## **Heavy-Duty Stuffing Box**





Johnson® Duramax® Heavy-duty Stuffing Box Systems are engineered and built to seal out seawater and give unmatched protection for your propulsion system. Johnson Stuffing Boxes, when combined with Duramax® Ultra-X® Packing, reduce maintenance costs drastically and keep your vessel moving full steam ahead.

### Air Seal Ring Allows Re-packing Without Dry-docking.

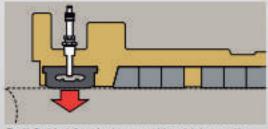
The ship's engineer can simply inflate the Air Seal rubber ring, making journal contact, creating a water-tight seal that holds out seawater during packing change. Optimum sealing is achieved when seal is inflated to 15 psi.

## Exclusive "Positive Retraction" permits repeated inflation-deflation cycles without damaging shaft.

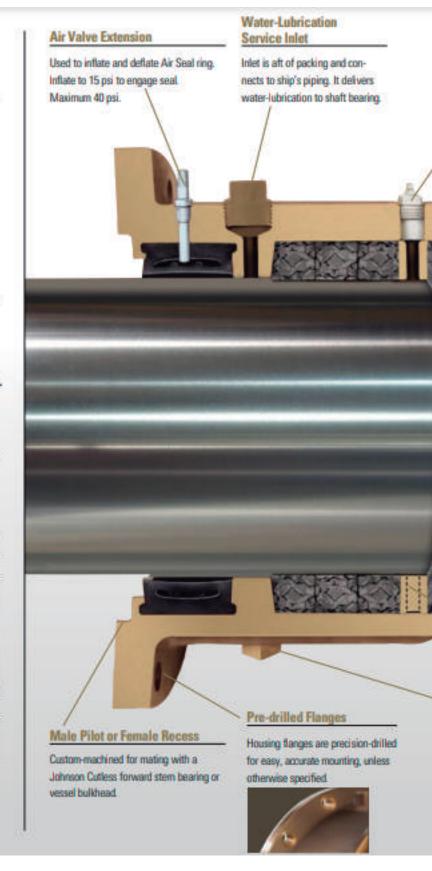
Once repacking is complete, the Air Seal ring is deflated. The nubber ring retracts to its original concave configuration in the housing, away from the journal. The rubber remains perfectly smooth. No wrinkles develop to cause wearing contact against the rotating shaft.



The Air Seal ring in original concave configuration



The Air Seal ring inflates, forming a water-tight seal during re-packing







### Duramax Ultra-X High Performance Compression Packing.

Ultra-X\* is the recommended packing for the
Johnson\* Duramax\* Stuffing Box. It is
engineered specifically to meet the
demands of marine propulsion. It lasts
5 times longer than other packing,
300% lower friction than flax, with
superior thermal conductivity. Ultra-X\* will outperform
all other marine packing in any stuffing box.

#### Virtually eliminates the high cost of packing failure.

You can install it and never need to worry about it again. It requires no grease, stays flexible, will not harden, swell or become brittle — virtually eliminating costly damage caused by extensive shaft scoring and wear.

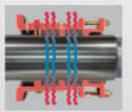


Shaft scoring caused by flax packing.

Duramax<sup>a</sup> Ultra-X<sup>a</sup> eliminates excessive shaft scoring that causes leaking, packing replacement and equipment damage.

#### Transfers frictional heat away from shaft.

With Duramax\* Ultra-X\* the stuffing box functions as a heat sink, lowering the temperature of the shaft and packing at high shaft speeds. Unlike flax packing that acts as an insulator, trapping the heat to the shaft causing costly damage.



### Complete Duramax System for optimum journal life & performance.

Trust the leader in water-lubricated bearing technology, proven performance of Johnson® Heavy Duty Stuffing Boxes and Ultra-X® Compression Packing engineered to meet the demands of marine propulsion systems.



Stuffing Box Options to Match Every Application. (Shafts 2-1/2 inches to 15 inches)

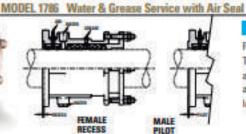
Stuffing boxes can be ordered with a female recess or male pilot to mate with Johnson Cutless\* forward stem tube bearings or vessel's bulkhead.





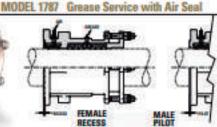






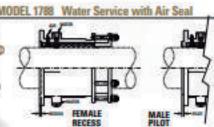
For use with water lubricated stem tube bearings. The 1786 is fitted with inflatable Air Seal ring: also inlets for water service to bearings, and "zerk" fitting with lantern-ring for grease lubrication of packing if required.





Identical to Fig. 1786, but does not include inlets for water lubrication. Suitable for a short sterntube where a forward bearing is not used. Includes "zerk" fitting and lantern-ring for grease lubrication of packing.

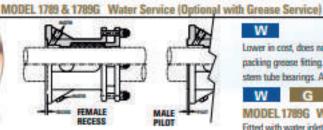




A W

Fitted with water inlet for bearing lubrication. Does not include grease fitting or lantern-ring, packing gland accommodates seven rings of packing as opposed to six for grease-lubricated glands. For use with self-lubricated packing.





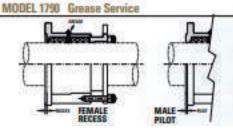
Lower in cost, does not include Air Seal feature or packing grease fitting. Water inlet delivers water to stem tube bearings. Accommodates 7 rows of packing.



WG

MODEL 1789G Water & Grease Service Fitted with water inlet, grease fitting, lantern ring and can accompdate 6 rows of packing.





For vessels with shafts up to 7" (177.80mm) this economical unit offers high efficiency at moderate cost. Equipped with grease-fitting, lantern-ringand space for six rings of packing. Four gland studs provide high strength for gland compression.



# Bulkhead & Rudder Stuffing Boxes

Space saving, Short-barrel Stuffing Box Options. (Shafts 2 inches to 6-1/4 inches)

#### MODEL 1790M Grease Service



G This short-barreled model accommodates four packing rings.
Flange has a 3/16' (4.76 mm) male pilot to project into buildhead.

"Zerk" fitting and lantern ring included.





#### MODEL 1791 Grease Service





## **Custom Options**

Johnson® Duramax® Stuffing Boxes can be custom built to match your specific needs. These are a few options to consider before ordering your custom system.

#### **Custom Engineered Castings**

If our large selection of standard sizes do not fit your need, or if you need a stuffing box larger than 15" we can custom build a unit up to 36".

Castings can be easily modified to accommodate unique applications.



#### Split Design for Ease of Installation

Because of the excessive weight, stuffing boxes larger than 15' are only built in split design. A split box at these sizes offers obvious installation and service advantages when working in confined quarters. Any size and model Johnson Cutless\* Heavy-Duty Stuffing Box can be custom split.



Add a Dutchman Air Seal to hold out seawater during maintenance.

The Dutchman housing permits the addition of our unique Air Seal Ring. that allows you to change packing without drydocking. This cost-saving unit can be custom built and added to any of our split design or solid stuffing boxes that do not have it already incorporated into their design.

The Air Seal easily seals out seawater with a minimum 15 psi. The seal can be inflated to a maximum of 40 psi. See page 30 for more information on ordering a Duramax<sup>a</sup> Dutchman Air Seal.

#### Stuffing Box Flange Configurations

#### With female recess.

For mating with flange-type forward stem tube Cutless® Bearing with male boss. Precisely machined to fit the male bearing flange pilot to form a solid unit.



For registering to the stem tube or for use with demountable rubber-stave bearing. Machined male pilot fits into stem tube

compressing the bearing staves, locking them into position and assuring alignment with the stern tube.

#### Stuffing Boxes Are Available in 2 Alloys







Aluminum (Optional)

#### Service Options

Available with Air Seal, water service or "zerk" grease service fitting, or a combination of all three.



# Duramax "Strong Boy" Stuffing Box & Stern Casting

For Shafts 4 inches to 6 inches on Smaller Commercial and Pleasure Craft

The Duramax® Strong Boy line of stuffing boxes and matching stern-castings are built for demanding longterm service. They are manufactured of cast bronze and require minimum maintenance.

#### "Strong-Boy" Series

#### "Strong-Boy" Series Stuffing Boxes

Solid bronze stuffing boxes designed with extra-thick ribs spaced at 90° for maximum rigidity and a heavy rectangular mounting flange. The extended male pilot mates with the shaft log to insure alignment. Three configurations are offered:

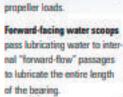
Model 102: Supplied with packing only

Model 102L: Supplied with packing, lantem-ring and grease litting for packing lubrication

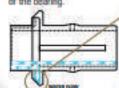
Model 102LB: Supplied with packing, lantern-ring and grease fitting, with 1/3-length standard rubber sleeve bearing, for extra support of longer shafts

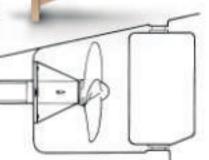
#### "Strong-Boy" Series Matching Stem-Castings

They are fitted with Johnson Cutless\* rubber sleeve bearings, are ideal for through-the-skeg installations. Their short barrel design includes an extended barrel which allows the bearing to project into the stern-post, thus leaving more space aft for propeller and rudder,



and adding support for heavy





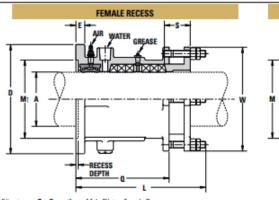


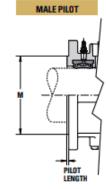
### **Model 1786**

Water and Grease Service with Air Seal Ring



MALE PILOT	/ FEMALE Ensions	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
6" – 15"	1/4"	3/8"



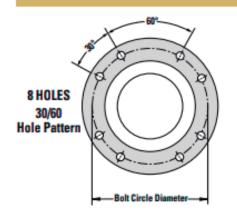


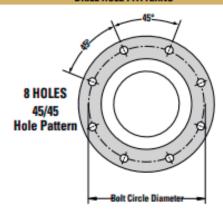
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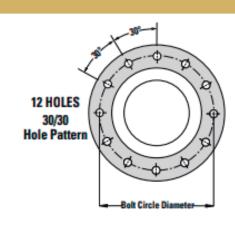
Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Milimeters Configurations: Male Pilot or Female Recess

Part	Model Numl	ber: Allo	y: Bronze (sta	ndard) or Alum	inum Shatt	Diameter: In	inches or Mili	meters Con	figurations: 1	Vale Pilot or Fe	emale Hecess			_			
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165.10										_							
6 - 5/8         0658         13 - 1/2         7/8         -         8 - 5/8         9 - 3/4         13 - 3/4         3         12 - 1/8         8 - 3/8         7/8         6         8         13/16         11 - 3/8         45/45           6 - 3/4         13 - 3/4         7/8         8 - 1/2         9         9 - 3/4         13 - 3/4         3         12 - 1/2         8 - 1/2         7/8         6         8         13/16         11 - 3/8         20.64         288.93         45/45           6 - 3/4         171.45         0634         13 - 3/4         7/8         8 - 1/2         9         9 - 3/4         13 - 3/4         3         12 - 1/2         8 - 1/2         7/8         6         8         13/16         12         45/45           171.45         0634         13 - 3/4         7/8         8 - 1/2         9         9 - 3/4         13 - 3/4         3         12 - 1/2         8 - 1/2         7/8         6         8         13/16         12         45/45           6 - 7/8         13 - 3/4         7/8         -         9 - 3/4         13 - 3/4         3         12 - 1/2         8 - 5/8         7/8         6         8         13/16         12         45/45		0612											6	8			45/45
168.28         0658         342.90         22.23         —         219.08         247.65         349.25         76.20         307.98         212.73         22.23         6         8         20.64         288.93         45/45           6 -3/4 171.45         0634 349.25         13 -3/4 22.23         13 -3/4 22.23         22.23         215.90         228.60         247.65         349.25         76.20         317.50         215.90         22.23         6         8         13/16 20.64         12 30.64         304.80         45/45           6 -7/8 174.63         13 -3/4 349.25         7/8 22.23         —         9 -3/4 228.60         13 -3/4 247.65         349.25 349.25         76.20 76.20         317.50 317.50         219.08         22.23         6         8         13/16 20.64         12 304.80         45/45           7         0700 177.80         13 -3/4 349.25         7/8 22.23         9 -3/4 22.860         13 -3/4 247.65         349.25 349.25         7/8 7/8 7/8 349.25         8 -3/4 7/8 7/8 349.25         7/8 22.23         6         8         13/16 8         12 20.64         304.80         45/45           7 - 1/8         0700 349.25         22.23         234.95         228.60         247.65         349.25         7/8.20         317.50 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td><math>\vdash</math></td></td<>																	$\vdash$
6 -3/4		0658			_								6	8			45/45
171.45					8 -1/2												
6 -7/8     0678     13 -3/4     7/8     -     9     9 -3/4     13 -3/4     3     12 -1/2     8 -5/8     7/8     6     8     13/16     12     45/45       174.63     349.25     22.23     -     228.60     247.65     349.25     76.20     317.50     219.08     22.23     6     8     13/16     12     45/45       177.80     13 -3/4     7/8     9 -1/4     9     9 -3/4     13 -3/4     3     12 -1/2     8 -3/4     7/8     6     8     13/16     12     45/45       177.80     349.25     22.23     234.95     228.60     247.65     349.25     76.20     317.50     222.25     22.23     6     8     13/16     12     45/45       7 -1/8     0718     14 -1/8     7/8     -     9 -5/8     11 -1/8     15 -5/8     3 -1/2     12 -7/8     9 -1/8     1     6     8     13/16     12 -3/8     45/45		0634											6	8			45/45
174.63     349.25     22.23     —     228.60     247.65     349.25     76.20     317.50     219.08     22.23     6     8     20.64     304.80     42/45       7     0700     13 - 3/4     7/8     9 - 1/4     9     9 - 3/4     13 - 3/4     3     12 - 1/2     8 - 3/4     7/8     6     8     13/16     12       177.80     349.25     22.23     234.95     228.60     247.65     349.25     76.20     317.50     222.25     22.23     6     8     13/16     12       7 - 1/8     0718     14 - 1/8     7/8     —     9 - 5/8     11 - 1/8     15 - 5/8     3 - 1/2     12 - 7/8     9 - 1/8     1     6     8     13/16     12 - 3/8     45/45		0070	13 -3/4									7/8		_			AE INC
177.80	174.63	0678	349.25	22.23	-	228.60	247.65	349.25	76.20	317.50	219.08	22.23	6	8	20.64	304.80	45/45
177.80 349.25 22.23 234.95 228.60 247.65 349.25 76.20 317.50 222.25 22.23 20.64 304.80 7-1/8 0718 14-1/8 7/8 - 9-5/8 11-1/8 15-5/8 3-1/2 12-7/8 9-1/8 1 6 8 13/16 12-3/8 45/45	7	0700	13 -3/4	7/8	9 -1/4	9	9 -3/4	13 -3/4	3	12 -1/2	8 -3/4	7/8	e		13/16	12	45/45
		0,00			234.95								Ľ	L.	_		10/10
180.98 358.78 22.23 - 244.48 282.58 396.88 88.90 327.03 231.78 25.40 20.64 314.33		0718			-								6	8			45/45
	180.98		358.78	22.23	-	244.48	282.58	396.88	88.90	327.03	231.78	25.40			20.64	314.33	









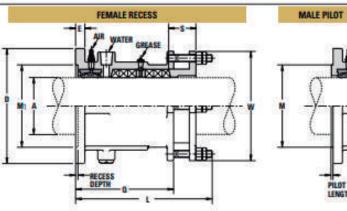
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O.D. Shaft or Sleeve Journal	CO DE	Range Diameter	Range Thickness	Male Pilot Diameter	Fe male Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
A		D	E	M	M1	a	L	s	w	P	acking			Drilling	Informat	ion
7 -1/4	0714	14 -1/8	7/8	9-1/4	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 -1/4	1	6	8	13/16	12 -3/8	45/45
184.15	u	358.78	22.23	234.95	244.48	282.58	396.88	88.90	327.03	234.95	25.40	•	_	20.64	314.33	1410
7 -3/8	0738	14 -1/8	7/8	-	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 -3/8	1	6	8	13/16	12 -3/8	45/45
187.33 7 -1/2		358.78 14 -1/2	22.23 7/8	10 -1/4	244.48 10	282.58 11 -1/8	396.88 15 -5/8	88.90 3 -1/2	327.03 13 -1/4	238.13 9 -1/2	25.40 1			20.64	314.33 12 -3/4	
190.50	0712	368.30	22.23	260.35	254.00	282.58	396.88	88.90	336.55	241.30	25.40	6	8	20.64	323.85	45/45
7 -5/8		14 -1/2	7/8	-	10	11 -1/8	15 -5/8	3-1/2	13 -1/4	9 -5/8	1		_	13/16	12 -3/4	
193.68	0758	368.30	22.23	-	254.00	282.58	396.88	88.90	336.55	244.48	25.40	6	8	20.64	323.85	45/45
7 -3/4	0734	14 -1/2	7/8	10 -1/4	10	11 -1/8	15 -5/8	3 -1/2	13 -1/4	9 -3/4	1	6	8	13/16	12 -3/4	45/45
196.85	0734	368.30	22.23	260.35	254.00	282.58	396.88	88.90	336.55	247.65	25.40	ů	ů	20.64	323.85	45/45
7 -7/8	0778	14 -7/8	7/8	-	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	9 -7/8	1	6	8	13/16	13 -1/8	45/45
200.03		377.83	22.23	-	263.53	282.58	396.88	88.90	346.08	250.83	25.40			20.64	333.38	
8 203.20	0800	14 -7/8 377.83	7/8 22.23	10 -1/4 260.35	10 -3/8 263.53	11 -1/8 282.58	15 -5/8 396.88	3 -1/2 88.90	13 -5/8 346.08	10 254.00	1 25.40	6	8	13/16 20.64	13 -1/8 333.38	45/45
8-1/8		14 -7/8	7/8	-	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	10 -1/8	25.40			13/16	13 -1/8	
206.38	0818	377.83	22.23	_	263.53	282.58	396.88	88.90	346.08	257.18	25.40	6	8	20.64	333.38	45/45
8 -1/4		15 -1/4	7/8	11	10 -3/4	11 -1/8	15 -5/8	3 -1/2	14	10 -1/4	1			13/16	13 -1/2	
209.55	0814	387.35	22.23	279.40	273.05	282.58	396.88	88.90	355.60	260.35	25.40	6	8	20.64	342.90	45/45
8 -3/8	0838	15 -1/4	7/8	-	10 -3/4	11 -1/8	15 -5/8	3 -1/2	14	10 -3/8	1	6		13/16	13 -1/2	45/45
212.73	0838	387.35	22.23	-	273.05	282.58	396.88	88.90	355.60	263.53	25.40	0	8	20.64	342.90	45/45
8 -1/2	0812	15 -1/4	7/8	11	10 -3/4	11 -1/8	15 -5/8	3 -1/2	14	10 -1/2	1	6	8	13/16	13 -1/2	45/45
215.90		387.35	22.23	279.40	273.05	282.58	396.88	88.90	355.60	266.70	25.40	-	_	20.64	342.90	-
8 - 5/8	0858	15 -5/8	1	-	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 - 3/8	10 -5/8	1 25.40	6	8	13/16	13 -7/8	45/45
219.08 8 -3/4		396.88 15 -5/8	25.40 1	11	282.58 11 -1/8	282.58 11 -1/8	396.88 15 -5/8	88.90 3 -1/2	365.13 14 -3/8	269.88 10 -3/4	25.40 1			20.64	352.43 13 -7/8	
222.25	0834	396.88	25.40	279.40	282.58	282.58	396.88	88.90	365.13	273.05	25.40	6	8	20.64	352.43	45/45
8 - 7/8		15 -5/8	1	-	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 - 3/8	10 -7/8	1			13/16	13 -7/8	
225.43	0878	396.88	25.40	-	282.58	282.58	396.88	88.90	365.13	276.23	25.40	6	8	20.64	352.43	45/45
9	0900	16	1	11 -3/4	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 -3/4	11	1	6	8	13/16	14 -1/4	45/45
228.60	0900	406.40	25.40	298.45	292.10	282.58	396.88	88.90	374.65	279.40	25.40	۰	•	20.64	361.95	45/45
9 -1/8	0918	16	1	-	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 -3/4	11 -1/8	1	6	8	13/16	14 -1/4	45/45
231.78		406.40	25.40	-	292.10	282.58	396.88	88.90	374.65	282.58	25.40			20.64	361.95	
9-1/4	0914	16	1 25.40	11 -3/4	11 -1/2	11 -1/8	15 -5/8	3-1/2	14 - 3/4	11 -1/4	1 25.40	6	8	13/16	14 -1/4	45/45
234.95 9 -3/8		406.40 16 -3/8	25.40 1	298.45	292.10 11 -7/8	282.58 11-1/8	396.88 15 - 5/8	88.90 3 -1/2	374.65 15 -1/8	285.75 11 -3/8	25.40 1			20.64	361.95 14 -5/8	
238.13	0938	415.93	25.40	_	301.63	282.58	396.88	88.90	384.18	288.93	25.40	6	8	20.64	371.48	45/45
9-1/2		16 -3/8	1	11 -3/4	11 -7/8	11 -1/8	15 -5/8	3 -1/2	15 -1/8	11 -1/2	1			13/16	14 -5/8	
241.30	0912	415.93	25.40	298.45	301.63	282.58	396.88	88.90	384.18	292.10	25.40	6	8	20.64	371.48	45/45
9 -5/8	0075	16 -3/8	1	-	11 -7/8	11 -1/8	15 -5/8	3 -1/2	15 -1/8	11 -5/8	1		_	13/16	14 -5/8	AP INC
244.48	0958	415.93	25.40	-	301.63	282.58	396.88	88.90	384.18	295.28	25.40	6	8	20.64	371.48	45/45
9 -3/4	0934	16 -7/8	1	12 -3/4	12 -3/8	11 -1/8	15 -5/8	3 -1/2	15 -1/2	11 -3/4	1	6	8	13/16	15	45/45
247.65		428.63	25.40	323.85	314.33	282.58	396.88	88.90	393.70	298.45	25.40		ľ	20.64	381.00	



# Model 1786 (continued) Water and Grease Service with Air Seal Ring



MALE PILOT	FEMALE INSIONS	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
6° -15°	1/4"	3/8"

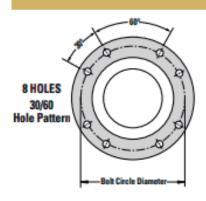


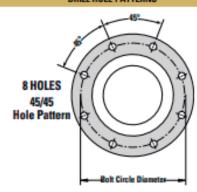
SPECIFY WHEN ORDERING:

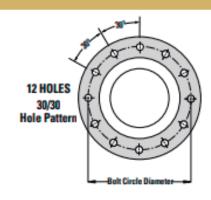
Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Millimeters Configurations: Male Pilot or Female Recess

