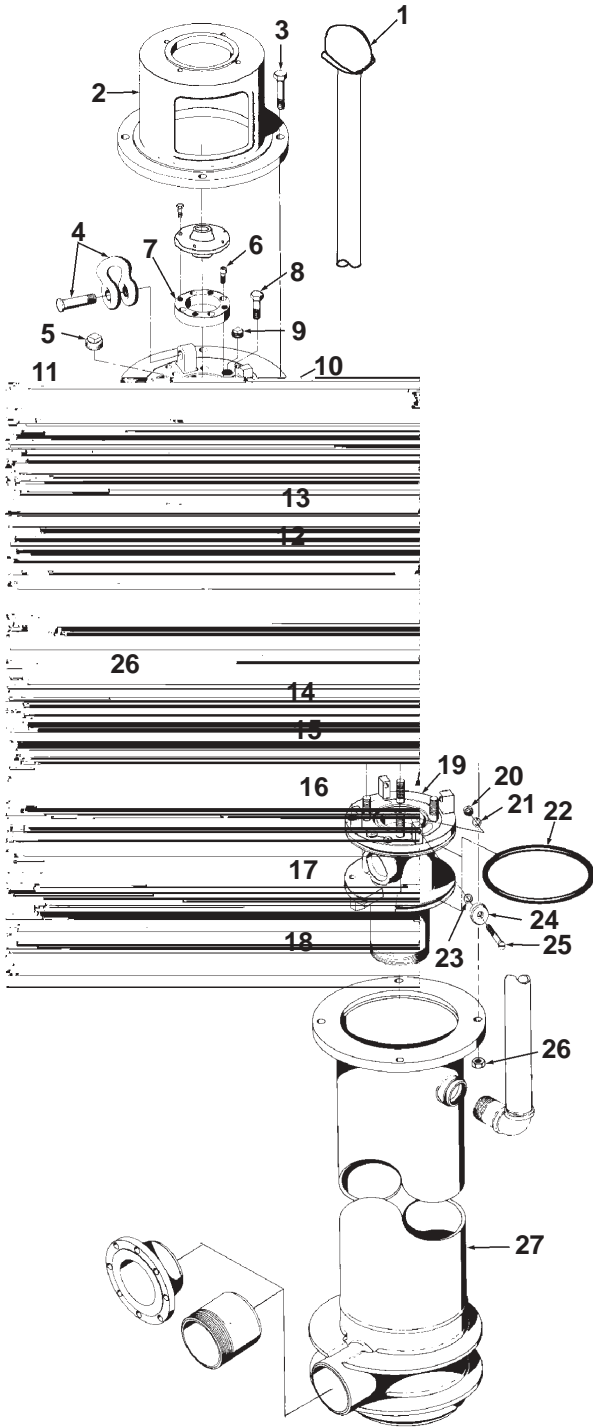
- GENERAL INFORMATION:** • General Features
 • Shipping Weights • Spools & Spool Cable Seals
 • O-Ring Selection Guide • Installation Instructions



- 10" Turbine Pitless • 12" Turbine Pitless
- 14" Turbine Pitless • 16" Turbine Pitless
- 18" Turbine Pitless • 20" Turbine Pitless
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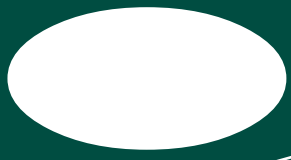
18" Turbine Pitless Parts Breakdown

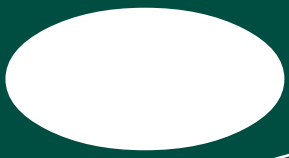
ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Qty	Description	Ord. No.
1	1	Screen Well Vent 2 1/2" NPT	PS155
2	1	Motor Support Stand	UN400
3	4	Hex Head Cap Screw 1"-8NCX4-1/2" L.	UL173
4	2	Screw Pin Anchor Shackle-1 3/8" Bow Size	UL175
5	1	Pipe Plug 1 1/2x11 1/2" NPT	UG54
6	4	Hex Socket Cap Screw-1/2-13NCx 1 1/2" L.	UK468
7	1	Upper Bearing Seal Housing (Machined to customer specifications)	UK564
8	6	Hex Head Cap Screw-7/8-9NCx3 1/2" L.	UK471
9	1	Pipe Plug, 1"-11 1/2"NPT	SW33
10	1	Motor Support Plate	UN550
11	1	Air Test Adapter	UK180
12	1	Lift-Out Pipe Assembly	UN563
13	10	Hex Nut, 7/8-11NC	UK188
14	1	Elbow, 3/4" IPx 3/4"-Plastic	UM149
15	1	Pipe Clamp - 3/4"	UM147
16	1	Drain Pipe	UL88
17	1	Bearing Seal Housing	UN183
18	1	Static Seal Ring	UN170
19	1	Spool Assembly (Order by description & Unit Serial No.)	-----
20	4	Hex Nut, 3/8-16NC	UB17
21	4	Lockwasher	TX31
22	2	Static Seal Rings for spool	UN15
23	4	Washer	ZA81
24	4	Washer	UL95
25	4	Machine Screw, 3/8-16NCx2 1/4" L	UM222
26	4	Hex Nut, 3/4-10NC	UM140
27	1	Discharge Body & Upper Case Assembly (Order by description & Unit Serial No.)	-----

