TAPS AND DIES

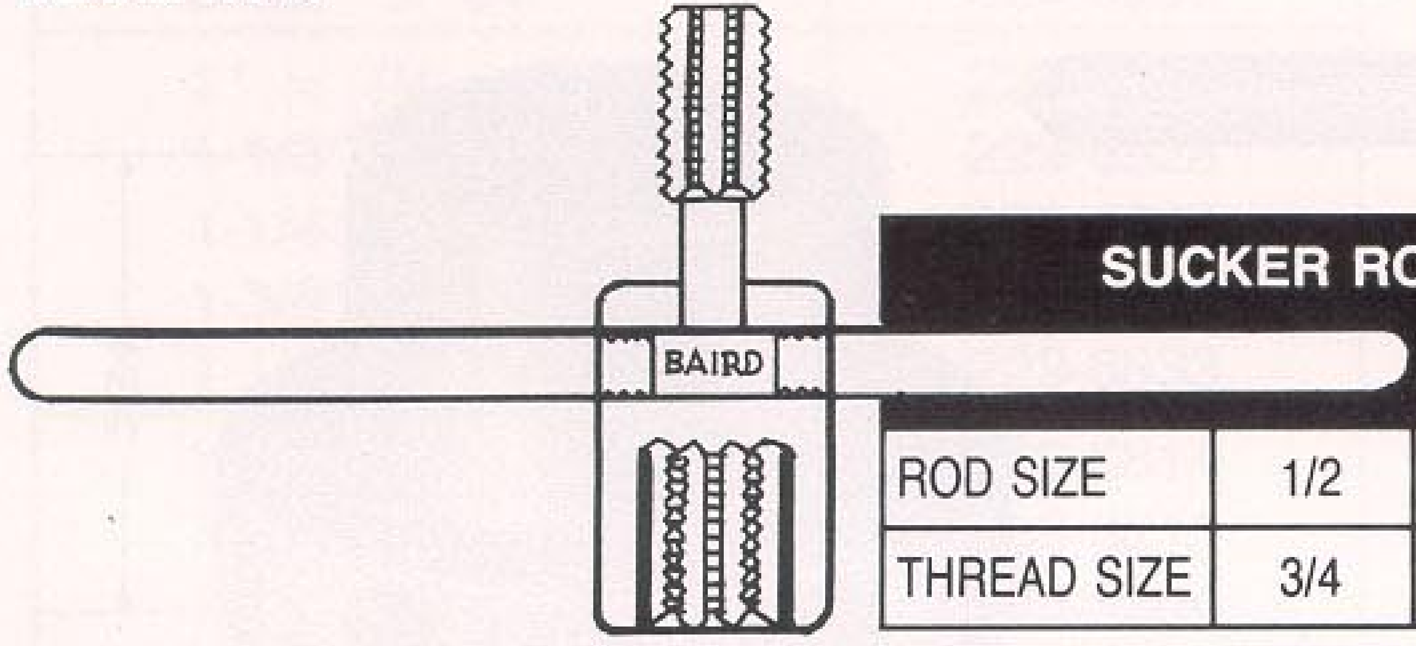
(Thread Chasers)

FOR SUCKER RODS

This Baird box and pin tool is for rechasing damaged threads on sucker rods to the original thread pitch and contact dimension. It can also be used when running the sucker rods back into the well for removing dirt, sand or scale from the box & pin threads before screwing up to insure proper shouldering and tightening of the joints.

NOTE: THIS TOOL IS NOT INTENDED FOR USE AS A TAP AND DIE TO CUT NEW THREADS ON BLANK ROD.

THREAD SIZE	BOX AND PIN TYPE TAP AND DIE	PART NO.
3/4″	FOR 1/2″ API RODS	228 6700
7/8″* O.S.	FOR 5/8″ O.S. RODS	228 6701
15/16″	FOR 5/8″ API RODS	228 6702
1″* O.S.	FOR 3/4″ O.S. RODS	228 6703
1-1/16″	FOR 3/4″ API RODS	228 6704
1-3/16″	FOR 7/8″ API RODS	228 6705
1-3/8″	FOR 1″ API RODS	228 6706
1-9/16″	FOR 1-1/8″ API RODS	228 6707



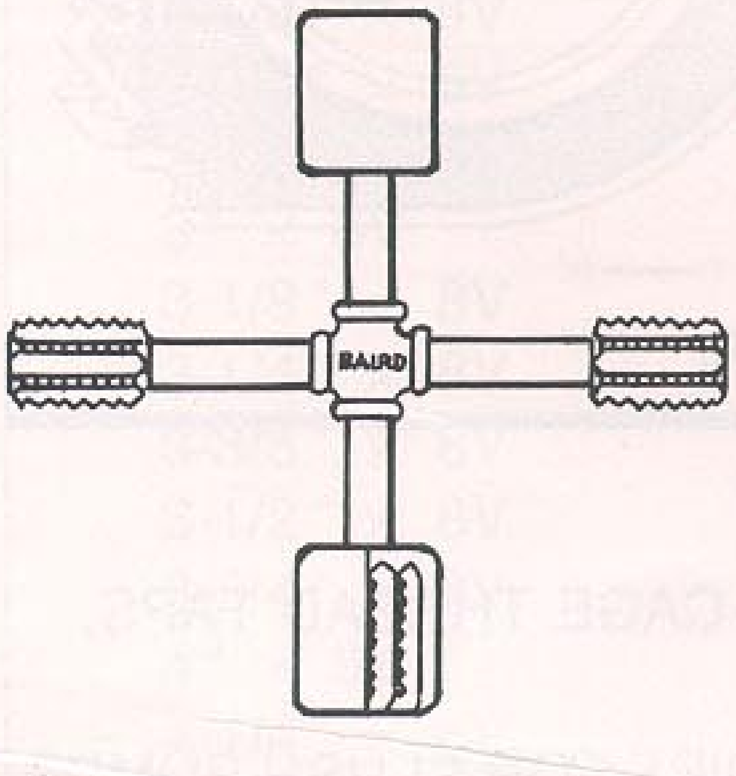
SUCKER ROD THREAD SPECIFICATIONS — BOX & PIN (ALL SIZES IN INCHES API UNLESS MARKED WITH ASTERISK * DENOTING OLD STYLE)

ROD SIZE	1/2	5/8*	5/8	3/4*	3/4	7/8	1	1-1/8
THREAD SIZE	3/4	7/8*	15/16	1*	1-1/16	1-3/16	1-3/8	1-9/16

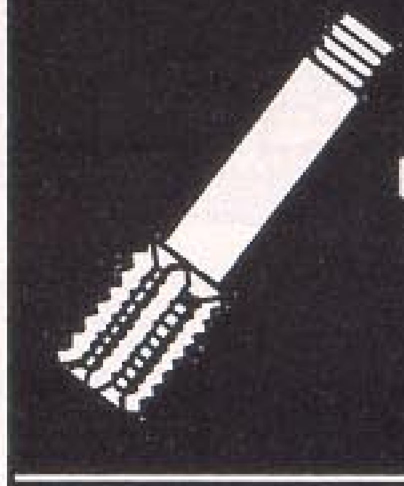
1-1/8″ POLISH RODS 15/16 OR 1-1/16″ API THREAD FORMS
1-1/4″ POLISH RODS 1-1/16 OR 1-3/16″ API THREAD FORMS

*INDICATES OLD STYLE (SMALLER THAN API)

For pumping wells or leases with more than one size of sucker rods we recommend use of the "combination type". This tool can be equipped with four taps or dies in any size assembly desired. All taps and dies are interchangeable in the hub and replacements can be made as required.



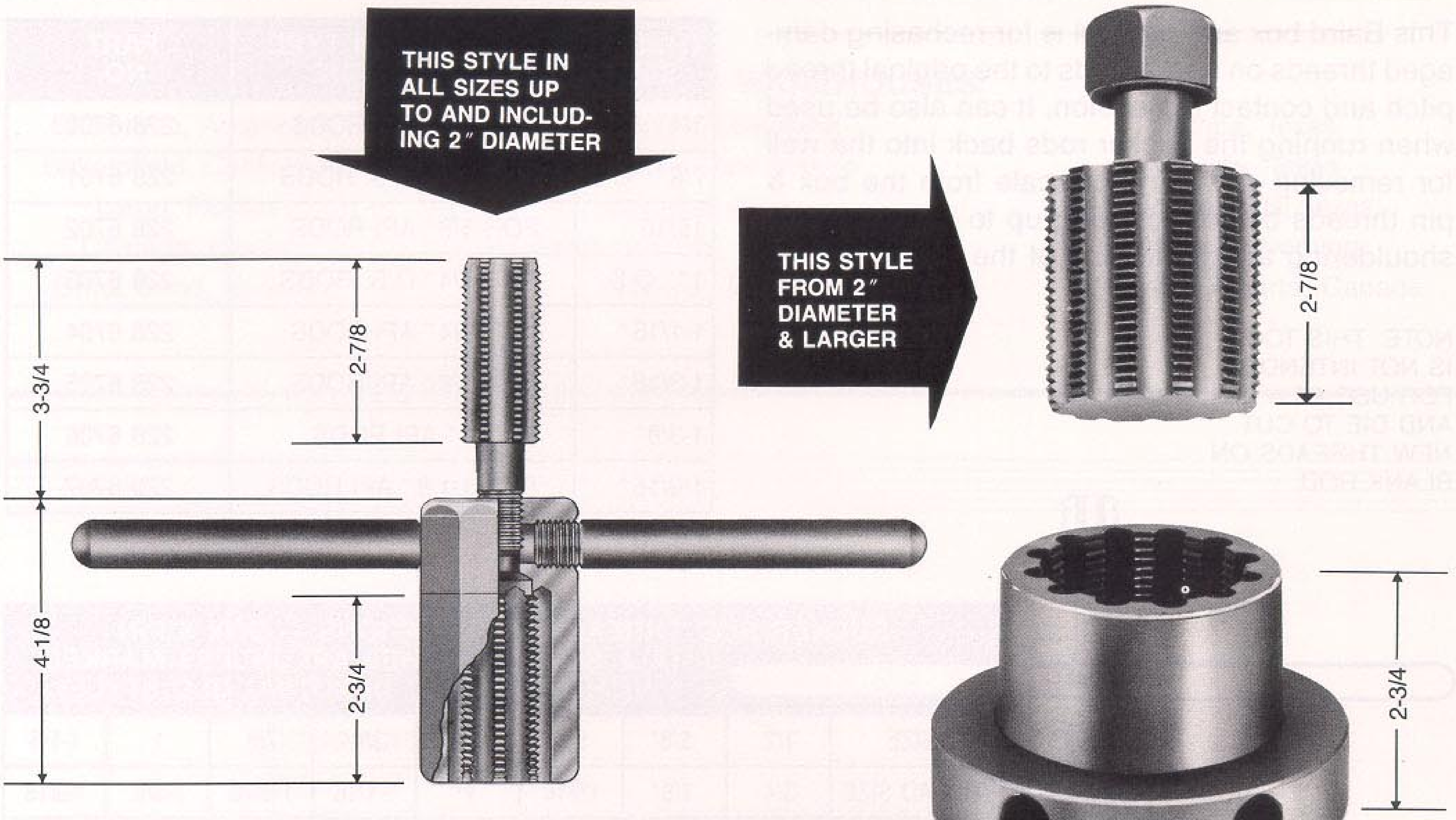
228 6710
COMBINATION TYPE
TAP AND DIE
WITH HUB
FOR
SUCKER ROD
PINS & BOXES
(SPECIFY SUCKER
ROD SIZE)

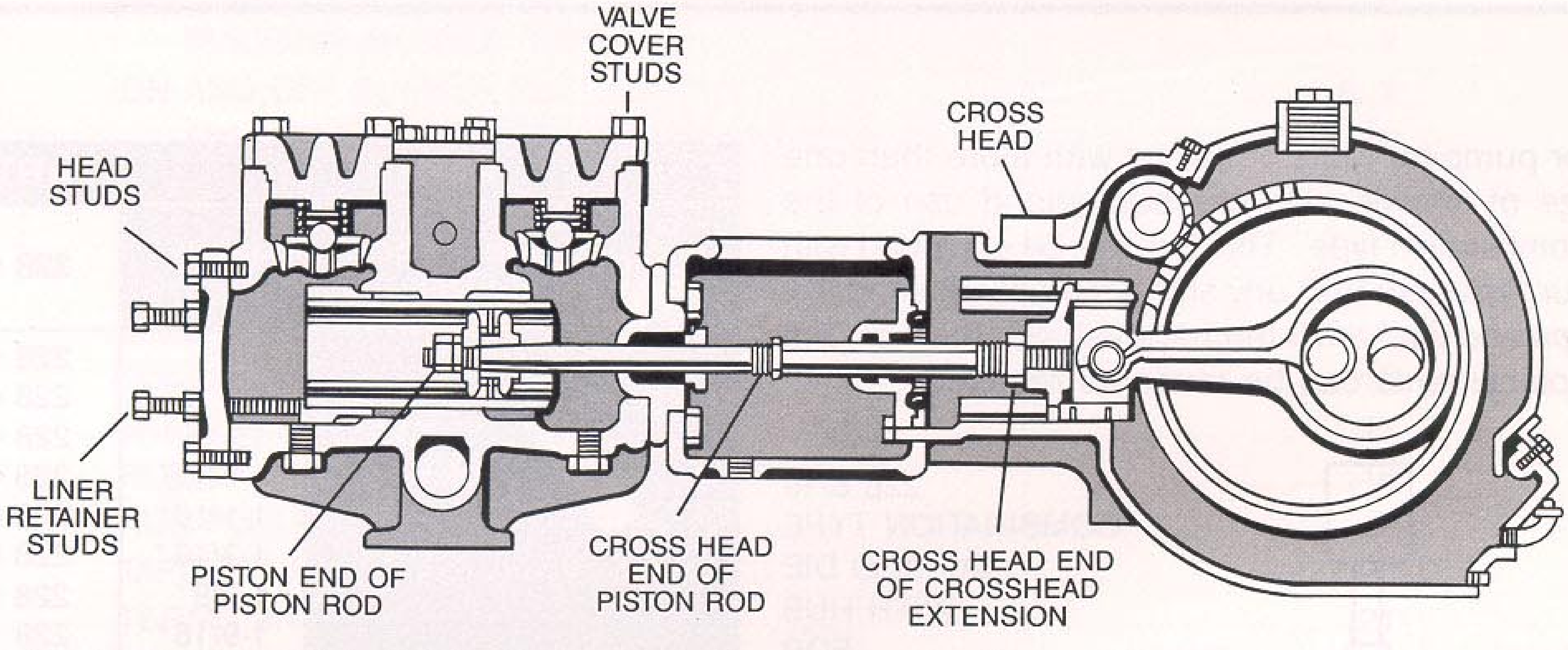
PARTS		PART NO.
 **HUB – Accommodates All Sizes:**		228 6713
 **TAP For Box Thread Sizes:**	3/4″	228 6728
	7/8″ O.S.	228 6714
	15/16″	228 6715
	1″ O.S.	228 6716
	1-1/16″	228 6717
	1-3/16″	228 6718
	1-3/8″	228 6719
	1-9/16″	228 6726
 **DIE For Pin Thread Sizes:**	3/4″	228 6729
	7/8″ O.S.	228 6720
	15/16″	228 6721
	1″ O.S.	228 6722
	1-1/16″	228 6723
	1-3/16″	228 6724
	1-3/8″	228 6725
	1-9/16″	228 6727

Baird

TAPS AND DIES
(Thread Chasers)

FOR SLUSH PUMPS & BLOWOUT PREVENTER STUDS (STRAIGHT THREAD)





API Taper Number for Piston End of Piston Rod on Slush Pumps (See price list page 27).

- MISCELLANEOUS TAPS & DIES AVAILABLE — SIZES ON REQUEST
- FOR BARREL TUBE TAPS, PIN END PLUNGER DIES, F-CAGE OR H-CAGE THREAD TAPS, SEE PRICE LIST PAGE 26
- FOR NOT TAPERED THREADS — OR TAPERED THREAD TAPS AND DIES FOR SLUSH PUMPS, SEE PRICE LIST PAGE 27

TAPS AND DIES
(Thread Chasers)

FOR SLUSH PUMPS & BLOWOUT PREVENTER STUDS (STRAIGHT THREAD)

SIZE × THREAD	PART NO.
2-1/4″ × 4-1/2V	229-6849
1-3/4″ × 5V	229-6850
1-7/8″ × 5V	229-6839
1-5/8″ × 5-1/2V	229-6836
1-1/4″ × 6V	229-6851
1-3/8″ × 6V	229-6823
1-1/2″ × 6V	229-6824
1-5/8″ × 6V	229-6852
1-3/4″ × 6V	229-6853
2-1/4″ × 6V	229-6854
2-1/2″ × 6V	229-6855
1″ × 7V	229-6825
1-1/8″ × 7V	229-6828
1-1/4″ × 7V	229-6822
1-3/8″ × 7V	229-6831
1-1/2″ × 7V	229-6833
3/4″ × 8V	229-6814
7/8″ × 8V	229-6813
1″ × 8V	229-6804
1-1/8″ × 8V	229-6805
1-1/4″ × 8V	229-6806
1-3/8″ × 8V	229-6807
1-1/2″ × 8V	229-6808
1-5/8″ × 8V	229-6809
1-3/4″ × 8V	229-6810
1-7/8″ × 8V	229-6811
2″ × 8V	229-6812
2-1/8″ × 8V	229-6816
2-1/4″ × 8V	229-6817
2-3/8″ × 8V	229-6818
2-1/2″ × 8V	229-6819
2-5/8″ × 8V	229-6820
2-3/4″ × 8V	229-6821
2-7/8″ × 8V	229-6841
3″ × 8V	229-6842
3-1/8″ × 8V	229-6843
3-1/4″ × 8V	229-6844
3-3/8″ × 8V	229-6845
3-1/2″ × 8V	229-6846
3-3/4″ × 8V	229-6869
4″ × 8V	229-6847
4-1/4″ × 8V	229-6875
4-1/2″ × 8V	229-6848

SIZE × THREAD	PART NO.
3/4″ × 9V	229-6876
7/8″ × 9V	229-6803
15/16″ × 9V	229-6877
1-5/8″ × 9V	229-6837
1-3/4″ × 9V	229-6856
1-7/8″ × 9V	229-6840
2″ × 9V	229-6857
3/4″ × 10V	229-6802
7/8″ × 10V	229-6884
1″ × 10V	229-6815
1-1/16″ × 10V	229-6827
1-1/8″ × 10V	229-6858
1-1/4″ × 10V	229-6878
1-3/8″ × 10V	229-6879
1-1/2″ × 10V	229-6834
1-5/8″ × 10V	229-6859
1-3/4″ × 10V	229-6838
1-7/8″ × 10V	229-6860
1-15/16″ × 10V	229-6880
1/2″ × 11V	229-6881
5/8″ × 11V	229-6801
1″ × 12V	229-6826
1-1/8″ × 12V	229-6829
1-1/4″ × 12V	229-6830
1-3/8″ × 12V	229-6832
1-1/2″ × 12V	229-6835
1-3/4″ × 12V	229-6861
1-7/8″ × 12V	229-6882
2″ × 12V	229-6874
2-1/4″ × 12V	229-6870
2-3/8″ × 12V	229-6800
2-1/2″ × 12V	229-6873
3-1/2″ × 12V	229-6862
1/2″ × 13V	229-6883
1″ × 14″	229-6871
1-1/8″ × 16V	229-6872
1-1/2″ × 16V	229-6863