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O.D. Shaft or Sleeve Journal	CO DE	Range Diameter	Range Thickness	Male Pilot Diameter	Fe male Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	<b>Bolt Circle</b>	Hole Spacing
A		D	E	M	M1	Q	L	S	w	P	acking		ı	Drilling	Informat	tion
9 -7/8	0978	16 -7/8	- 1	-	12 -3/8	11 -1/8	15 -5/8	3 -1/2	15 -1/2	11 -7/8	1	6	8	13/16	15	45/45
250.83	U3/6	428.63	25.40	-	314.33	282.58	396.88	88.90	393.70	301.63	25.40	ů	•	20.64	381.00	40/40
10	1000	16 -7/8	1	12 -3/4	12 -3/8	11 -1/8	15 -5/8	3 -1/2	15 -1/2	12	1	6	8	13/16	15	45/45
254.00		428.63	25.40	323.85	314.33	282.58	396.88	88.90	393.70	304.80	25.40	_	_	20.64	381.00	1415
10 -1/8	1018	17 -7/8	1	-	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -1/8	1	6	8	15/16	15 -3/4	45/45
257.18		454.03	25.40		323.85	298.45	412.75	88.90	406.40	307.98	25.40			23.81	400.05	
10 -1/4 260.35	1014	17 -7/8 454.03	1 25.40	12 -3/4 323.85	12 -3/4 323.85	11 -3/4 298.45	16 -1/4 412.75	3 -1/2 88.90	16 406.40	12 -1/4 311.15	1 25.40	6	8	15/16 23.81	15 -3/4 400.05	45/45
10 -3/8		17 -7/8	1	- 223.00	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -3/8	1			15/16	15 - 3/4	
263.53	1038	454.03	25.40	_	323.85	298.45	412.75	88.90	406.40	314.33	25.40	6	8	23.81	400.05	45/45
10 -1/2		18 -1/4	1	13 - 3/4	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 -3/8	12 -1/2	1			15/16	16 -1/8	
266.70	1012	463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	317.50	25.40	6	8	23.81	409.58	45/45
10 -5/8		18 -1/4	1	-	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 -3/8	12 -5/8	1		_	15/16	16 -1/8	
269.88	1058	463.55	25.40	-	333.38	298.45	412.75	88.90	415.93	320.68	25.40	6	8	23.81	409.58	45/45
10 -3/4	1034	18 -1/4	1	13 -3/4	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 -3/8	12 -3/4	1	6	8	15/16	16 -1/8	45/45
273.05	1034	463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	323.85	25.40	Ľ	ů	23.81	409.58	40,40
10 -7/8	1078	18 -5/8	1	-	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	12 -7/8	1	6	8	15/16	16 -1/2	45/45
276.23		473.08	25.40	-	342.90	298.45	412.75	88.90	425.45	327.03	25.40			23.81	419.10	
11	1100	18 - 5/8	1	13 -3/4	13 -1/2	11 -3/4	16 - 1/4	3 -1/2	16 -3/4	13	1	6	8	15/16	16 -1/2	45/45
279.40		473.08	25.40	349.25	342.90	298.45	412.75	88.90	425.45	330.20	25.40			23.81	419.10	
11 -1/8 282.58	1118	18 -5/8 473.08	1 25.40	_	13 -1/2 342.90	11 -3/4 298.45	16 -1/4 412.75	3 -1/2 88.90	16 -3/4 425.45	13 -1/8 333.38	1 25.40	6	8	15/16 23.81	16 -1/2 419.10	45/45
11 -1/4		19	1	14 -1/2	13 -7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -1/4	1			15/16	16 - 7/8	
285.75	1114	482.60	25.40	368.30	352.43	298.45	412.75	88.90	434.98	336.55	25.40	6	8	23.81	428.63	45/45
11 -3/8		19	1	-	13 -7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -3/8	1			15/16	16 -7/8	
288.93	1138	482.60	25.40	-	352.43	298.45	412.75	88.90	434.98	339.73	25.40	6	8	23.81	428.63	45/45
11 -1/2	1112	19	1	14 -1/2	13 -7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -1/2	1	6	8	15/16	16 -7/8	45/45
292.10	IIIZ	482.60	25.40	368.30	352.43	298.45	412.75	88.90	434.98	342.90	25.40	ů	•	23.81	428.63	40/40
11 -5/8	1158	19 -3/8	1	-	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -5/8	1	6	12	15/16	17 -1/4	30/30
295.28		492.13	25.40	-	358.78	298.45	412.75	88.90	444.50	346.08	25.40	-		23.81	438.15	34,55
11 -3/4	1134	19 -3/8	1	14 -1/2	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -3/4	1	6	12	15/16	17 -1/4	30/30
298.45		492.13	25.40	368.30	358.78	298.45	412.75	88.90	444.50	349.25	25.40			23.81	438.15	
11 -7/8 301.63	1178	19 -3/8 492.13	1 25.40	_	14 -1/8 358.78	11 -3/4 298.45	16 -1/4 412.75	3 -1/2 88.90	17 -1/2 444.50	13 -7/8 352.43	1 25.40	6	12	15/16 23.81	17 -1/4 438.15	30/30
12		19 -3/4	1	15 -1/2	14 -1/2	11 -5/8	16 -3/8	3 -3/4	17 -7/8	14	25.40			15/16	17 -5/8	
304.80	1200	501.65	25.40	393.70	368.30	295.28	415.93	95.25	454.03	355.60	25.40	6	12	23.81	447.68	30/30
12 -1/8		19 -3/4	1	-	14 -1/2	11 -5/8	16 -3/8	3 - 3/4	17 -7/8	14 -1/8	1			15/16	17 -5/8	
307.98	1218	501.65	25.40	_	368.30	295.28	415.93	95.25	454.03	358.78	25.40	6	12	23.81	447.68	30/30
12 -1/4		19 -3/4	1	15 -1/2	14 -1/2	11 -5/8	16 -3/8	3 -3/4	17 -7/8	14 -1/4	1			15/16	17 -5/8	20.00
311.15	1214	501.65	25.40	393.70	368.30	295.28	415.93	95.25	454.03	361.95	25.40	6	12	23.81	447.68	30/30
		20 -1/8	1 -1/8	-	15 -1/8	11 -5/8	16 -3/8	3 -3/4	18 -1/4	14 -3/8	1			15/16	18	
12 -3/8	1238	20-1/6	1 -1/0	_	15-170	40		, -		14 010		6	12			30/30









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O.D. Shaft or Sleeve Journal	CO DE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
A		D	E	M	M1	Q	L	S	w	P	acking		- 1	Drilling	Informat	tion
12 -1/2	1212	20 -1/8	1 -1/8	15 -1/2	15 -1/8	11 -5/8	16 - 3/8	3 3/4	18 -1/4	14 -1/2	1	6	12	15/16	18	30/30
317.50		511.18	28.58	393.70	384.18	295.28	415.93	95.25	463.55	368.30	25.40	Ľ		23.81	457.20	54,50
12 -5/8	1258	20 -1/8	1 -1/8	-	15 -1/8	11 -5/8	16 -3/8	3 -3/4	18 -1/4	14 -5/8	1	6	12	15/16	18	30/30
320.68 12 -3/4		511.18 20 -1/2	28.58 1 -1/8	16 -1/4	384.18 15 -1/2	295.28 11 -5/8	415.93 16 -3/8	95.25 3 -3/4	463.55 18 -5/8	371.48 14 -3/4	25.40 1			23.81 15/16	457.20 18 -3/8	
323.85	1234	520.70	28.58	412.75	393.70	295.28	415.93	95.25	473.08	374.65	25.40	6	12	23.81	466.73	30/30
12 -7/8		20 -1/2	1 -1/8	-	15 -1/2	11 -5/8	16 -3/8	3 - 3/4	18 - 5/8	14 -7/8	1			15/16	18 - 3/8	
327.03	1278	520.70	28.58	-	393.70	295.28	415.93	95.25	473.08	377.83	25.40	6	12	23.81	466.73	30/30
13		20 -1/2	1 -1/8	16 -1/4	15 -1/2	11 -5/8	16 -3/8	3 -3/4	18 -5/8	15	1		_	15/16	18 -3/8	20.00
330.20	1300	520.70	28.58	412.75	393.70	295.28	415.93	95.25	473.08	381.00	25.40	6	12	23.81	466.73	30/30
13 -1/8	1318	21	1 -1/8	-	15 -3/4	11 -5/8	16 -3/8	3 -3/4	19 -1/8	15 -1/8	1	6	12	15/16	18 -7/8	30/30
333.38		533.40	28.58	-	400.05	295.28	415.93	95.25	485.78	384.18	25.40	-	-	23.81	479.43	
13 -1/4	1314	21	1 -1/8	16 -1/4	15 -3/4	11 -5/8	16 -3/8	3 - 3/4	19 -1/8	15 -1/4	1	6	12	15/16	18 - 7/8	30/30
336.55 13 -3/8		533.40 <b>21</b>	28.58 1 -1/8	412.75	400.05 15 -3/4	295.28 11 -5/8	415.93 16 -3/8	95.25 3 -3/4	485.78 19 -1/8	387.35 15 -3/8	25.40 1			23.81 15/16	479.43 18 - 7/8	
339.73	1338	533.40	28.58	_	400.05	295.28	415.93	95.25	485.78	390.53	25.40	6	12	23.81	479.43	30/30
13 -1/2		21 -3/8	1 -1/8	17 -1/4	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -1/2	1			15/16	19 -1/4	
342.90	1312	542.93	28.58	438.15	412.75	295.28	415.93	95.25	495.30	393.70	25.40	6	12	23.81	488.95	30/30
13 -5/8		21 -3/8	1 -1/8	-	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -5/8	1			15/16	19 -1/4	
346.08	1358	542.93	28.58	-	412.75	295.28	415.93	95.25	495.30	396.88	25.40	6	12	23.81	488.95	30/30
13 -3/4	1334	21 -3/8	1 -1/8	17 -1/4	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -3/4	1	6	12	15/16	19 -1/4	30/30
349.25		542.93	28.58	438.15	412.75	295.28	415.93	95.25	495.30	400.05	25.40	-		23.81	488.95	
13 -7/8	1378	21 -3/4	1 -1/8	-	16 -5/8	11 -5/8	16 -3/8	3 -3/4	19 -7/8	15 -7/8	1	6	12	15/16	19 -5/8	30/30
352.43 14		552.45 21 -3/4	28.58 1 -1/8	17 -1/4	422.28 16 -5/8	295.28 11 -5/8	415.93 16 -3/8	95.25 3 -3/4	504.83 19 -7/8	403.23 16	25.40 1			23.81 15/16	498.48 19 -5/8	
355.60	1400	552.45	28.58	438.15	422.28	295.28	415.93	95.25	504.83	406.40	25.40	6	12	23.81	498.48	30/30
14 -1/8		21 -3/4	1 -1/8	-	16 -5/8	11 -5/8	16 - 3/8	3 -3/4	19 -7/8	16 -1/8	1			15/16	19 -5/8	
358.78	1418	552.45	28.58	_	422.28	295.28	415.93	95.25	504.83	409.58	25.40	6	12	23.81	498.48	30/30
14 -1/4	1414	22 -1/8	1 -1/8	18 -1/4	17 -1/4	11 -7/8	16 -5/8	3 -3/4	20 -1/4	16 -1/4	1	Ī.	12	15/16	20	20/20
361.95	1414	561.98	28.58	463.55	438.15	301.63	422.28	95.25	514.35	412.75	25.40	6	12	23.81	508.00	30/30
14 -3/8	1438	22 -1/8	1 -1/8	-	17 -1/4	11 -7/8	16 -5/8	3 -3/4	20 -1/4	16 -3/8	1	6	12	15/16	20	30/30
365.13		561.98	28.58	-	438.15	301.63	422.28	95.25	514.35	415.93	25.40			23.81	508.00	
14 -1/2	1412	22 -1/8	1 -1/8	18 -1/4	17 -1/4	11 -7/8	16 -5/8	3 - 3/4	20 -1/4	16 - 1/2	1 25.40	6	12	15/16	20	30/30
368.30 14 -5/8		561.98 22 -1/2	28.58	463.55	438.15 17 -1/2	301.63 11 -7/8	422.28 16 -5/8	95.25 3 -3/4	514.35 20 -5/8	419.10 16 -5/8	25.40 1			23.81	508.00 20 -3/8	
371.48	1458	571.50	28.58	_	444.50	301.63	422.28	95.25	523.88	422.28	25.40	6	12	23.81	517.53	30/30
14 - 3/4		22 -1/2	1 -1/8	18 -1/4	17 -1/2	11 -7/8	16 -5/8	3 - 3/4	20 -5/8	16 -3/4	1			15/16	20 -3/8	
374.65	1434	571.50	28.58	463.55	444.50	301.63	422.28	95.25	523.88	425.45	25.40	6	12	23.81	517.53	30/30
14 -7/8	1478	22 -3/4	1 -1/8	-	17 -3/4	11 -7/8	16 -5/8	3 -3/4	20 -7/8	16 -7/8	1		12	15/16	20 -5/8	20/20
377.83	14/6	577.85	28.58	-	450.85	301.63	422.28	95.25	530.23	428.63	25.40	6	12	23.81	523.88	30/30
15	1500	22 -3/4	1 -1/8	19	17 -3/4	11 -7/8	16 -5/8	3 -3/4	20 -7/8	17	1	6	12	15/16	20 -5/8	30/30
381.00		577.85	28.58	482.60	450.85	301.63	422.28	95.25	530.23	431.80	25.40	Ľ		23.81	523.88	32/30

Consult factory for sizes 15-1/8" to 36"

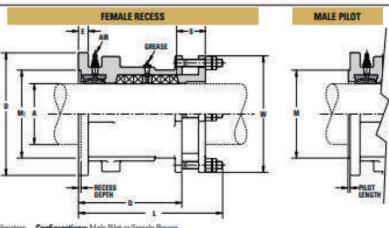


### Model 1787

Grease Service with Air Seal Ring



MALE PILOT	FEMALE ENSIONS	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
6' - 15'	1/4"	3/8"

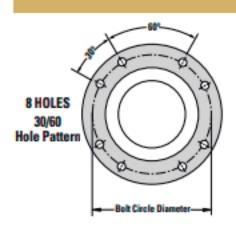


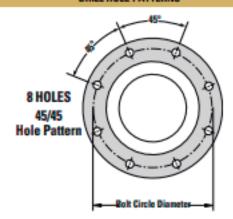
SPECIFY WHEN ORDERING:

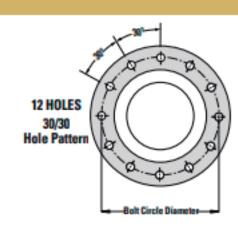
Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Milimeters Configurations: Male Pilot or Female Recess

		,											_			
O.D. Shaft or Sleeve Journal	CODE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
A		D	E	M	M1	Q	L	S	w	P	acking			Drilling	Informat	ion
2 -1/2	0212	6 -1/4	7/16	3 -1/2	4	5 - 7/16	7 -1/2	-	5 -3/4	3 -1/4	3/8	6	8	9/16	5	30/60
63.5	UZIZ	158.75	11.11	88.90	101.60	138.11	190.50	-	146.05	82.55	9.53	ů	ů	14.29	127.00	30/60
3	0300	7 -1/2	7/16	4 -1/2	4 -3/4	6 -5/16	8 -1/2	1 -7/16	7	4	1/2	6	8	11/16	6-1/4	30/60
76.20		190.50	11.11	114.30	120.65	160.34	215.90	36.51	177.80	101.60	12.70	_	-	17.46	158.75	
3 -1/4	0314	7 -1/2	7/16	-	4 - 3/4	6 -5/16	8 - 1/2	1 -7/16	7	4 - 1/4	1/2	6	8	11/16	6 - 1/4	30/60
82.55		190.50	11.11	-	120.65	160.34	215.90	36.51	177.80	107.95	12.70			17.46	158.75	
3 -1/2 88.90	0312	8 -1/8 206.38	5/8 15.88	4 -1/2 114.30	5 -1/4 133.35	6 -5/16 160.34	8 -11/16 220.66	1 -5/8 41.28	7 -5/8 193.68	4-1/2 114.30	1/2 12.70	6	8	11/16 17.46	6-3/4 171.45	30/60
3 -3/4		8 -1/8	5/8	-	5-1/4	6 -5/16	8 -11/16	1 -5/8	7 -5/8	4-3/4	1/2			11/16	6-3/4	
95.25	0334	206.38	15.88	_	133.35	160.34	220.66	41.28	193.68	120.65	12.70	6	8	17.46	171.45	30/60
4		8 -5/8	5/8	5 -1/2	5 -3/4	6 -5/16	8 -11/16	1 -5/8	8 - 1/8	5	1/2			11/16	7 -1/4	
101.60	0400	219.08	15.88	139.70	146.05	160.34	220.66	41.28	206.38	127.00	12.70	6	8	17.46	184.15	30/60
4 -1/4	0414	8 -5/8	5/8	5 -1/2	5 -3/4	6 -5/16	8 -11/16	1 -5/8	8 -1/8	5 -1/4	1/2			11/16	7 -1/4	20.00
107.95	0414	219.08	15.88	139.70	146.05	160.34	220.66	41.28	206.38	133.35	12.70	6	8	17.46	184.15	30/60
4 -1/2	0412	9 -3/8	13/16	6 -1/8	6 -1/2	7 -5/16	9 -15/16	1 -7/8	8 - 7/8	5 -3/4	5/8	6	8	11/16	8	30/60
114.30	0412	238.13	20.64	155.58	165.10	185.74	252.41	47.63	225.43	146.05	15.88	L.	L.	17.46	203.20	30/60
4 -3/4	0434	9 -3/8	13/16	6 -1/8	6 -1/2	7 -5/16	9 - 15/16	1 -7/8	8 -7/8	6	5/8	6	8	11/16	8	30/60
120.65		238.13	20.64	155.58	165.10	185.74	252.41	47.63	225.43	152.40	15.88	Ľ	_	17.46	203.20	50,00
5	0500	10 -1/8	13/16	6 -1/2	7 -1/4	8-9/16	11 -15/16	2 -3/8	9 -5/8	6 -1/2	3/4	6	8	11/16	8 - 3/4	30/60
127.00		257.18	20.64	165.10	184.15	217.49	303.21	60.33	244.48	165.10	19.05	_	-	17.46	222.25	
5 -1/4	0514	10 -1/8	13/16	6 -1/2	7 -1/4	8 -9/16	11 -15/16	2 -3/8	9 -5/8	6 -3/4	3/4	6	8	11/16	8 - 3/4	30/60
133.35		257.18	20.64	165.10	184.15	217.49	303.21	60.33	244.48	171.45	19.05			17.46	222.25	
5 -1/2 139.70	0512	10 -5/8 269.88	13/16 20.64	7 -1/2 190.50	7 -3/4 196.85	8 -9/16 217.49	11 -15/16 303.21	2 -3/8 60.33	10 -1/8 257.18	7 177.80	3/4 19.05	6	8	17,46	9 - 1/4 234.95	30/60
5-3/4		10 -5/8	13/16	7-1/2	7 -3/4	8-9/16	11 -15/16	2 -3/8	10 -1/8	7-1/4	3/4			11/16	9 -1/4	
146.05	0534	269.88	20.64	190.50	196.85	217.49	303.21	60.33	257.18	184.15	19.05	6	8	17.46	234.95	30/60
6		11 -3/8	13/16	8	8	8 - 3/4	12 -3/4	3	11 -1/8	7 -1/2	3/4			11/16	10 -1/8	
152.40	0600	288.93	20.64	203.20	203.20	222.25	323.85	76.20	282.58	190.50	19.05	6	8	17.46	257.18	30/60
6 -1/4	0614	11 -3/8	13/16	8	8	8 -3/4	12 -3/4	3	11 -1/8	7 -3/4	3/4			11/16	10 -1/8	20/00
158.75	0614	288.93	20.64	203.20	203.20	222.25	323.85	76.20	282.58	196.85	19.05	6	8	17.46	257.18	30/60
6 -1/2	0612	13 -1/2	7/8	8 -1/2	8 -5/8	9 -3/4	13 -3/4	3	12 -1/8	8 - 1/4	7/8	6	8	13/16	11 -3/8	45/45
165.10	0012	342.90	22.23	215.90	219.08	247.65	349.25	76.20	307.98	209.55	22.23	Ľ	Ľ	20.64	288.93	40/40
6 -5/8	0658	13 -1/2	7/8	-	8 -5/8	9 -3/4	13 -3/4	3	12 -1/8	8 -3/8	7/8	6	8	13/16	11 -3/8	45/45
168.28		342.90	22.23	-	219.08	247.65	349.25	76.20	307.98	212.73	22.23			20.64	288.93	
6 -3/4	0634	13 -3/4	7/8	8 -1/2	9	9 -3/4	13 -3/4	3	12 -1/2	8 -1/2	7/8	6	8	13/16	12	45/45
171.45		349.25	22.23	215.90	228.60	247.65	349.25	76.20	317.50	215.90	22.23			20.64	304.80	
6 - 7/8	0678	13 -3/4	7/8	-	9	9 - 3/4	13 - 3/4	3	12 -1/2	8 - 5/8	7/8	6	8	13/16	12	45/45
174.63		349.25	22.23	- 0.1/4	228.60	247.65	349.25	76.20	317.50	219.08	22.23			20.64	304.80	
7 177.80	0700	13 -3/4 349.25	7/8 22.23	9 -1/4 234.95	9 228.60	9 -3/4 247.65	13 -3/4 349.25	3 76.20	12 -1/2 317.50	8 -3/4 222.25	7/8 22.23	6	8	13/16 20.64	12 304.80	45/45
7-1/8		14 - 1/8	7/8	234.90	9 - 5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9-1/8	1			13/16	12 - 3/8	
180.98	0718	358.78	22.23	_	244.48	282.58	396.88	88.90	327.03	231.78	25.40	6	8	20.64	314.33	45/45
100.00		000.70	22.23		241.40	202.00	550.00	00.30	027.03	201.70	20.40			20.04	314.33	









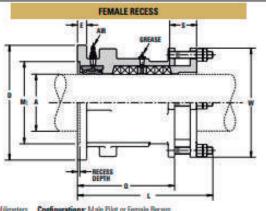
O.D. Shaft or Sleeve Journal	CODE	Flange Diameter	Flange Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	əzis II i Q	Bolt Circle	Hole Spacing
A		D	E	M	M1	Q	L	s	w	P	acking			Drilling	Informat	tion
7 -1/4		14 -1/8	7/8	9 -1/4	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 - 1/4	1			13/16	12 -3/8	
184.15	0714	358.78	22.23	234.95	244.48	282.58	396.88	88.90	327.03	234.95	25.40	6	8	20.64	314.33	45/45
7 -3/8		14 -1/8	7/8	-	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 -3/8	1	_		13/16	12 -3/8	
187.33	0738	358.78	22.23	_	244.48	282.58	396.88	88.90	327.03	238.13	25.40	6	8	20.64	314.33	45/45
7 -1/2	0712	14 -1/2	7/8	10 -1/4	10	11 -1/8	15 -5/8	3 -1/2	13 -1/4	9 -1/2	1			13/16	12 -3/4	45/45
190.50	0/12	368.30	22.23	260.35	254.00	282.58	396.88	88.90	336.55	241.30	25.40	6	8	20.64	323.85	45/45
7 -5/8	0750	14 -1/2	7/8	-	10	11 -1/8	15 -5/8	3 -1/2	13 -1/4	9 -5/8	1	_		13/16	12 -3/4	AFME
193.68	0758	368.30	22.23	-	254.00	282.58	396.88	88.90	336.55	244.48	25.40	6	8	20.64	323.85	45/45
7 -3/4	0734	14 -1/2	7/8	10 -1/4	10	11 -1/8	15 -5/8	3 -1/2	13 -1/4	9 -3/4	1	6	8	13/16	12 -3/4	45/45
196.85	0734	368.30	22.23	260.35	254.00	282.58	396.88	88.90	336.55	247.65	25.40	•	•	20.64	323.85	45/45
7 -7/8	0778	14 -7/8	7/8	-	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	9 -7/8	1			13/16	13 -1/8	AEME
200.03	0778	377.83	22.23	-	263.53	282.58	396.88	88.90	346.08	250.83	25.40	6	8	20.64	333.38	45/45
8	0800	14 -7/8	7/8	10 -1/4	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	10	1	6	8	13/16	13 -1/8	45/45
203.20	0000	377.83	22.23	260.35	263.53	282.58	396.88	88.90	346.08	254.00	25.40	Ľ	Ľ	20.64	333.38	40/40
8 -1/8	0818	14 -7/8	7/8	-	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	10 -1/8	1	6	8	13/16	13 -1/8	45/45
206.38	00.0	377.83	22.23	-	263.53	282.58	396.88	88.90	346.08	257.18	25.40	Ľ	Ľ	20.64	333.38	40/40
8 - 1/4	0814	15 -1/4	7/8	11	10 -3/4	11 -1/8	15 -5/8	3-1/2	14	10 -1/4	1	6	8	13/16	13 -1/2	45/45
209.55	0014	387.35	22.23	279.40	273.05	282.58	396.88	88.90	355.60	260.35	25.40	Ľ	Ľ	20.64	342.90	40/40
8 -3/8	0838	15 -1/4	7/8	-	10 -3/4	11 -1/8	15 -5/8	3 -1/2	14	10 -3/8	1	6	8	13/16	13 -1/2	45/45
212.73		387.35	22.23	-	273.05	282.58	396.88	88.90	355.60	263.53	25.40	_	_	20.64	342.90	14/15
8 -1/2	0812	15 -1/4	7/8	11	10 -3/4	11 -1/8	15 -5/8	3 -1/2	14	10 -1/2	1	6	8	13/16	13 -1/2	45/45
215.90		387.35	22.23	279.40	273.05	282.58	396.88	88.90	355.60	266.70	25.40	_	_	20.64	342.90	141.5
8 -5/8	0858	15 -5/8	1	-	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 -3/8	10 -5/8	1	6	8	13/16	13 -7/8	45/45
219.08		396.88	25.40	-	282.58	282.58	396.88	88.90	365.13	269.88	25.40			20.64	352.43	
8 -3/4	0834	15 -5/8	1	11	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 -3/8	10 -3/4	1	6	8	13/16	13 -7/8	45/45
222.25		396.88	25.40	279.40	282.58	282.58	396.88	88.90	365.13	273.05	25.40	_	-	20.64	352.43	
8 - 7/8	0878	15 -5/8	1	-	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 - 3/8	10 -7/8	1	6	8	13/16	13 -7/8	45/45
225.43		396.88	25.40	-	282.58	282.58	396.88	88.90	365.13	276.23	25.40			20.64	352.43	-
9	0900	16	1	11 -3/4	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 - 3/4	11	1	6	8	13/16	14 -1/4	45/45
228.60		406.40	25.40	298.45	292.10	282.58	396.88	88.90	374.65	279.40	25.40			20.64	361.95	
9 -1/8	0918	16	1	-	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 - 3/4	11 -1/8	1	6	8	13/16	14 -1/4	45/45
231.78		406.40	25.40	-	292.10	282.58	396.88	88.90	374.65	282.58	25.40			20.64	361.95	
9-1/4	0914	16	1	11 -3/4	11 -1/2	11 -1/8	15 -5/8	3-1/2	14 - 3/4	11 -1/4	1 25.40	6	8	13/16	14 -1/4	45/45
234.95		406.40	25.40	298.45	292.10	282.58	396.88	88.90	374.65	285.75	25.40			20.64	361.95	
9 - 3/8	0938	16 - 3/8	25.40	_	11 -7/8	11-1/8	15 - 5/8	3-1/2	15 - 1/8	11 -3/8	1 25.40	6	8	13/16	14 -5/8	45/45
238.13		415.93	25.40		301.63	282.58	396.88	88.90	384.18	288.93	25.40			20.64	371.48	
9-1/2	0912	16 - 3/8	1 25.40	11 -3/4	11 -7/8	11 -1/8	15 -5/8	3-1/2	15 -1/8	11 -1/2	1 25.40	6	8	13/16	14 -5/8	45/45
241.30		415.93	25.40	298.45	301.63	282.58	396.88	88.90	384.18	292.10	25.40			20.64	371.48	
9 - 5/8	0958	16 - 3/8	25.40	_	11 -7/8	11 -1/8	15 -5/8	3-1/2	15 - 1/8	205.20	1 25 AD	6	8	13/16	14 -5/8	45/45
244.48 9 -3/4		415.93 16 -7/8	25.40 1	12 -3/4	301.63	282.58	396.88 15 -5/8	88.90	384.18	295.28	25.40 1			20.64	371.48 <b>15</b>	
	0934				12 - 3/8	202 50		3 -1/2 88.90	15-1/2	200 //5	1	6	8	13/16		45/45
247.65		428.63	25.40	323.85	314.33	282.58	396.88	80.90	393.70	298.45	25.40	$\overline{}$	-	20.64	381.00	

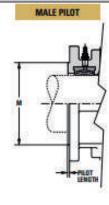


# Model 1787 (continued) Grease Service with Air Seal Ring



MALE PILOT	FEMALE ENSIONS	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
6'-15'	W	3/8.