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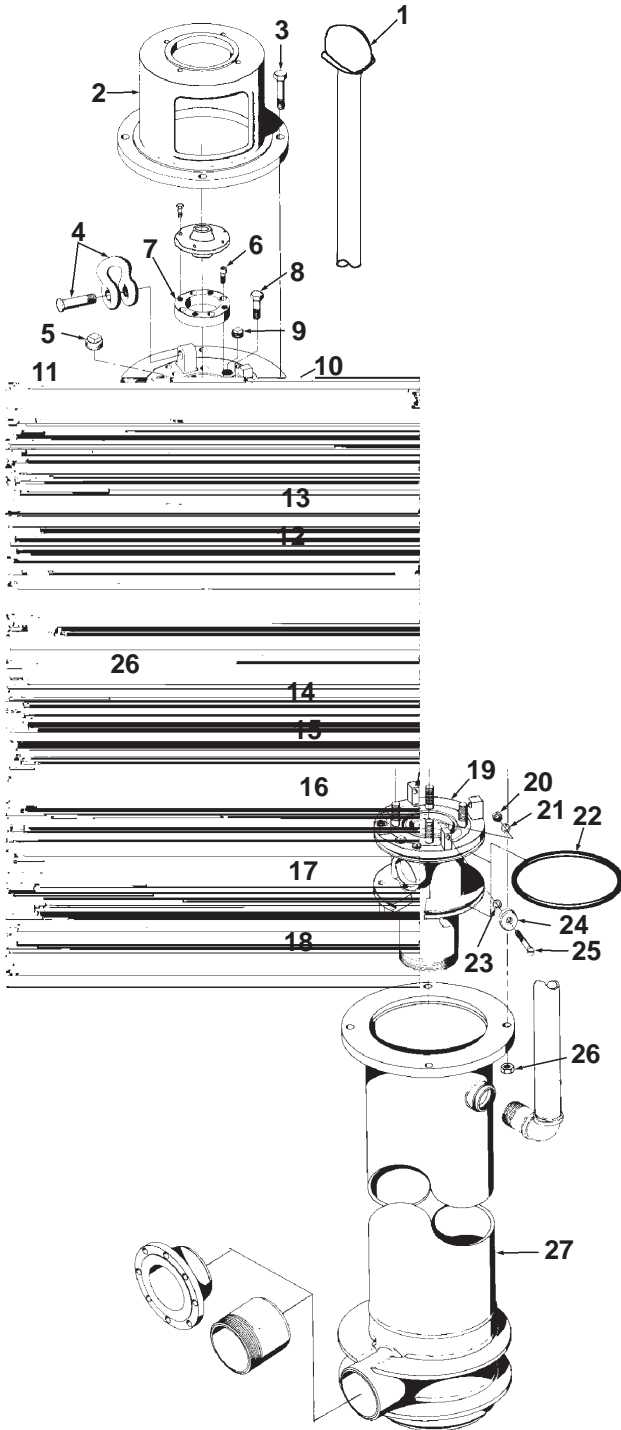




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20" Turbine Pitless Parts Breakdown

ANY ORDER FOR REPAIR PARTS MUST BE ACCOMPANIED BY THE PITLESS UNIT SERIAL NUMBER AND ORDER NUMBER



Key No.	Qty	Description	Ord. No.
1	1	Screen Well Vent 2 1/2" NPT	PS155
2	1	Motor Support Stand	UQ400
3	4	Hex Head Cap Screw 1"-8NCX4-1/2" L.	UL173
4	2	Screw Pin Anchor Shackle-1 3/8" Bow Size	UL175
5	1	Pipe Plug 1 1/2x11 1/2" NPT	UG54
6	4	Hex Socket Cap Screw-1/2-13NCx 1 1/2" L.	UK468
7	1	Upper Bearing Seal Housing (Machined to customer specifications)	UK564
8	6	Hex Head Cap Screw-7/8-9NCx3 1/2" L.	UK471
9	1	Pipe Plug, 1"-11 1/2"NPT	SW33
10	1	Motor Support Plate	UQ550
11	1	Air Test Adapter	UK180
12	1	Lift-Out Pipe Assembly	UN563
13	10	Hex Nut, 7/8-11NC	UK188
14	1	Elbow, 3/4" IPx 3/4"-Plastic	UM149
15	1	Pipe Clamp - 3/4"	UM147
16	1	Drain Pipe	UL88
17	1	Bearing Seal Housing	UN183
18	1	Static Seal Ring	UN170
19	1	Spool Assembly (Order by description & Unit Serial No.)	-----
20	4	Hex Nut, 3/8-16NC	UB17
21	4	Lockwasher	TX31
22	2	Static Seal Rings for spool	UA15A
23	4	Washer	ZA81
24	4	Washer	UL95
25	4	Machine Screw, 3/8-16NCx2 1/4" L	UM222
26	4	Hex Nut, 3/4-10NC	UM140
27	1	Discharge Body & Upper Case Assembly (Order by description & Unit Serial No.)	-----

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WELD ON PITLESS ADAPTER

- Weld On Pitless Adapter

GENERAL INFORMATION

- General Features
- Installation Instructions



Weld On tear drop designed bottom for easy welding onto a steel casing in 8", 10" and 12" I.D. well sizes.