SLUSH PUMP THREAD SIZES

(Thread Chasers)

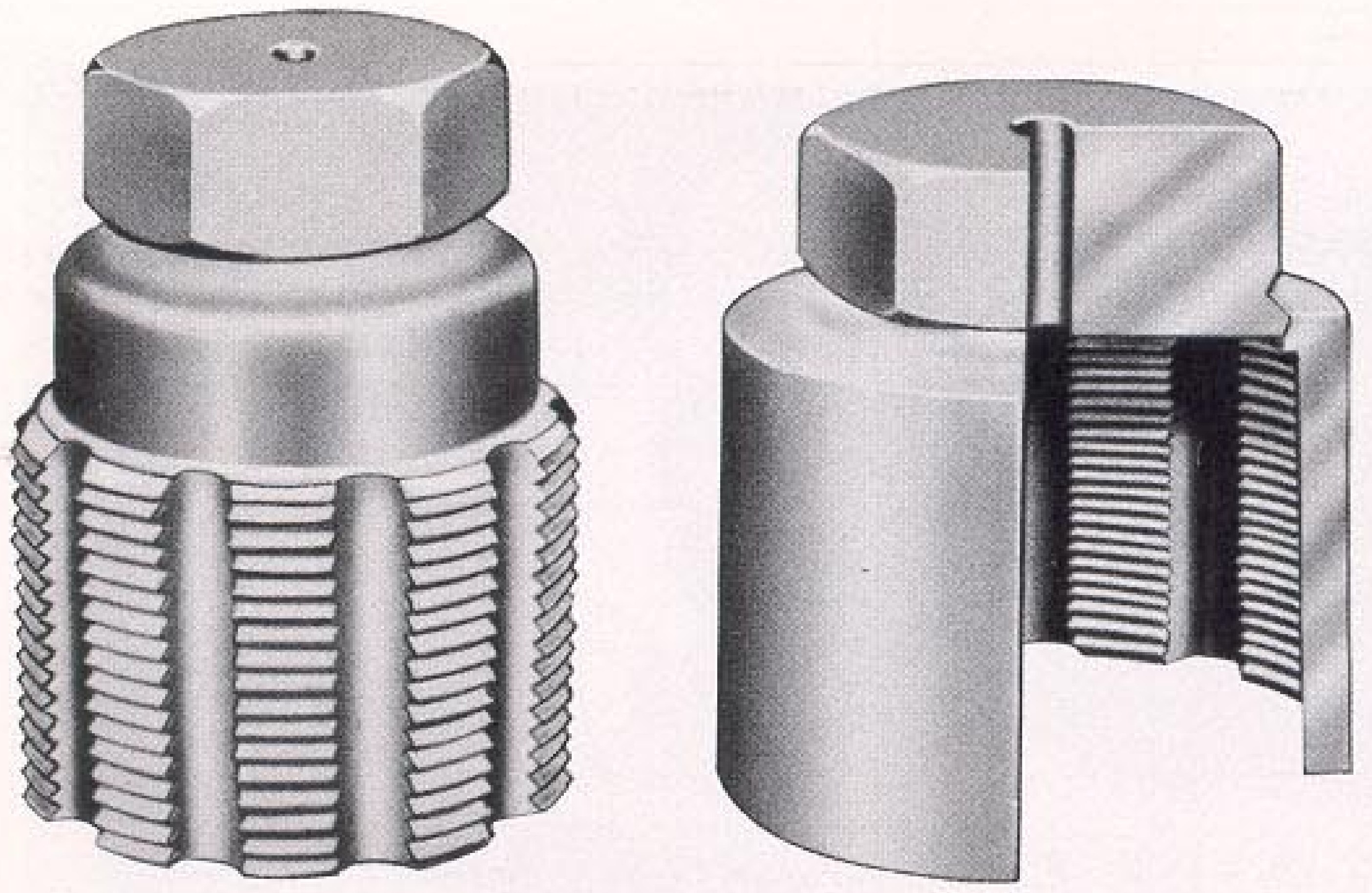
		PISTON ROD					
	PUMPS	PISTON ROD CROSS HEAD END	PISTON ROD END FEMALE	CROSS HEAD END MALE	VALVE COVER STUDS	CYLINDER HEAD STUDS	LINER RETAINER STUDS
		MAJOR DIAMETER IN INCHES — NO. OF THREADS PER INCH					
BETHLEHEM	G-14, G-150	1-3/4 – 10	1-3/4 – 10	2-1/2 – 8	1-1/4 – 7	1-1/4 – 7	2-1/4 – 8
	GD-225, GOC-225	2 – 8	2 – 8	3 – 8	1-1/4 – 7	1-1/4 – 7	2-1/4 – 8
	G-300, G-16	2-1/4 – 8	2-1/4 – 8	3 – 8	1-1/2 – 8	1-1/2 – 8	2-1/4 – 8
	G-450, G-600	2-1/2 – 8	2-1/2 – 8	3-1/2 – 8	1-1/2 – 6	1-1/2 – 6	2-1/4 – 8
EMSCO	D-175	1-7/8 – 8	1-7/8 – 8	2-1/4 – 8	1-1/8 – 12 OR 8	1-1/8 – 12 OR 8	1 – 8
	D-300, BA-14	2 – 8	2 – 8	2-1/2 – 8	1-1/4 – 12 OR 8	1-1/4 – 12 OR 8	2 – 8
	B-14	2 – 8	2 – 8	—	1-1/4 – 7	1-1/4 – 7	2 – 8
	C-12	1-7/8 – 8	1-7/8 – 8	—	1 – 8	1 – 12 OR 8	1-1/2 – 6
	C-16, CA-16, D-500	2-1/2 – 8	2-1/2 – 8	3 – 8	1-1/4 – 7	1-1/4 – 7	2 – 8
	D-850, DA-850, D-100	TAPERED	TAPERED	TAPERED	THREADED	1-1/2 – 8	—
	DA-500, D-550	TAPERED	TAPERED	TAPERED	THREADED	1-1/4 – 8	—
	DA-700, D-700	TAPERED	TAPERED	TAPERED	THREADED	1-1/2 – 8	—
	D-1250, D-1500	TAPERED	TAPERED	TAPERED	THREADED	1-3/4 – 8	—
	D-225, D-375	TAPERED	TAPERED	TAPERED	THREADED	1-1/8 – 8	—
NATIONAL – IDEAL	D-50	1-1/2 – 12	1-1/2 – 12	2-1/4 – 8	7/8 – 9	7/8 – 9	7/8 – 9
	C-100	1-3/4 – 10	1-3/4 – 10	2-5/8 – 8	7/8 – 9	1-1/4 – 7	1-1/4 – 7
	C-150	1-7/8 – 9	1-7/8 – 9	2-5/8 – 8	1-1/8 – 7	1-1/8 – 7	1-1/4 – 7
	C-250	2-1/4 – 8	2-1/4 – 8	3-1/8 – 8	1-1/8 – 7	1-1/4 – 7	1-1/2 – 6
	C-350 (OLD STYLE)	2-3/8 – 8	2-3/8 – 8	3-1/4 – 8	1-1/4 – 7	1-1/4 – 7	1-1/2 – 6
	E-700	3-1/8 – 8	3-1/8 – 8	4-1/2 – 8	1-1/2 – 6	1-1/2 – 6	1-1/2 – 6
	E-500, G-700	2-5/8 – 8	2-5/8 – 8	3-3/4 – 8	1-1/2 – 6	1-3/4 – 5	1-3/4 – 5
	G-1000, G-1000B	3-1/8 – 8	3-1/8 – 8	4-1/2 – 8	1-1/2 – 6	1-1/2 – 6	1-1/4 – 7
	H-1250	TAPERED	TAPERED	4-1/2 – 8	1-1/4 – 7	1-1/2 – 6	1-1/4 – 7
WILSON SNYDER – OILWELL	612P	1-7/8 – 8	1-7/8 – 8	2-1/4 – 8	1-1/8 – 8	1-1/8 – 7	7/8 – 9
	712P	1-7/8 – 8	1-7/8 – 8	2-1/4 – 8	1-1/8 – 8	1-1/4 – 7	1-1/8 – 7
	16P	1-7/8 – 8	1-7/8 – 8	1-7/8 – 8	1-1/4 – 7	1-1/8 – 7	7/8 – 9
	14HD	2-1/4 – 8	2-1/4 – 8	3-1/4 – 8	1-1/4 – 7	1-1/4 – 7	1-1/4 – 7
	18P	2-1/4 – 8	2-1/4 – 8	3-1/4 – 8	1-3/8 – 8	1-3/8 – 8	1-3/8 – 8
	220P	2-1/2 – 8	2-1/2 – 8	4 – 8	1-3/8 – 8	1-3/8 – 8	1-3/8 – 8
	7P	1-7/8 – 8	1-7/8 – 8	3-1/4 – 8	1-1/4 – 7	1-1/4 – 7	—
	214P	2-1/4 – 8	2-1/4 – 8	3-1/4 – 8	1-1/4 – 7	1-3/8 – 8	—
	212P	1-7/8 – 8	1-7/8 – 8	2-1/4 – 8	1-1/8 – 8	1-1/4 – 7	—
	218P	2-1/4 – 8	2-1/4 – 8	3-1/4 – 8	1-3/8 – 8	1-3/8 – 8	—
	20P	2-1/2 – 8	2-1/2 – 8	4 – 8	1-3/8 – 8	1-3/8 – 8	—
	818D	3-1/4 – 8	3-1/4 – 8	TAPERED	1-3/8 – 8	1-3/8 – 8	—
	816P	2-3/4 – 8	2-3/4 – 8	TAPERED	1-1/4 – 8	1-3/8 – 8	—
GARDNER – DENVER	FD-FXD	1-1/2 – 8	1-1/2 – 8	NONE	1-3/8 – 6	1-3/8 – 6	1 – 8
	FXO O.S. & N.S.	1-3/4 – 8	1-3/4 – 8	2 – 8	7/8 – 9	7/8 – 9	1 – 8
	FXZ O.S. & N.S.	2 – 8	2 – 8	2-1/4 – 8	7/8 – 9	7/8 – 9	1 – 8
	FXK O.S. & N.S.	2 – 8	2 – 8	2-1/2 – 8	1-1/4 – 7	1-1/8 – 7	1-1/8 – 7
	FXQ O.S. & N.S.	2 – 8	2 – 8	2-1/2 – 8	1-3/8 – 6	1-3/8 – 6	1-1/8 – 7
	GXQ	2-1/4 – 8	2-1/4 – 8	2-1/2 – 8	1-3/8 – 6	1-1/8 – 7	1-1/8 – 7
	GXP	2-1/2 – 8	2-1/2 – 8	—	1-3/8 – 6	1-3/8 – 6	1-3/8 – 6
	GXR	2-3/4 – 8	2-3/4 – 8	3-1/2 – 8	1-3/8 – 6	1-3/8 – 6	1-3/8 – 6
	GXN	2 – 8	2 – 8	2-1/2 – 8	1-3/8 – 6	1-1/8 – 7	1-1/8 – 7
	FXL O.S. & N.S.	2-1/2 – 8	2-1/2 – 8	3 – 8	1-3/8 – 6	1-3/8 – 6	1-3/8 – 6

Also available are API tapered taps & dies for piston end of piston rod on slush pumps, not tapered threads.

TAPS AND DIES
(Thread Chasers)

Baird

FOR TUBING AND LINE PIPE (3/4″ TAPER PER FOOT)



FOR FIELD CLEANUP OF SMASHED THREADS AND REMOVAL OF DIRT FROM TUBING OR COLLAR. ALTHOUGH HARDENED, THIS TAP & DIE IS NOT FOR CUTTING NEW THREADS. THE TAP, BEING RELIEVED AT EACH LAND, WILL USUALLY REMOVE GYP FROM THE CENTER OF COLLAR — BUT IS NOT GUARANTEED TO DO SO.

PLAIN NON-UPSET TUBING

227-2127-D	3/4″-10RD. DIE
227-2127-T	3/4″-10RD. TAP
227-2126-D	1″-10RD. DIE
227-2126-T	1″-10RD. TAP
227-2123-D	1-1/2″-10RD. DIE
227-2123-T	1-1/2″-10RD. TAP
227-2102-D	2″-10RD. DIE
227-2102-T	2″-10RD. TAP
227-2104-D	2-1/2″-10RD. DIE
227-2104-T	2-1/2″-10RD. TAP
227-2106-D	3″-10RD. DIE
227-2106-T	3″-10RD. TAP
227-2122-D	1-1/4″-11-1/2V DIE
227-2122-T	1-1/4″-11-1/2V TAP
227-2101-D	2″-11-1/2V DIE
227-2101-T	2″-11-1/2V TAP
227-2103-D	2-1/2″-11-1/2V DIE
227-2103-T	2-1/2″-11-1/2V TAP
227-2105-D	3″-11-1/2V DIE
227-2105-T	3″-11-1/2V TAP

LINE PIPE

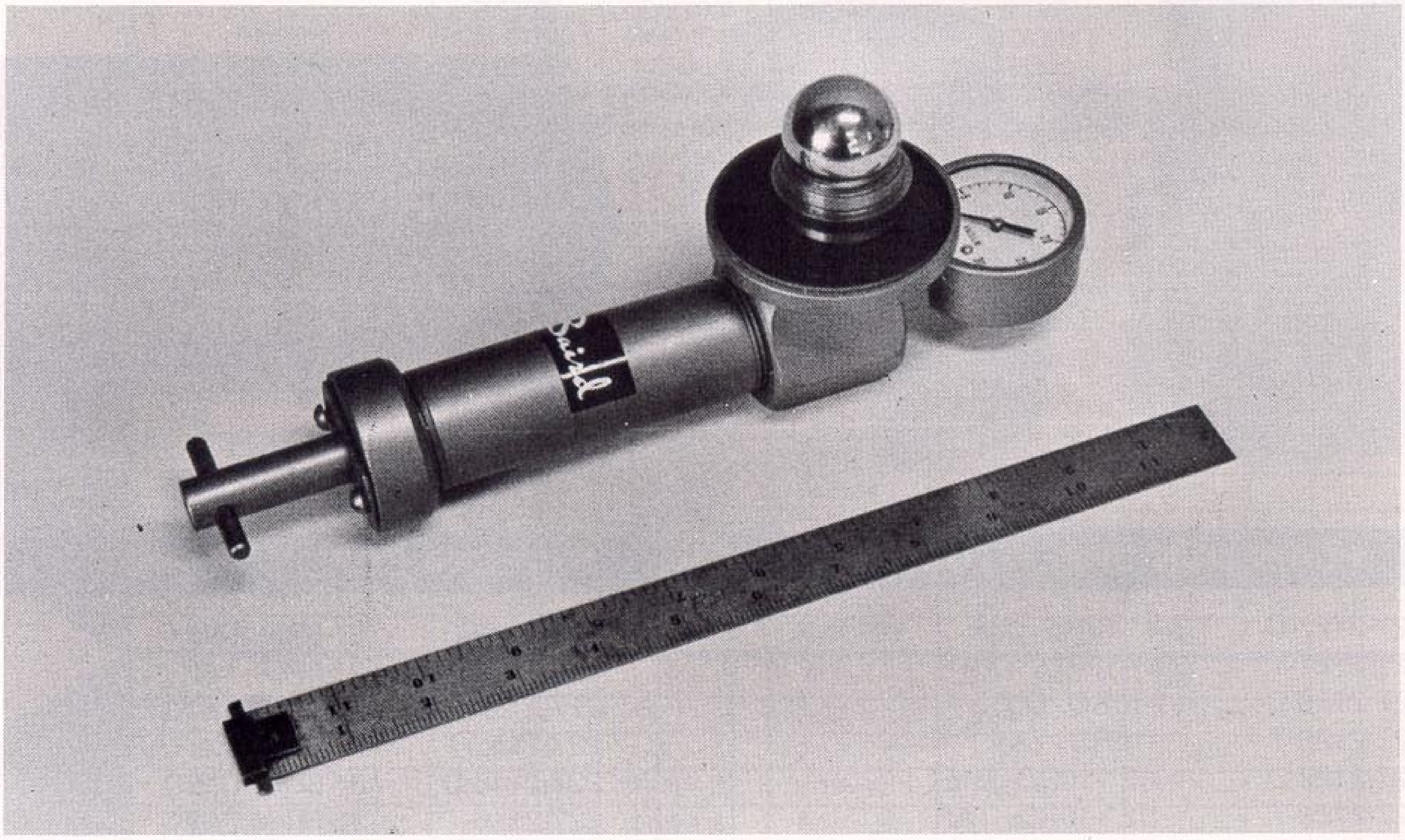
227-2100-D	1″-11-1/2V DIE
227-2100-T	1″-11-1/2V TAP
227-2125-D	1-1/2″-11-1/2V DIE
227-2125-T	1-1/2″-11-1/2V TAP
227-2107-D	2-1/2″-8V DIE
227-2107-T	2-1/2″-8V TAP
227-2108-D	3″-8V DIE
227-2108-T	3″-8V TAP
227-2109-D	4″-8V DIE
227-2109-T	4″-8V TAP

EXTERNAL UPSET TUBING (EUE)

227-2110-D	2″-8RD. DIE
227-2110-T	2″-8RD. TAP
227-2113-D	2-1/2″-8RD. DIE
227-2113-T	2-1/2″-8RD. TAP
227-2116-D	3″-8RD. DIE
227-2116-T	3″-8RD. TAP
227-2124-D	4″-8RD. DIE
227-2124-T	4″-8RD. TAP
227-2118-D	3/4″-10RD. DIE
227-2118-T	3/4″-10RD. TAP
227-2120-D	1″-10RD. DIE
227-2120-T	1″-10RD. TAP
227-2119-D	1-1/4″-10RD. DIE
227-2119-T	1-1/4″-10RD. TAP
227-2121-D	1-1/2″-10RD. DIE
227-2121-T	1-1/2″-10RD. TAP
227-2111-D	2″-10V DIE
227-2111-T	2″-10V TAP
227-2114-D	2-1/2″-10V DIE
227-2114-T	2-1/2″-10V TAP
227-2117-D	3″-10V DIE
227-2117-T	3″-10V TAP
227-2112-D	2″-11-1/2V DIE
227-2112-T	2″-11-1/2V TAP
227-2115-D	2-1/2″-11-1/2V DIE
227-2115-T	2-1/2″-11-1/2V TAP