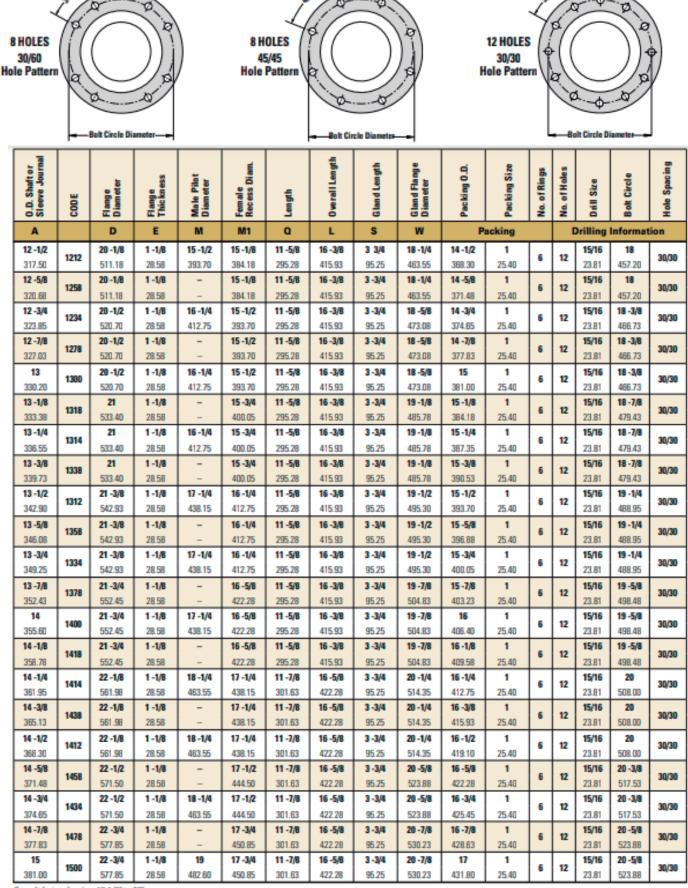
SPECIFY WHEN ORDERING:

Model Number: Alloy: Branze (standard) or Aluminum Shaft Diameter: In Inches or Milimeters Configurations: Male Pilot or Female Recess

												_	_			
O.D. Shaft or Steeve Journal	30 DE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	<b>Bolt Circle</b>	Hole Spacing
A		D	E	M	M1	Q	L	S	w	P	acking		-	Drilling	Informat	tion
9 -7/8	0978	16 -7/8	1	-	12 -3/8	11 -1/8	15 -5/8	3 -1/2	15 -1/2	11 -7/8	1	6	8	13/16	15	45/45
250.83		428.63	25.40	-	314.33	282.58	396.88	88.90	393.70	301.63	25.40	_	-	20.64	381.00	
10	1000	16 -7/8	1	12 -3/4	12 - 3/8	11 -1/8	15 -5/8	3 -1/2	15-1/2	12	1 25.40	6	8	13/16	15	45/45
254.00 10 -1/8		428.63 17 -7/8	25.40 1	323.85	314.33 12 -3/4	282.58 11 -3/4	396.88 16 -1/4	88.90 3 -1/2	393.70 16	304.80 12 -1/8	25.40 1			20.64 15/16	381.00 15 -3/4	
257.18	1018	454.03	25.40	_	323.85	298.45	412.75	88.90	406.40	307.98	25.40	6	8	23.81	400.05	45/45
10 -1/4		17 -7/8	1	12 -3/4	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -1/4	1			15/16	15 -3/4	
260.35	1014	454.03	25.40	323.85	323.85	298.45	412.75	88.90	406.40	311.15	25.40	6	8	23.81	400.05	45/45
10 -3/8	1038	17 -7/8	1	-	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -3/8	1	6	8	15/16	15 -3/4	45/45
263.53	1036	454.03	25.40	-	323.85	298.45	412.75	88.90	406.40	314.33	25.40	ů	°	23.81	400.05	40/40
10 -1/2	1012	18 -1/4	1	13 -3/4	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 -3/8	12 -1/2	1	6	8	15/16	16 -1/8	45/45
266.70		463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	317.50	25.40			23.81	409.58	
10 -5/8 269.88	1058	18 -1/4 463.55	1 25.40	-	13 -1/8 333.38	11 -3/4	16 -1/4 412.75	3 -1/2 88.90	16 - 3/8	12 -5/8 320.68	1 25.40	6	8	15/16 23.81	16 -1/8 409.58	45/45
10 -3/4		18 -1/4	1	13 -3/4	13 -1/8	298.45 11 -3/4	16 -1/4	3-1/2	415.93 16 -3/8	12 -3/4	1			15/16	16 -1/8	
273.05	1034	463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	323.85	25.40	6	8	23.81	409.58	45/45
10 -7/8		18 -5/8	1	-	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	12 -7/8	1			15/16	16 -1/2	
276.23	1078	473.08	25.40	_	342.90	298.45	412.75	88.90	425.45	327.03	25.40	6	8	23.81	419.10	45/45
11	****	18 -5/8	1	13 -3/4	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	13	1			15/16	16 -1/2	ar iar
279.40	1100	473.08	25.40	349.25	342.90	298.45	412.75	88.90	425.45	330.20	25.40	6	8	23.81	419.10	45/45
11 -1/8	1118	18 -5/8	1	-	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	13 -1/8	1	6	8	15/16	16 -1/2	45/45
282.58		473.08	25.40	-	342.90	298.45	412.75	88.90	425.45	333.38	25.40	-	_	23.81	419.10	
11 -1/4	1114	19	1	14 -1/2	13 - 7/8	11 -3/4	16-1/4	3-1/2	17 -1/8	13 -1/4	1	6	8	15/16	16 -7/8	45/45
285.75 11 -3/8		482.60 <b>19</b>	25.40 1	368.30	352.43 13 -7/8	298.45 11 -3/4	412.75 16 -1/4	88.90 3 -1/2	434.98 17 -1/8	336.55 13 -3/8	25.40 1			23.81	428.63 16 -7/8	
288.93	1138	482.60	25.40	_	352.43	298.45	412.75	88.90	434.98	339.73	25.40	6	8	23.81	428.63	45/45
11 -1/2		19	1	14 -1/2	13 -7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -1/2	1			15/16	16 -7/8	
292.10	1112	482.60	25.40	368.30	352.43	298.45	412.75	88.90	434.98	342.90	25.40	6	8	23.81	428.63	45/45
11 -5/8	****	19 -3/8	1	-	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -5/8	1			15/16	17 -1/4	20.00
295.28	1158	492.13	25.40	-	358.78	298.45	412.75	88.90	444.50	346.08	25.40	6	12	23.81	438.15	30/30
11 -3/4	1134	19 -3/8	1	14 -1/2	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -3/4	1	6	12	15/16	17 -1/4	30/30
298.45		492.13	25.40	368.30	358.78	298.45	412.75	88.90	444.50	349.25	25.40	-	_	23.81	438.15	
11 -7/8	1178	19 - 3/8	1 25.40	-	14 - 1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 - 7/8	1 25.40	6	12	15/16	17 -1/4	30/30
301.63		492.13	25.40	15 1/2	358.78	298.45	412.75	88.90	444.50	352.43	25.40			23.81	438.15	
12 304.80	1200	19 -3/4 501.65	25.40	15 -1/2 393.70	14 -1/2 368.30	11 -5/8 295.28	16 -3/8 415.93	3 -3/4 95.25	17 -7/8 454.03	14 355.60	25.40	6	12	23.81	<b>17 -5/8</b> 447.68	30/30
12 -1/8		19 -3/4	1	-	14 -1/2	11 -5/8	16 -3/8	3-3/4	17 -7/8	14 -1/8	1			15/16	17 -5/8	
307.98	1218	501.65	25.40	_	368.30	295.28	415.93	95.25	454.03	358.78	25.40	6	12	23.81	447.68	30/30
12 -1/4		19 -3/4	1	15 -1/2	14 -1/2	11 -5/8	16 -3/8	3 -3/4	17 -7/8	14 -1/4	1			15/16	17 -5/8	
311.15	1214	501.65	25.40	393.70	368.30	295.28	415.93	95.25	454.03	361.95	25.40	6	12	23.81	447.68	30/30
12 -3/8	1238	20 -1/8	1 -1/8	-	15 -1/8	11 -5/8	16 -3/8	3 -3/4	18 -1/4	14 -3/8	1	6	12	15/16	18	30/30
	16.00	511.18	28.58		384.18	295.28	415.93	95.25	463.55	365.13			1 14	23.81		20,30



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Consult factory for sizes 15-1/8" to 36'

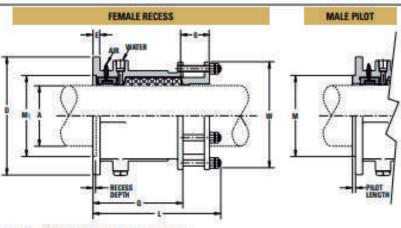


### **Model 1788**

Water Service with Air Seal Ring



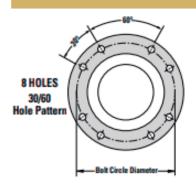
MALE PILOT /	FEMALE ENSIONS	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
6'-15'	1/4"	3/8"

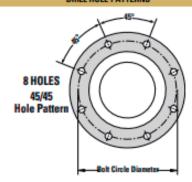


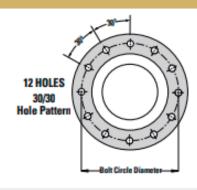
SPECIFY WHEN ORDERING:
Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Milmeters Configurations: Male Pilot or Female Recess

or					ě.		ngth	ą.	96	0.D.	.8	<u>se</u>	22			B u
O.D. Shaft or Sleeve Journal	30 DE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circ le	Hole Spacing
A A	8	D D	E	M M	ææ M1	0	L	S	W		acking	2	_		informat	_
		_				_		_					_			tion
2 -1/2 63.5	0212	6 -1/4 158.75	7/16 11.11	3 -1/2 88.90	4 101.60	5-7/16 138.11	7 -1/2 190.50	-	5 - 3/4 146.05	3 -1/4 82.55	3/8 9.53	7	8	9/16 14.29	5 127.00	30/60
3		7 -1/2	7/16	4 -1/2	4 -3/4	6-5/16	8 -1/2	1 -7/16	7	4	1/2			11/16	6-1/4	
76.20	0300	190.50	11.11	114.30	120.65	160.34	215.90	36.51	177.80	101.60	12.70	7	8	17.46	158.75	30/60
3 -1/4		7 -1/2	7/16	-	4 -3/4	6 -5/16	8 -1/2	1 -7/16	7	4 - 1/4	1/2	_	_	11/16	6 -1/4	
82.55	0314	190.50	11.11	-	120.65	160.34	215.90	36.51	177.80	107.95	12.70	7	8	17.46	158.75	30/60
3 -1/2	0312	8 -1/8	5/8	4 -1/2	5 -1/4	6 -5/16	8 -11/16	1 -5/8	7 -5/8	4 -1/2	1/2	7	8	11/16	6 -3/4	30/60
88.90	WILE	206.38	15.88	114.30	133.35	160.34	220.66	41.28	193.68	114.30	12.70		•	17.46	171.45	30,00
3 -3/4	0334	8 -1/8	5/8	-	5 -1/4	6 -5/16	8 -11/16	1 -5/8	7 -5/8	4 - 3/4	1/2	7	8	11/16	6 -3/4	30/60
95.25		206.38	15.88	-	133.35	160.34	220.66	41.28	193.68	120.65	12.70	_	-	17.46	171.45	,
4	0400	8 -5/8	5/8	5-1/2	5 - 3/4	6-5/16	8-11/16	1 -5/8	8 - 1/8	5	1/2	7	8	11/16	7 -1/4	30/60
101.60 4 -1/4		219.08 8 -5/8	15.88 5/8	139.70 5 -1/2	146.05 5 -3/4	160.34 6 -5/16	220.66 8 -11/16	41.28 1 -5/8	206.38 8 -1/8	127.00 5 -1/4	12.70 1/2			17.46 11/16	184.15 7 -1/4	
107.95	0414	219.08	15.88	139.70	146.05	160.34	220.66	41.28	206.38	133.35	12.70	7	8	17.46	184.15	30/60
4 -1/2		9 -3/8	13/16	6 -1/8	6 -1/2	7 -5/16	9 -15/16	1 -7/8	8 - 7/8	5 -3/4	5/8			11/16	8	
114.30	0412	238.13	20.64	155.58	165.10	185.74	252.41	47.63	225.43	146.05	15.88	7	8	17.46	203.20	30/60
4 -3/4	0434	9 -3/8	13/16	6 -1/8	6 -1/2	7 -5/16	9 - 15/16	1 -7/8	8 - 7/8	6	5/8	7	8	11/16	8	30/60
120.65	0434	238.13	20.64	155.58	165.10	185.74	252.41	47.63	225.43	152.40	15.88		۰	17.46	203.20	30/00
5	0500	10 -1/8	13/16	6 -1/2	7 -1/4	8-9/16	11 -15/16	2 -3/8	9 -5/8	6 -1/2	3/4	7	8	11/16	8 -3/4	30/60
127.00		257.18	20.64	165.10	184.15	217.49	303.21	60.33	244.48	165.10	19.05	-	_	17.46	222.25	,
5-1/4	0514	10 -1/8	13/16	6 -1/2	7 -1/4	8 -9/16	11 -15/16	2 -3/8	9 -5/8	6 -3/4	3/4	7	8	11/16	8 - 3/4	30/60
133.35 5-1/2		257.18 10 -5/8	20.64 13/16	165.10 7 -1/2	184.15 7 -3/4	217.49 8 -9/16	303.21 11 -15/16	60.33 2 -3/8	244.48 10 -1/8	171.45 7	19.05 3/4			17.46 11/16	222.25 9-1/4	
139.70	0512	269.88	20.64	190.50	196.85	217.49	303.21	60.33	257.18	177.80	19.05	7	8	17.46	234.95	30/60
5 -3/4		10 -5/8	13/16	7 -1/2	7 -3/4	8-9/16	11 -15/16	2 -3/8	10 -1/8	7 -1/4	3/4			11/16	9 -1/4	
146.05	0534	269.88	20.64	190.50	196.85	217.49	303.21	60.33	257.18	184.15	19.05	7	8	17.46	234.95	30/60
6	0600	11 -3/8	13/16	8	8	8 -3/4	12 -3/4	3	11 -1/8	7 -1/2	3/4	7	8	11/16	10 -1/8	30/60
152.40	0000	288.93	20.64	203.20	203.20	222.25	323.85	76.20	282.58	190.50	19.05		۰	17.46	257.18	30/00
6 -1/4	0614	11 -3/8	13/16	8	8	8 -3/4	12 -3/4	3	11 -1/8	7 -3/4	3/4	7	8	11/16	10 -1/8	30/60
158.75		288.93	20.64	203.20	203.20	222.25	323.85	76.20	282.58	196.85	19.05			17.46	257.18	
6 -1/2	0612	13 -1/2	7/8	8 -1/2	8 -5/8	9 -3/4	13 -3/4	3	12 -1/8	8 - 1/4	7/8	7	8	13/16	11 -3/8	45/45
165.10 6 -5/8		342.90 13 -1/2	22.23 7/8	215.90	219.08 8 -5/8	247.65 9 - 3/4	349.25 13 -3/4	76.20 3	307.98 12 -1/8	209.55 8 -3/8	22.23 7/8			20.64 13/16	288.93 11 -3/8	
168.28	0658	342.90	22.23	_	219.08	247.65	349.25	76.20	307.98	212.73	22.23	7	8	20.64	288.93	45/45
6 -3/4		13 -3/4	7/8	8 -1/2	9	9 - 3/4	13 -3/4	3	12 -1/2	8-1/2	7/8			13/16	12	
171.45	0634	349.25	22.23	215.90	228.60	247.65	349.25	76.20	317.50	215.90	22.23	7	8	20.64	304.80	45/45
6 -7/8	0620	13 -3/4	7/8	-	9	9 -3/4	13 -3/4	3	12 -1/2	8 -5/8	7/8	,		13/16	12	AEIAE
174.63	0678	349.25	22.23	-	228.60	247.65	349.25	76.20	317.50	219.08	22.23	7	8	20.64	304.80	45/45
7	0700	13 -3/4	7/8	9 -1/4	9	9 -3/4	13 -3/4	3	12 -1/2	8 - 3/4	7/8	7	8	13/16	12	45/45
177.80		349.25	22.23	234.95	228.60	247.65	349.25	76.20	317.50	222.25	22.23	_	_	20.64	304.80	
7 -1/8	0718	14 -1/8	7/8	-	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 - 1/8	1 75.40	7	8	13/16	12 - 3/8	45/45
180.98		358.78	22.23	-	244.48	282.58	396.88	88.90	327.03	231.78	25.40			20.64	314.33	