133 Enterprise Street
Evansville, WI 53536



WELD ON PITLESS ADAPTERS

WELD ON PITLESS ADAPTER FOR 8", 10" & 12" WELLS



FEATURES

- Durable fabricated steel housing - brass elbow, stainless steel discharge, large drain hole in the pull pipe port, 3" FIP pull pipe, 3" FIP drop pipe, 3" stainless steel MIP discharge and large o-ring seal.
- Designed to be welded onto 8", 10" and 12" I.D. steel casing.
- Designed for shallow or deep settings and high working pressures up to 300 PSI.
- Durable steel housing with tear drop design for EZ bottom welding.
- Water contacts only 304 stainless steel and lead free brass elbow for long term corrosion protection.
- No obstruction in the casing I.D. when the lead free brass elbow is removed.
- Stainless steel 10° tapered slip fitting design on the elbow for easy installation and removal at time of servicing.
- Large O-Ring neoprene seal.
- Large drain hole in the 3" FIP pull pipe port.
- Designed for 10,000 lbs. load.
- Also available factory welded to casing.

WELD ON PITLESS ADAPTER

Order No.	Well Size	Drop Pipe Size	Discharge Size	Weight (lbs)
8123BEZ	8", 10" & 12" I.D.	3" Female NPT	3" Male NPT	27
83BEZ	Kit for 8" x 18" L.	3" Female NPT	3" Male NPT	75
83BEZ6	Kit for 6"	3" Female NPT	3" Male NPT	90
103BEZ	Kit for 10" x 18" L.	3" Female NPT	3" Male NPT	95
123BEZ	Kit for 12" x 18" L	3" Female NPT	3" Male NPT	115
8123BEZ6	8"-12" w/nipple 6" L.	3" Female NPT	3" Male NPT	30

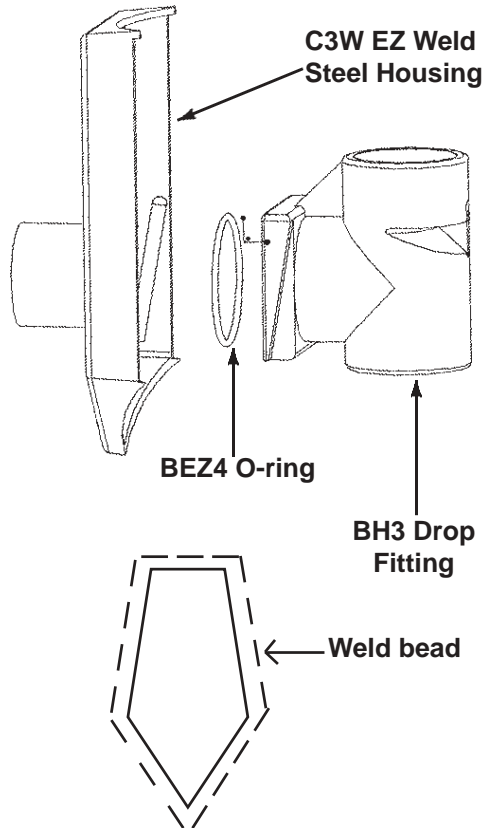
GENERAL INFORMATION: • [General Features](#)
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WELD ON PITLESS ADAPTERS

WELD ON PITLESS ADAPTER FOR 8", 10" & 12" WELLS



INSTALLATION INSTRUCTIONS

- Locate the template (provided) over the installation location on the steel pipe where you want to install the Monitor E-Z Weld Pitless Adapter.
- Center punch at points A on the template.
- Connect all A points with A lines.
- Flame cut over lines. Note: Cut must be parallel with centerline of pipe.
- After opening has been cut, pry out the cut casing at the bottom corner.
- BH3 drop fitting must fit through the cut hole.
- Clean off all slag and burrs on the cut casing opening. Place the C3W EZ weld steel housing onto the opening. Tac the corners to hold the steel housing in place. Weld the top and sides to the steel casing. Note: see diagram.

8123BEZ Pitless Adapter Pressure Drop Test

Using an 80gpm pump to supply water flow

8/20/02 data

Flow Rate (GPM)	Inlet Pressure (PSI)	Outlet Pressure (PSI)	Pressure Drop (PSI)
40	4	3	1
60	5.5	4.5	1
80	8.5	7	1.5

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