BALL AND SEAT PORTABLE TESTER

GAUGE TYPE

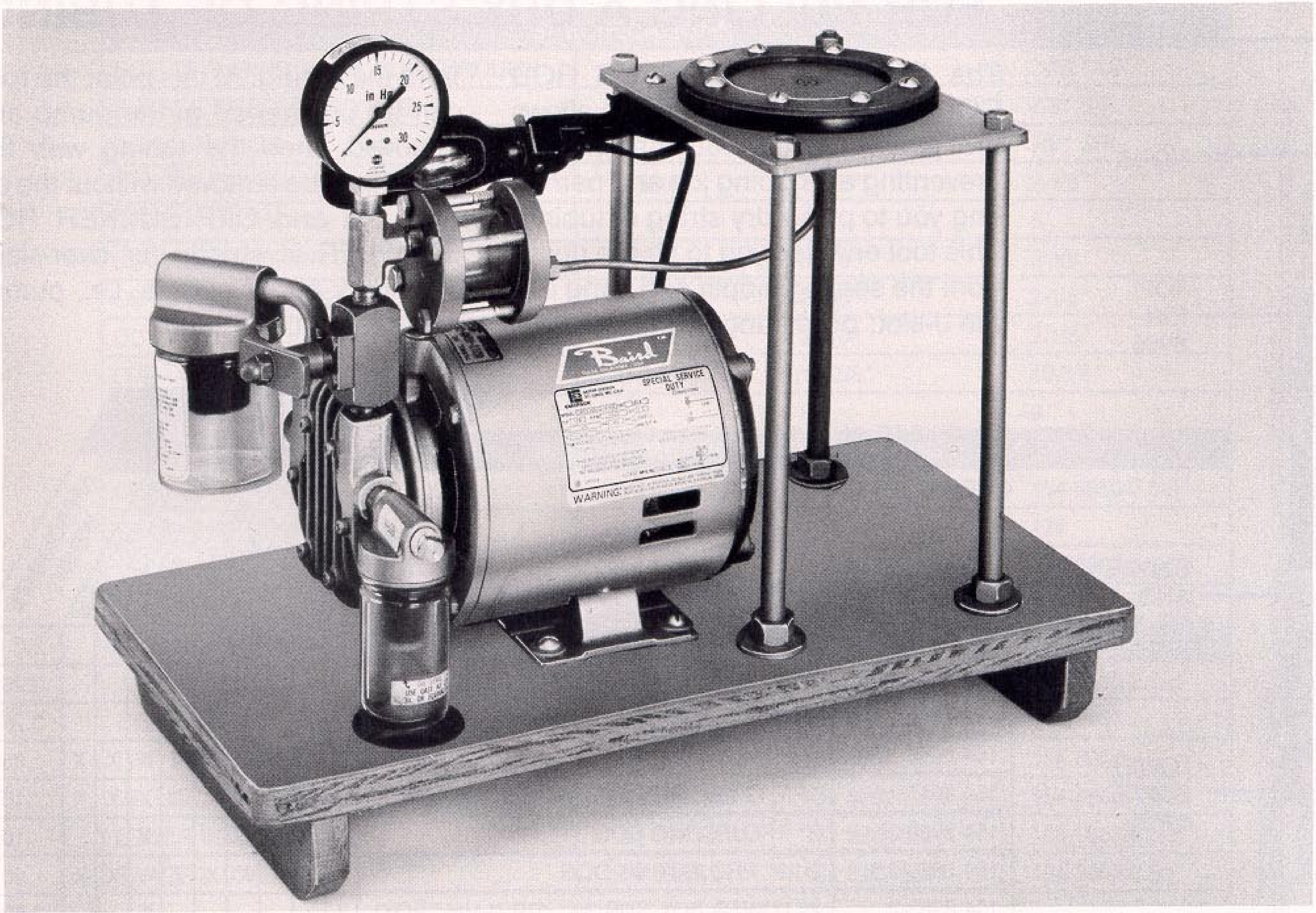


The Baird portable ball and seat tester is a light, hand operated tool designed to permit testing pump valves at the well location, or anywhere it is impractical to use our larger motor driven tester. To operate, place moistened ball and seat directly over the suction port in the rubber pad. Then actuate pump handle until desired pressure gauge reading is obtained. If assembly is effecting a proper seal, pressure drawn on the gauge will remain constant. If ball and seat are defective, gauge hand will return to zero reading.

COMPLETE TESTER PART NO. 9805
SEE PRICE LIST FOR PARTS

BALL AND SEAT TESTING MACHINE

BUBBLE TYPE



A conventional ball and seat is one of the least expensive parts in the repair of a pump, yet one of the most important. Many times a visual inspection can find nothing wrong with the ball and seat, but a test will prove the assembly to be defective beyond a doubt. Because the efficiency of the pump is completely dependent upon the effective seal in the ball and seat, always insist that your assemblies be tested with the Baird bubble type tester.

DIRECTIONS FOR USE:

The ball and seat to be tested should be clean and dry, then firmly pressed on to the rubber pad. Start the motor to actuate the vacuum pump, then open the cock (immediately to the left of the glass reservoir). Within a few seconds, the air in the line will be exhausted. Give the ball a good firm twist down into the seat. From then on, if the seal between the ball and seat is perfect, the ball should rotate in any direction with no bubbles appearing in the glass reservoir.

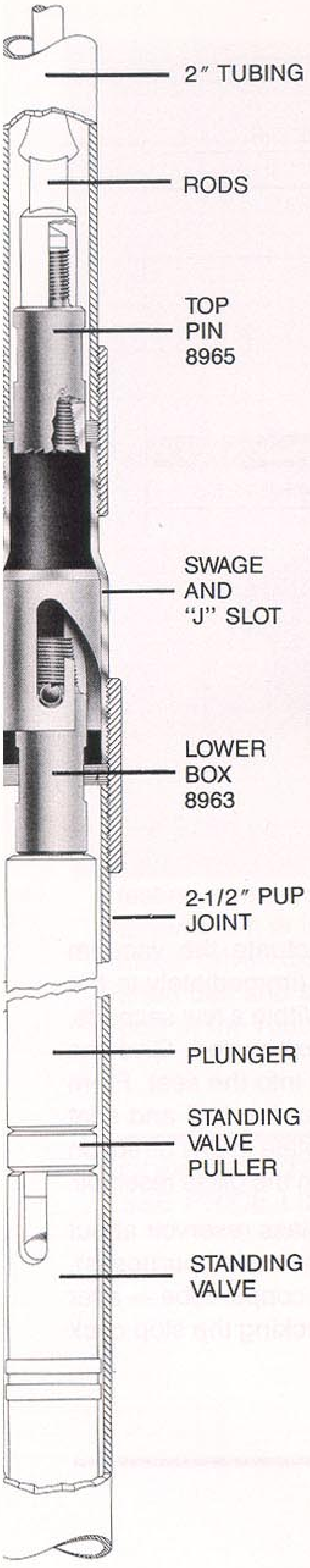
We recommend filling the glass reservoir about half full with kerosene (for corrosion purposes). Pour the kerosene down the copper tube — after the motor is started and cracking the stop cock slightly.

COMPLETE MACHINE PART NO. 9800
SEE PRICE LIST FOR PARTS

Baird

ON AND OFF SUCKER ROD COUPLER

FOR OVERSIZE STATIONARY BARREL PUMPS



FOR PULLING A DRY STRING OF TUBING

The ON and OFF SUCKER ROD COUPLER (left hand threads) allows the pulling of the rod string; thus preventing a stripping job and permitting you to pull a dry string of tubing. This tool enables you to lift the pump from the seating nipple and hang it in the J-slot; permitting the oil to drain from the tubing. At this point the rods can be unscrewed at the pump and removed, then the tubing with the pump may be removed without the oil. This ON and OFF SUCKER ROD COUPLER is strictly for over-sized stationary barrel pumps, i.e., pumps larger than the tubing.

COMPLETE AND SIMPLE INSTRUCTIONS FOR THIS OPERATION ON PAGE 10.

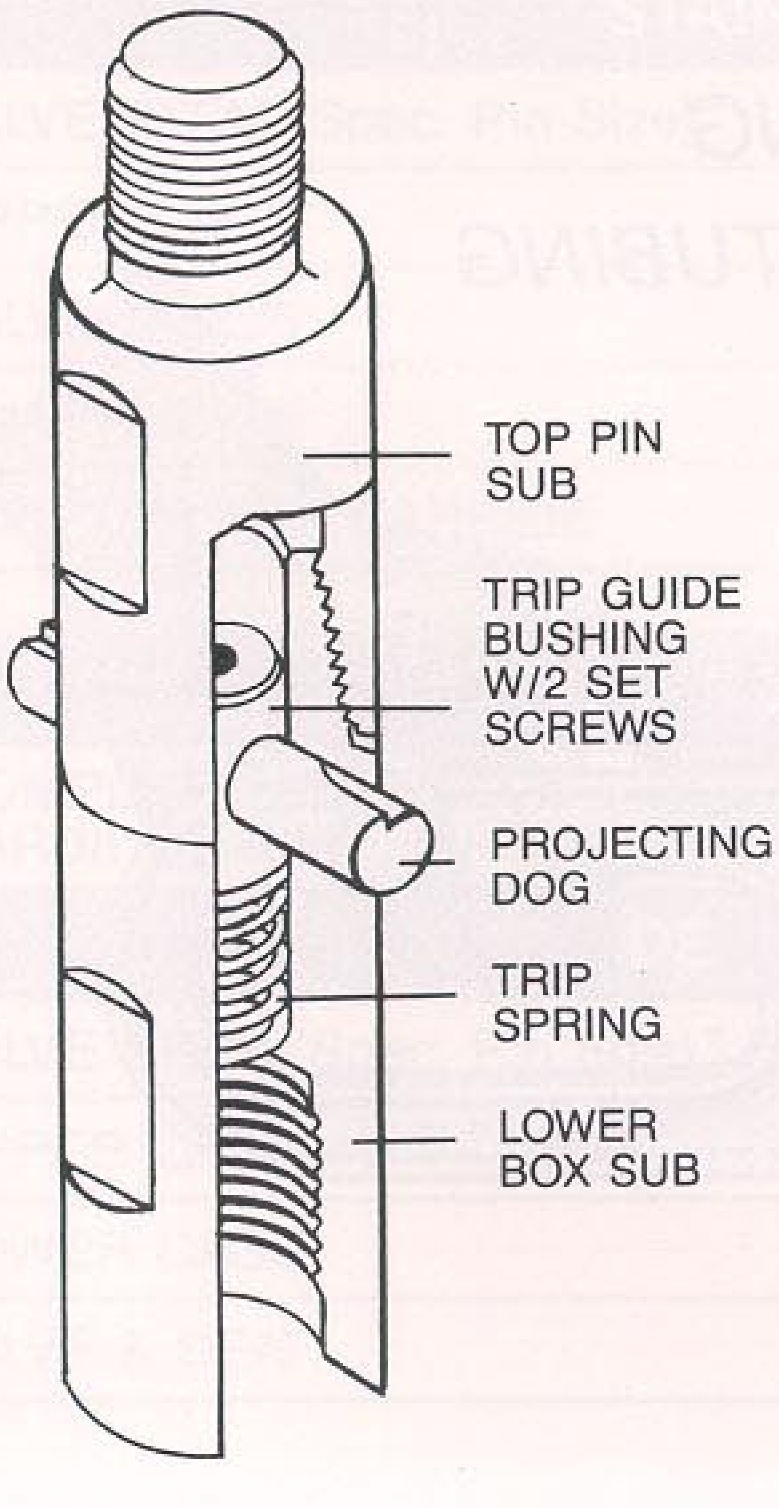
		COMPLETE TOOL PART NO.						SUB-ASSEMBLY PART NO.			
PART NO.	PART NAME	154 8950-2	154 8950-2-L	154 8950-2.5-A	154 8950-2.5-A-L	154 8950-2.5-B	154 8950-2.5-B-L	154 8951-2	154 8951-2.5-A	154 8951-2.5-B	APPROXIMATE WEIGHT
154 8955-2	2″ TOP PIN SUB 3/4″ S/R (1-1/16″ PIN)	X	X								2.5
154 8955-2.5-A	2-1/2″ TOP PIN SUB 3/4″ S/R (1-1/16″ PIN)			X	X						3.25
154 8955-2.5-B	2-1/2″ TOP PIN SUB 7/8″ S/R (1-3/16″ PIN)					X	X				3.25
154 8956	TRIP SPRING	X	X	X	X	X	X	X	X	X	.05
154 8957	TRIP GUIDE BUSHING W/2 SET SCREWS	X	X	X	X	X	X	X	X	X	.10
154 8960-2	2″ PROJECTING DOG	X	X					X			.10
154 8960-2.5	2-1/2″ PROJECTING DOG			X	X	X	X		X	X	.20
154 8963-2	2″ LOWER BOX SUB 3/4″ S/R (1-1/16″ BOX)	X	X					X			2.50
154 8963-2.5-A	2-1/2″ LOWER BOX SUB 3/4″ S/R (1-1/16″ BOX)			X	X				X		3.75
154 8963-2.5-B	2-1/2″ LOWER BOX SUB 7/8″ S/R (1-3/16″ BOX)					X	X			X	3.75
154 8965-2	2″ SWAGE AND J-SLOT	X									6.50
154 8965-2.5	2-1/2″ SWAGE AND J-SLOT			X							9.50

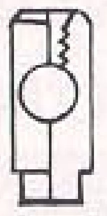
2″ ON & OFF SUCKER ROD COUPLERS AVAILABLE:	
154 8950-2	2″ ON & OFF S/R COUPLER WITH 3/4″ (1-1/16″) B & P COMPLETE
154 8950-2-L	2″ ON & OFF S/R COUPLER WITH 3/4″ (1-1/16″) B & P LESS SWAGE & J-SLOT
2″ ON & OFF SUCKER ROD SUB-ASSEMBLY AVAILABLE:	
154 8951-2	2″ LOWER BOX ASSEMBLY WITH 3/4″ (1-1/16″) BOX
2-1/2″ ON & OFF SUCKER ROD COUPLERS AVAILABLE:	
154 8950-2.5-A	2-1/2″ ON-OFF S/R COUPLER WITH 3/4″ (1-1/16″) B & P
154 8950-2.5-A-L	2-1/2″ ON-OFF S/R COUPLER WITH 3/4″ (1-1/16″) B & P LESS SWAGE & J-SLOT
154 8950-2.5-B	2-1/2″ ON-OFF S/R COUPLER WITH 7/8″ (1-3/16″) B & P
154 8950-2.5-B-L	2-1/2″ ON-OFF S/R COUPLER WITH 7/8″ (1-3/16″) B & P LESS SWAGE & J-SLOT
2-1/2″ ON & OFF SUCKER ROD SUB-ASSEMBLIES AVAILABLE:	
154 8951-2.5-A	2-1/2″ LOWER BOX ASSEMBLY WITH 3/4″ (1-1/16″) BOX
154 8951-2.5-B	2-1/2″ LOWER BOX ASSEMBLY WITH 7/8″ (1-3/16″) BOX

ON AND OFF SUCKER ROD COUPLER

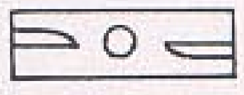
FOR OVERSIZE STATIONARY BARREL PUMPS

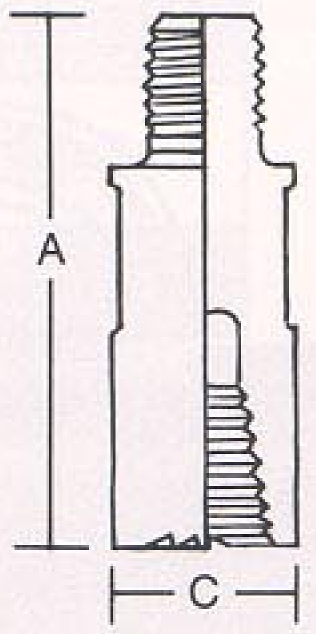
SPECIFICATIONS			
SIZE OF TUBING TO BE RUN THROUGH	2″	2-1/2″ UP	2-1/2″ UP
SUCKER ROD THREAD SIZE	3/4″ S/R	3/4″ S/R	7/8″ S/R
BOX & PIN SIZE	3/4″ S/R	3/4″ S/R	7/8″ S/R
MAX. DIAMETER OF COUPLER	1-13/16″	2-1/8″	2-1/8″
LENGTH OF TOP PIN SUB (SEE #A)	5″	5″	5″
LENGTH OF LOWER BOX SUB (SEE #B)	5-3/8″	5-3/8″	5-3/8″
OD OF TOP PIN SUB (SEE #C)	1-13/16″	2-1/8″	2-1/8″
OD OF LOWER BOX SUB (SEE #D)	1-13/16″	2-1/8″	2-1/8″
OVERALL LENGTH OF TOOL	10-3/8″	10-3/8″	10-3/8″
OVERALL LENGTH OF SWAGE	9″	9″	9″
PART NUMBERS			
COMPLETE TOOL	154 8950-2	154 8950-2.5-A	154 8950-2.5-B
WEIGHT OF COMPLETE TOOL	12#	17#	17#
TOOL LESS SWAGE AND 'J' SLOT	154 8950-2-L	154 8950-2.5-A-L	154 8950-2.5-B-L
TOOL WEIGHT LESS SWAGE AND 'J' SLOT	5.5#	7.5#	7.5#
PARTS			
TOP PIN SUB	154 8955-2	154 8955-2.5-A	154 8955-2.5-B
TRIP SPRING	154 8956	154 8956	154 8956
TRIP GUIDE BUSHING W/2 SET SCREWS	154 8957	154 8957	154 8957
PROJECTING DOG	154 8960-2	154 8960-2.5	154 8960-2.5
LOWER BOX SUB	154 8963-2	154 8963-2.5-A	154 8963-2.5-B
SWAGE & 'J' SLOT	154 8965-2	154 8965-2.5	154 8965-2.5