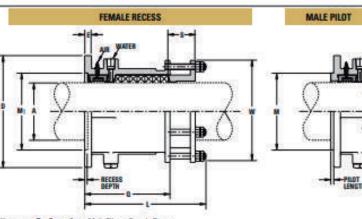
The color of the	ft or ournal			2	# L	Nam.		ength	ngth	a mg e	0.D.	Size	såu	oles		<u>=</u>	cing
Table   Tabl	O.D. Shar Steeve J	CODE	Flange Diameter	Flange Thicknes	Male Pil Diamete	Female Recess D	Length	Overall Length	Gland Length	Gland Flu Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
1815   6714   2817   2223   2245   244.68   2025   368.08   88.90   37.70   23.95   25.40   7   8   20.94   314.33   4545     1873   1873   1876   17   27   3   3   3   3   3   3   3   3   3							Q	L	s		P	acking		ı	Orilling	Informat	tion
18-15   18-16   12-23   224-55   224-	7 -1/4	0214	14 -1/8	7/8	9 -1/4	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 -1/4	1	٦,		13/16	12 - 3/8	AEIAE
16733   358.78   22.23   244.48   202.58   366.88   88.90   327.03   228.13   25.40   7 8   20.64   314.33   45/45     17-1/2   16 -1/2   7/8   10 -1/4   10   11 -1/8   15 -5/8   3-1/2   13 -1/4   9 -1/2   1   25.40   7 8   20.64   21.85   23.85     17-5/8   0758   14 -1/2   7/8   7 - 19   11 -1/8   15 -5/8   3-1/2   13 -1/4   9 -1/2   1   25.40   7 8   20.64   23.85     17-3/4   16 -1/2   7/8   7 - 24.00   272.50   368.88   88.90   336.55   244.88   25.40   7 8   20.64   32.85     18-3/8   0734   14 -1/2   7/8   10 -1/4   10   11 -1/8   15 -5/8   3 -1/2   13 -1/4   9 -5/8   1   7 8   13/16   12 -3/4     196.55   0734   14 -1/2   7/8   10 -1/4   10   11 -1/8   15 -5/8   3 -1/2   13 -1/2   33.85   244.88   25.40   7 8   20.64   32.85     18-7.3   0738   14 -7/8   7/8   10 -3/8   11 -1/8   15 -5/8   3 -1/2   13 -5/8   9 -7/8   1     196.55   0734   14 -7/8   7/8   10 -3/8   11 -1/8   15 -5/8   3 -1/2   13 -5/8   9 -7/8   1     196.56   0734   14 -7/8   7/8   10 -3/8   11 -1/8   15 -5/8   3 -1/2   13 -5/8   9 -7/8   1     196.57   0000   14 -7/8   7/8   10 -1/4   10 -3/8   11 -1/8   15 -5/8   3 -1/2   13 -5/8   10 -1/8   1   7 8   20.64   333.39     18-1/4   0014   14 -7/8   7/8   - 10 -3/4   11 -1/8   15 -5/8   3 -1/2   13 -5/8   10 -1/8   1   7 8   20.64   333.39     18-1/4   0014   17 -7/8   11   10 -3/4   11 -1/8   15 -5/8   3 -1/2   13 -5/8   10 -1/8   1   7 8   20.64   333.39     18-1/4   0014   17 -7/8   11   10 -3/4   11 -1/8   15 -5/8   3 -1/2   14   10 -1/8   1   1 -1/4   1   1	-	0/14		_	234.95	_								•			49/40
2-1/2		0738			-								7	8			45/45
190.50   0772   368.30   22.23   280.35   254.00   282.58   368.88   88.90   336.55   244.80   25.40   7 8   20.64   322.85   43.95   34.95																	
7-5 6    075 6    14-1/2   7/6		0712											7	8			45/45
151.06   1758   368.30   22.23   -   254.00   282.58   306.08   88.90   336.55   244.48   25.40   7   8   20.64   323.85   45.45   17.86   17.44   17.86   17.44   17.86   17.44   17.86   17.86   17.44   1																	
196.85   97.94   368.30   22.23   260.35   254.00   262.58   396.88   68.90   336.55   247.65   254.00   7		0758			-								7	8			45/45
1986  6	7 -3/4		14 -1/2	7/8	10 -1/4	10	11 -1/8	15 -5/8	3 -1/2	13 -1/4	9 -3/4	1	Ι.		13/16	12 -3/4	ar inc
8 000 14 -78 7783 22 23 - 263 53 282 58 396.88 8.90 346.08 25.083 25.40 7 8 20.64 333.38 45,45 20.32 20.32 0 000 14 -78 78 10 -1/4 10 -3/8 11 -1/8 15 -5/8 3 -1/2 13 -5/8 10 -1 1 7 8 20.64 333.38 45,45 20.32 8 -1/8 20.32 22 3 260.35 263 53 282 58 396.88 8.90 346.08 25.40 0 25.40 7 8 20.64 333.38 45,45 20.53 282 58 396.88 8.90 346.08 25.40 0 25.40 7 8 20.64 333.38 45,45 20.53 282 58 396.88 8.90 346.08 25.40 0 25.40 7 8 20.64 333.38 45,45 20.9	196.85	0/34	368.30	22.23	260.35	254.00	282.58	396.88	88.90	336.55	247.65	25.40	′	8	20.64	323.85	45/45
8   14   78   78   10   14   78   10   14   10   36   11   18   15   58   396   88   89   3   366   8   254   0   254   0   7   8   12/16   13   14   14   14   14   16   36   16   16   16   17   18   15   16   18   18   18   18   18   18   18	7 -7/8	0778	14 - 7/8	7/8	-	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	9 -7/8	1	,		13/16	13 -1/8	ASAS
203.20		0776	_	22.23	-	263.53	282.58	396.88	88.90		250.83		,	•	20.64	333.38	45/45
8 - 1/8   0818   37/83   22 23   - 263 53   282 58   396 88   88 90   346 08   257,18   25.40   7   8   13/16   13 - 1/8   13 - 1/8   20.54   333 38   45/45     8 - 1/4   0814   387 35   22 23   - 273.05   282 58   396 88   88 90   356 50   26.35   26.35   26.40   34.20   26.43   342 90   45/45     8 - 3/8   0838   15 - 1/4   7/8   - 10 - 3/4   11 - 1/8   15 - 5/8   3 - 1/2   14   10 - 1/4   1   7   8   13/16   13 - 1/2   20.64   342 30   45/45     8 - 3/8   0838   15 - 1/4   7/8   - 10 - 3/4   11 - 1/8   15 - 5/8   3 - 1/2   14   10 - 3/8   1   7   8   13/16   13 - 1/2   20.64   342 30   45/45     8 - 3/8   0838   15 - 1/4   7/8   - 10 - 3/4   11 - 1/8   15 - 5/8   3 - 1/2   14   10 - 3/8   1   7   8   13/16   13 - 1/2   20.64   342 30   45/45     8 - 3/8   0838   25 - 22 23   - 273.05   282 58   396 88   88 90   355 60   263 53   25 40   7   8   13/16   13 - 1/2   20.64   342 30   45/45     8 - 3/8   0812   387 35   22 23   - 273.05   282 58   396 88   88 90   355 60   263 53   25 40   7   8   13/16   13 - 1/2   20.64   342 30   45/45     8 - 3/8   0812   387 35   22 23   279 40   273.05   282 58   396 88   88 90   355 60   263 53   25 40   7   8   13/16   13 - 1/2   20.64   342 30   45/45     8 - 3/8   0812   387 35   22 23   279 40   273.05   282 58   396 88   88 90   355 60   263 53   25 40   7   8   13/16   13 - 1/2   20.64   342 30   45/45     8 - 3/8   0818   15 - 1/4   17 - 11 - 1/4   11 - 1/8   11 - 1/8   15 - 5/8   3 - 1/2   14 - 3/8   10 - 3/4   1   7   8   13/16   13 - 1/8   20.64   352 43   45/45     8 - 3/8   082   082   365 88   25 40   - 282 58   282 58   396 88   88 90   365 13   276 23   25 40   7   8   20.64   352 43   45/45     8 - 3/8   082		0800											7	8			45/45
205.38																	
8 - 1/4		0818			-								7	8			45/45
209.55					- 11												
8-3/8   212.73   0838   15-1/4   7/8   -   10-3/4   11-1/8   15-5/8   3-1/2   14   10-3/8   1   7   8   13/16   13-1/2   45/45		0814											7	8			45/45
212.73   0838   387.35   22.23   -     273.05   282.58   398.88   88.90   355.60   263.53   25.40   7   8   20.64   342.90   45/45																	
215.90		0838											7	8			45/45
215.90   397.35   22.23   279.40   273.05   282.58   396.88   88.90   355.60   266.70   25.40   26.44   342.90   279.06   282.58   282.58   396.88   88.90   365.13   269.88   25.40   7   8   20.64   352.43   45/45   272.25   282.58   2	8 -1/2	0042	15 -1/4	7/8	11	10 -3/4	11 -1/8	15 -5/8	3 -1/2	14	10 -1/2	1	Ι,		13/16	13 -1/2	ACIAC
219.08   396.88   25.40   -   282.58   282.58   396.88   88.90   365.13   269.88   25.40   7   8   20.64   352.43   45/45	215.90	0812	387.35	22.23	279.40	273.05	282.58	396.88	88.90	355.60	266.70	25.40		8	20.64	342.90	45/45
219.08   395.88   25.40   - 282.58   396.88   88.90   365.13   269.88   25.40   20.54   352.43   352.43   352.22   352.22   368.88   369.0   365.13   273.05   25.40   7 8	8 -5/8	0858	15 -5/8	1	-	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 -3/8	10 -5/8	1	,	8	13/16	13 -7/8	45/45
222.25         0834         396.88         25.40         279.40         282.58         282.58         396.88         88.90         365.13         273.05         25.40         7         8         20.64         352.43         45/45           8 -7/8 225.43         0878         15 -5/8         1         -         11 -1/8         11 -1/8         15 -5/8         3 -1/2         14 -3/8         10 -7/8         1         7         8         20.64         352.43         45/45           9 254.0         16         1         11 -3/4         11 -1/2         11 -1/8         15 -5/8         3 -1/2         14 -3/4         11         1         7         8         13/16         14 -1/4         45/45           9 -1/8 28.60         0900 40         16         1         11 -3/4         11 -1/2         11 -1/8         15 -5/8         3 -1/2         14 -3/4         11         1         7         8         13/16         14 -1/4         45/45           9 -1/8 231.78         0918         16         1         -         11 -1/2         11 -1/8         15 -5/8         3 -1/2         14 -3/4         11 -1/8         1         -         11 -3/4         11 -1/2         11 -1/8         15 -5/8         3 -1/2							-							-			,
8-7/8         0878         15-5/8         1         -         11-1/8         11-1/8         15-5/8         3-1/2         14-3/8         10-7/8         1         7         8         13/16         13-7/8         45/45           225.43         396.88         25.40         -         282.58         282.58         396.88         88.90         365.13         276.23         25.40         7         8         13/16         13-7/8         45/45           9 -1/8 228.69         16         1         11-3/4         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11         1         7         8         13/16         14-1/4         45/45           9 -1/8 231.78         0918         16         1         -         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/8         1         7         8         13/16         14-1/4         45/45           231.78         0918         16         1         -         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/8         1         7         8         13/16         14-1/4         45/45           9-1/4         0914         16         1		0834											7	8			45/45
225.43         0678         396.88         25.40         —         282.58         282.58         396.88         88.90         365.13         276.23         25.40         7         8         20.64         352.43         45/45           9         0900         16         1         11-3/4         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11         1         7         8         13/16         14-1/4         45/45           9-1/8         0918         16         1         -         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/8         1         7         8         13/16         14-1/4         45/45           9-1/8         0918         16         1         -         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/8         1         7         8         13/16         14-1/4         45/45           231.78         0914         16         1         11-3/4         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/4         1         7         8         13/16         14-1/4         45/45           234.95         0914         4	_																
9 0900 16 1 11-3/4 11-1/2 11-1/8 15-5/8 3-1/2 14-3/4 11 1 7 8 13/16 14-1/4 45/45 9-1/8 231.78 0918 16 1		0878			_								7	8			45/45
228.60         9900         406.40         25.40         298.45         292.10         282.58         396.88         88.90         374.65         279.40         25.40         7         8         20.64         361.95         45/45           9-1/8 231.78         0918         16         1         —         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/8         1         7         8         13/16         14-1/4         20.64         361.95         45/45           9-1/4 234.95         16         1         11-3/4         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/4         1         7         8         13/16         14-1/4         20.64         361.95         45/45           9-1/4 234.95         16         1         11-3/4         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/4         1         7         8         13/16         14-1/4         20.64         361.95         45/45           9-3/8 238.13         0938         16-3/8         1         —         11-7/8         11-1/8         15-5/8         3-1/2         15-1/8         11-3/8         1         7 <t< td=""><td></td><td></td><td></td><td></td><td>11 -3/4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>					11 -3/4												
231.78		0900									l .		7	8			45/45
231.78         406.40         25.40         —         292.10         282.58         396.88         88.90         374.65         282.58         25.40         20.64         361.95           9-1/4         16         1         11-3/4         11-1/2         11-1/8         15-5/8         3-1/2         14-3/4         11-1/4         1         7         8         13/16         14-1/4         45/45           9-3/8         238.13         16-3/8         1         —         11-7/8         11-1/8         15-5/8         3-1/2         15-1/8         11-3/8         1         7         8         13/16         14-5/8         20.64         361.95           9-3/8         238.13         16-3/8         1         —         11-7/8         11-1/8         15-5/8         3-1/2         15-1/8         11-3/8         1         7         8         13/16         14-5/8         20.64         371.48         45/45           9-1/2         291.2         16-3/8         1         11-3/8         11-1/8         15-5/8         3-1/2         15-1/8         11-1/2         1         7         8         13/16         14-5/8         20.64         371.48         45/45           9-3/8         0958	9 -1/8		16	1	-	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 - 3/4	11 -1/8	1	_		13/16	14 -1/4	
234.95	231.78	0918	406.40	25.40	-	292.10	282.58	396.88	88.90	374.65	282.58	25.40	<b>'</b>	8	20.64	361.95	45/45
234.95	9 -1/4	0914	16	1	11-3/4	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 -3/4	11 -1/4	1	,	g	13/16	14-1/4	4545
238.13     0938     415.93     25.40     —     301.63     282.58     396.88     88.90     384.18     288.93     25.40     7     8     20.64     371.48     45/45       9-1/2 241.30     0912     16-3/8     1     11-3/4     11-7/8     11-1/8     15-5/8     3-1/2     15-1/8     11-1/2     1     7     8     13/16     14-5/8     45/45       9-5/8 244.48     0958     16-3/8     1     —     11-7/8     11-1/8     15-5/8     3-1/2     15-1/8     11-5/8     1     7     8     13/16     14-5/8     45/45       9-5/8 244.48     0958     16-3/8     1     —     11-7/8     11-1/8     15-5/8     3-1/2     15-1/8     11-5/8     1     7     8     13/16     14-5/8     20.64     371.48     45/45       9-3/4     0934     16-7/8     1     12-3/4     12-3/8     11-1/8     15-5/8     3-1/2     15-1/2     11-3/4     1     7     8     13/16     14-5/8     20.64     371.48     45/45	234.95		406.40		298.45	292.10	282.58	396.88	88.90	374.65	285.75		,	•	20.64	361.95	13/10
9-1/2     0912     16-3/8     1     11-3/4     11-7/8     11-1/8     15-5/8     3-1/2     15-1/8     11-1/2     1     7     8     13/16     14-5/8     45/45       9-5/8     0958     16-3/8     1     -     11-7/8     11-1/8     15-5/8     3-1/2     15-1/8     11-1/2     1     7     8     13/16     14-5/8     20.64     371.48       9-5/8     0958     16-3/8     1     -     11-7/8     11-1/8     15-5/8     3-1/2     15-1/8     11-5/8     1     7     8     13/16     14-5/8     20.64     371.48       244.48     9-3/4     16-7/8     1     12-3/4     12-3/8     11-1/8     15-5/8     3-1/2     15-1/2     11-3/4     1     7     8     13/16     14-5/8     20.64     371.48       9-3/4     0934     16-7/8     1     12-3/4     12-3/8     11-1/8     15-5/8     3-1/2     15-1/2     11-3/4     1     7     8     13/16     14-5/8     20.64     371.48		0938											7	8			45/45
241.30     0912     415.93     25.40     298.45     301.63     282.58     396.88     88.90     384.18     292.10     25.40     7     8     20.54     371.48     45/45       9-5/8 244.48     0958     16-3/8     1     -     11-7/8     11-1/8     15-5/8     3-1/2     15-1/8     11-5/8     1     7     8     13/16     14-5/8     45/45       9-3/4     0934     16-7/8     1     12-3/4     12-3/8     11-1/8     15-5/8     3-1/2     15-1/2     11-3/4     1     7     8     13/16     15     45/45																	7
9-5/8 0958 16-3/8 1 - 11-7/8 11-1/8 15-5/8 3-1/2 15-1/8 11-5/8 1 7 8 13/16 14-5/8 45/45 9-3/4 0934 16-7/8 1 12-3/4 12-3/8 11-1/8 15-5/8 3-1/2 15-1/2 11-3/4 1 7 8 13/16 15 45/45		0912										i .	7	8			45/45
244.48																	
9-3/4 0934 16-7/8 1 12-3/4 12-3/8 11-1/8 15-5/8 3-1/2 15-1/2 11-3/4 1 7 8 13/16 15 45/45		0958											7	8			45/45
0934					_										-		
		0934											7	8			45/45



# Model 1788 (continued) Water Service with Air Seal Ring



MALE PILOT	FEMALE ENSIONS	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
6"-15"	3/4"	3/8.

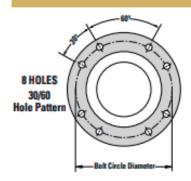


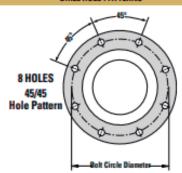
SPECIFY WHEN ORDERING:

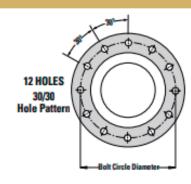
Model Number: Alloy: Brorze (standard) or Aluminum Shaft Diameter: In Inches or Milimeters Configurations: Male Pilot or Female Recess

	_								_			_	_			
O.D. Shaft or Sleeve Journal	CO DE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
Α		D	E	M	M1	Q	L	S	w	P	acking			Drilling	Informat	tion
9 -7/8	0978	16 -7/8	- 1	-	12 -3/8	11 -1/8	15 -5/8	3 -1/2	15 -1/2	11 -7/8	1	7	8	13/16	15	45/45
250.83	U3/10	428.63	25.40	-	314.33	282.58	396.88	88.90	393.70	301.63	25.40	'	°	20.64	381.00	40/40
10	1000	16 -7/8	1	12 -3/4	12 -3/8	11 -1/8	15 -5/8	3 -1/2	15 -1/2	12	1	,	8	13/16	15	45/45
254.00 10 -1/8		428.63	25.40 1	323.85	314.33	282.58	396.88	88.90	393.70 16	304.80 12 -1/8	25.40 1			20.64 15/16	381.00	
257.18	1018	<b>17 -7/8</b> 454.03	25.40	_	12 -3/4 323.85	11 -1/8 282.58	16 -1/4 412.75	3 -1/2 88.90	406.40	307.98	25.40	7	8	23.81	<b>15 -3/4</b> 400.05	45/45
10 -1/4		17 -7/8	1	12 -3/4	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -1/4	1			15/16	15 -3/4	
260.35	1014	454.03	25.40	323.85	323.85	298.45	412.75	88.90	406.40	311.15	25.40	1	8	23.81	400.05	45/45
10 -3/8	4000	17 -7/8	1	-	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -3/8	1			15/16	15 -3/4	
263.53	1038	454.03	25.40	-	323.85	298.45	412.75	88.90	406.40	314.33	25.40	7	8	23.81	400.05	45/45
10 -1/2	1012	18 -1/4	1	13 -3/4	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 -3/8	12 -1/2	1	7	8	15/16	16 -1/8	45/45
266.70		463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	317.50	25.40		-	23.81	409.58	144
10 -5/8	1058	18 -1/4	1	-	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 - 3/8	12 -5/8	1	7	8	15/16	16 -1/8	45/45
269.88 10 -3/4		463.55 18 -1/4	25.40 1	13 -3/4	333.38 13 -1/8	298.45 11 -3/4	412.75 16 -1/4	88.90 3 -1/2	415.93 16 -3/8	320.68 12 -3/4	25.40 1			23.81 15/16	409.58 16 -1/8	
273.05	1034	463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	323.85	25.40	7	8	23.81	409.58	45/45
10 -7/8		18 -5/8	1	-	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	12 -7/8	1			15/16	16 -1/2	
276.23	1078	473.08	25.40	_	342.90	298.45	412.75	88.90	425.45	327.03	25.40	7	8	23.81	419.10	45/45
11		18 -5/8	1	13 -3/4	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	13	1			15/16	16 -1/2	
279.40	1100	473.08	25.40	349.25	342.90	298.45	412.75	88.90	425.45	330.20	25.40	7	8	23.81	419.10	45/45
11 -1/8	1118	18 -5/8	1	-	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	13 -1/8	1	7	8	15/16	16 -1/2	45/45
282.58		473.08	25.40	-	342.90	298.45	412.75	88.90	425.45	333.38	25.40		_	23.81	419.10	
11 -1/4	1114	19	1	14 -1/2	13 -7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -1/4	1	7	8	15/16	16 - 7/8	45/45
285.75 11 -3/8		482.60 <b>19</b>	25.40 1	368.30	352.43	298.45	412.75 16 -1/4	88.90	434.98	336.55	25.40 1			23.81	428.63 16 -7/8	$\vdash$
288.93	1138	482.60	25.40	_	13 -7/8 352.43	11 -3/4 298.45	412.75	3 -1/2 88.90	17 -1/8 434.98	13 -3/8 339.73	25.40	7	8	23.81	428.63	45/45
11 -1/2		19	1	14 -1/2	13 -7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -1/2	1			15/16	16 -7/8	
292.10	1112	482.60	25.40	368.30	352.43	298.45	412.75	88.90	434.98	342.90	25.40	1	8	23.81	428.63	45/45
11 -5/8		19 -3/8	1	-	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -5/8	1	٠.		15/16	17 -1/4	
295.28	1158	492.13	25.40	-	358.78	298.45	412.75	88.90	444.50	346.08	25.40	7	12	23.81	438.15	30/30
11 -3/4	1134	19 -3/8	1	14 -1/2	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -3/4	1	7	12	15/16	17 -1/4	30/30
298.45		492.13	25.40	368.30	358.78	298.45	412.75	88.90	444.50	349.25	25.40			23.81	438.15	34,35
11 -7/8	1178	19 -3/8	1	-	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -7/8	1	7	12	15/16	17 -1/4	30/30
301.63		492.13	25.40	45 4/2	358.78	298.45	412.75	88.90	444.50	352.43	25.40			23.81	438.15	
12 304.80	1200	19 -3/4 501.65	1 25.40	15 -1/2 393.70	14 -1/2 368.30	11 -5/8 295.28	16 -3/8 415.93	3 -3/4 95.25	17 -7/8 454.03	14 355.60	1 25.40	7	12	15/16 23.81	<b>17 -5/8</b> 447.68	30/30
12 -1/8		19 -3/4	1	- 353.70	14 -1/2	11 -5/8	16 -3/8	3-3/4	17 -7/8	14 -1/8	1			15/16	17 -5/8	
307.98	1218	501.65	25.40	_	368.30	295.28	415.93	95.25	454.03	358.78	25.40	7	12	23.81	447.68	30/30
12 -1/4		19 -3/4	1	15 -1/2	14 -1/2	11 -5/8	16 -3/8	3 -3/4	17 -7/8	14 -1/4	1		-	15/16	17 -5/8	
311.15	1214	501.65	25.40	393.70	368.30	295.28	415.93	95.25	454.03	361.95	25.40	7	12	23.81	447.68	30/30
12 -3/8	1238	20 -1/8	1 -1/8	-	15 -1/8	11 -5/8	16 -3/8	3 -3/4	18 -1/4	14 -3/8	1	7	12	15/16	18	30/30
314.33	1236	511.18	28.58	-	384.18	295.28	415.93	95.25	463.55	365.13	25.40	1	12	23.81	457.20	30/30









									_						_	
O.D. Shaft or Sierve Journal	CODE	Flange Diameter	Flange Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
A		D	E	M	M1	Q	L	s	w	P	acking		ı	Drilling	Informat	tion
12 -1/2	1212	20 -1/8	1 -1/8	15 -1/2	15 -1/8	11 -5/8	16 - 3/8	3 -3/4	18 -1/4	14 -1/2	1	7	12	15/16	18	30/30
317.50	1212	511.18	28.58	393.70	384.18	295.28	415.93	95.25	463.55	368.30	25.40	Ľ	12	23.81	457.20	aujau
12 -5/8	1258	20 -1/8	1 -1/8	-	15 -1/8	11 -5/8	16 -3/8	3 -3/4	18 -1/4	14 -5/8	1	7	12	15/16	18	30/30
320.68		511.18	28.58	-	384.18	295.28	415.93	95.25	463.55	371.48	25.40			23.81	457.20	
12 -3/4 323.85	1234	20 -1/2 520.70	1 -1/8 28.58	16 -1/4 412.75	15 -1/2 393.70	11 -5/8 295.28	16 -3/8 415.93	3 -3/4 95.25	18 -5/8 473.08	14 -3/4 374.65	1 25.40	7	12	15/16 23.81	18 -3/8 466.73	30/30
12 -7/8		20 -1/2	1 -1/8	- 412.79	15 -1/2	11 -5/8	16 -3/8	3-3/4	18 -5/8	14 -7/8	1			15/16	18 - 3/8	
327.03	1278	520.70	28.58	_	393.70	295.28	415.93	95.25	473.08	377.83	25.40	7	12	23.81	466.73	30/30
13	4200	20 -1/2	1 -1/8	16 -1/4	15 -1/2	11 -5/8	16 -3/8	3 -3/4	18 -5/8	15	1	Ι,		15/16	18 -3/8	20/20
330.20	1300	520.70	28.58	412.75	393.70	295.28	415.93	95.25	473.08	381.00	25.40	7	12	23.81	466.73	30/30
13 -1/8	1318	21	1 -1/8	-	15 -3/4	11 -5/8	16 -3/8	3 -3/4	19 -1/8	15 -1/8	1	7	12	15/16	18 -7/8	30/30
333.38	1310	533.40	28.58	-	400.05	295.28	415.93	95.25	485.78	384.18	25.40	•	"	23.81	479.43	50/50
13 -1/4	1314	21	1 -1/8	16 -1/4	15 -3/4	11 -5/8	16 -3/8	3 -3/4	19 -1/8	15 -1/4	1	7	12	15/16	18 - 7/8	30/30
336.55		533.40	28.58	412.75	400.05	295.28	415.93	95.25	485.78	387.35	25.40			23.81	479.43	
13 -3/8 339.73	1338	21 533.40	1 -1/8 28.58	_	15 -3/4 400.05	11 -5/8 295.28	16 -3/8 415.93	3 -3/4 95.25	19 -1/8 485.78	15 -3/8 390.53	1 25.40	7	12	15/16 23.81	18 - 7/8 479.43	30/30
13 -1/2		21 -3/8	1 -1/8	17 -1/4	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -1/2	1			15/16	19 -1/4	
342.90	1312	542.93	28.58	438.15	412.75	295.28	415.93	95.25	495.30	393.70	25.40	7	12	23.81	488.95	30/30
13 -5/8	1358	21 -3/8	1 -1/8	-	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -5/8	1	7	12	15/16	19 -1/4	20/20
346.08	1308	542.93	28.58	-	412.75	295.28	415.93	95.25	495.30	396.88	25.40		12	23.81	488.95	30/30
13 -3/4	1334	21 -3/8	1 -1/8	17 -1/4	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -3/4	1	7	12	15/16	19 -1/4	30/30
349.25		542.93	28.58	438.15	412.75	295.28	415.93	95.25	495.30	400.05	25.40	ı.	-	23.81	488.95	54,50
13 -7/8	1378	21 -3/4	1 -1/8	-	16 - 5/8	11 -5/8	16 -3/8	3 - 3/4	19 -7/8	15 - 7/8	1	7	12	15/16	19 -5/8	30/30
352.43 14		552.45 21 -3/4	28.58 1 -1/8	17 -1/4	422.28 16 -5/8	295.28 11 -5/8	415.93 16 -3/8	95.25 3 -3/4	504.83 19 -7/8	403.23 16	25.40 1			23.81	498.48 19 -5/8	
355.60	1400	552.45	28.58	438.15	422.28	295.28	415.93	95.25	504.83	406.40	25.40	7	12	23.81	498.48	30/30
14 -1/8		21 -3/4	1 -1/8	-	16 -5/8	11 -5/8	16 -3/8	3 -3/4	19 -7/8	16 -1/8	1			15/16	19 -5/8	
358.78	1418	552.45	28.58	_	422.28	295.28	415.93	95.25	504.83	409.58	25.40	7	12	23.81	498.48	30/30
14 -1/4	1414	22 -1/8	1 -1/8	18 -1/4	17 -1/4	11 -7/8	16 -5/8	3 -3/4	20 -1/4	16 -1/4	1	7	12	15/16	20	30/30
361.95		561.98	28.58	463.55	438.15	301.63	422.28	95.25	514.35	412.75	25.40	Ľ	"	23.81	508.00	30,30
14 -3/8	1438	22 -1/8	1 -1/8	-	17 -1/4	11 -7/8	16 -5/8	3 -3/4	20 -1/4	16 -3/8	1	7	12	15/16	20	30/30
365.13		561.98	28.58	-	438.15	301.63	422.28	95.25	514.35	415.93	25.40			23.81	508.00	
14 -1/2 368.30	1412	22 -1/8 561.98	1 -1/8 28.58	18 -1/4 463.55	17 -1/4 438.15	11 -7/8 301.63	16 -5/8 422.28	3 -3/4 95.25	20 -1/4 514.35	16 -1/2 419.10	1 25.40	7	12	15/16 23.81	20 508.00	30/30
14 -5/8		22 -1/2	1 -1/8	403.50	438.15 17 -1/2	11 -7/8	16 -5/8	3 - 3/4	20 -5/8	16 - 5/8	20.40			15/16	20 -3/8	
371.48	1458	571.50	28.58	_	444.50	301.63	422.28	95.25	523.88	422.28	25.40	7	12	23.81	517.53	30/30
14 - 3/4		22 -1/2	1 -1/8	18 -1/4	17 -1/2	11 -7/8	16 -5/8	3 -3/4	20 -5/8	16 -3/4	1			15/16	20 -3/8	20.00
374.65	1434	571.50	28.58	463.55	444.50	301.63	422.28	95.25	523.88	425.45	25.40	7	12	23.81	517.53	30/30
14 -7/8	1478	22 -3/4	1 -1/8	-	17 -3/4	11 -7/8	16 -5/8	3 -3/4	20 -7/8	16 -7/8	1	7	12	15/16	20 -5/8	30/30
377.83		577.85	28.58	-	450.85	301.63	422.28	95.25	530.23	428.63	25.40	,	_	23.81	523.88	
15	1500	22 -3/4	1 -1/8	19	17 -3/4	11 -7/8	16 -5/8	3 -3/4	20 -7/8	17	1	7	12	15/16	20 -5/8	30/30
381.00		577.85	28.58	482.60	450.85	301.63	422.28	95.25	530.23	431.80	25.40			23.81	523.88	

Consult factory for sizes 15-1/8" to 36"

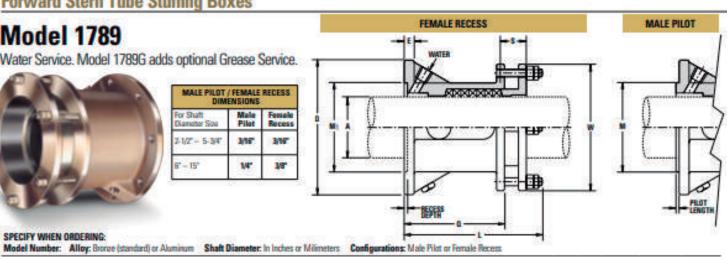


### **Model 1789**

Water Service. Model 1789G adds optional Grease Service.

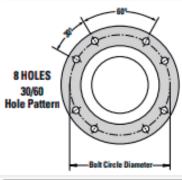


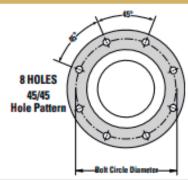
MALE PILOT /	FEMALE ENSIONS	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
5" – 15°	1/4"	3/8"

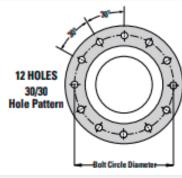


O.D. Shaft or Sleeve Journal	CODE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
A		D	E	M	M1	Q	L	S	w	P	acking		ı	Drilling	Informat	tion
2 -1/2 63.5	0212	6 -1/4 158.75	7/16 11.11	3 -1/2 88.90	4 101.60	5 -7/16 138.11	7 -1/2 190.50	-	5 - 3/4 146.05	3 -1/4 82.55	3/8 9.53	7	8	9/16 14.29	5 127.00	30/60
3	0300	7 -1/2	7/16	4 -1/2	4 -3/4	6 -5/16	8 -1/2	1 -7/16	7	4	1/2	7	8	11/16	6 -1/4	30/60
76.20 3 -1/4		190.50 7 -1/2	7/16	114.30	120.65 4 -3/4	160.34 6 -5/16	215.90 8 -1/2	36.51 1 -7/16	177.80 <b>7</b>	101.60 4 -1/4	12.70 1/2	_	_	17.48 11/16	158.75 6 -1/4	
82.55	0314	190.50	11.11	-	120.65	160.34	215.90	36.51	177.80	107.95	12.70	7	8	17.46	158.75	30/60
3 -1/2 88.90	0312	8 -1/8 206.38	5/8 15.88	4 -1/2 114.30	5 -1/4 133.35	6 -5/16 160.34	8-11/16 220.66	1 -5/8 41.28	7 -5/8 193.68	4-1/2 114.30	1/2 12.70	7	8	11/16 17.46	6 -3/4 171.45	30/60
3 -3/4 95.25	0334	8 -1/8 206.38	5/8 15.88	-	5 -1/4 133.35	6 -5/16 160.34	8 -11/16 220.66	1 -5/8 41.28	7 -5/8 193.68	4 -3/4 120.65	1/2 12.70	7	8	11/16 17.46	6 -3/4 171.45	30/60
4	0400	8 -5/8	5/8	5-1/2	5 -3/4	6 -5/16	8-11/16	1 -5/8	8 - 1/8	5	1/2	7	8	11/16	7 -1/4	30/60
101.60 4 -1/4	0414	219.08 8 -5/8	15.88 5/8	139.70 5 -1/2	146.05 5 -3/4	160.34 6 -5/16	220.66 8 -11/16	41.28 1 -5/8	206.38 8 -1/8	127.00 5 -1/4	12.70 1/2	7	8	17.48 11/16	184.15 7 -1/4	30/60
107.95 4 -1/2		219.08 9 -3/8	15.88 13/16	139.70 6 -1/8	146.05 6 -1/2	160.34 7 -5/16	220.66 9 -15/16	41.28 1 -7/8	206.38 8 - 7/8	133.35 5 -3/4	12.70 5/8			17.48 11/16	184.15	
114.30	0412	238.13	20.64	155.58	165.10	185.74	252.41	47.63	225.43	146.05	15.88	7	8	17.46	203.20	30/60
4 -3/4 120.65	0434	9 -3/8 238.13	13/16 20.64	6 -1/8 155.58	6 -1/2 165.10	7 -5/16 185.74	9 -15/16 252.41	1 -7/8 47.63	8 -7/8 225.43	6 152.40	<b>5/8</b> 15.88	7	8	11/16 17.46	8 203.20	30/60
5 127.00	0500	10 -1/8 257.18	13/16 20.64	6 -1/2 165.10	7 -1/4 184.15	8 -9/16 217.49	11 -15/16 303.21	2 -3/8 60.33	9 -5/8 244.48	6 -1/2 165.10	3/4 19.05	7	8	11/16 17.46	8 -3/4 222.25	30/60
5-1/4	0514	10 -1/8	13/16	6-1/2	7-1/4	8 -9/16	11 -15/16	2 -3/8	9 -5/8	6 - 3/4	3/4	7	8	11/16	8 - 3/4	30/60
133.35 5 -1/2	0512	257.18 10 -5/8	20.64 13/16	165.10 7 -1/2	184.15 7 -3/4	217.49 8 -9/16	303.21 11 -15/16	60.33 2 -3/8	244.48 10 -1/8	171.45 7	19.05 3/4	7	8	17.46 11/16	222.25 9-1/4	30/60
139.70 5 -3/4		269.88 10 -5/8	20.64 13/16	190.50 7 -1/2	196.85 7 -3/4	217.49 8-9/16	303.21 11 -15/16	60.33 2 -3/8	257.18 10 -1/8	177.80 7-1/4	19.05 3/4			17.46 11/16	234.95 9 -1/4	
146.05	0534	269.88	20.64	190.50	196.85	217.49	303.21	60.33	257.18	184.15	19.05	7	8	17.46	234.95	30/60
6 152.40	0600	11 -3/8 288.93	13/16 20.64	8 203.20	8 203.20	8 -3/4 222.25	12 -3/4 323.85	3 76.20	11 -1/8 282.58	7 -1/2 190.50	3/4 19.05	7	8	11/16 17.46	10 -1/8 257.18	30/60
6 -1/4 158.75	0614	11 -3/8 288.93	13/16 20.64	8 203.20	8 203.20	8 -3/4 222.25	12 -3/4 323.85	3 76.20	11 -1/8 282.58	7 -3/4 196.85	3/4 19.05	7	8	11/16 17.46	10 -1/8 257.18	30/60
6 -1/2	0612	13 -1/2	7/8	8 -1/2	8 -5/8	9 -3/4	13 -3/4	3	12 -1/8	8 - 1/4	7/8	7	8	13/16	11 -3/8	45/45
165.10 6 -5/8	0658	342.90 13 -1/2	22.23 7/8	215.90	219.08 8 -5/8	247.65 9 -3/4	349.25 13 -3/4	76.20 3	307.98 12 -1/8	209.55 8 -3/8	22.23 7/8	7	8	20.64 13/16	288.93 11 -3/8	45/45
168.28 6 -3/4		342.90 13 -3/4	22.23 7/8	- 8 -1/2	219.08 9	247.65 9 - 3/4	349.25 13 -3/4	76.20 <b>3</b>	307.98 12 -1/2	212.73 8 -1/2	22.23 7/8			20.64	288.93 12	
171.45	0634	349.25	22.23	215.90	228.60	247.65	349.25	76.20	317.50	215.90	22.23	7	8	20.64	304.80	45/45
6 -7/8 174.63	0678	13 -3/4 349.25	7/8 22.23	-	9 228.60	9 -3/4 247.65	13 -3/4 349.25	3 76.20	12 -1/2 317.50	8 -5/8 219.08	7/8 22.23	7	8	13/16 20.64	<b>12</b> 304.80	45/45
7 177.80	0700	13 -3/4 349.25	7/8 22.23	9 -1/4 234.95	9 228.60	9 -3/4 247.65	13 -3/4 349.25	3 76.20	12 -1/2 317.50	8 -3/4 222.25	7/8 22.23	7	8	13/16 20.64	12 304.80	45/45
7 -1/8	0718	14 -1/8	7/8	-	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 -1/8	1 25.40	7	8	13/16	12 -3/8	45/45
180.98		358.78	22.23	_	244.48	282.58	396.88	88.90	327.03	231.78	25.40			20.64	314.33	









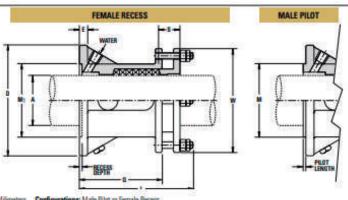
	_											_	_	_		_
O.D. Shaft or Sleeve Journal	CODE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.0.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
A		D	E	M	M1	Q	L	S	w	P	acking		ı	Drilling	Informat	tion
7 -1/4		14 -1/8	7/8	9 -1/4	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 - 1/4	1	Ι.		13/16	12 -3/8	ar iar
184.15	0714	358.78	22.23	234.95	244.48	282.58	396.88	88.90	327.03	234.95	25.40	7	8	20.64	314.33	45/45
7 -3/8	0738	14 -1/8	7/8	-	9 -5/8	11 -1/8	15 -5/8	3 -1/2	12 -7/8	9 - 3/8	1	7	8	13/16	12 -3/8	45/45
187.33	0730	358.78	22.23	-	244.48	282.58	396.88	88.90	327.03	238.13	25.40	1	ů	20.64	314.33	45/45
7-1/2	0712	14 -1/2	7/8	10 -1/4	10	11 -1/8	15 -5/8	3 - 1/2	13 -1/4	9 -1/2	1	7	8	13/16	12 -3/4	45/45
190.50		368.30	22.23	260.35	254.00	282.58	396.88	88.90	336.55	241.30	25.40			20.64	323.85	
7 -5/8 193.68	0758	14 -1/2 368.30	7/8 22.23	_	10 254.00	11 -1/8 282.58	15 -5/8 396.88	3 -1/2 88.90	13 -1/4 336.55	9 -5/8 244.48	1 25.40	7	8	13/16 20.64	12 -3/4 323.85	45/45
7 -3/4		14 -1/2	7/8	10 -1/4	10	11 -1/8	15 -5/8	3 -1/2	13 -1/4	9 - 3/4	1			13/16	12 -3/4	
196.85	0734	368.30	22.23	260.35	254.00	282.58	396.88	88.90	336.55	247.65	25.40	7	8	20.64	323.85	45/45
7 -7/8		14 -7/8	7/8	-	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	9 - 7/8	1	-		13/16	13 -1/8	
200.03	0778	377.83	22.23	-	263.53	282.58	396.88	88.90	346.08	250.83	25.40	7	8	20.64	333.38	45/45
8	0800	14 -7/8	7/8	10 -1/4	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	10	1	,	8	13/16	13 -1/8	45/45
203.20	0000	377.83	22.23	260.35	263.53	282.58	396.88	88.90	346.08	254.00	25.40	Ľ	ů	20.64	333.38	40/40
8 -1/8	0818	14 -7/8	7/8	-	10 -3/8	11 -1/8	15 -5/8	3 -1/2	13 -5/8	10 -1/8	1	7	8	13/16	13 -1/8	45/45
206.38		377.83	22.23	-	263.53	282.58	396.88	88.90	346.08	257.18	25.40			20.64	333.38	-
8-1/4	0814	15 -1/4	7/8	11	10 -3/4	11 -1/8	15 -5/8	3 -1/2 88.90	14	10 -1/4	1 25.40	7	8	13/16 20.64	13 - 1/2	45/45
209.55 8 -3/8		387.35 15 - 1/4	22.23 7/8	279.40	273.05 10 -3/4	282.58 11 -1/8	396.88 15 -5/8	3 -1/2	355.60 14	260.35 10 -3/8	25.40 1			13/16	342.90 13 -1/2	
212.73	0838	387.35	22.23	_	273.05	282.58	396.88	88.90	355.60	263.53	25.40	7	8	20.64	342.90	45/45
8 -1/2		15 -1/4	7/8	11	10 -3/4	11 -1/8	15 -5/8	3 -1/2	14	10 -1/2	1			13/16	13 -1/2	
215.90	0812	387.35	22.23	279.40	273.05	282.58	396.88	88.90	355.60	266.70	25.40	1	8	20.64	342.90	45/45
8 -5/8	0858	15 -5/8	1	-	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 -3/8	10 -5/8	1	7	8	13/16	13 -7/8	45/45
219.08	0000	396.88	25.40	-	282.58	282.58	396.88	88.90	365.13	269.88	25.40		ů	20.64	352.43	45/40
8 -3/4	0834	15 -5/8	1	11	11 -1/8	11 -1/8	15 -5/8	3 -1/2	14 -3/8	10 -3/4	1	7	8	13/16	13 - 7/8	45/45
222.25		396.88	25.40	279.40	282.58	282.58	396.88	88.90	365.13	273.05	25.40			20.64	352.43	
8 - 7/8	0878	15 -5/8	1 25.40	-	11 -1/8	11 -1/8	15 -5/8	3-1/2	14 - 3/8	10 -7/8	1 25.40	7	8	13/16	13 -7/8	45/45
225.43 9		396.88 16	25.40 1	11 -3/4	282.58 11 -1/2	282.58 11 -1/8	396.88 15 -5/8	88.90 3 -1/2	365.13 14 -3/4	276.23 11	25.40 1			20.64 13/16	352.43 14 -1/4	
228.60	0900	406.40	25.40	298.45	292.10	282.58	396.88	88.90	374.65	279.40	25.40	7	8	20.64	361.95	45/45
9 -1/8		16	1	-	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 -3/4	11 -1/8	1			13/16	14 -1/4	
231.78	0918	406.40	25.40	_	292.10	282.58	396.88	88.90	374.65	282.58	25.40	7	8	20.64	361.95	45/45
9 - 1/4	0914	16	1	11-3/4	11 -1/2	11 -1/8	15 -5/8	3 -1/2	14 -3/4	11 -1/4	1	7	8	13/16	14 -1/4	45/45
234.95	0914	406.40	25.40	298.45	292.10	282.58	396.88	88.90	374.65	285.75	25.40	<b>'</b>	•	20.64	361.95	45/45
9 -3/8	0938	16 -3/8	1	-	11 -7/8	11 -1/8	15 -5/8	3 -1/2	15 -1/8	11 -3/8	1	7	8	13/16	14 -5/8	45/45
238.13		415.93	25.40	-	301.63	282.58	396.88	88.90	384.18	288.93	25.40	Ĺ	•	20.64	371.48	
9 -1/2	0912	16 -3/8	1	11 -3/4	11 -7/8	11 -1/8	15 -5/8	3 -1/2	15 -1/8	11 -1/2	1	7	8	13/16	14 -5/8	45/45
241.30		415.93	25.40	298.45	301.63	282.58	396.88	88.90	384.18	292.10	25.40			20.64	371.48	
9 -5/8 244.48	0958	16 -3/8 415.93	1 25.40	_	11 -7/8 301.63	11 -1/8 282.58	15 -5/8 396.88	3 -1/2 88.90	15 -1/8 384.18	11 -5/8 295.28	1 25.40	7	8	13/16 20.64	14 -5/8 371.48	45/45
9-3/4		16 -7/8	1	12 -3/4	12 -3/8	11 -1/8	15 -5/8	3-1/2	15 -1/2	11 -3/4	20.40			13/16	3/1.48	
247.65	0934	428.63	25.40	323.85	314.33	282.58	396.88	88.90	393.70	298.45	25.40	7	8	20.64	381.00	45/45
247.00	_	78.0.00	20.70	UE-0-00	W1-1-00	202.00	555.00	55.50	UUU.1U	200.40	20.70	_	$\overline{}$	20.04	W01.00	$\overline{}$



# Model 1789 (continued) Water Service. Model 1789G adds optional Grease Service.



MALE PILOT /	FEMALE INSIGNS	RECESS
For Shaft Diameter Size	Male Pilot	Female Recess
2-1/2" - 5-3/4"	3/16"	3/16"
B' = 15°	1/4"	3/8"

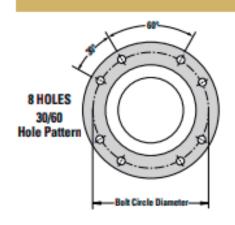


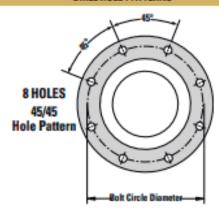
SPELIFT	WHEN	ORDERIN	

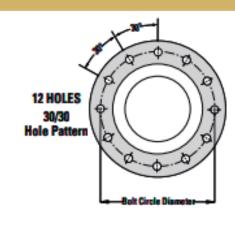
Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Millimeters Configurations: Male Pilot or Female Recess

O.D. Shaft or Sleeve Journal	DE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	th.	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circ le	Hole Spacing
O.D. Slee	8	Ham Diar	Han Thic	Mail	Fe	Length	Ove	g	Gen	Pac	Pac	Ş.	Ş.	Dril	Bolt	Fole
A		D	E	M	M1	Q	L	S	w	P	acking		ı	Drilling	Informat	tion
9 -7/8	0978	16 -7/8	1	-	12 -3/8	11 -1/8	15 -5/8	3 -1/2	15 -1/2	11 -7/8	1	7	8	13/16	15	45/45
250.83		428.63	25.40	-	314.33	282.58	396.88	88.90	393.70	301.63	25.40			20.64	381.00	
10 254.00	1000	16 -7/8 428.63	1 25.40	12 -3/4 323.85	12 -3/8 314.33	11 -1/8 282.58	15 -5/8 396.88	3 -1/2 88.90	15 -1/2 393.70	12 304.80	1 25.40	7	8	13/16 20.64	15 381.00	45/45
10 -1/8		17 -7/8	1	-	12 -3/4	11 -1/8	16 -1/4	3 -1/2	16	12 -1/8	1			15/16	15 -3/4	
257.18	1018	454.03	25.40	-	323.85	282.58	412.75	88.90	406.40	307.98	25.40	7	8	23.81	400.05	45/45
10 -1/4	1014	17 -7/8	1	12 -3/4	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -1/4	1	Ι,		15/16	15 -3/4	45/45
260.35	1014	454.03	25.40	323.85	323.85	298.45	412.75	88.90	406.40	311.15	25.40	1	8	23.81	400.05	45/45
10 -3/8	1038	17 -7/8	1	-	12 -3/4	11 -3/4	16 -1/4	3 -1/2	16	12 -3/8	1	7	8	15/16	15 -3/4	45/45
263.53		454.03	25.40	-	323.85	298.45	412.75	88.90	406.40	314.33	25.40		_	23.81	400.05	1415
10 -1/2	1012	18 -1/4	1	13 -3/4	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 -3/8	12 -1/2	1	7	8	15/16	16 -1/8	45/45
266.70		463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	317.50	25.40			23.81	409.58	
10 -5/8 269.88	1058	18 -1/4 463.55	1 25.40	_	13 -1/8 333.38	11 -3/4 298.45	16 -1/4 412.75	3 -1/2 88.90	16 -3/8 415.93	12 -5/8 320.68	1 25.40	7	8	15/16 23.81	16 -1/8 409.58	45/45
10 -3/4		18 -1/4	1	13 -3/4	13 -1/8	11 -3/4	16 -1/4	3 -1/2	16 - 3/8	12 -3/4	1			15/16	16 -1/8	
273.05	1034	463.55	25.40	349.25	333.38	298.45	412.75	88.90	415.93	323.85	25.40	7	8	23.81	409.58	45/45
10 -7/8	1070	18 -5/8	1	-	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	12 -7/8	1	,		15/16	16 -1/2	AEME
276.23	1078	473.08	25.40	-	342.90	298.45	412.75	88.90	425.45	327.03	25.40	7	8	23.81	419.10	45/45
11	1100	18 -5/8	1	13 -3/4	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	13	1	7	8	15/16	16 -1/2	45/45
279.40		473.08	25.40	349.25	342.90	298.45	412.75	88.90	425.45	330.20	25.40		ů	23.81	419.10	43/43
11 -1/8	1118	18 -5/8	1	-	13 -1/2	11 -3/4	16 -1/4	3 -1/2	16 -3/4	13 -1/8	1	7	8	15/16	16 -1/2	45/45
282.58		473.08	25.40	-	342.90	298.45	412.75	88.90	425.45	333.38	25.40			23.81	419.10	
11 -1/4 285.75	1114	19 482.60	1 25.40	14 -1/2 368.30	13 -7/8 352.43	11 -3/4 298.45	16 -1/4 412.75	3 -1/2 88.90	17 -1/8 434.98	13 -1/4 336.55	1 25.40	7	8	15/16 23.81	16 -7/8 428.63	45/45
11 -3/8		19	1	-	13 - 7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -3/8	1			15/16	16 -7/8	
288.93	1138	482.60	25.40	-	352.43	298.45	412.75	88.90	434.98	339.73	25.40	7	8	23.81	428.63	45/45
11 -1/2	1112	19	1	14 -1/2	13 -7/8	11 -3/4	16 -1/4	3 -1/2	17 -1/8	13 -1/2	1	Ι,		15/16	16 -7/8	45/45
292.10	11112	482.60	25.40	368.30	352.43	298.45	412.75	88.90	434.98	342.90	25.40	7	8	23.81	428.63	40/40
11 -5/8	1158	19 -3/8	1	-	14 -1/8	11 -3/4	16 -1/4	3 -1/2	17 -1/2	13 -5/8	1	,	12	15/16	17 -1/4	30/30
295.28		492.13	25.40	-	358.78	298.45	412.75	88.90	444.50	346.08	25.40		-	23.81	438.15	
11 -3/4	1134	19 - 3/8	1	14 -1/2	14 - 1/8	11 -3/4	16 -1/4	3 - 1/2	17 -1/2	13 - 3/4	1	7	12	15/16	17 -1/4	30/30
298.45 11 -7/8		492.13 19 -3/8	25.40 1	368.30	358.78 14 -1/8	298.45 11 -3/4	412.75 16 -1/4	3.4/2	444.50 17 -1/2	349.25 13 -7/8	25.40 1			23.81	438.15 17 -1/4	
301.63	1178	492.13	25.40	_	358.78	298.45	412.75	3 -1/2 88.90	444.50	352.43	25.40	7	12	23.81	438.15	30/30
12		19 -3/4	1	15 -1/2	14 -1/2	11 -5/8	16 -3/8	3 -3/4	17 -7/8	14	1			15/16	17 -5/8	
304.80	1200	501.65	25.40	393.70	368.30	295.28	415.93	95.25	454.03	355.60	25.40	7	12	23.81	447.68	30/30
12 -1/8	1218	19 -3/4	1	-	14 -1/2	11 -5/8	16 -3/8	3 - 3/4	17 -7/8	14 -1/8	1	7	12	15/16	17 -5/8	30/30
307.98	1216	501.65	25.40	-	368.30	295.28	415.93	95.25	454.03	358.78	25.40	,	12	23.81	447.68	30/30
12 -1/4	1214	19 -3/4	1	15 -1/2	14 -1/2	11 -5/8	16 -3/8	3 -3/4	17 -7/8	14 -1/4	1	7	12	15/16	17 -5/8	30/30
311.15		501.65	25.40	393.70	368.30	295.28	415.93	95.25	454.03	361.95	25.40	<u> </u>	_	23.81	447.68	
12 -3/8	1238	20 -1/8	1 -1/8	-	15 - 1/8	11 -5/8	16 -3/8	3 - 3/4	18 - 1/4	14 - 3/8	1	7	12	15/16	18	30/30
314.33		511.18	28.58	-	384.18	295.28	415.93	95.25	463.55	365.13	25.40			23.81	457.20	