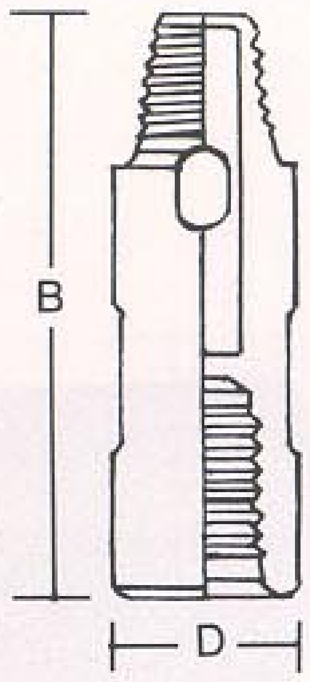

TRIP GUIDE BUSHING W/2 SET SCREWS


TRIP SPRING

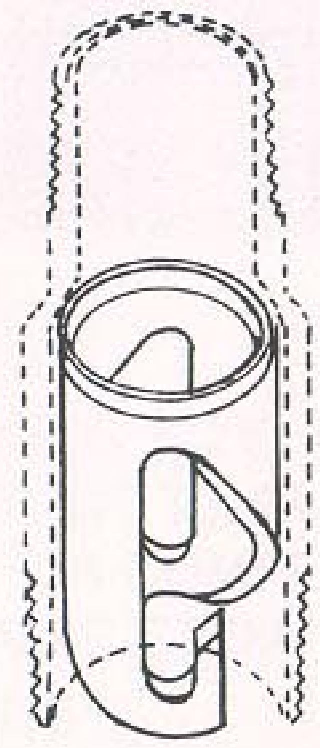

PROJECTING DOG



TOP PIN SUB



LOWER BOX SUB


SWAGE & "J" SLOT

ON & OFF SUCKER ROD COUPLER

FOR OVERSIZE & STATIONARY BARREL PUMPS

HOW TO USE THE ON & OFF SUCKER ROD COUPLER:

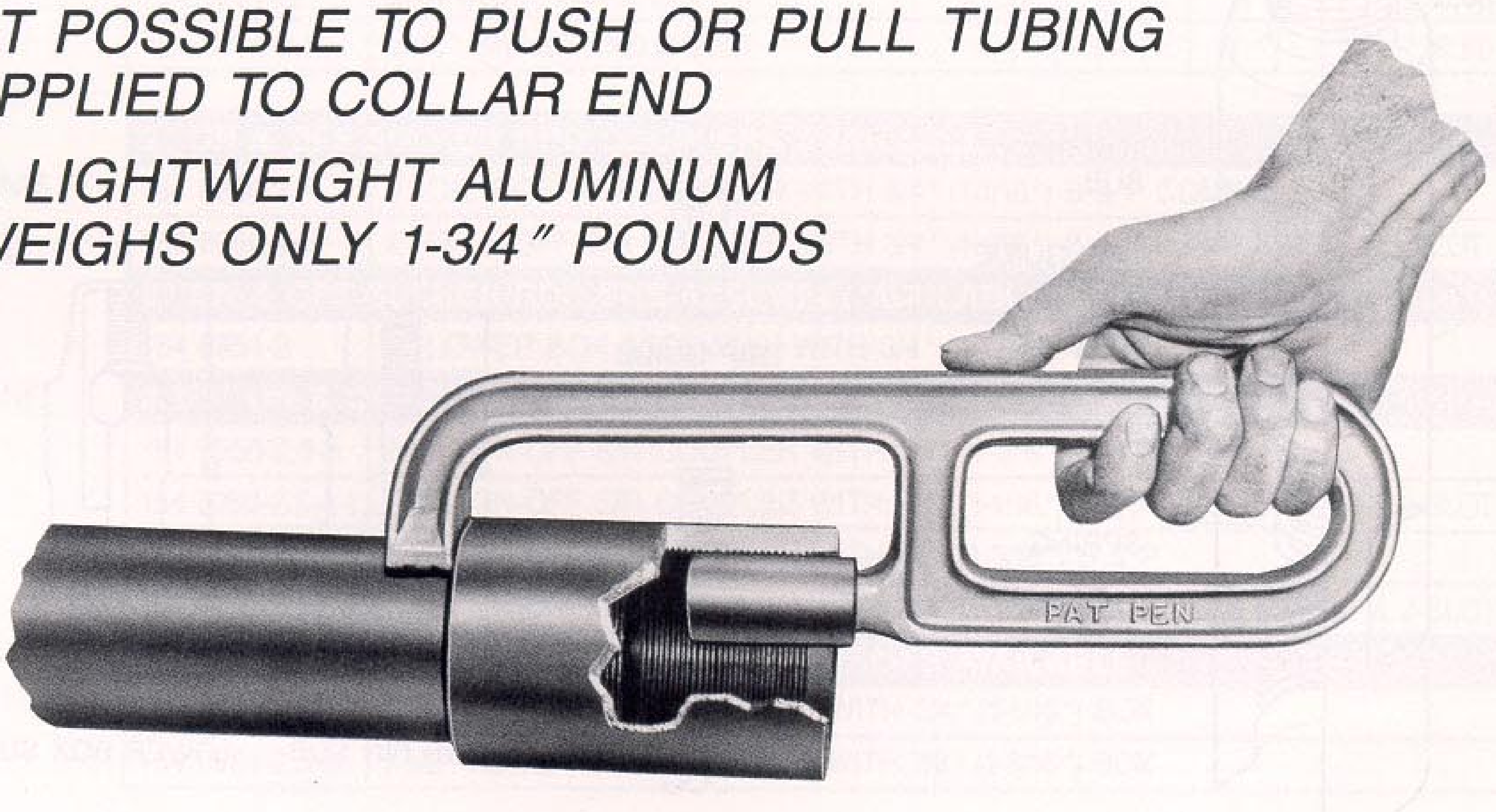
GETTING READY: The swage, with the "J" slot welded inside, is installed on the bottom of the 2″ tubing. A 2½″ pup joint, longer than the combined length of the plunger plus the cages plus standing valve puller, is screwed on to the bottom of the swage. This will give room (when coming out) to drop down and pick up the standing valve and hang the whole assembly in the "J" slot. Put the standing valve in the seating shoe – screw the bottom half of our coupler (Part #8963) to the top cage on the plunger. Hang the whole plunger assembly in the "J" slot. Screw the barrel on to the bottom of the pup joint. Run the tubing.

GETTING ON: Screw the top part of our coupler (Part #8955) to the bottom of the rods. Run the rods. Remember, the plunger assembly is hanging in the "J" slot, and with reasonable measurement, the bottom of the rods can approach the top of the plunger carefully. After contact is made – turn the rods to the left snugly and the ratchet on our coupler will fall in place. "Un J" the plunger and space the stroke of the well.

GETTING OFF: Drop the plunger and standing valve puller down and pick up the standing valve. Hang the whole assembly in the "J" slot, (this gives you a dry tubing string to pull). Put some tension on the rods to release the ratchet on our coupler – turn the rods to the right and when loose, go ahead and pull the rods.

PIPE GRIPPER

- *A SAFER, EASIER WAY TO HANDLE TUBING*
- *MAKES IT POSSIBLE TO PUSH OR PULL TUBING WHEN APPLIED TO COLLAR END*
- *SPECIAL LIGHTWEIGHT ALUMINUM ALLOY WEIGHS ONLY 1-3/4″ POUNDS*



POSITIVE LIFT TRAVELING VALVE

FOR ELIMINATION OF GAS LOCK

At the start of the down stroke — the weight of the entire column of oil in the tubing forces the gas out of the barrel.

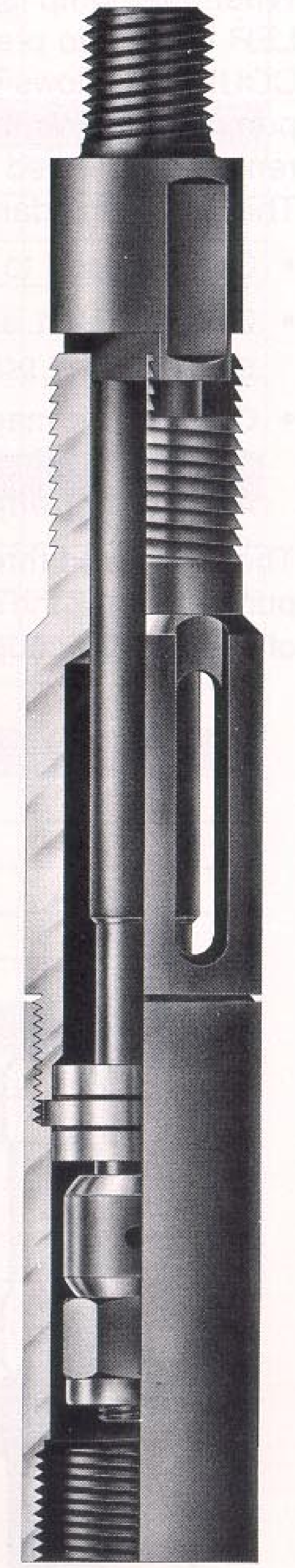
Note that the ball and seat assembly "make and break" on the bottom side. The ball is directly connected to the rods.

Both the ball and the seat are reversible, or can be reconditioned. They are made of hardened stainless steel.

To install, simply remove top cage and the ball and seat and replace with assembly shown here.

This tool cannot be used in traveling plunger insert pump.

This tool can be furnished with full TUNGSTEN CARBIDE trim, instead of stainless steel. Also, we can now furnish an adapter to fit regular stems now in the field. This will permit changing old tools over to carbide trim. A new lower cage is also required. It is the same price as the lower cage listed below.



SPECIFICATIONS:

TO REPLACE API CAGE SIZE″ SPECIFY S/R PIN SIZE* ″	1-3/4 15/16 or 1-1/16	2-1/4 1-1/16 or 1-3/16	2-3/4 1-1/16 or 1-3/16
STAINLESS ASSEMBLY			
COMPLETE ASSEMBLY, STAINLESS TRIM	150 1401-175	150 1401-225	150 1401-275
STAINLESS TRIM PARTS			
VALVE STEM (Spec. Pin Size)*	150 1402-175	150 1402-225	150 1402-275
UPPER CAGE	150 1403-175	150 1403-225	150 1403-275
VALVE & SEAT	150 1404-175	150 1404-225	150 1404-275
LOWER CAGE	150 1405-175	150 1405-225	150 1405-275
ADAPTER FOR CARBIDE	150 1408-175	150 1408 225	—

CARBIDE ASSEMBLY		
COMPLETE ASSEMBLY, CARBIDE TRIM	150 1420-175	150 1420-225
CARBIDE TRIM PARTS		
VALVE STEM (Spec. Pin Size)*	150 1402-175-C	150 1402-225-C
UPPER CAGE	150 1403-175-C	150 1403-225-C
LOWER CAGE	150 1405-175-C	150 1405-225-C
VALVE & SEAT	150 1406-175	150 1406-225-C

*TO SPECIFY PIN SIZE, ADD "B", "C", OR "D" TO PART NUMBERS FOR COMPLETE TOOL OR VALVE STEM.

B = 15/16″
C = 1-1/16″
D = 1-3/16″

OFF COUPLERS

When the pump is stuck the BAIRD OFF COUPLER is used to prevent a stripping job. The OFF COUPLER allows you to unscrew the rods at the pump; (left hand threads) allowing the rods to be removed, followed by the pump with the tubing. This is for standard-size pumps only.

- Can be used to save a stripping job.
- Can be used as a coupler to break the rod string at that point.
- Can reduce magnetism and electrolysis when the bronze off coupler is used (Bronze is Non-API recognized).

The right hand threads allow you to "get off" the pump or break the sucker rods when used in place of a standard coupler.

DIMENSIONS:

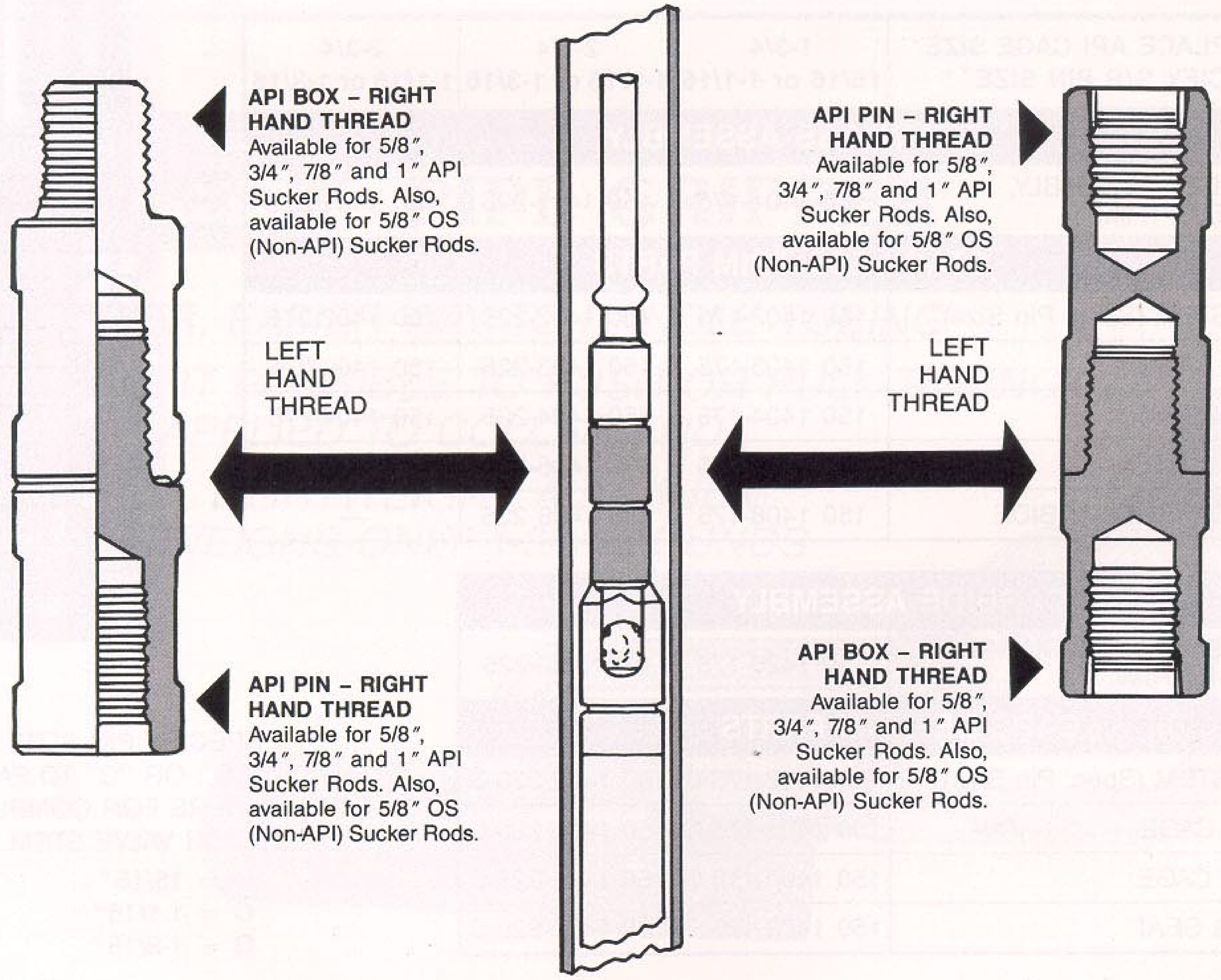
The O.D. and length of the Off Coupler conform to API Spec 11B for fullsize coupling (See Table 4.1).

ROCKWELL HARDNESS:

Conforms to API Spec 11 B for Steel Sucker Rod Couplings (See Table 4.3); Class: T Rockwell C: 16 min. to 23 max.

TUBING SIZE:

Information shown in this brochure is from API Spec 11B, Table 4.1 for fullsize couplings (Chart Bottom Page 13).



OFF COUPLERS

PART NUMBER	FOR SUCKER ROD	DIMENSIONS OD (A)	(LENGTH (B)	USED WITH MINIMUM OD TUBING	PIN SIZE OR BOX SIZE
STEEL OFF COUPLER, BOX & PIN STYLE					
161 8801	5/8″ OS*	1-1/2″	6-3/8″	2-1/16″	7/8″ OS*
161 8802	5/8″ API	1-1/2″	6-3/8″	2-1/16″	15/16″ PIN
161 8803	3/4″ API	1-5/8″	6-5/8″	2-3/8″	1-1/16″
161 8804	7/8″ API	1-13/16″	6-5/8″	2-7/8″	1-3/16″
161 8805	1″ API	2-3/16″	7-7/8″	3-1/2″	1-3/8″
161 8821	1″ API	2-3/16″	7-7/8″	3-1/2″	1-3/16″ BOX × 1-3/8″ PIN
BRONZE ALLOY ** OFF COUPLER, BOX & PIN STYLE					
162 8811	5/8″ OS*	1-1/2″	6-3/8″	2-1/16″	7/8″ OS*
162 8812	5/8″ API	1-1/2″	6-3/8″	2-1/16″	15/16″
162 8813	3/4″ API	1-5/8″	6-5/8″	2-3/8″	1-1/16″
162 8814	7/8″ API	1-13/16″	6-5/8″	2-7/8″	1-3/16″
162 8815	1″ API	2-3/16″	7-7/8″	3-1/2″	1-3/8″
STEEL OFF COUPLER, BOX & BOX STYLE					
161 8806	5/8″ OS*	1-1/2″	6-7/8″	2-1/16″	7/8″ OS*
161 8807	5/8″ API	1-1/2″	6-7/8″	2-1/16″	15/16″
161 8808	3/4″ API	1-5/8″	7-1/8″	2-3/8″	1-1/16″
161 8809	7/8″ API	1-13/16″	7-1/8″	2-7/8″	1-3/16″
161 8810	1″ API	2-3/16″	8-3/8″	3-1/2″	1-3/8″
BRONZE ALLOY ** OFF COUPLER, BOX & BOX STYLE					
161 8816	5/8″ OS*	1-1/2″	6-7/8″	2-1/16″	7/8″ OS*
162 8817	5/8″ API	1-1/2″	6-7/8″	2-1/16″	15/16″
162 8818	3/4″ API	1-5/8″	7-1/8″	2-3/8″	1-1/16″
162 8819	7/8″ API	1-13/16″	7-1/8″	2-7/8″	1-3/16″
162 8820	1″ API	2-3/16″	8-3/8″	3-1/2″	1-3/8″

*NON API

◄ CONFORMS TO API SPEC 11 B FOR FULL-SIZE SUCKER RODS ►

**OTHER MATERIAL: Bronze is available when there is a need to reduce magnetism and the conduction of electrolysis. Alloy 360 ASTM-B-16 (Non-API material)

NOMINAL COUPLING SIZE*	OUTSIDE DIAMETER A	LENGTH MINIMUM B	LENGTH OF WRENCH FLAT	SPACE BETWEEN WRENCH FLATS 0-1/32	USED WITH MINIMUM OD TUBING
FULL SIZE COUPLINGS AND SUBCOUPLINGS					
5/8″	1-1/2″	4″	1-1/4″	1-3/8″	2-1/16″
3/4″	1-5/8″	4″	1-1/4″	1-1/2″	2-3/8″
7/8″	1-13/16″	4″	1-1/4″	1-5/8″	2-7/8″
1″	2-3/16″	4″	1-1/2″	1-7/8″	3-1/2″
1-1/8″	2-3/8″	4-1/2″	1-5/8″	2-1/8″	3-1/2″

*ALSO SIZE OF ROD WITH WHICH COUPLING IS TO BE USED.

DROP VALVES

FOR TESTING TUBING

BAIRD'S DROP VALVE lets you test for tubing leaks without pulling tubing. This effects big savings by decreasing down time, pulling unit time, and tubing test time.

PART NO.	COMPLETE VALVE FOR 2″ TUBING
152-1550-175	1-3/4″ DROP VALVE W/6″ VALVE STEM (7/8″ D.)
152-1550-175-B	1-3/4″ DROP VALVE W/18″ VALVE STEM (7/8″ D.)
152-1550-175-E	1-3/4″ DROP VALVE W/1-1/16″ PIN TOP (3/4″ S/R)
152-1550-175-G	1-3/4″ DROP VALVE W/6″ VALVE STEM (3/4″ D.)
152-1550-175-I	1-3/4″ DROP VALVE W/18″ VALVE STEM (3/4″ D.)

PART NO.	COMPLETE VALVE FOR 2-1/2″ TUBING
152-1550-175-C	1-3/4″ DROP VALVE W/6″ VALVE STEM (7/8″ D.)
152-1550-175-D	1-3/4″ DROP VALVE W/18″ VALVE STEM (7/8″ D.)
152-1550-175-F	1-3/4″ DROP VALVE W/1-1/16″ PIN TOP (3/4″ S/R)
152-1550-175-H	1-3/4″ DROP VALVE W/6″ VALVE STEM (3/4″ D.)
152-1550-175-J	1-3/4″ DROP VALVE W/18″ VALVE STEM (3/4″ D.)

PART NO.	PART DESCRIPTION
152-1504L-175	1-3/4″ VALVE & SEAT
152-1552-175	1-3/4″ VALVE STEM 6″ (7/8″ D.)
152-1552-175-B	1-3/4″ VALVE STEM 18″ (7/8″ D.)
152-1552-175-C	1-3/4″ VALVE STEM 1-1/16″ PIN (3/4″ S/R)
152-1552-175-D	1-3/4″ VALVE STEM 6″ (3/4″ D.)
152-1552-175-E	1-3/4″ VALVE STEM 18″ (3/4″ D.)
152-1553-175	1-3/4″ UPPER CAGE
152-1555-175	1-3/4″ LOWER CAGE
152-1555-175-B	1-3/4″ LOWER CAGE ADAPTOR FOR 2-1/2″ TUBING

DROP VALVES

FOR TESTING TUBING

How to test for tubing leaks with the BAIRD Drop Valve:

- Install a complete seating cup mandrel to the bottom of the DROP VALVE™.
- Remove the down hole pump from the well.
- The DROP VALVE™ with the seating cup mandrel is then dropped into the tubing string to seat in the seating nipple. (The fluid standing in the hole cushions the impact of the valve landing. This should prevent the DROP VALVE™ from going through the seating nipple.)
- When the DROP VALVE™ is in place, sealing off the bottom of the tubing string, a HOT OILER or PRESSURE TRUCK can tie into the top of the tubing string. The tubing can then be pressured up and tested for leaks.
- After testing is completed, the DROP VALVE™ can be fished with the sand line. The DROP VALVE™ will open on the uplift which allows pressure and fluid weight to be released down hole, making it easier and faster for recovery of the DROP VALVE™ when testing is completed.
- In the unlikely event the DROP VALVE™ should become stuck in the seating nipple or does not open when lifted by the sand line, sucker rods can be used with a conventional type fishing tool to remove the DROP VALVE™.

BAIRD ALSO MANUFACTURES
BALL & SEATS, SNUBBER CAGES,
INSERT GUIDED CAGES,
RELIEF, REGULATOR & BY-PASS VALVES,
GAS SAFETY VALVES & OTHER PRODUCTION TOOLS.
ASK YOUR FAVORITE SUPPLY STORE
FOR ASSISTANCE IN ORDERING BAIRD PRODUCTS.

POLISH ROD LUBRICATOR

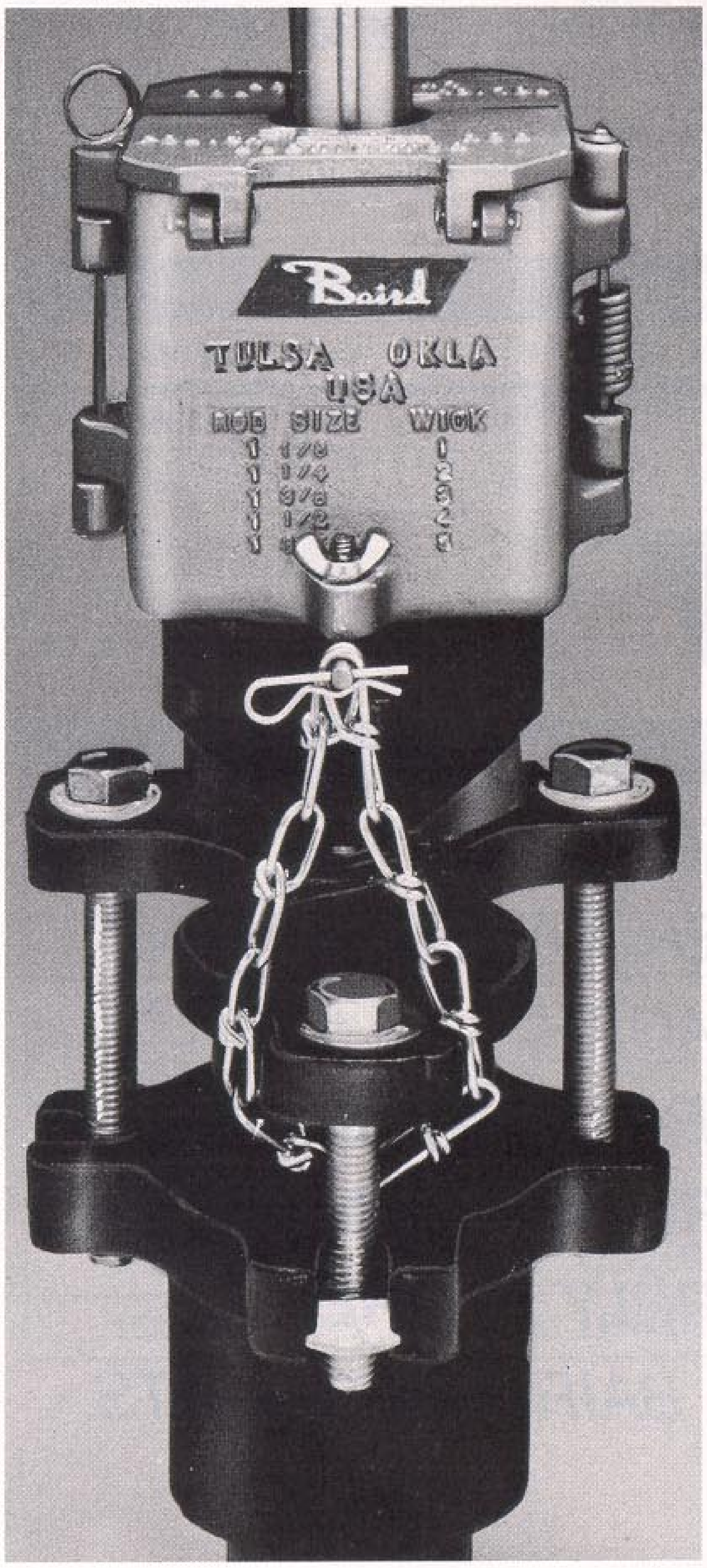
APPLICATION:

Purpose is to reduce friction heat and damage to packing rubbers and polish rods when a well pumps off.

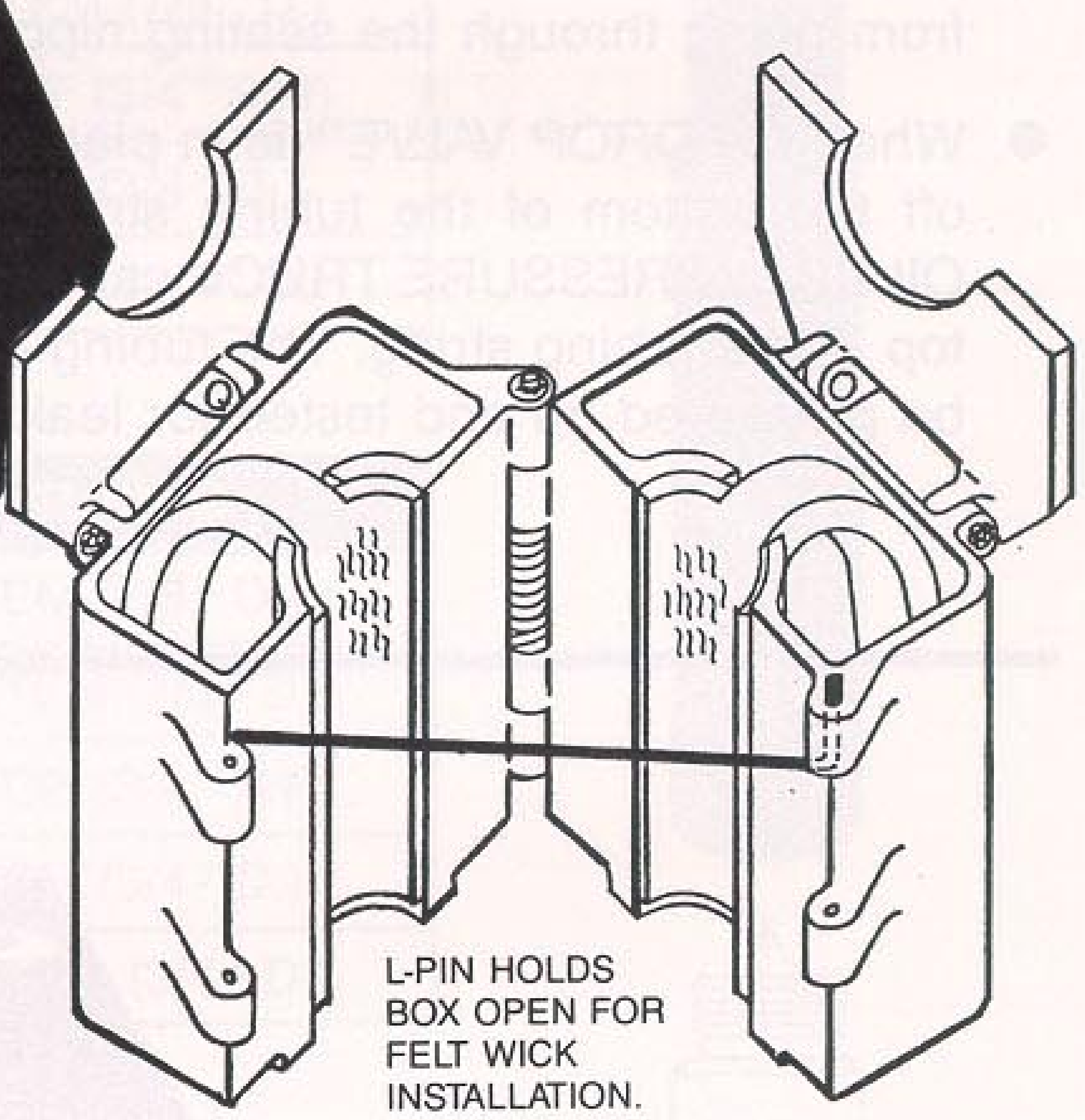
When properly maintained the polish rod lubricator will keep the polish rods lubricated on both the down and up stroke.

FEATURES:

- Our Baird design allows for double usage by merely moving the spring and rod to opposite sides.
- Lubricator also comes with tiedowns.
- Capacity of Reservoirs: 1 quart.



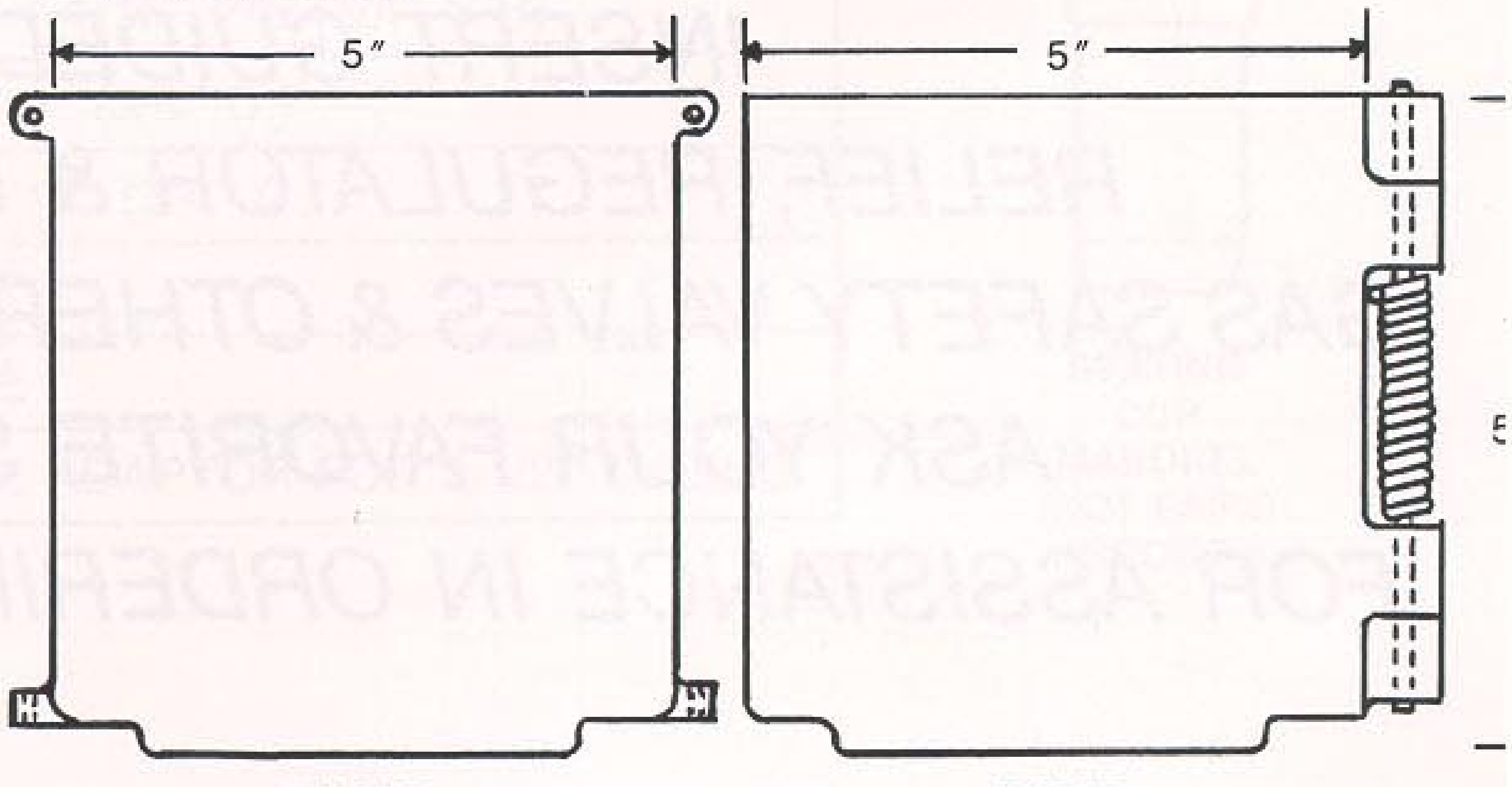
BOX SIDES ARE IDENTICAL. IF LUGS BREAK, SPRING AND PIN CAN BE HINGED THROUGH OTHER SIDE.



L-PIN HOLDS BOX OPEN FOR FELT WICK INSTALLATION.

CHAIN HOLD-DOWNS: WHEN INSTALLING CHAINS, LEAVE THEM SLIGHTLY LOOSE FOR BEST RESULTS.

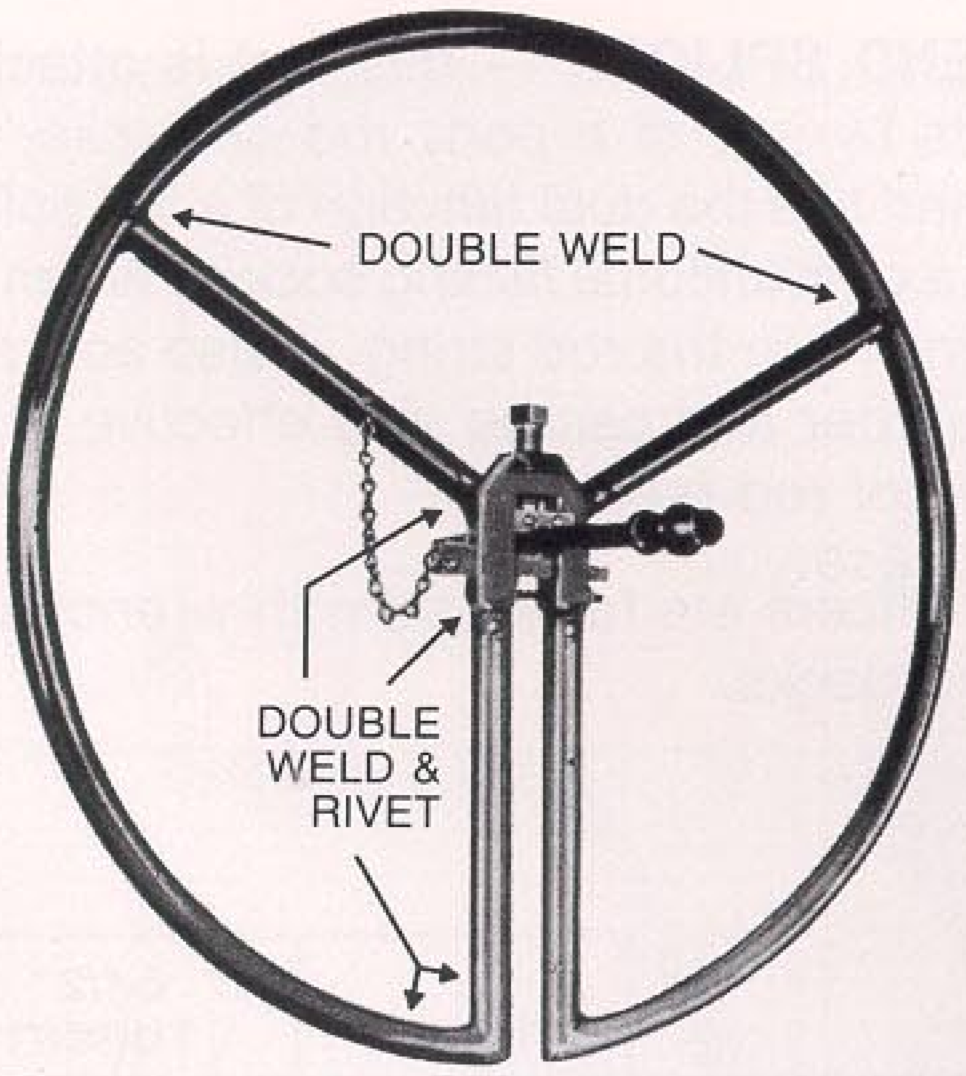
DIMENSIONS:



FRONT

RIGHT

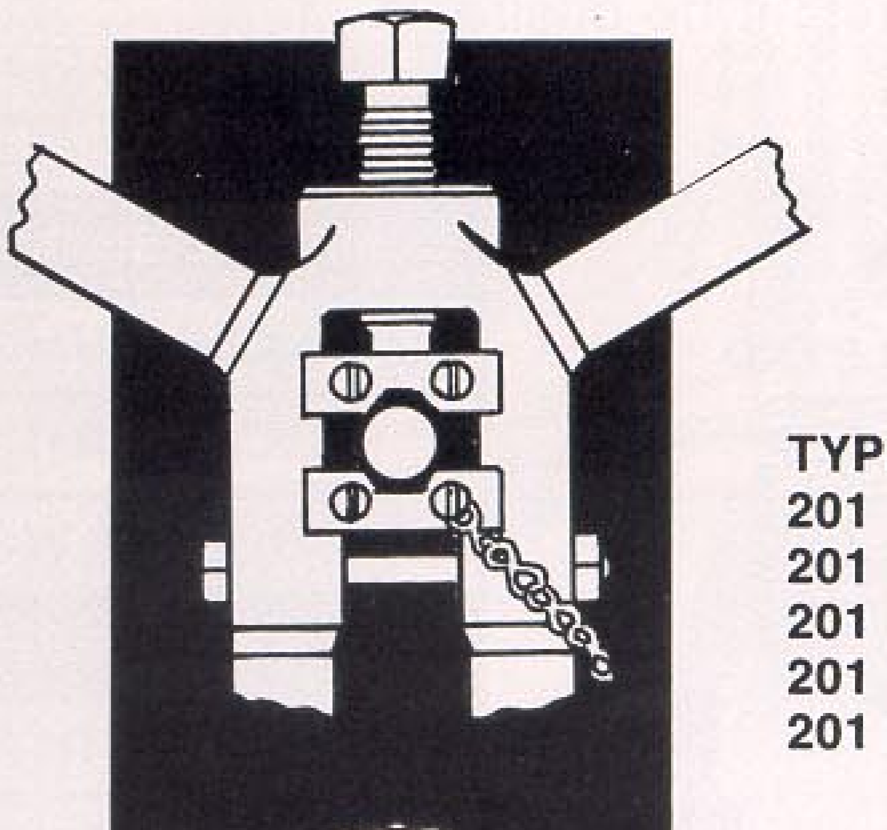
SAFETY WHEEL WRENCH



TYPE D SAFETY WHEEL (201 1603 SHOWN)

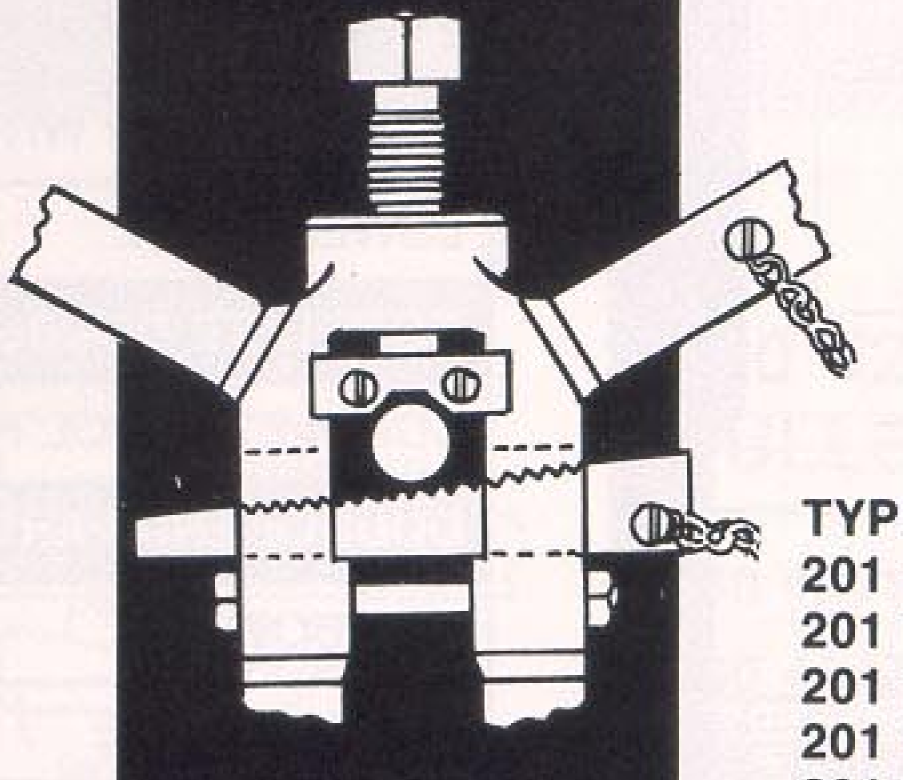
- WHEEL IS AVAILABLE IN THREE STYLES SHOWN BELOW. ALL JAW SURFACES ARE HARDENED.
- WHEN PUMP IS STUCK, ALWAYS USE BOLT IN HUB, TO ADD TO ITS STRENGTH.
- THIS WHEEL WILL GRIP RODS 5/8″ TO 1-1/4″ IN DIAMETER.

COMPLETE ASSEMBLY 36″ SAFETY WHEEL WRENCH	PART NO.
TYPE B HUB ASSEMBLY	201 1602
TYPE D HUB ASSEMBLY	201 1603
TYPE E HUB ASSEMBLY	201 1615



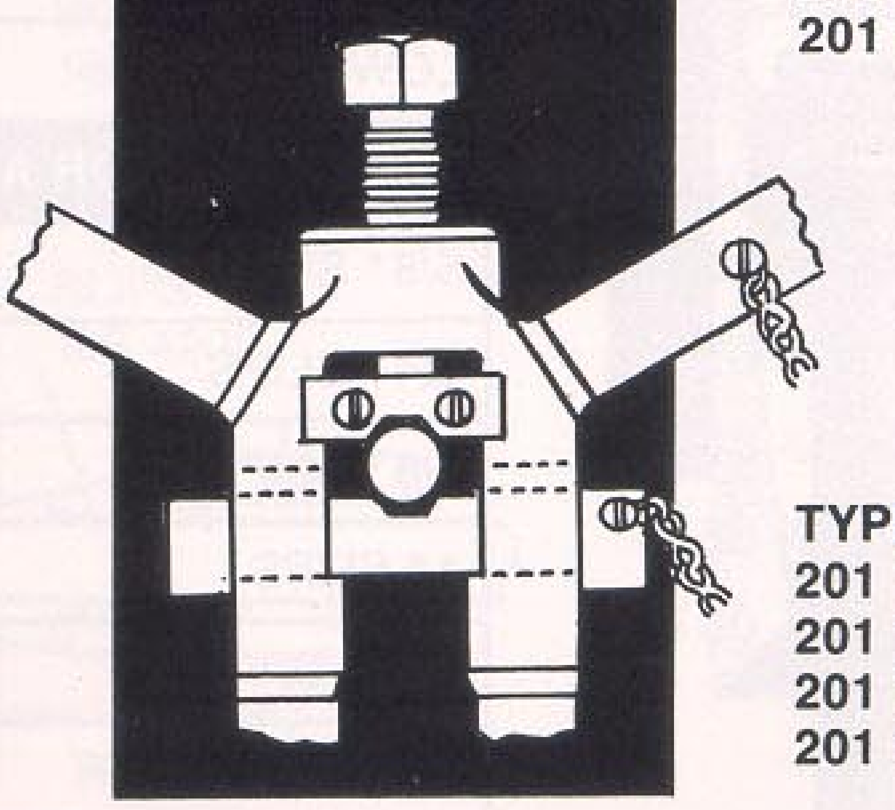
TYPE B HUB ASSEMBLY

201 1604	Wrench Body & Hub
201 1605	Front Wickered Seat
201 1606	Back Wickered Seat
201 1608	Square Head Set Screw
201 1617	5″ Bolt for Hub



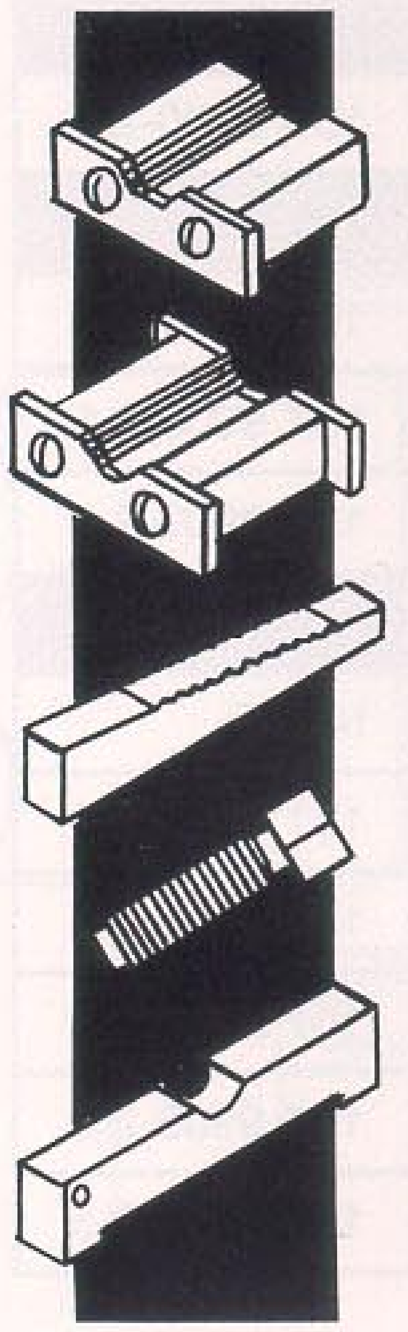
TYPE D HUB ASSEMBLY

201 1604	Wrench Body & Hub
201 1606	Back Wickered Seat
201 1607	Tapered Key Wedge
201 1608	Square Head Set Screw
201 1617	5″ Bolt for Hub



TYPE E HUB ASSEMBLY

201 1604	Wrench Body & Hub
201 1606	Back Wickered Seat
201 1608	Square Head Set Screw
201 1616	Front Safety Wickered Seat
201 1617	5″ Bolt for Hub



201 1605
FRONT WICKERED SEAT

201 1606
BACK WICKERED SEAT

201 1607
TAPERED KEY WEDGE

201 1608
SQUARE HEAD SET SCREW

201 1616
FRONT SAFETY WICKERED SEAT

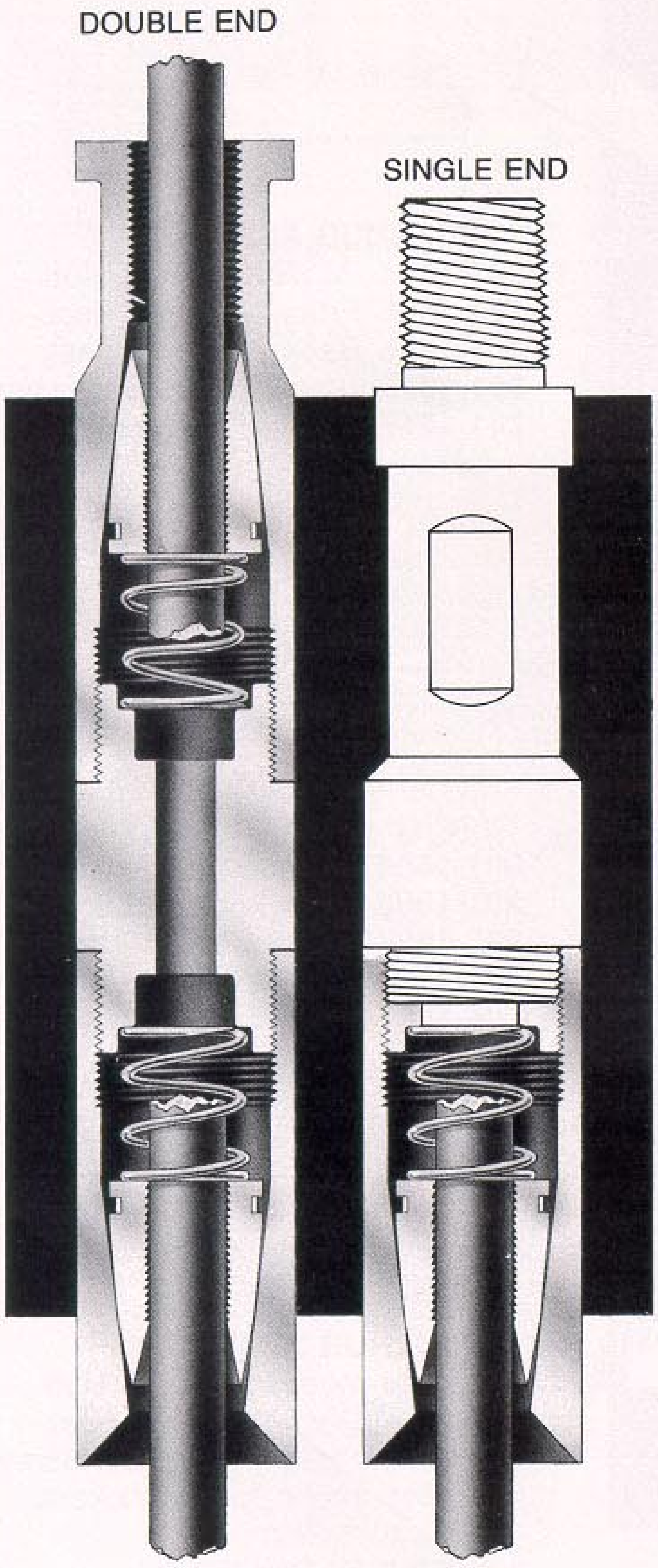
ROD SPLICER

When the rods part, this tool enables the operator to hook onto the broken rod pulled out of the hole, re-enter the well to engage the lower end of the broken rod, and continue pumping. The splicer may remain in the rod string until such time as other well problems require a pulling job.

DOUBLE END SPLICER — permits splicing of both broken rod ends elminating the necessity of replacing the top portion of the rod with a pony joint. Top bowl is equipped with a 1-1/16″ API sucker rod thread which permits attaching the rod directly to the bowl, should it be desirable.

SINGLE END SPLICER — this tool is attached to the rods by use of a pony rod or sucker rod coupling and has the dual function of a rod splicer as well as a conventional fishing socket. When the splicer remains in the rod string, it also acts as a shock absorber and can be very effective in the curtailment of rod breakage.

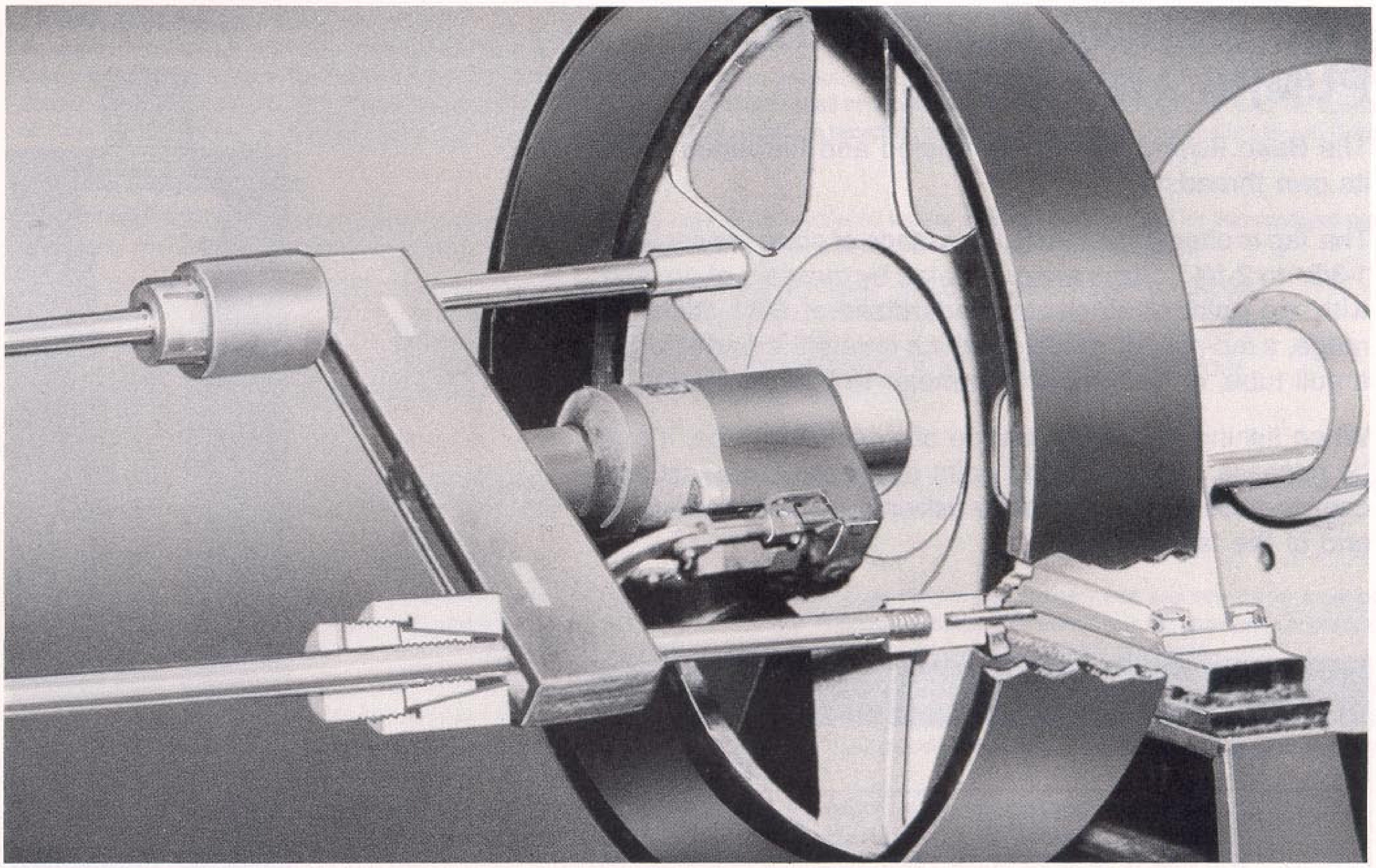
Both rod splicers are furnished with wrench flats and fishing necks.