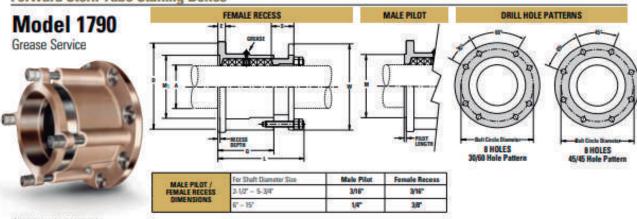




O.D. Shaft or Sleeve Journal		la la	SS	a di	Diam.		Length	e ngth	lange er	0.D.	Size	ings	oles	9.	cle	u cin g
O.D. Shi Sleeve	CODE	Range Diameter	Range Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Pa ck ing	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circ le	Hole Spacing
A		D	E	М	M1	Q	L	S	w	Р	acking		-	Drilling	Informat	ion
12 -1/2	1212	20 -1/8	1 -1/8	15 -1/2	15 -1/8	11 -5/8	16 -3/8	3 -3/4	18 -1/4	14 -1/2	1	7	12	15/16	18	30/30
317.50	1212	511.18	28.58	393.70	384.18	295.28	415.93	95.25	483.55	368.30	25.40		12	23.81	457.20	aujau
12 -5/8	1258	20 -1/8	1 -1/8	-	15 -1/8	11 -5/8	16 -3/8	3 -3/4	18 -1/4	14 -5/8	1	7	12	15/16	18	30/30
320.68		511.18	28.58	-	384.18	295.28	415.93	95.25	463.55	371.48	25.40			23.81	457.20	
12 -3/4 323.85	1234	<b>20 -1/2</b> 520.70	1 -1/8 28.58	16 -1/4 412.75	15 -1/2 393.70	11 -5/8 295.28	16 -3/8 415.93	3 -3/4 95.25	18 -5/8 473.08	14 -3/4 374.65	1 25.40	7	12	15/16 23.81	18 - 3/8 466.73	30/30
12 -7/8		20 -1/2	1-1/8	412.75	15 -1/2	11 -5/8	16 - 3/8	3-3/4	18 - 5/8	14 -7/8	1			15/16	18 - 3/8	
327.03	1278	520.70	28.58	_	393.70	295.28	415.93	95.25	473.08	377.83	25.40	7	12	23.81	466.73	30/30
13		20 -1/2	1 -1/8	16 -1/4	15 -1/2	11 -5/8	16 -3/8	3 -3/4	18 -5/8	15	1			15/16	18 -3/8	
330.20	1300	520.70	28.58	412.75	393.70	295.28	415.93	95.25	473.08	381.00	25.40	7	12	23.81	466.73	30/30
13 -1/8	1318	21	1 -1/8	-	15 -3/4	11 -5/8	16 -3/8	3 - 3/4	19 -1/8	15 -1/8	1	7	12	15/16	18 -7/8	30/30
333.38	1310	533.40	28.58	-	400.05	295.28	415.93	95.25	485.78	384.18	25.40	′	12	23.81	479.43	30/30
13 -1/4	1314	21	1 -1/8	16 -1/4	15 -3/4	11 -5/8	16 -3/8	3 -3/4	19 -1/8	15 -1/4	1	7	12	15/16	18 -7/8	30/30
336.55		533.40	28.58	412.75	400.05	295.28	415.93	95.25	485.78	387.35	25.40			23.81	479.43	
13 -3/8	1338	21	1 -1/8	_	15 - 3/4	11 -5/8	16 -3/8	3 - 3/4	19 -1/8	15 -3/8	1 25.40	7	12	15/16	18 - 7/8	30/30
339.73		533.40	28.58		400.05	295.28	415.93	95.25	485.78	390.53	25.40			23.81	479.43	
13 -1/2 342.90	1312	21 -3/8 542.93	1 -1/8 28.58	17 -1/4 438.15	16 -1/4 412.75	11 -5/8 295.28	16 -3/8 415.93	3 -3/4 95.25	19 -1/2 495.30	15 -1/2 393.70	1 25.40	7	12	15/16 23.81	19 -1/4 488.95	30/30
13 -5/8		21 -3/8	1 -1/8	430.13	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -5/8	1			15/16	19 -1/4	
346.08	1358	542.93	28.58	_	412.75	295.28	415.93	95.25	495.30	396.88	25.40	7	12	23.81	488.95	30/30
13 -3/4		21 -3/8	1 -1/8	17 -1/4	16 -1/4	11 -5/8	16 -3/8	3 -3/4	19 -1/2	15 -3/4	1			15/16	19 -1/4	
349.25	1334	542.93	28.58	438.15	412.75	295.28	415.93	95.25	495.30	400.05	25.40	7	12	23.81	488.95	30/30
13 -7/8	1378	21 -3/4	1 -1/8	-	16 -5/8	11 -5/8	16 -3/8	3 -3/4	19 -7/8	15 -7/8	1	7	12	15/16	19 -5/8	30/30
352.43	1376	552.45	28.58	-	422.28	295.28	415.93	95.25	504.83	403.23	25.40	•	12	23.81	498.48	30/30
14	1400	21 -3/4	1 -1/8	17 -1/4	16 -5/8	11 -5/8	16 -3/8	3 -3/4	19 - 7/8	16	1	7	12	15/16	19 -5/8	30/30
355.60		552.45	28.58	438.15	422.28	295.28	415.93	95.25	504.83	406.40	25.40		-	23.81	498.48	
14 -1/8	1418	21 -3/4	1 -1/8	-	16 -5/8	11 -5/8	16 - 3/8	3 - 3/4	19 -7/8	16 -1/8	1 25.40	7	12	15/16 23.81	19 -5/8	30/30
358.78 14 -1/4		552.45 22 -1/8	28.58 1 -1/8	18 -1/4	422.28 17 -1/4	295.28 11 -7/8	415.93 16 -5/8	95.25 3 -3/4	504.83 20 -1/4	409.58 16 -1/4	25.40 1			15/16	498.48 <b>20</b>	
361.95	1414	561.98	28.58	463.55	438.15	301.63	422.28	95.25	514.35	412.75	25.40	7	12	23.81	508.00	30/30
14 -3/8		22 -1/8	1 -1/8	-	17 -1/4	11 -7/8	16 -5/8	3 -3/4	20 -1/4	16 -3/8	1			15/16	20	
365.13	1438	561.98	28.58	_	438.15	301.63	422.28	95.25	514.35	415.93	25.40	7	12	23.81	508.00	30/30
14 -1/2	1412	22 -1/8	1 -1/8	18 -1/4	17 -1/4	11 -7/8	16 -5/8	3 -3/4	20 -1/4	16 -1/2	1	7	12	15/16	20	30/30
368.30	1412	561.98	28.58	463.55	438.15	301.63	422.28	95.25	514.35	419.10	25.40	<b>'</b>	12	23.81	508.00	auyau
14 -5/8	1458	22 -1/2	1 -1/8	-	17 -1/2	11 -7/8	16 -5/8	3 -3/4	20 -5/8	16 -5/8	1	7	12	15/16	20 -3/8	30/30
371.48	.406	571.50	28.58	-	444.50	301.63	422.28	95.25	523.88	422.28	25.40	,	"	23.81	517.53	34/30
14 -3/4	1434	22 -1/2	1 -1/8	18 -1/4	17 -1/2	11 -7/8	16 -5/8	3 -3/4	20 -5/8	16 -3/4	1	7	12	15/16	20 -3/8	30/30
374.65		571.50	28.58	463.55	444.50	301.63	422.28	95.25	523.88	425.45	25.40			23.81	517.53	
14 -7/8	1478	22 -3/4	1 -1/8	-	17 -3/4	11 -7/8	16 -5/8	3 - 3/4	20 -7/8	16 -7/8	1 25.40	7	12	15/16	20 -5/8	30/30
377.83 <b>15</b>		577.85 22 -3/4	28.58	19	450.85	301.63	422.28 16 -5/8	95.25	530.23	428.63 17	25.40			23.81	523.88 20 -5/8	
381.00	1500	577.85	1 -1/8 28.58	482.60	17 -3/4 450.85	11 -7/8 301.63	422.28	3 -3/4 95.25	20 -7/8 530.23	431.80	1 25.40	7	12	23.81	523.88	30/30
301.00		3//.03	26.08	462.00	400.00	301.03	422.25	50.20	030.23	431.00	20.40			23.81	DZ-3.88	$\Box$

Consult factory for sizes 15-1/8" to 36"





SPECIFY WHEN ORDERING:
Model Number: Alloy: Brorue (standard) or Aluminum Shaft Diameter: In Inches or Milimeters Configurations: Male Pilot or Fernale Recess

0.D. Shaft or Sle eve Journal	CODE	Flange Diameter	Flange Thickness	Male Pilot Diameter	Female Recess Diam.	Length	Overall Length	Gland Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Grole	Hole Spacing
A		D	E	М	M1	Q	L	S	W	P	acking		-	Drilling	Informat	ion
<b>3</b> 76.20	0300	7 -1/2 190.50	7/16 11.11	4 -1/2 114.30	4 -3/4 120.65	<b>4 -1/8</b> 104.78	6 -5/16 160.34	1 -7/16 36.51	7 177.80	4 101.60	1/2 12.70	6	8	11/16 17.46	6 -1/4 158.75	30/60
3 -1/4 82.55	0314	7 -1/2 190.50	7/16 11.11	4-1/2 114.30	4 -3/4 120.65	4 -1/8 104.78	6 -5/16 160.34	1 -7/16 36.51	<b>7</b> 177.80	4 -1/4 107.95	1/2 12.70	6	8	11/16 17.46	6 -1/4 158.75	30/60
3 -1/2 88.90	0312	8 -1/8 206.38	5/8 15.88	4 -1/2 114.30	5 -1/4 133.35	4 -1/8 104.78	6 -1/2 165.10	1 -5/8 41.28	7 -5/8 193.68	4 -1/2 114.30	1/2 12.70	6	8	11/16 17.46	6 -3/4 171.45	30/60
3 -3/4 95.25	0334	8 -1/8 206.38	5/8 15.88	5 -1/2 139.70	5 -1/4 133.35	4 -1/8 104.78	6 -1/2 165.10	1 -5/8 41.28	7 -5/8 193.68	4 - 3/4 120.65	1/2 12.70	6	8	11/16 17.46	6 -3/4 171.45	30/60
<b>4</b> 101.60	0400	8 -5/8 219.08	<b>5/8</b> 15.88	5 -1/2 139.70	5 -3/4 146.05	<b>4 -1/8</b> 104.78	6 -1/2 165.10	1 -5/8 41.28	8 -1/8 206.38	5 127.00	1/2 12.70	6	8	11/16 17.46	7 -1/4 184.15	30/60
4 -1/4 107.95	0414	8 -5/8 219.08	5/8 15.88	5 -1/2 139.70	5 -3/4 146.05	4 -1/8 104.78	6 -1/2 165.10	1 -5/8 41.28	8 -1/8 206.38	5 - 1/4 133.35	1/2 12.70	6	8	11/16 17.46	7 -1/4 184.15	30/60
4 -1/2 114.3	0412	9 -3/8 238.13	13/16 20.64	6 -1/8 155.58	6 -1/2 165.10	<b>5</b> 127.00	7 -5/8 193.68	1 -7/8 47.63	8 -7/8 225.43	<b>5 -3/4</b> 148.05	<b>5/8</b> 15.88	6	8	11/16 17.46	8 203.20	30/60
4 -3/4 120.65	0434	9-3/8 238.13	13/16 20.64	6 -1/8 155.58	6 -1/2 165.10	5 127.00	7 -5/8 193.68	1 -7/8 47.63	8 - 7/8 225.43	6 152.40	5/8 15.88	6	8	11/16 17.46	8 203.20	30/60
5 127.00	0500	10 -1/8 257.18	13/16 20.64	6 -1/2 165.10	7-1/4 184.15	5 -7/8 149.23	9 -1/4 234.95	2 -3/8 60.33	9 - 5/8 244.48	6 -1/2 165.10	3/4 19.05	6	8	11/16 17.46	8 -3/4 222.25	30/60
5 -1/4 133.35	0514	10 -1/8 257.18	13/16 20.64	6 -1/2 165.10	7 -1/4 184.15	5 -7/8 149.23	9 -1/4 234.95	2 -3/8 60.33	9 - 5/8 244.48	6-3/4 171.45	3/4 19.05	6	8	11/16 17.46	8 -3/4 222.25	30/60
5-1/2 139.70	0512	10 -5/8 269.88	13/16 20.64	7 -1/2 190.50	7 -3/4 196.85	5-7/8 149.23	9-1/4 234.95	2 -3/8 60.33	10 -1/8 257.18	7 177.80	3/4 19.05	6	8	11/16 17.46	9 -1/4 234.95	30/60
5 -3/4	0534	10 -5/8	13/16	7 -1/2	7 -3/4	5 - 7/8	9 -1/4	2 -3/8	10 -1/8	7 -1/4	3/4	6	8	11/16	9 -1/4	30/60
148.45 6	0600	269.88	20.64 13/16	190.50	196.85	149.23 6	234.95	60.33 3	257.18	7-1/2	19.05 3/4	6	8	17.46	234.95	30/60
152.40 6 -1/4	0614	288.93	20.64 13/16	203.20 8	203.20 8	152.40 6	254.00 10	76.20 3	282.58 11 -1/8	190.50 7 -3/4	19.05 3/4	6	8	17.46	257.18 10 -1/8	30/60
158.75 6 -1/2	0612	288.93 13 -1/2	20.64 7/8	203.20 8-1/2	203.20 8 -5/8	152.40 6 -7/8	254.00 10 -7/8	76.20 3	282.58 12 -1/8	196.85 8 -1/4	19.05 7/8	6	8	17.46 13/16	257.18	45/45
165.10 6 -5/8	0658	342.90 13 -1/2	22.23 7/8	215.90	219.08 8 -5/8	174.63 6 -7/8	276.23 10 -7/8	76.20 3	307.98 12 -1/8	209.55 8 -3/8	22.23 7/8	6	8	20.64 13/16	288.93 11 -3/8	45/45
168.28 6 -3/4	0634	342.90 13 -3/4	22.23 7/8	8 -1/2	219.08 9	174.63 6 -7/8	276.23 10 -7/8	76.20 3	307.98 12 -1/2	212.73 8 -1/2	22.23 7/8	6	8	20.64 13/16	288.93 12	45/45
171.45 6 -7/8	0678	349.25 13 -3/4	22.23 7/8	215.90	228.60 9	174.63 6 -7/8	276.23 10 -7/8	76.20 3	317.50 12 -1/2	215.90 8 -5/8	22.23 7/8	6	8	20.64 13/16	304.80 12	45/45
174.63 7	0700	349.25 13 -3/4	22.23 7/8	9 -1/4	228.60 9	174.63 6 -7/8	276.23 10 -7/8	76.20 3	317.50 12 -1/2	219.08 8 -3/4	22.23 7/8	6	8	20.64 13/16	304.80 12	45/45
177.80		349.25	22.23	234.95	228.60	174.63	276.23	76.20	317.50	222.25	22.23			20.64	304.80	

Consult factory for sizes larger than 7"

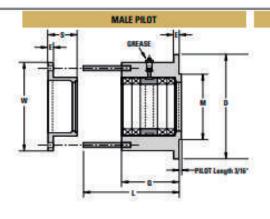


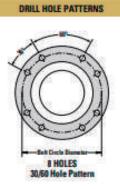
### **Bulkhead & Rudder Stuffing Boxes**

### Model 1790M

Grease Service







SPECIFY WHEN ORDERING:
Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Millimeters

A									_							
2	O.D. Shaft or Sie eve Journal	CODE	Fla nge Di anne ter	Flange Thickness	Male Pilot Diameter	Length	Overall Length	a a	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
Second   146.05   12.70   82.55   63.50   119.06   31.75   133.35   69.85   95.3   4   8   14.29   114.30   30.90	A		D	E	M	Q	L	S	w	l l	Packing			Drilling	Informat	ion
18450   1270   1275   1255	2	0200	5 -3/4	1/2	3 -1/4	2 -1/2	4 -11/16	1 -1/4	5 -1/4	2 -3/4	3/8			9/16	4 -1/2	30/60
ST.15   0214   152.40   12.70   0890   63.50   119.06   31.75   138.70   76.20   95.3   4   8   14.29   120.65   30/60	50.80	0200	146.05	12.70	82.55	63.50	119.06	31.75	133.35	69.85	9.53	•	•	14.29	114.30	30,00
12-10    1		0214										4	8			30/60
1987   1987   1987   1987   1987   1987   1988												_	_	-		
2-3 4   0234   6-1 2   1/2   4   2-5 8   4-13/16   1-3 8   6   3-1 2   3/8   9   5   14/2   133/0   30/0     3		0212										4	8			30/60
88 15																
3		0234										4	8			30/60
The column   The									_					_		
3-1/4   0314   7-1/2   7/16   4-3/4   3-1/16   5-1/4   1-7/16   7   4-1/4   1/2   4   8   11/16   6-1/4   190.50   11.11   120.65   77.79   133.35   36.51   177.80   107.95   12.70   4   8   17.46   158.75   30/60     3-1/2		0300									1 1	4	8			30/60
82.55   0314   199.50   11.11   120.85   77.79   133.55   38.51   177.80   107.95   12.70   4   8   17.86   198.75   30/60    3-1/2   8-1/8   5/8   5-1/4   3-1/4   5-5/8   1-5/8   7-5/8   4-1/2   1/2   4   8   11/16   6-3/4   17.86   15.87    3-3/4   0334   266.38   15.88   133.35   82.55   142.88   41.28   193.68   114.30   12.70   4   8   17.86   171.46   171.45    4   8   17.86   17.86   17.86   17.86   1.5/8   1.5/											-					
3-1/2   0312   8-1/8   5/8   5-1/4   3-1/4   5-5/8   1-5/8		0314										4	8			30/60
Section   Sect																
3-3/4 95.25 0334 8-1/8 5/8 5-1/4 3-1/4 5-5/8 1-5/8 7-5/8 4-3/4 1/2 4 8 11/16 6-3/4 30/60 101.60 0400 8-5/8 5/8 5-3/4 3-1/4 5-5/8 142.88 41.28 193.68 120.65 12.70 4 8 17.46 171.45 30/60 101.60 0400 219.08 15.88 146.05 82.55 142.88 41.28 206.38 127.00 12.70 4 8 11/16 7-1/4 101.60 15.88 146.05 82.55 142.88 41.28 206.38 127.00 12.70 4 8 11/16 7-1/4 107.95 193.68 14.28 206.38 133.35 12.70 4 8 11/16 7-1/4 11/4 11/4 11/4 11/4 11/4 11/4 11/4		0312		-							1 1	4	8			30/60
95.25																
101.60	95.25	0334	206.38	15.88	133.35	82.55	142.88	41.28	193.68	120.65	12.70	4	8	17.46	171.45	30/60
101.60 219.08 15.88 146.05 82.55 142.88 41.28 206.38 127.00 12.70 17.46 184.15 30.60 14.1/4 107.95 41.1/6 15.88 146.05 82.55 142.88 41.28 206.38 133.35 12.70 4 8 11/16 7-1/4 30/60 14.1/2 0412 238.13 19.05 165.10 92.08 158.75 47.63 225.43 146.05 15.88 4 8 11/16 8 203.20 30/60 14.3/4 9-3/8 3/4 6-1/2 3-5/8 6-1/4 1-7/8 8-7/8 5-3/4 166.05 15.88 4 8 11/16 8 203.20 30/60 14.3/4 9-3/8 19.05 165.10 92.08 158.75 47.63 225.43 146.05 15.88 4 8 11/16 8 203.20 152.70 15.1/6	4		8 -5/8	5/8	5 -3/4	3 -1/4	5 -5/8	1 -5/8	8 -1/8	5	1/2			11/16	7 -1/4	
107.95	101.60	0400	219.08	15.88	146.05	82.55	142.88	41.28	206.38	127.00	12.70	4	8	17.46	184.15	30/60
107.95	4-1/4	0414	8 -5/8	5/8	5 -3/4	3 -1/4	5 -5/8	1 -5/8	8 - 1/8	5-1/4	1/2			11/16	7 -1/4	20.60
114.30	107.95	0414	219.08	15.88	146.05	82.55	142.88	41.28	206.38	133.35	12.70	•	•	17.46	184.15	30/00
114.30	4 -1/2	0412	9 -3/8	3/4	6 -1/2	3 -5/8	6 -1/4	1 -7/8	8 - 7/8	5 -3/4	5/8	4	R	11/16	8	30/60
120.65   0434   238.13   19.05   165.10   92.08   158.75   47.63   225.43   152.40   15.88   4   8   17.46   203.20   30/60    5	114.30	01.12	238.13	19.05	165.10	92.08	158.75	47.63	225.43	146.05	15.88	_	_	17.46	203.20	50,00
120.65		0434	9 -3/8									4	R		_	30/60
127.00					100.00							ľ	_			54,55
127.00		0500	10 -1/8	3/4	7 -1/4	4 -1/4	7 -5/8			6 -1/2		4	8			30/60
133.35									_							
5-1/2 139.70         0512 269.88         10-5/8 19.05         3/4 19.05         4-1/4 19.85         7-5/8 193.68         2-3/8 60.33         10-1/8 257.18         7-3/4 177.80         3/4 19.05         4-1/4 269.88         3/4 19.05         7-3/4 19.05         4-1/4 19.05         193.68 19.05         60.33 193.68         2-3/8 60.33         10-1/8 257.18         7-1/4 18-1/5 19.05         3/4 11/16         9-1/4 234.95         30/60           6 0600 152.40         11-3/8 288.93         3/4 19.05         8-3/8 212.73         4-1/4 107.95         8-1/4 209.55         2-3/8 60.33         10-7/8 276.23         7-1/2 19.05         3/4 8 11/16         11/16 10-1/8 17.46         257.18 257.18           6-1/4 0614         11-3/8 3/4         3/4 8-3/8         4-1/4 4-1/4         8-1/4 8-1/4         2-3/8 8-1/4         10-7/8 2-3/8         7-3/4 19.05         3/4 4 8         4 8 11/16         10-1/8 17.46         257.18 257.18		0514										4	8			30/60
139.70																
5-3/4 146.05     0534 269.88     10-5/8 269.88     3/4 19.05     7-3/4 196.85     4-1/4 197.95     7-5/8 193.68     2-3/8 60.33     10-1/8 27.18     7-1/4 184.15     3/4 19.05     4 17.46     11/16 234.95     9-1/4 234.95     30/60       6 152.40     0600 288.93     19.05     212.73     107.95     209.55     60.33     276.23     190.50     19.05     4 8     11/16 17.46     257.18       6-1/4     0614     11-3/8 0614     3/4 11-3/8     3/4 3/4     8-3/8 8-3/8     4-1/4 8-1/4     8-1/4 8-1/4     2-3/8 8-1/4     10-7/8 10-7/8     7-3/4 7-3/4     3/4 3/4     4 8     11/16 11-1/8 11/16     10-1/8 11/16     30/60		0512										4	8			30/60
146.05																
6 0600 11 - 3/8 3/4 8 - 3/8 4 - 1/4 8 - 1/4 2 - 3/8 10 - 7/8 7 - 1/2 3/4 4 8 11/16 10 - 1/8 30/60 152.40 0604 11 - 3/8 3/4 8 - 3/8 4 - 1/4 8 - 1/4 2 - 3/8 10 - 7/8 7 - 3/4 3/4 4 8 11/16 10 - 1/8 30/60 152.40 0614 11 - 3/8 3/4 8 - 3/8 4 - 1/4 8 - 1/4 2 - 3/8 10 - 7/8 7 - 3/4 3/4 4 8 11/16 10 - 1/8 30/60		0534										4	8			30/60
152.40 0600 288.93 19.05 212.73 107.95 209.55 60.33 276.23 190.50 19.05 4 8 17.46 257.18 30/60 6-1/4 0614 11-3/8 3/4 8-3/8 4-1/4 8-1/4 2-3/8 10-7/8 7-3/4 3/4 4 8 11/16 10-1/8 30/60									_	_						
6-1/4 0614 11-3/8 3/4 8-3/8 4-1/4 8-1/4 2-3/8 10-7/8 7-3/4 3/4 4 8 11/16 10-1/8 30/60		0600								1		4	8			30/60
0614   1   4   8   1   30/60																
		0614										4	8			30/60