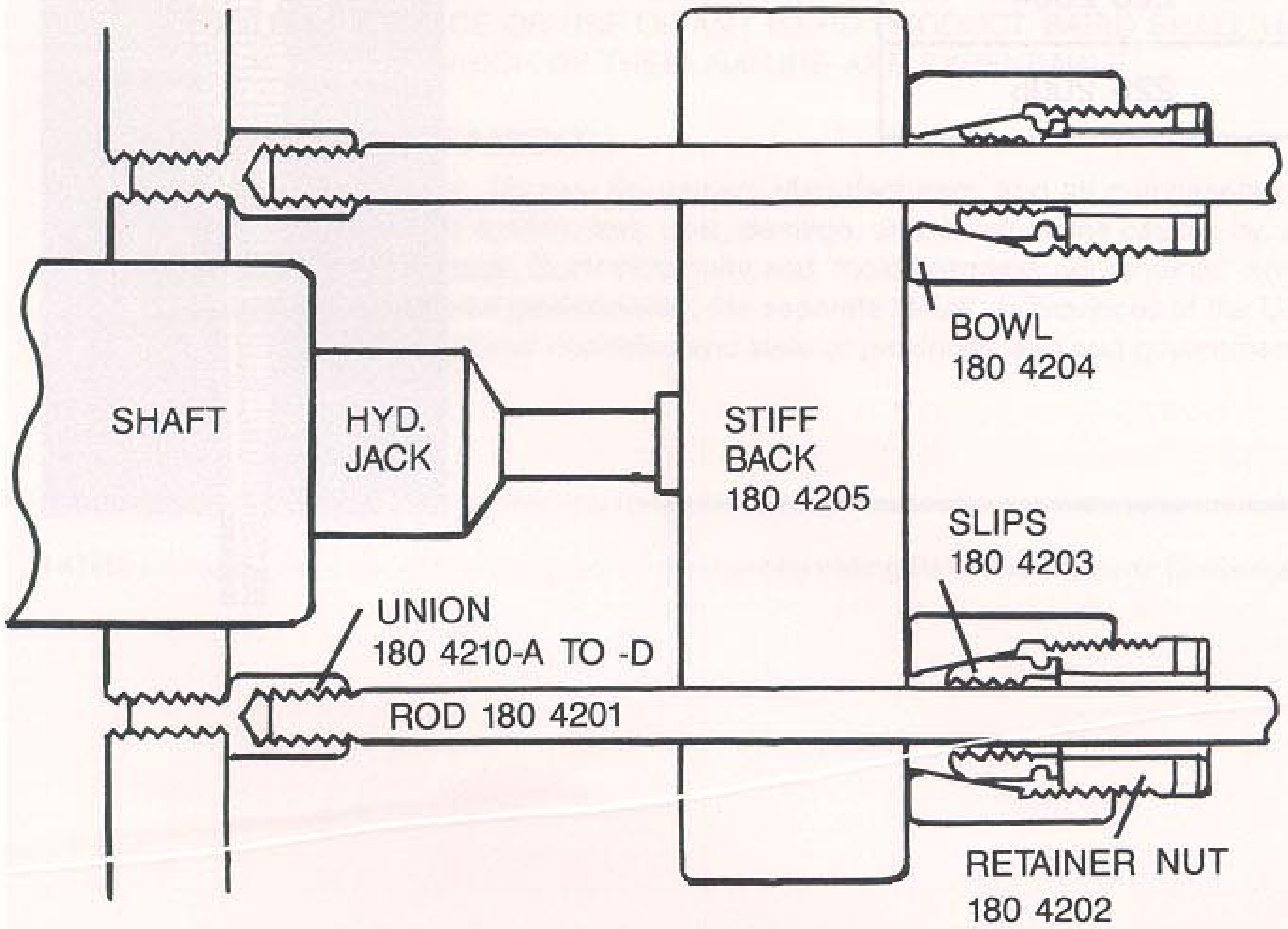


	2″ TUBING	2-1/2″ TUBING
COMPLETE SINGLE END SPLICER*		
2″ SPLICER WITH 15/16″ PIN	157 9910	
2″ SPLICER WITH 1-1/16″ PIN	157 9911	
2-1/2″ SPLICER WITH 1-1/16″ PIN		157 9912
SINGLE END PARTS ONLY		
2″ PIN TOP WITH 15/16″ PIN	157 9913	
2″ PIN TOP WITH 1-1/16″ PIN	157 9914	
2-1/2″ PIN TOP WITH 1-1/16″ PIN		157 9915
LOWER BOWL	157 9903-2	157 9903-2.5
COMPLETE DOUBLE END SPLICER*		
COMPLETE TOOL PART NO.	157 9900-2	157 9900-2.5
DOUBLE END PARTS ONLY		
TOP BOWL	157 9901-2	157 9901-2.5
CENTER PIECE	157 9902-2	157 9902-2.5
LOWER BOWL	157 9903-2	157 9903-2.5
PARTS LIST FOR ALL COMPLETE TOOLS		
5/8″ SLIPS	157 9904-2	NONE
3/4″ SLIPS	157 9905-2	157 9905-2.5
7/8″ SLIPS	157 9906-2	157 9906-2.5
1″ SLIPS	NONE	157 9907-2.5
COIL SPRING	157 9908-2	157 9908-2.5
SLIP SPRING	157 9909-2	157 9909-2.5

*SPECIFY SLIP SIZE: A = 5/8; B = 3/4; C = 7/8 & D = 1″

HUB PULLER SET





180 4200 HUB PULLER COMPLETE:

180 4201	Puller Rods (Set of 2)
180 4202	Retainer Nuts (Set of 2)
180 4203	Slips (Set of 2)
180 4204	Bowls (Set of 2)
180 4205	Stiff Back (1)
180 4210-A	1/2″ Union (Set of 2)
180 4210-B	5/8″ Union (Set of 2)
180 4210-C	3/4″ Union (Set of 2)
180 4210-D	7/8″ Union (Set of 2)
180 4208	Wooden Box (1)

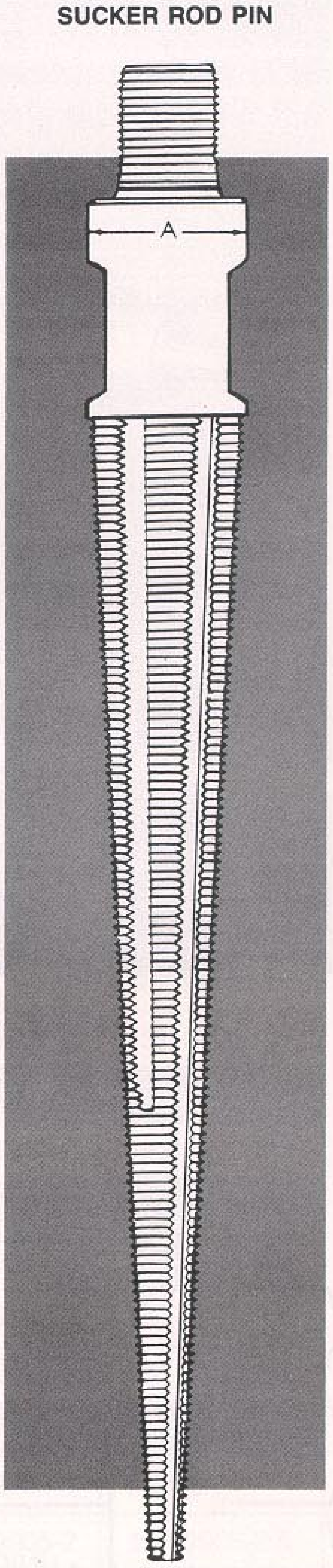
TAPERED FISHING TAP

FOR FISHING BOTTOM HOLE PUMPS AND PARTS:

The Baird fishing tap is heat treated and hardened to cut its own threads.

The Tap is offered in an extensive range of sizes varying from 1-3/8″ to 2-1/4″. Sizes are graduated by quarters of an inch, with the point of all sizes standardized at 3/8″. With this range, a tap may be selected which enters the barrel to fish a pull tube, or of sufficient diameter to fish the barrel.

When fishing for a cage on top of a standing tube, it may be necessary to cut off the point of the tap if contact with cage is prevented by premature ball engagement by the lower end of the tap.

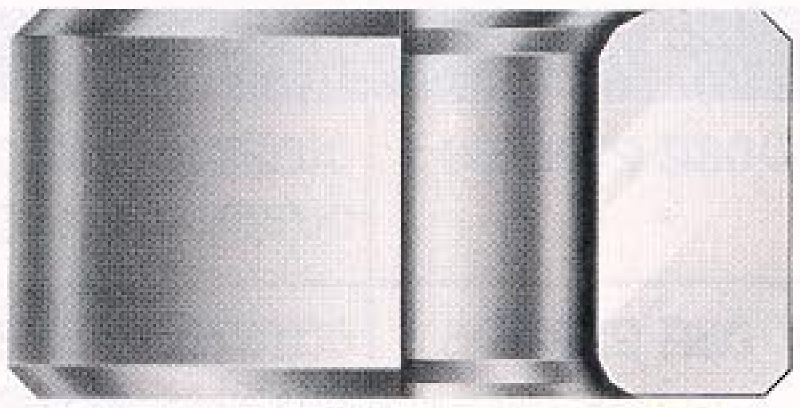


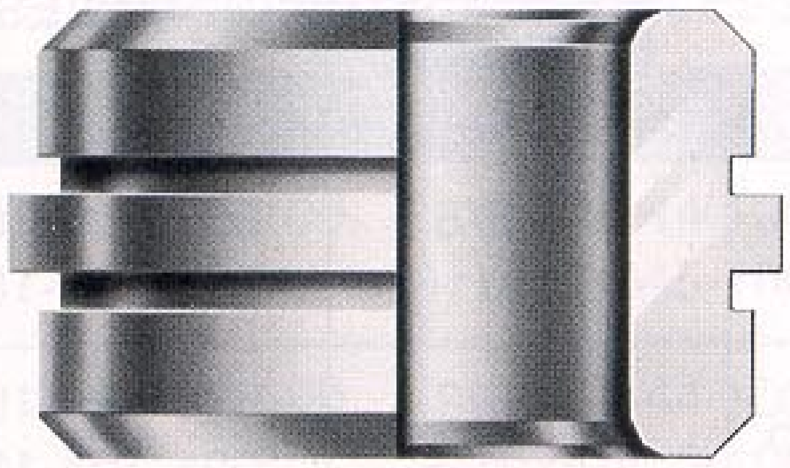
MAX. DIA. – A	S.R. PIN SIZE	PART NO.
1-3/8″	15/16″	226 2001
1-5/8″	1-1/16″	226 2002
1-7/8″	1-1/16″	226 2003
2-1/8″	1-1/16″	226 2004
2-1/4″	1-1/16″	226 2005

OTHER TAP SIZES AVAILABLE.
CALL FOR QUOTE AND DELIVERY TIME.

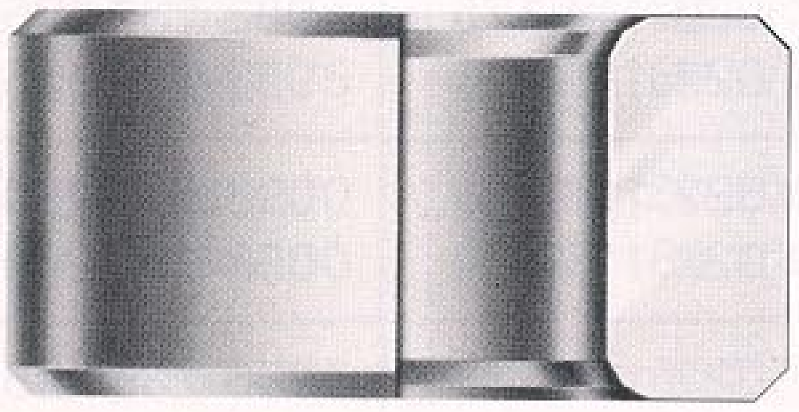
BALLS AND SEATS

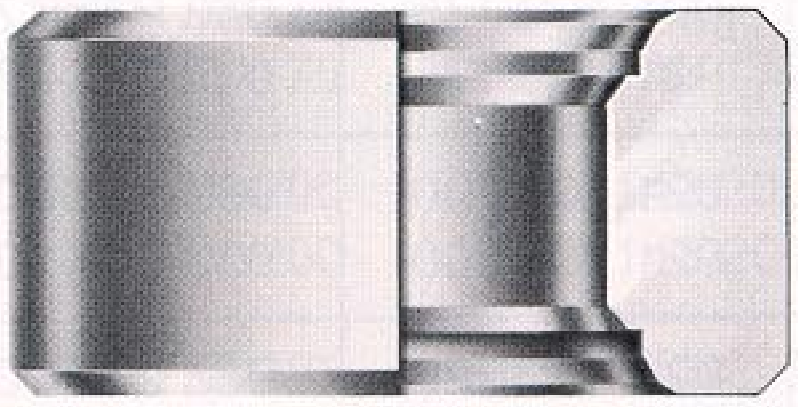
TWO TYPES OF SEATS

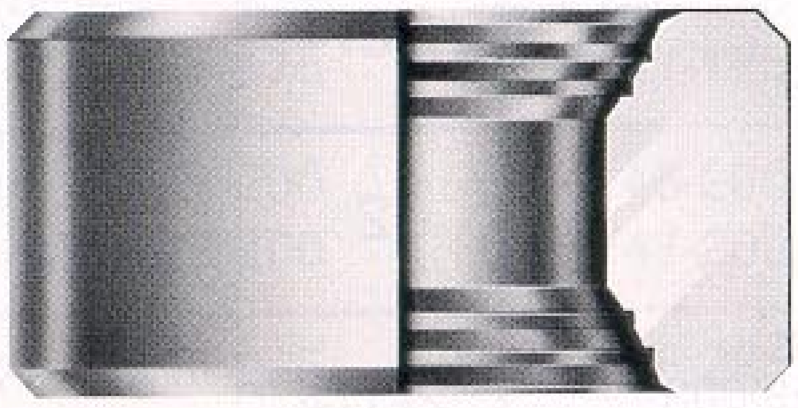

FLAT


RIB

THREE DISTINCTIVE SEALING DESIGNS IN STAINLESS STEEL, SHERALLOY, AND CARBIDE


SINGLE-SEAL


DOUBLE-SEAL®


TRIPLE-SEAL

FOUR DIFFERENT BALL MATERIALS


440 STAINLESS STEEL


SHERALLOY
(COBALT BASE METAL)


329 STAINLESS STEEL
(NO. 7 MO)


CARBIDE
(TUNGSTEN)
(TITANIUM)

OVER 500 DIFFERENT BALL AND SEAT COMBINATIONS

BAIRD Manufacturer Division maintains extensive factory stocks of different metals and alloys to meet all well conditions. These complete stocks insure our customers of an assembly capable of high performance and long service tailored for every well condition.

Baird

BALL AND SEAT COMBINATIONS

API – FLAT TYPE BALLS AND SEATS FOR BOTTOM HOLE PUMPS

API SIZE "	BALL DIA. "	DOUBLE SEAL		STANALLOY SINGLE SEAL	
	BALL MATERIAL	STAINLESS	# 7 MO	STAINLESS	# 7 MO
		PART NUMBERS			
1	API 5/8 ALT. 9/16	021 102-100 021 104-100	032 232-100 *	022 114-100 022 116-100	033 236-100 *
1-1/16	API 5/8 ALT. 9/16	021 102-106 021 104-106	032 232-106 *	022 114-106 022 116-106	033 236-106 *
1-1/4	API 3/4 ALT. 11/16	021 102-125 021 104-125	032 232-125 *	022 114-125 022 116-125	033 236-125 *
1-1/2	API 15/16 ALT. 7/8	021 102-150 021 104-150	032 232-150 032 234-150	022 114-150 022 116-150	033 236-150 033 238-150
1-3/4	API 1-1/8 ALT. 1	021 102-175 021 104-175	032 232-175 032 234-175	022 114-175 022 116-175	033 236-175 033 238-175
2	API 1-1/4 ALT. 1-1/8	021 102-200 021 104-200	032 232-200 032 234-200	022 114-200 022 116-200	033 236-200 033 238-200
2-1/4	API 1-3/8 ALT. 1-1/4	021 102-225 021 104-225	032 232-225 032 234-225	022 114-225 022 116-225	033 236-225 033 238-225
2-3/4	API 1-11/16 ALT. 1-1/2	021 102-275 021 104-275	032 232-275 032 234-275	022 114-275 022 116-275	033 236-275 033 238-275
3-1/4	API * ALT. 2	* 021 104-325	* 032 234-325	* 022 116-325	* 033 238-325
3-3/4	API 2-1/4 ALT. 2	021 102-375 021 104-375	032 232-375 032 234-375	022 114-375 022 116-375	033 236-375 033 238-375

★ SEE OUR PRICE LIST FOR OTHER COMBINATIONS (RIB OR FLAT) AND PRICING DETAILS.

BAIRD BALL AND SEAT MATERIALS

•

MANY OTHER COMBINATIONS AVAILABLE

STANALLOY

FOR GENERAL USE IN FAVORABLE PUMPING CONDITIONS . . .

Although an economy grade ball and seat, these assemblies are manufactured to the same exacting tolerances as our most expensive grades. Material 440 stainless. Hardness 52 Rockwell C. Magnetic.

DOUBLE SEAL®

FOR IMPACT AND HARD PUMPING . . .

A reservoir trap situated between the dual seats maintains a captured fluid cushion to absorb the shock of the ball returning to the seat. As the name DOUBLE SEAL® indicates this assembly has two seating surfaces compared with only one on the conventional seat design. This additional seating area joins with the fluid trap to eliminate ball damage due to shock. Material 440 stainless. Hardness 52 Rockwell C. Magnetic.

TO SELECT THE CORRECT ASSEMBLY, ALL WELL CHARACTERISTICS, SUCH AS CORROSION, ABRASION AND SHOCK, SHOULD BE CONSIDERED. THE CORRECT ASSEMBLY ASSURES A LONGER SEAL BETWEEN BALL AND SEAT — RESULTING IN LONGER PUMP RUNS AND LONGER PROFITS.

Baird

SHERALLOY		"NU" TRIPLE SEAL	CARBIDE		SEAT MATERIAL
SINGLE SEAL	DOUBLE SEAL				
SHERALLOY	SHERALLOY	# 7 MO	CARBIDE	STAINLESS	SHERALLOY
PART NUMBERS					
027 162-100 027 164-100	028 166-100 028 168-100	029 170-100 *	023 142-100 *	024 144-100 024 145-100	025 146-100 025 147-100
027 162-106 027 164-106	028 166-106 028 168-106	029 170-106 *	023 142-106 *	024 144-106 024 145-106	025 146-106 025 147-106
027 162-125 027 164-125	028 166-125 028 168-125	029 170-125 *	023 142-125 023 143-125	024 144-125 024 145-125	025 146-125 025 147-125
027 162-150 027 164-150	028 166-150 028 168-150	029 170-150 029 171-150	023 142-150 023 143-150	024 144-150 024 145-150	025 146-150 025 147-150
027 162-175 027 164-175	028 166-175 028 168-175	029 170-175 029 171-175	023 142-175 023 143-175	024 144-175 024 145-175	025 146-175 025 147-175
027 162-200 027 164-200	028 166-200 028 168-200	029 170-200 029 171-200	023 142-200 023 143-200	024 144-200 024 145-200	025 146-200 025 147-200
027 162-225 027 164-225	028 166-225 028 168-225	029 170-225 029 171-225	023 142-225 023 143-225	024 144-225 024 145-225	025 146-225 025 147-225
027 162-275 027 164-275	028 166-275 028 168-275	029 170-275 029 171-275	023 142-275 023 143-275	024 144-275 024 145-275	025 146-275 025 147-275
* 027 164-325	* 028 168-325	* 029 171-325	* 023 143-325	* 024 145-325	* 025 147-325
027 162-375 027 164-375	028 166-375 028 168-375	029 170-375 029 171-375	* 023 143-375	024 144-375 024 145-375	025 146-375 025 147-375

*NOT AVAILABLE

SHERALLOY

FOR SEVERE CORROSION, ABRASION AND HARD PUMPING

The SHERALLOY grade ball and seat was pioneered by the BAIRD Company to withstand the most severe pumping conditions. It is manufactured in both the single and double seat design. SHERALLOY is a cast alloy of carbon, chromium, tungsten, and cobalt. Hardness 59 Rockwell C. Non-Magnetic.