Consult factory for sizes larger than 6-1/4"

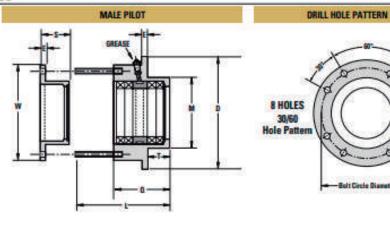


### **Bulkhead & Rudder Stuffing Boxes**

### **Model 1791**

Grease Service





SPECIFY WHEN ORDERING:
Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Milimeters

Part																	
200	O.D. Shaft or Sie eve Journal	CODE	Flange Diameter	Flange Thickness	Male Pilot Diameter	Length	Overall Length	Gland Length	Pilot Length	Gland Flange Diameter	Packing 0.D.	Packing Size	No. of Rings	No. of Holes	Drill Size	Bolt Circle	Hole Spacing
14.00   14.0	A		D	E	M	Q	L	S	Т	w	P	Packing		ı	Orilling	Informat	ion
1805   1805	2	0200	5 -3/4	1/4	3 -1/4	2 -1/2	4 -11/16	1 -1/4	1	5 -1/4	2 -3/4	3/8			9/16	4 -1/2	20/60
57.15         6234         152.40         6.35         61.90         63.50         118.06         31.75         25.40         139.70         76.20         9.53         4         8         14.29         120.55         30/60           2-1/2         6-1/4         3/8         3-3/4         2-5/80         6-13/16         1-3/80         1         5-3/4         3-1/4         3/8         4         8         9/16         5-1/2         30/60           2-3/4         155.10         95.33         95.55         66.68         172.24         34.93         25.40         152.40         88.90         95.31         4         8         9/16         5-1/2         30/60         30.70         7-1/2         7/16         4-3/4         3-1/16         5-1/4         1-7/16         1-5/16         7-1/2         17/16         4-3/4         3-1/16         5-1/4         1-7/16         1-5/16         7         4-1/4         1/2         4         8         11/16         6-1/2         30/60           3-1/4         9304         7-1/2         7/16         4-3/4         3-1/16         5-1/4         1-7/16         1-5/16         7         4-1/4         1/2         4         8         11/16         6-1/2	50.80	0200	146.05	6.35	82.55	63.50	119.06	31.75	25.40	133.35	69.85	9.53		Ľ	14.29	114.30	30/00
15.715   15.240   6.35   88.90   63.50   119.06   31.75   25.40   132.70   76.20   95.31   5   14.29   120.65   75.50   158.75   95.31   95.75   66.88   122.24   34.90   25.40   146.05   82.55   95.31   4   8   14.29   127.00   30.90	2 -1/4	0214	6	1/4	3 -1/2	2 -1/2	4 -11/16	1 -1/4	1	5 -1/2	3	3/8	4	8	9/16	4 -3/4	30/60
Color			152.40	6.35		63.50	119.06			139.70		9.53	Ľ	Ľ	14.29		30,00
2-3 4		0212											4	8	-,		30/60
Color																	
3		0234											4	8			30/60
The column   The										-					-		
3-1/4   27-1/2   7/16   4-3/4   3-1/16   5-1/4   1-7/16   1-5/16   7   4-1/4   1/2   4   8   11/16   6-1/4   13/16   3-1/4		0300										1	4	8			30/60
82.55																	
3-1/2   0312   8-1/8   5/8   5-1/4   3-1/4   5-5/8   1-5/8   1-3/8   7-5/8   4-1/2   1/2   4   8   11/16   6-3/4   30/60		0314								l .		1 -	4	8			30/60
88.90																	
3-3/4   034   8-1/8   5/8   5-1/4   3-1/4   5-5/8   1-5/8   1-3/8   7-5/8   4-3/4   1/2   4   8   11/16   6-3/4   30/60    4		0312											4	8			30/60
95.25   206.38   15.88   133.35   82.55   142.88   41.28   34.93   193.68   120.65   12.70   17.46   171.45   101.60   219.08   15.88   146.05   82.55   142.88   41.28   31.75   206.38   127.00   12.70   4   8   11/16   7-1/4   30/60   17.46   184.15   30/60   17.46   184.15   30/60   17.46   184.15   30/60   184.15   146.05   146.05	3 -3/4		8 -1/8	5/8	5 -1/4	3 -1/4	5 -5/8	1 -5/8	1 -3/8	7 -5/8	4 -3/4	1/2			11/16	6 -3/4	
101.60	95.25	0334	206.38	15.88	133.35	82.55	142.88	41.28	34.93	193.68	120.65	12.70	4	8	17.46	171.45	30/60
101.60	4		8 -5/8	5/8	5 -3/4	3 -1/4	5 -5/8	1 -5/8	1 -1/4	8 -1/8	5	1/2	١.		11/16	7 -1/4	2000
107.95	101.60	0400	219.08	15.88	146.05	82.55	142.88	41.28	31.75	206.38	127.00	12.70	٩ ا	8	17.46	184.15	30/60
107.95   107.95   129.08   15.88   146.05   82.55   142.88   44.28   31.75   206.38   133.35   12.70   17.46   184.15   30.54   14.30	4 -1/4	0414	8 -5/8	5/8	5 -3/4	3 -1/4	5 -5/8	1 -5/8	1 -1/4	8 -1/8	5 -1/4	1/2		٦.	11/16	7 -1/4	20/50
14.30	107.95	0414	219.08	15.88	146.05	82.55	142.88	41.28	31.75	206.38	133.35	12.70	L*	L°.	17.48	184.15	30/00
114.30	4 -1/2	0412	9 -3/8	3/4	6 -1/2	3 -5/8	6 -1/4	1 -7/8	1 -1/2	8 - 7/8	5 -3/4	5/8		R	11/16	8	30/60
120.65	114.30	0412	238.13	19.05	165.10	92.08	158.75	47.63	38.10	225.43	146.05	15.88	<u> </u>	Ľ	17.48	203.20	30/00
120.65	4 -3/4	0434	9 -3/8	3/4	6 -1/2	3 -5/8	6 -1/4	1 -7/8	1 -1/2	8 - 7/8	6	5/8	4	8	11/16	8	30/60
127.00																	
127.00		0500											4	8			30/60
133.35																	
5 -1/2         0512         10 -5/8 269.88         3/4 19.05         7 -3/4 4 -1/4 19.68         7 -5/8 2 -3/8 60.33         1 -7/8 46.03         10 -1/8 257.18         7 -3/4 3/4 19.05         4 8 11/16 9 -1/4 234.95         30/60           5 -3/4 146.05         0534 269.88         19.05 196.85         107.95 193.68         60.33 47.63 257.18         10 -1/8 7 -1/4 3/4 3/4 3/4 17.46         234.95         11/16 9 -1/4 234.95         30/60           6 0600 152.40         11 -3/8 3/4 289.33         3/4 8 -3/8 4 -1/4 8 -1/4 2-3/8 1 -7/8 10 -7/8 7 -1/2 3/4 17.46         19.05 19.05 19.05 19.05         11/16 10 -1/8 30/60         30/60           6 -1/4 0614         11 -3/8 3/4 8 -3/8 4 -1/4 8 -1/4 2-3/8 1 -7/8 10 -7/8 7 -3/4 3/4 8 -3/4 8 -3/8 4 -1/4 8 -1/4 2-3/8 1 -7/8 10 -7/8 7 -3/4 3/4 4 8 11/16 10 -1/8 30/60         11/16 10 -1/8 30/60         30/60		0514											4	8			30/60
139.70					_												
5 - 3/4         0534         10 - 5/8         3/4         7 - 3/4         4 - 1/4         7 - 5/8         2 - 3/8         1 - 7/8         10 - 1/8         7 - 1/4         3/4         4         8         11/16         9 - 1/4         30/60           146.05         269.88         19.05         196.85         107.95         193.68         60.33         47.63         257.18         184.15         19.05         4         8         11/16         9 - 1/4         234.95         234.95         11 - 3/8         3/4         8 - 3/8         4 - 1/4         8 - 1/4         2 - 3/8         1 - 7/8         10 - 7/8         7 - 1/2         3/4         4         8         11/16         10 - 1/8         30/60           6 - 1/4         288.93         19.05         212.73         107.95         209.55         60.33         47.63         276.23         190.50         19.05         4         8         11/16         10 - 1/8         30/60           6 - 1/4         0614         11 - 3/8         3/4         8 - 3/8         4 - 1/4         8 - 1/4         2 - 3/8         1 - 7/8         10 - 7/8         7 - 3/4         3/4         4         8         11/16         10 - 1/8         30/60		0512											4	8			30/60
146.05																	
6 0600 11-3/8 3/4 8-3/8 4-1/4 8-1/4 2-3/8 1-7/8 10-7/8 7-1/2 3/4 4 8 11/16 10-1/8 30/60 152.40 288.93 19.05 212.73 107.95 209.55 60.33 47.63 276.23 190.50 19.05 4 8 17.46 257.18 30/60 6-1/4 0614 11-3/8 3/4 8-3/8 4-1/4 8-1/4 2-3/8 1-7/8 10-7/8 7-3/4 3/4 4 8 11/16 10-1/8 30/60		0534											4	8			30/60
152.40																	
6-1/4 0614 11-3/8 3/4 8-3/8 4-1/4 8-1/4 2-3/8 1-7/8 10-7/8 7-3/4 3/4 4 8 11/16 10-1/8 30/60		0600											4	8			30/60
0614					_										_		
	158.75	0614				107.95	209.55			276.23			4	8	17.46	257.18	30/60

Consult factory for sizes larger than 6-1/4"



### "Strong Boy" Stuffing Boxes & Stern Castings

### Model 102

Stuffing Box

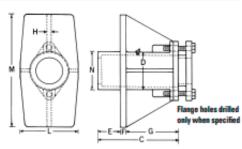
Model 102: Supplied with packing only Model 102L: Supplied with packing, lantem-ring and grease service for packing lubrication

Model 102LB: Supplied with packing, lantern-ring and grease service, with 1/3-length standard rubber sleeve bearing



SPECIFY WHEN ORDERING: Model Number: Alloy: Bronze (standard) o

Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Milimeters



Model Numb	er: Alloy: Bronze (	standard) or Ali	uminum Sha	itt Diameter:	in inches or M	Imeters							
O.D. Shaft or Siee ve Journal	CODE										Lantern Ring LD. & Length	Packing Size	No. of Rings
A		С	D	E	F	G	н	L	М	N		Pack	ting
4	102-400	12 -1/2	5 - 3/4	3 -3/4	3/4	8	5/8	9	18	5 -7/8		1/2	23
4	102-400L	12 -1/2	5 -3/4	3 -3/4	3/4	8	5/8	9	18	5 -7/8	4-1/8 x 3-1/2	1/2	16
4	102-400LB	12 -1/2	5 - 3/4	3 -3/4	3/4	8	5/8	9	18	5 - 7/8	4-1/8 x 2-1/2	1/2	8
4-1/4	102-414	12 -1/2	5 - 7/8	3 -5/8	7/8	8	5/8	9	18	6		1/2	23
4-1/4	102-414L	12 -1/2	5 - 7/8	3 -5/8	7/8	8	5/8	9	18	6	4 -3/8 x 3 -1/2	1/2	16
4-1/4	102-414LB	12 -1/2	5 - 7/8	3 -5/8	7/8	8	5/8	9	18	6	4-3/8 x 2-1/2	1/2	8
4 -1/2	102-412	12 -1/2	6	3 1/2	1	8	5/8	9	18	6 -1/8		1/2	23
4 -1/2	102-412L	12 -1/2	6	3 -1/2	1	8	5/8	9	18	6 -1/8	4-5/8 x 3-1/2	1/2	16
4 -1/2	102-412LB	12 -1/2	6	3 -1/2	1	8	5/8	9	18	6 -1/8	4 -5/8 x 2 -1/2	1/2	8
4 -3/4	102-434	13 -3/4	6 -1/4	4	1	8 -3/4	3/4	9 -1/4	18	6 -3/8		1/2	26
4 -3/4	102-434L	13 -3/4	6-1/4	4	1	8 -3/4	3/4	9 -1/4	18	6 -3/8	4-7/8 x 3-1/2	1/2	18
4 -3/4	102-434LB	13 -3/4	6-1/4	4	1	8 -3/4	3/4	9 -1/4	18	6 -3/8	4-7/8 x 2-1/2	1/2	8
5	102-500	13 -3/4	6 -3/4	4	1	8 -3/4	3/4	9 -3/4	18	6 -7/8		1/2	26
5	102-500L	13 -3/4	6 -3/4	4	1	8 -3/4	3/4	9 -3/4	18	6 -7/8	5-1/8 x 3-1/2	1/2	18
5	102-500LB	13 -3/4	6 -3/4	4	1	8 -3/4	3/4	9 -3/4	18	6 - 7/8	5-1/8 x 2-1/2	1/2	8
5 - 1/4	102-514	14 -1/2	7	4 - 1/2	1	9	3/4	10	18	7 -1/8		1/2	26
5 -1/4	102-514L	14 -1/2	7	4 - 1/2	1	9	3/4	10	18	7 -1/8	5-3/8 x 3-1/2	1/2	18
5 -1/4	102-514LB	14 -1/2	7	4 -1/2	1	9	3/4	10	18	7 -1/8	5-3/8 x 2-1/2	1/2	8
5 -1/2	102-512	14 -1/2	7 -3/4	4-7/16	1 1/16	9	3/4	10 -3/4	18	7 -7/8		3/4	18
5 -1/2	102-512L	14 -1/2	7 -3/4	4-7/16	1 1/16	9	3/4	10 -3/4	18	7 -7/8	5-5/8 x 3-1/2	3/4	12
5 -1/2	102-512LB	14 -1/2	7 -3/4	4 -7/16	1 1/16	9	3/4	10 -3/4	18	7 -7/8	5 -5/8 x 2 -1/2	3/4	6
5 -3/4	102-534	15 -1/2	8	4 - 7/8	1 1/8	9 -1/2	7/8	11	18	8 -1/8		3/4	18
5 -3/4	102-534L	15 -1/2	8	4 - 7/8	1 1/8	9 -1/2	7/8	11	18	8 -1/8	5 -7/8 x 3 -1/2	3/4	12
5 -3/4	102-534LB	15 -1/2	8	4 - 7/8	1 1/8	9 -1/2	7/8	11	18	8 -1/8	5 -7/8 x 2 -1/2	3/4	6
6	102-600	15 -1/2	8 -1/4	4 -7/8	1 1/8	9 -1/2	7/8	11 -1/4	18	8 -3/8		3/4	18
6	102-600L	15 -1/2	8 -1/4	4 - 7/8	1 1/8	9 -1/2	7/8	11 -1/4	18	8 -3/8	6-1/8 x 3-1/2	3/4	12
6	102-600LB	15 -1/2	8 -1/4	4-7/8	1 1/8	9 -1/2	7/8	11 -1/4	18	8 -3/8	6-1/8 x 2-1/2	3/4	6
Consult foots	ny for eisae lamar t	han Cit											

Consult factory for sizes larger than 6"

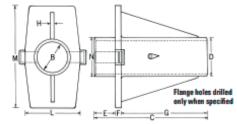
#### Model 102

Stern Casting



SPECIFY WHEN ORDERING:

Model Number: Alloy: Bronze (standard) or Aluminum Shaft Diameter: In Inches or Millimeter.



Model Number:	Alloy: Bronze (standard) or	Peter State	art Diameter.	Inches or Milime	1000						
O.D. Shaft or Sie eve Journal	CODE										
A		В	С	D	E	F	G	Н	L	M	N
4	100-400	5	16 -1/4	5 -3/4	2 -3/8	15/16	13	5/8	9	16 -1/2	5 -3/4
4 -1/4	100-414	5 -1/2	17 -1/4	6 -1/4	2 -3/4	1	13 -1/2	5/8	9	16 -1/2	6 -1/4
4 -1/2	100-412	5-1/2	18 -1/4	6 -1/4	3 -1/4	1	14	5/8	9	16 -1/2	6 -1/4
4 -3/4	100-434	6 -1/8	19 -1/2	7 -1/8	3 -13/16	1 -1/16	14 -1/2	3/4	10	17 -1/2	7 -1/8
5	100-500	6 -1/8	20 -1/2	7 -1/8	4 -3/8	1 -1/8	15	3/4	10	17 -1/2	7 -1/8
5 -1/4	100-514	6 -3/4	21 -1/2	8	4 -7/8	1 -1/8	15 -1/2	3/4	11	18 -1/2	8
5 -1/2	100-512	7	22 -1/2	8	5 -5/16	1 -3/16	16	7/8	11	18 -1/2	8
5 - 3/4	100-534	7	23 -1/2	8 -1/4	5 -13/16	1 -3/16	16 -1/2	7/8	12	19 -1/2	8 -1/4
6	100-600	7 -1/2	24 -1/4	8 -1/2	5	1 -1/4	18	1 -1/8	11	20	8 -1/2

Consult factory for sizes larger than 6"



# The Dutchman Add-On Air Seal Housing

#### Allows You To Change Packing Without Drydocking.

The Dutchman can be custom-built and added to any split design or solid stuffing box. The Air Seal makes it easy to seal out seawater with a minimum of 15 psi, D0 NOT EXCEED 40 psi. It allows you to change packing or maintain a stuffing box at sea, greatly reducing maintenance time and cost. A Dutchman Air Seal Housing can be added to any size or any type stuffing box. The housing can be ordered with female recess or a male pilot on either side to fit forward stern tube, vessel's bulkhead, or mating with stuffing box.

Dutchman Air Seal Housing Specs

MALE PILOT/FEMALE RECESS CONFIGURATION

MALE PILOT/FEMALE RECESS CONFIGURATION

ARE

OPTION 1

SHOLES
30/30

Role Protein

SPECIFY WHEN ORDERING:

SPECIFY WHEN ORDER

				-					
0.0. Shaft or Sie eve Journal	CODE	Outside Diameter	Male Pilot/ Female Recess Diameter	Male Pilot/ Female Recess Diameter	Overall Width	Ho le Size	Number of Holes	Hole Drill and Tap	Hole Spacing
A		D	М	M1	w		Drilling	Information	
2-1/2	0212	7-1/2	3-1/2	4	3-1/2	11/16	8	5/8 - 11 UNC	30/60
3	0300	7-1/2	4-1/2	4-3/4	3-1/2	11/16	8	5/8 - 11 UNC	30/60
3-1/4	0314	7-1/2	4-1/2	4-3/4	3-1/2	11/16	8	5/8 - 11 UNC	30/60
3-1/2	0312	8-1/8	4-1/2	5-1/4	3-1/2	11/16	8	5/8 - 11 UNC	30/60
3-3/4	0334	8-1/8	-	5-1/4	3-1/2	11/16	8	5/8 - 11 UNC	30/60
4	0400	8-5/8	5-1/2	5-3/4	3-1/2	11/16	8	5/8 - 11 UNC	30/60
4-1/4	0414	8-5/8	5-1/2	5-3/4	4	11/16	8	5/8 - 11 UNC	30/60
4-1/2	0412	9-3/8	6-1/8	6-1/2	4	11/16	8	5/8 - 11 UNC	30/60
4-3/4	0434	9-3/8	6-1/8	6-1/2	4	11/16	8	5/8 - 11 UNC	30/60
5	0500	10-1/8	6-1/2	7-1/4	4	11/16	8	5/8 - 11 UNC	30/60
5-1/4	0514	10-1/8	6-1/2	7-1/4	4	11/16	8	5/8 - 11 UNC	30/60
5-1/2	0512	10-5/8	7-1/2	7-3/4	4	11/16	8	5/8 - 11 UNC	30/60
5-3/4	0534	10-5/8	7-1/2	7-3/4	4	11/16	8	5/8 - 11 UNC	30/60
6	0600	11-3/8	8	8	4	11/16	8	5/8 - 11 UNC	30/60
6-1/4	0614	11-3/8	8	8	4	11/16	8	5/8 - 11 UNC	30/60
6-1/2	0612	13-1/2	8-1/2	8-5/8	4	13/16	8	3/4 - 10 UNC	45/45
6-5/8	0658	13-1/2	8-1/2	8-5/8	4	13/16	8	3/4 - 10 UNC	45/45
6-3/4	0634	13-3/4	8-1/2	9	4	13/16	8	3/4 - 10 UNC	45/45
6-7/8	0678	13-3/4		9	4	13/16	8	3/4 - 10 UNC	45/45
7	0700	13-3/4	9-1/4	9	4	13/16	8	3/4 - 10 UNC	45/45
7-1/8	0718	14-1/8	9-1/4	9-5/8	4	13/16	8	3/4 - 10 UNC	45/45
7-1/4	0714	14-1/8	9-1/4	9-5/8	4	13/16	8	3/4 - 10 UNC	45/45
7-3/8	0738	14-1/8	-	9-5/8	4	13/16	8	3/4 - 10 UNC	45/45
7-1/2	0712	14-1/2	10-1/4	10	4	13/16	8	3/4 - 10 UNC	45/45



A         D         M         M1         W         Description formation           7-348         8798         14-1/2         19-1/4         18         4         13/16         8         34-1-10 MIC         45465           7-348         8794         14-1/2         19-1/4         19-3/8         4         13/16         8         34-1-10 MIC         4566           8         6800         14-7/8         19-1/8         19-3/8         4         13/16         8         24-1-10 MIC         4566           8-1/8         6818         15-7/8         -         19-3/8         4         13/16         8         24-1-10 MIC         4565           8-1/8         6818         15-1/4         11         19-3/4         4         13/16         8         24-1-10 MIC         4665           8-3/8         6818         15-1/4         11         19-3/4         4         13/16         8         24-1-10 MIC         4695           8-3/8         6828         15-5/8         11         11-1/8         4         13/16         8         24-1-10 MIC         4695           8-3/8         6828         15-5/8         11         11-1/8         4         13/16         8	O.D. Shaft or Sleeve Journal	CODE	Outside Diameter	Male Pilot/ Female Recess Diamete r	Male Pilot/ Female Recess Diameter	Overall Width	Hole Size	Number of Holes	Hole Drill and Tap	Hole Spacing
7-348 9734 14-12 15-14 15-14 16 16 4 13/16 8 34-1-9 UNC 6496 8 6 1690 14-78 15-14 15-38 4 13/16 8 34-1-9 UNC 6496 8 16-1	A		D	M	M1	w		Drilling	Information	
17-78   9778	7-5/8	0758	14-1/2	10-1/4	10	4	13/16	8	3/4 - 10 UNC	45/45
B	7-3/4	0734	14-1/2	10-1/4	10	4	13/16	8	3/4 - 10 UNC	45/45
## 1-19	7-7/8	0778	14-7/8	10-1/4	10-3/8	4	13/16	8	3/4 - 10 UNC	45/45
## 1-14   9814   15-14   11   16-34   4   13/95   8   24-18 UNIC   65/95   ## 1-12   9812   15-14   11   16-34   4   13/95   8   24-18 UNIC   65/95   ## 1-12   9812   15-14   11   16-34   4   13/95   8   24-18 UNIC   65/95   ## 1-24   9812   15-14   11   16-34   4   13/95   8   24-18 UNIC   65/95   ## 1-24   9812   15-58   11   11-18   4   13/95   8   24-18 UNIC   65/95   ## 1-24   9812   15-58   11   11-18   4   13/95   8   24-18 UNIC   65/95   ## 1-24   9812   15-58   11   11-18   4   13/95   8   24-18 UNIC   65/95   ## 1-24   9812   15-58   11   11-18   4   13/95   8   24-18 UNIC   65/95   ## 1-24   9812   15-58   11   11-12   4   13/95   8   24-18 UNIC   65/95   ## 1-14   9818   16   11-24   11-12   4   13/95   8   24-18 UNIC   65/95   ## 1-14   9818   16   11-24   11-12   4   13/95   8   24-18 UNIC   65/95   ## 1-14   9818   16-38   11-24   11-12   4   13/95   8   24-18 UNIC   65/95   ## 1-28   9828   16-38   11-24   11-28   4   13/95   8   24-18 UNIC   65/95   ## 1-28   9828   16-38   11-24   11-28   4   13/95   8   24-18 UNIC   65/95   ## 1-28   9828   16-38   11-24   11-28   4   13/95   8   24-18 UNIC   65/95   ## 1-28   9828   16-38   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95   8   24-18 UNIC   65/95   ## 1-28   1988   17-78   12-24   12-38   4   13/95	8	0800	14-7/8	10-1/4	10-3/8	4	13/16	8	3/4 - 10 UNC	45/45
\$\frac{1}{8}\$-38\$\$\$ \$15-14\$\$\$ \$11\$\$\$ \$15-34\$\$\$ \$4\$\$\$ \$13-76\$\$\$ \$8\$\$\$ \$34-16 BUNC\$\$\$ \$6455\$\$ \$1-24\$\$\$ \$15-56\$\$\$ \$11\$\$\$ \$15-16\$\$\$ \$11\$\$\$ \$15-16\$\$\$ \$4\$\$\$ \$13-76\$\$\$\$ \$8\$\$\$ \$34-16 BUNC\$\$\$ \$6455\$\$ \$2-44\$\$\$ \$15-56\$\$\$ \$11\$\$\$ \$15-16\$\$\$\$ \$4\$\$\$ \$13-76\$\$\$\$\$ \$8\$\$\$ \$34-16 BUNC\$\$\$ \$6455\$\$\$ \$2-78\$\$\$ \$0900\$\$\$\$\$\$\$ \$15-560\$\$\$\$\$\$\$\$\$ \$11\$\$\$\$ \$11-16\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	8-1/8	0818	14-7/8	-	10-3/8	4	13/16		3/4 - 10 UNC	45/45
\$\$ -1/2  6812  15-1/4  11  15-34  4  13/16  8  34-10 UNC  6465  5-3/4  6826  15-5/8  11  11-1/8  4  13/16  8  34-10 UNC  6465  5-3/4  6826  15-5/8  11  11-1/8  4  13/16  8  34-10 UNC  6465  5-7/8  6826  15-5/8  11-1/8  4  13/16  8  34-10 UNC  6465  5-1/8  6926  15-5/8  11-1/2  4  13/16  8  34-10 UNC  6465  5-1/8  6914  16  11-3/4  11-1/2  4  13/16  8  34-10 UNC  6465  5-1/8  6926  11-3/4  11-1/2  4  13/16  8  34-10 UNC  6465  5-1/8  6926  11-3/4  11-1/3  4  13/16  8  34-10 UNC  6465  5-1/8  11-3/4  11-1/3  4  13/16  8  34-10 UNC  6465  5-3/8  6924  11-3/4  11-1/3  4  13/16  8  34-10 UNC  6465  5-3/8  6924  15-3/8  11-3/4  11-1/3  4  13/16  8  34-10 UNC  6465  5-3/8  6924  15-7/8  12-3/4  12-3/8  4  13/16  8  34-10 UNC  6465  5-1/8  12-3/4  12-3/8  4  13/16  8  34-10 UNC  6465  5-1/8  12-3/4  12-3/8  4  13/16  8  34-10 UNC  6465  12-3/8  4  13/16  8  34-10 UNC  6465  12-3/8  12-3/4  12-3/8  4  13/16  8  34-10 UNC  6465  12-3/8  15-1/8  12-3/4  12-3/8  4  13/16  8  34-10 UNC  6465  13-1/4  12-3/4  12-3/4  4  13/16  8  34-10 UNC  6465  13-1/4  13-3/4  12-3/4  12-3/4  4  15/16  8  34-10 UNC  6465  13-1/4  13-3/4  13-3/4  13-3/4  13-1/4  13-3/4  13-1/4										
8-9/8   0858   15-58   11								_		
## 3-34										
1-78   0978   15-50										
9   9000   16					-	-		_		
\$\frac{1}{9}\$-\frac{1}{10}\$\$ 0918 \$ 16 \$ 11-244 \$ 11-122 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 11-3/4 \$ 11-1/78 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 11-3/4 \$ 11-7/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 11-3/4 \$ 11-7/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 11-3/4 \$ 11-7/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 11-3/4 \$ 11-7/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.34 \$ 11-7/8 \$ 12-2/4 \$ 12-2/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.00 \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.00 \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.00 \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.00 \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.00 \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.00 \$ 45/45 \$ 1-3/16 \$ 19.34 \$ 10.00 \$ 16-7/8 \$ 12-2/4 \$ 12-2/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 10-1/8 \$ 10.00 \$ 16-7/8 \$ 12-2/4 \$ 12-2/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 10-1/8 \$ 10.00 \$ 16-7/8 \$ 12-2/4 \$ 12-2/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 10-1/8 \$ 10.00 \$ 17-7/8 \$ 12-2/4 \$ 12-2/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 10-1/8 \$ 10.00 \$ 17-7/8 \$ 12-2/4 \$ 12-2/8 \$ 4 \$ 12/16 \$ 8 \$ 34-10 UNC \$ 45/45 \$ 10-1/8 \$ 10.00 \$ 17-7/8 \$ 12-2/4 \$ 12-2/8 \$ 4 \$ 12/16 \$ 8 \$ 7/8-9 UNC \$ 45/45 \$ 10-1/4 \$ 13-1/4 \$ 10-1/4 \$ 13										-
\$\frac{1}{9}\$-\frac{1}{16}\$\$ \$938\$ \$16-38\$ \$11-34\$ \$11-12\$ \$4\$ \$13/16\$ \$8\$ \$34-10 UNC\$ \$45/45\$ \$1-13/16\$ \$1.00 UNC\$ \$45/45\$ \$1-13/16										
\$\frac{1}{9}\$-100   \$0.000   \$16-200   \$11-204   \$11-700   \$4   \$12705   \$8   \$34-10 UNC   \$4545   \$1-300   \$1-300   \$11-304   \$11-700   \$4   \$12705   \$8   \$34-10 UNC   \$4545   \$1-300   \$1-3										
S-1/2										
S-568   0958   16-38									-	
S-7/8   1997		0958				4		8		
10	9-3/4	0934	16-7/8	12-3/4	12-3/8	4	13/16	8	3/4 - 10 UNC	45/45
10-1/8	9-7/8	0978	16-7/8	12-3/4	12-3/8	4	13/16	8	3/4 - 10 UNC	45/45
10-1/4	10	1000	16-7/8	12-3/4	12-3/8	4	13/16	8	3/4 - 10 UNC	45/45
10-3/8   1038   17-7/8     12-3/4   4   15/16   8   7/8-9 UNC   45/45     10-1/2   1012   18-1/4   13-3/4   13-1/8   4   15/16   8   7/8-9 UNC   45/45     10-5/8   1058   18-1/4   13-3/4   13-1/8   4   15/16   8   7/8-9 UNC   45/45     10-3/4   1103/4   1103/4   118-1/4   13-3/4   13-1/2   4   15/16   8   7/8-9 UNC   45/45     11-3/4   1103/4   1103/4   13-1/2   4   15/16   8   7/8-9 UNC   45/45     11   1100   18-5/8   13-3/4   13-1/2   4   15/16   8   7/8-9 UNC   45/45     11   1100   18-5/8   13-3/4   13-1/2   4   15/16   8   7/8-9 UNC   45/45     11-1/8   1118   18-5/8     13-1/2   4   15/16   8   7/8-9 UNC   45/45     11-1/8   1118   19   14-1/2   13-7/8   4   15/16   8   7/8-9 UNC   45/45     11-1/8   1138   19   14-1/2   13-7/8   4   15/16   8   7/8-9 UNC   45/45     11-1/2   1112   19   14-1/2   13-7/8   4   15/16   8   7/8-9 UNC   45/45     11-1/4   1134   13-3/8   14-1/2   13-7/8   4   15/16   8   7/8-9 UNC   45/45     11-1/4   1134   13-3/8   14-1/2   13-7/8   4   15/16   8   7/8-9 UNC   45/45     11-1/8   1138   19   14-1/2   13-7/8   4   15/16   8   7/8-9 UNC   45/45     11-1/8   1138   19-3/8   14-1/2   13-7/8   4   15/16   12   7/8-9 UNC   30/30     11-3/4   1134   13-3/8     14-1/8   4   15/16   12   7/8-9 UNC   30/30     11-3/4   1134   13-3/8     14-1/8   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   13-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   13-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   13-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   13-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   13-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   13-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   13-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30     12-1/8   1218   21-1/4   15-1/4   4   15/16   12   7/8-9 UNC   30/30     13-1/8   1338   21   15-1/4   15-1/4   4   15/16	10-1/8	1018	17-7/8	12-3/4	12-3/4	4	15/16	8	7/8 - 9 UNC	45/45
10-1/2	10-1/4	1014	17-7/8	12-3/4	12-3/4	4	15/16	8	7/8 - 9 UNC	45/45
10-5/8   1058   18-1/4   13-3/4   13-1/8   4   15/16   8   7/8-9 UNC   45/45	10-3/8	1038	17-7/8	-	12-3/4	4	15/16	8	7/8 - 9 UNC	45/45
10-3/4   1034   18-1/8   13-3/4   13-1/8   4   15/16   8   7/8 -9 UNC   45/45     10-7/8   1078   18-5/8   13-3/4   13-1/2   4   15/16   8   7/8 -9 UNC   45/45     11   1100   18-5/8   13-3/4   13-1/2   4   15/16   8   7/8 -9 UNC   45/45     11-1/8   1118   18-5/8   -	10-1/2	1012	18-1/4	13-3/4	13-1/8	4	15/16	8	7/8 - 9 UNC	45/45
10-7/8   1078   18-5/8   13-3/4   13-1/2   4   15/16   8   7/8-9 UNC   45/45	10-5/8	1058	18-1/4	13-3/4	13-1/8	4	15/16	8	7/8 - 9 UNC	45/45
11	10-3/4	1034	18-1/4	13-3/4	13-1/8	4	15/16	8	7/8 - 9 UNC	45/45
11-1/8			18-5/8	13-3/4					-	
11-1/4										
11-3/8   1138   19										
11-1/2   1112   19										
11-5/8   1158   19-3/8   14-1/2   14-1/8   4   15/16   12   7/8-9 UNC   30/30   11-3/4   1134   19-3/8   14-1/2   14-1/8   4   15/16   12   7/8-9 UNC   30/30   30/30   11-7/8   1178   19-3/8   -   14-1/8   4   15/16   12   7/8-9 UNC   30/30   12-1/8   1200   19-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30   12-1/8   1218   19-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30   12-1/8   1218   19-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30   12-1/4   1214   19-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30   12-1/8   1238   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-1/2   1212   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-5/8   1258   20-1/8   -   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-5/8   1258   20-1/8   -   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/8   1318   21   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/4   1314   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/3   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-5/8   4-1/4   15/16										
11-3/4										
11-7/8 1178 19-3/8 - 14-1/8 4 15/16 12 7/8-9 UNC 30/30 12-1/2 1210 19-3/4 15-1/2 14-1/2 4 15/16 12 7/8-9 UNC 30/30 12-1/8 1218 19-3/4 15-1/2 14-1/2 4 15/16 12 7/8-9 UNC 30/30 12-1/4 1214 19-3/4 15-1/2 14-1/2 4 15/16 12 7/8-9 UNC 30/30 12-1/4 1214 19-3/4 15-1/2 14-1/2 4 15/16 12 7/8-9 UNC 30/30 12-3/8 1238 20-1/8 15-1/2 15-1/8 4-1/4 15/16 12 7/8-9 UNC 30/30 12-1/2 1212 20-1/8 15-1/2 15-1/8 4-1/4 15/16 12 7/8-9 UNC 30/30 12-1/2 1212 20-1/8 15-1/2 15-1/8 4-1/4 15/16 12 7/8-9 UNC 30/30 12-3/8 1258 20-1/8 - 15-1/2 15-1/8 4-1/4 15/16 12 7/8-9 UNC 30/30 12-3/4 1234 20-1/2 16-1/4 15-1/2 4-1/4 15/16 12 7/8-9 UNC 30/30 12-3/8 1278 20-1/2 16-1/4 15-1/2 4-1/4 15/16 12 7/8-9 UNC 30/30 13-1/8 1318 21 16-1/4 15-1/2 4-1/4 15/16 12 7/8-9 UNC 30/30 13-1/8 1318 21 16-1/4 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-1/8 1318 21 16-1/4 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-1/8 1318 21 16-1/4 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-1/2 1312 21-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-1/2 1312 21-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 1338 21 - 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 1338 21 - 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 1338 21 - 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 1338 21 - 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 13-3/8 13-3/8 13-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 13-3/8 13-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 13-3/8 13-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 13-3/8 13-3/4 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 13-3/4 13-3/4 17-1/4 16-5/8 4-1/4 15/16 12 7/8-9 UNC 30/30 13-3/8 13-3/4										
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12-1/8   1218   19-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30   12-1/4   1214   19-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30   12-3/8   1238   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/8   1258   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/8   1278   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13   1300   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/4   1334   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/8   1418   21-3/4   -   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/8   1418   21-3/4   -   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC										
12-1/4   1214   19-3/4   15-1/2   14-1/2   4   15/16   12   7/8-9 UNC   30/30   12-3/8   1238   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-1/2   1212   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-5/8   1258   20-1/8   -   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   12-7/8   1278   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/4   1314   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/4   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/8   1418   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/8   1418   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8										
12-3/8   1238   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   12-1/2   1212   20-1/8   15-1/2   15-1/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   12-5/8   1258   20-1/8   -   15-1/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   13   1300   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-1/8   1314   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-5/8   1358   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/4   1334   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/4   1334   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/4   1338   21-3/4   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/8   1338   21-3/4   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/4   1334   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/8   1418   21-3/4   -   16-5/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/8   1418   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/8   1418   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/8   1438   22-1/8   18-1/4   17-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/8   1438   22-1/8   18-1/4   17-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   1		1214				4		12		
12-5/8   1258   20-1/8   -   15-1/8   4-1/4   15/16   12   7/8-9 UNC   30/30   12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   12-7/8   1278   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13   1300   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1314   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/4   1314   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-5/8   1358   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/4   1334   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1378   21-3/4   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-7/8   1378   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/8   1418   21-3/4   -   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-5/8   1458   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/4   1478   22-3/4   -   17-3/4   4-1/4   15/16   12   7/8-9 UNC   3										
12-3/4   1234   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   12-7/8   1278   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   13   1300   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-1/4   1314   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-5/8   1358   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/4   1334   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/8   1338   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-3/4   1334   21-3/8   17-1/4   16-5/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   13-7/8   1378   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/8   1418   21-3/4   -   16-5/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/8   1418   21-3/4   -   16-5/8   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/4   1414   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/2   1412   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-1/2   1412   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/4   1434   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/4   1434   22-3/4   -   17-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/4   1434   22-3/4   -   17-3/4   4-1/4   15/16   12   7/8 -9 UNC   30/30   14-3/8   1438   22-3/4   -   17-3/4   4-1/4	12-1/2	1212	20-1/8	15-1/2	15-1/8	4-1/4	15/16	12	7/8 - 9 UNC	30/30
12-7/8   1278   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13   1300   20-1/2   16-1/4   15-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/8   1318   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/4   1314   21   16-1/4   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/8   1338   21   -   15-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-1/2   1312   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-5/8   1358   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-5/8   1358   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-3/4   1334   21-3/8   17-1/4   16-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   13-7/8   1378   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/8   1418   21-3/4   17-1/4   16-5/8   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/8   1418   21-3/4   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-1/2   1412   22-1/8   18-1/4   17-1/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-1/2   18-1/4   17-1/2   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-3/4   -   17-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-3/4   -   17-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-3/4   -   17-3/4   4-1/4   15/16   12   7/8-9 UNC   30/30   14-3/8   1438   22-3/4   -   17-3/4   4-1/4   15/16   12   7/8-9	12-5/8	1258	20-1/8		15-1/8	4-1/4	15/16	12	7/8 - 9 UNC	30/30
13 1300 20-1/2 16-1/4 15-1/2 4-1/4 15/16 12 7/8-9 UNC 30/30  13-1/8 1318 21 16-1/4 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30  13-1/4 1314 21 16-1/4 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30  13-1/4 1314 21 16-1/4 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30  13-3/8 1338 21 - 15-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30  13-1/2 1312 21-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  13-5/8 1358 21-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  13-3/4 1334 21-3/8 17-1/4 16-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  13-7/8 1378 21-3/4 17-1/4 16-5/8 4-1/4 15/16 12 7/8-9 UNC 30/30  14 1400 21-3/4 17-1/4 16-5/8 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/8 1418 21-3/4 - 16-5/8 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/4 1414 22-1/8 18-1/4 17-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/4 1414 22-1/8 18-1/4 17-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/4 1414 22-1/8 18-1/4 17-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/2 1412 22-1/8 18-1/4 17-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/8 1438 22-1/2 18-1/4 17-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/8 1438 22-1/8 18-1/4 17-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  14-1/8 1438 22-1/2 18-1/4 17-1/4 4-1/4 15/16 12 7/8-9 UNC 30/30  14-3/4 1434 22-1/2 18-1/4 17-1/2 4-1/4 15/16 12 7/8-9 UNC 30/30  14-3/4 1434 22-1/2 18-1/4 17-1/2 4-1/4 15/16 12 7/8-9 UNC 30/30  14-7/8 1478 22-3/4 - 17-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30	12-3/4	1234	20-1/2	16-1/4	15-1/2	4-1/4	15/16	12	7/8 - 9 UNC	30/30
13-1/8         1318         21         16-1/4         15-3/4         4-1/4         15/16         12         7/8-9 UNC         30/30           13-1/4         1314         21         16-1/4         15-3/4         4-1/4         15/16         12         7/8-9 UNC         30/30           13-3/8         1338         21         -         15-3/4         4-1/4         15/16         12         7/8-9 UNC         30/30           13-1/2         1312         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8-9 UNC         30/30           13-5/8         1358         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8-9 UNC         30/30           13-3/4         1334         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8-9 UNC         30/30           13-7/8         1338         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8-9 UNC         30/30           13-7/8         1378         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8-9 UNC         30/30           14-1/8	12-7/8	1278	20-1/2	16-1/4	15-1/2	4-1/4	15/16	12	7/8 - 9 UNC	30/30
13-1/4         1314         21         16-1/4         15-3/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-3/8         1338         21         -         15-3/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-1/2         1312         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-5/8         1358         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-3/4         1334         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-7/8         1378         21-3/8         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14         1400         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/	13	1300	20-1/2	16-1/4	15-1/2	4-1/4	15/16	12	7/8 - 9 UNC	30/30
13-3/8         1338         21         -         15-3/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-1/2         1312         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-5/8         1358         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-5/8         1334         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-7/8         1378         21-3/8         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-7/8         1378         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14         1400         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           1	13-1/8	1318	21	16-1/4	15-3/4	4-1/4	15/16	12	7/8 - 9 UNC	30/30
13-1/2         1312         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-5/8         1358         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-3/4         1334         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-7/8         1378         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14         1400         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/4         1414         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           <				16-1/4						
13-5/8         1358         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-3/4         1334         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-7/8         1378         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14         1400         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/4         1414         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-3/8         1438         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           <										
13-3/4         1334         21-3/8         17-1/4         16-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           13-7/8         1378         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14         1400         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/4         1414         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/2         1412         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           <										
13-7/8         1378         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14         1400         21-3/4         17-1/4         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/8         1418         22-3/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/4         1414         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/2         1412         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-5/8         1458         22-1/2         18-1/4         17-1/2         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-3/4         1434         22-1/2         18-1/4         17-1/2         4-1/4         15/16         12         7/8 - 9 UNC         30/30										
14     1400     21-3/4     17-1/4     16-5/8     4-1/4     15/16     12     7/8-9 UNC     30/30       14-1/8     1418     21-3/4     -     16-5/8     4-1/4     15/16     12     7/8-9 UNC     30/30       14-1/4     1414     22-1/8     18-1/4     17-1/4     4-1/4     15/16     12     7/8-9 UNC     30/30       14-3/8     1438     22-1/8     18-1/4     17-1/4     4-1/4     15/16     12     7/8-9 UNC     30/30       14-1/2     1412     22-1/8     18-1/4     17-1/4     4-1/4     15/16     12     7/8-9 UNC     30/30       14-5/8     1458     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8-9 UNC     30/30       14-3/4     1434     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8-9 UNC     30/30       14-7/8     1478     22-3/4     -     17-3/4     4-1/4     15/16     12     7/8-9 UNC     30/30										
14-1/8         1418         21-3/4         -         16-5/8         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/4         1414         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-3/8         1438         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/2         1412         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-5/8         1458         22-1/2         18-1/4         17-1/2         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-3/4         1434         22-1/2         18-1/4         17-1/2         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-7/8         1478         22-3/4         -         17-3/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30										
14-1/4         1414         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-3/8         1438         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-1/2         1412         22-1/8         18-1/4         17-1/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-5/8         1458         22-1/2         18-1/4         17-1/2         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-3/4         1434         22-1/2         18-1/4         17-1/2         4-1/4         15/16         12         7/8 - 9 UNC         30/30           14-7/8         1478         22-3/4         -         17-3/4         4-1/4         15/16         12         7/8 - 9 UNC         30/30										
14-3/8     1438     22-1/8     18-1/4     17-1/4     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-1/2     1412     22-1/8     18-1/4     17-1/4     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-5/8     1458     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-3/4     1434     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-7/8     1478     22-3/4     -     17-3/4     4-1/4     15/16     12     7/8 - 9 UNC     30/30										
14-1/2     1412     22-1/8     18-1/4     17-1/4     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-5/8     1458     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-3/4     1434     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-7/8     1478     22-3/4     -     17-3/4     4-1/4     15/16     12     7/8 - 9 UNC     30/30										
14-5/8     1458     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8-9 UNC     30/30       14-3/4     1434     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8-9 UNC     30/30       14-7/8     1478     22-3/4     -     17-3/4     4-1/4     15/16     12     7/8-9 UNC     30/30										
14-3/4     1434     22-1/2     18-1/4     17-1/2     4-1/4     15/16     12     7/8 - 9 UNC     30/30       14-7/8     1478     22-3/4     -     17-3/4     4-1/4     15/16     12     7/8 - 9 UNC     30/30										
14-7/8 1478 22-3/4 - 17-3/4 4-1/4 15/16 12 7/8-9 UNC 30/30					_					
		1500		19			15/16	12		30/30

Consult factory for sizes 15-1/8" to 36"