NU TRIPLE SEAL

FOR SEVERE CORROSION, ABRASION, AND HARD PUMPING

The NU TRIPLE SEAL incorporates two fluid reservoir traps and three sealing surfaces to eliminate shock damage to the ball and seat. The design principle of three sealing surfaces prolongs life expectancy of the assembly by increasing shock area between the ball and seat, and by spanning ball pits to effect a seal. Material Sheralloy alloy. Hardness 59 Rockwell C. Non-Magnetic.

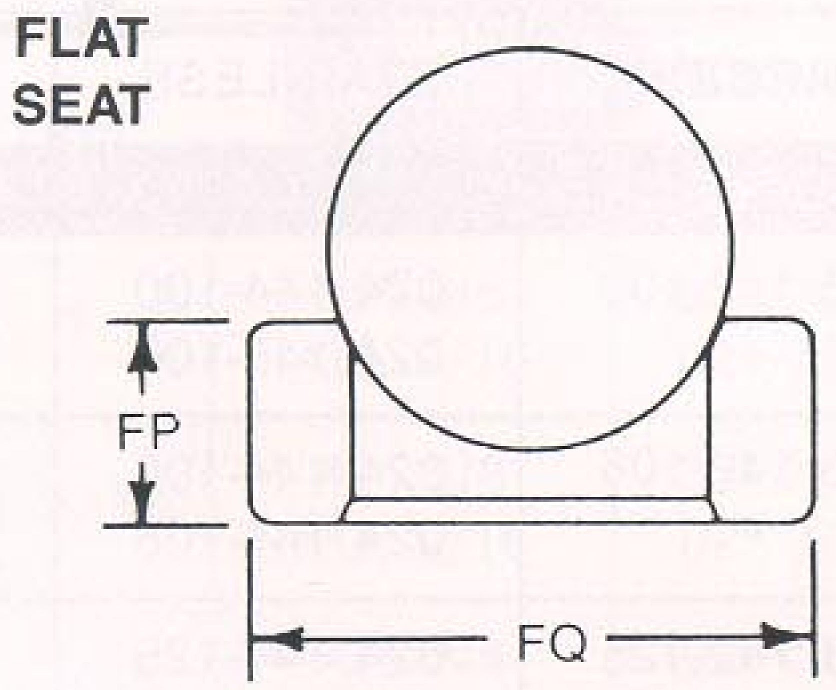
TUNGSTEN CARBIDE

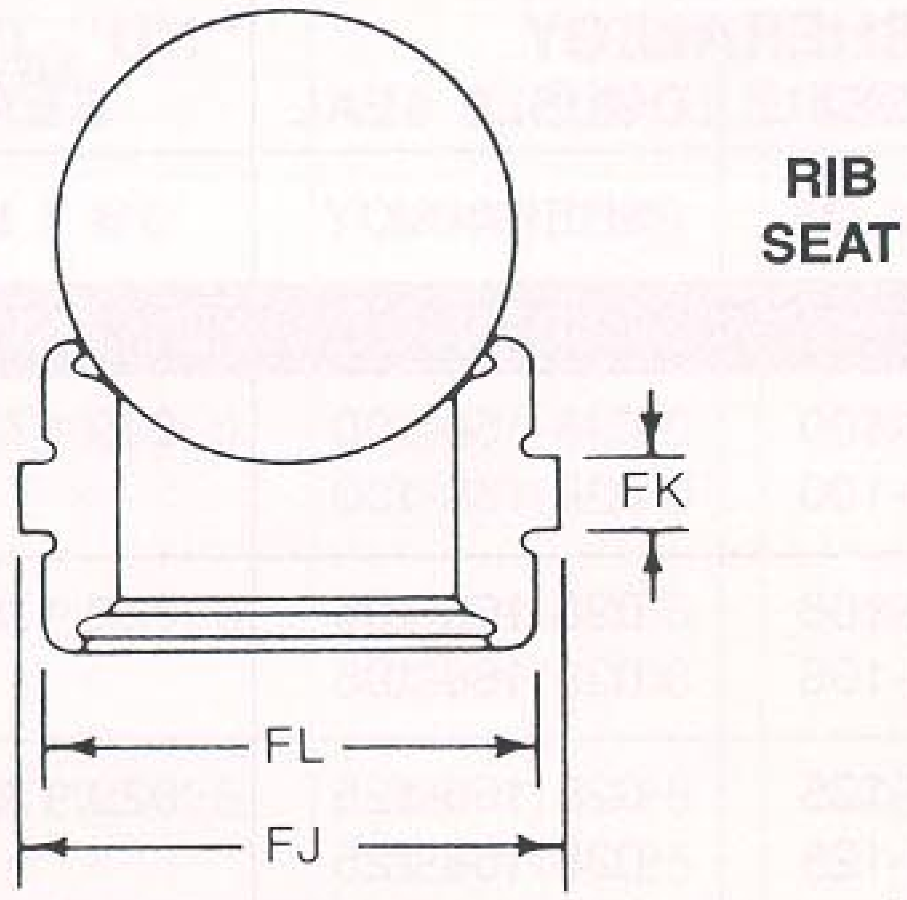
FOR THE MOST SEVERE CONDITIONS OF ABRASION, AND HARD PUMPING

Carbide has the strength and hardness for the most demanding pumping conditions. Hardness 82 Rockwell C. Slightly Magnetic.

USE GRADES AS RECOMMENDED FOR EXCELLENT SERVICE IN THE FIELD

BALL AND SEAT API CHART





BALL AND SEAT DIMENSIONS . . . .

SIZE "	API SIZE DESIGNATION	SEAT DIMENSIONS FJ	FK	FL	FP	FQ	BALL SIZE REG. "	ALT. "
1	100F13-F14 100F23-F24	.730 —	.156 —	.626 —	— .375	— .763	5/8 5/8	9/16 9/16
1-1/16	106F23-F24	—	—	—	.500	.793	5/8	9/16
1-1/4	125F23-F24	—	—	—	.500	.918	3/4	11/16
1-3/8	NOT API	.968	.216	.875	—	—	7/8	—
1-1/2	150F13-F14 150F23-F24	1.094 —	.156 —	.969 —	— .500	— 1.168	15/16 15/16	7/8 7/8
1-5/8	NOT API	1.125	.216	.988	—	—	7/8	—
1-3/4	175F13-F14 175F23-F24	1.342 —	.156 —	1.188 —	— .500	— 1.388	1-1/8 1-1/8	1 1
2	200F13-F14 200F23-F24	1.436 —	.156 —	1.281 —	— .500	— 1.478	1-1/4 1-1/4	1-1/8 1-1/8
2-1/4	225F13-F14 225F23-F24	1.655 —	.156 —	1.438 —	— .500	— 1.720	1-3/8 1-3/8	1-1/4 1-1/4
2-3/4	275F13-F14 275F23-F24	1.967 —	.156 —	1.751 —	— .500	— 2.010	1-11/16 1-11/16	1-1/2 1-1/2
3	NOT API	2.250	.250	2.000	—	—	2	—
3-1/8	NOT API	2.300	.250	2.125	—	—	2	1-7/8
3-1/4	NOT API	2.406	.250	2.250	—	—	2	1-7/8
3-1/4	325F13-F14 325F23-F24	2.687 —	.188 —	2.250 —	— .750	— 2.710	2-1/8 2-1/8	2 2
3-3/4	375F13-F14 375F23-F24	2.905 —	.188 —	2.626 —	— .750	— 3.072	2-1/4 2-1/4	2 2
4-3/4	475F13-F14	3.780	.375	3.376	—	—	3-1/4	—

API TOLERANCES

FJ	+ .000 − .040
FK	+ .060 − .000
FL	+ .000 − .002
FQ	+ .000 − .005

POSITIVE LIFT TRAVELING VALVE

FOR ELIMINATION OF GAS LOCK . . .

At the start of the down stroke — the weight of the entire column of oil in the tubing forces the gas out of the barrel.

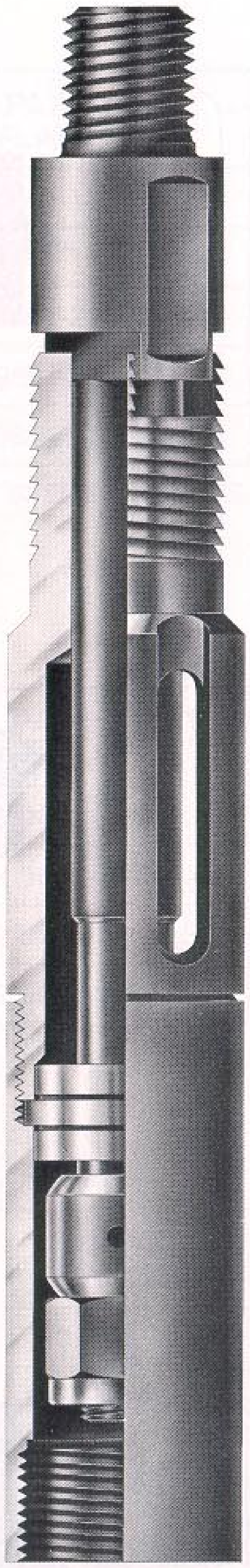
Note that the ball and seat assembly "make and break" on the bottom side. The ball is directly connected to the rods.

Both the ball and the seat are reversible, or can be reconditioned. They are made of hardened stainless steel.

To install, simply remove top cage and the ball and seat and replace with assembly shown here.

This tool cannot be used in traveling plunger insert pump.

This tool can be furnished with full TUNGSTEN CARBIDE trim, instead of stainless steel. Also, we can now furnish an adapter to fit regular stems now in the field. This will permit changing old tools over to carbide trim. A new lower cage is also required. It is the same price as the lower cage listed below.



SPECIFICATIONS:

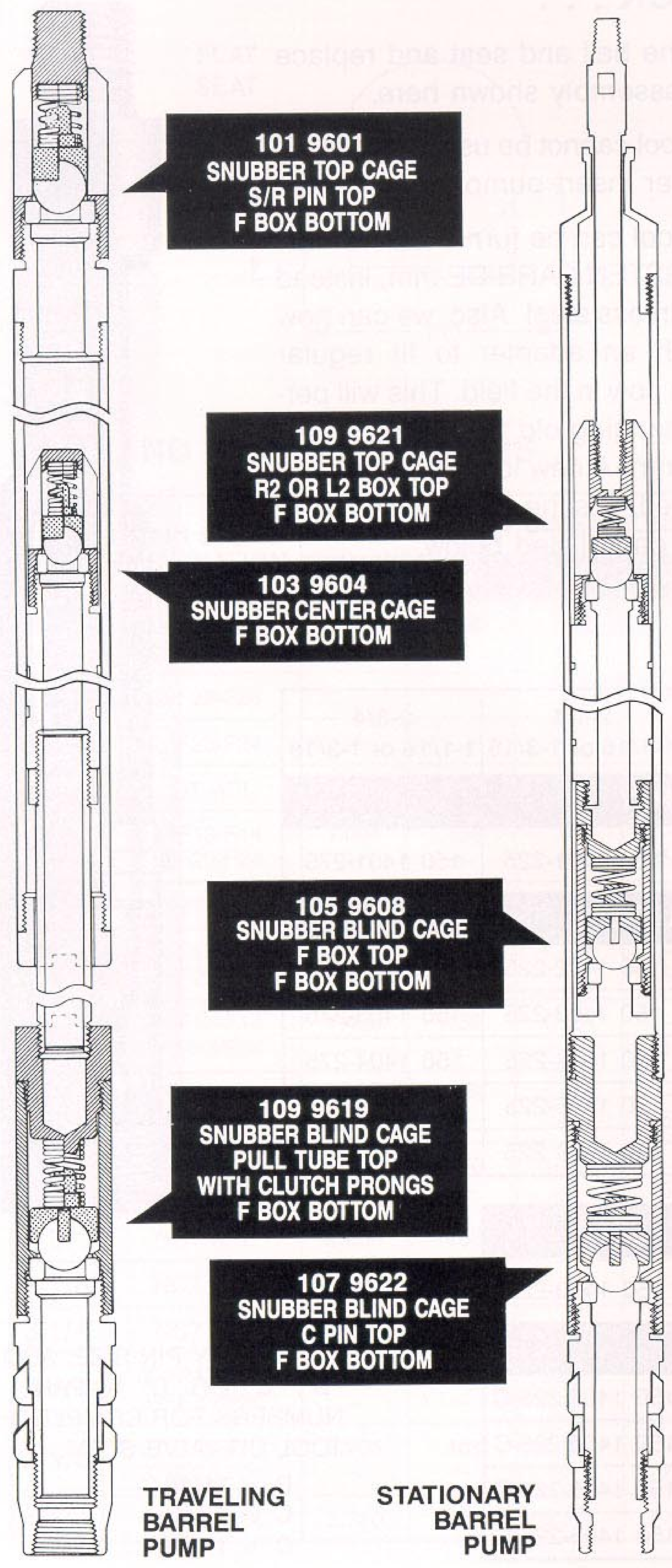
TO REPLACE API CAGE SIZE″ SPECIFY S/R PIN SIZE* ″	1-3/4 15/16 or 1-1/16	2-1/4 1-1/16 or 1-3/16	2-3/4 1-1/16 or 1-3/16
STAINLESS ASSEMBLY			
COMPLETE ASSEMBLY, STAINLESS TRIM	150 1401-175	150 1401-225	150 1401-275
STAINLESS TRIM PARTS			
VALVE STEM (Spec. Pin Size)*	150 1402-175	150 1402-225	150 1402-275
UPPER CAGE	150 1403-175	150 1403-225	150 1403-275
VALVE & SEAT	150 1404-175	150 1404-225	150 1404-275
LOWER CAGE	150 1405-175	150 1405-225	150 1405-275
ADAPTER FOR CARBIDE	150 1408-175	150 1408 225	—

CARBIDE ASSEMBLY		
COMPLETE ASSEMBLY, CARBIDE TRIM	150 1420-175	150 1420-225
CARBIDE TRIM PARTS		
VALVE STEM (Spec. Pin Size)*	150 1402-175-C	150 1402-225-C
UPPER CAGE	150 1403-175-C	150 1403-225-C
LOWER CAGE	150 1405-175-C	150 1405-225-C
VALVE & SEAT	150 1406-175	150 1406-225-C

*TO SPECIFY PIN SIZE, ADD "B", "C", OR "D" TO PART NUMBERS FOR COMPLETE TOOL OR VALVE STEM.

B = 15/16″
C = 1-1/16″
D = 1-3/16″

SNUBBER CAGES



FOR CONTROL OF MANY PUMPING PROBLEMS

The Baird Snubber Cage has proven highly effective in controlling a number of troublesome pumping problems. This is accomplished by constantly maintaining ball control with a spring loaded follower that guides the ball as it moves upward, then returns the ball directly to the seat on the down stroke.

The Snubber Cage is recommended for use in controlling the following pumping problems:

Positive return of the ball to the seat by the spring loaded follower will eliminate most minor gas lock problems.

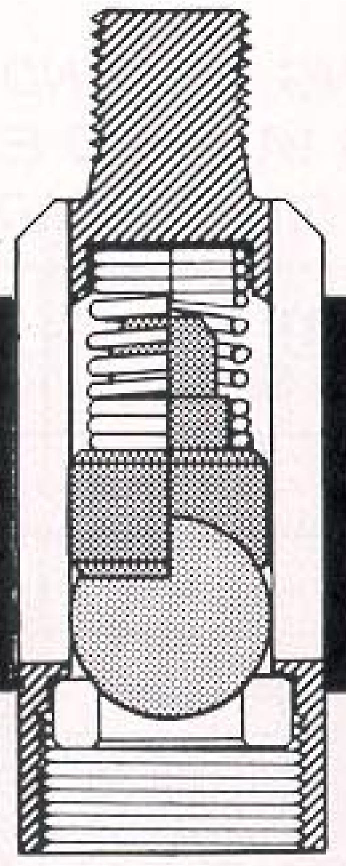
Constant control of the ball movement prevents battering of the cage wings and scarring of the ball surface.

Spring loaded follower forces the ball to return to the seat in spite of exposure to paraffin as it passes through the zone.

The Baird Snubber Cage is offered in a variety of metals including cold rolled steel, stainless steel, brass, and monel. The springs are made of monel metal.

Repairs are seldom required, but are easily made by replacing the spring and follower, and may be done in the field.

SNUBBER CAGES

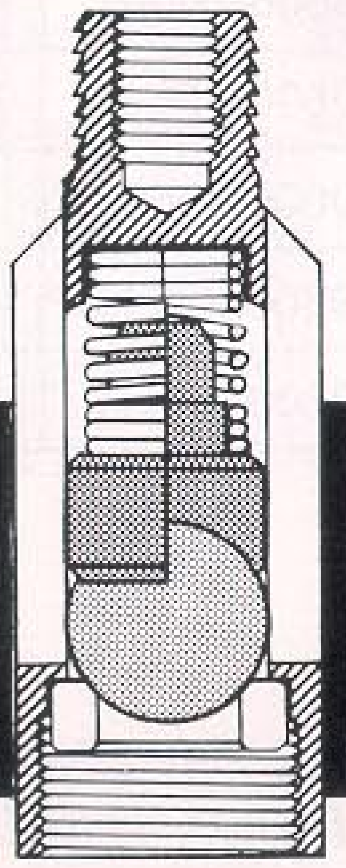


101 9601
TOP CAGE
API S/R PIN TOP
F BOX BOTTOM

101-9601 TOP CAGE *API SUCKER ROD PIN TOP*

API SIZE″		API SEAT		PART NO. RIB SEAT	PART NO. FLAT SEAT
CAGE	SEAT	RIB	FLAT		
1-1/2	1-1/2	150F12	150F22	101 9601-150-R-5/8A1	101 9601-150-F-5/8A1
1-3/4	1-3/4	175F12	175F22	101 9601-175-R-3/4A1	101 9601-175-F-3/4A1
2	2	200F12	200F22	101 9601-200-R-3/4A1	101 9601-200-F-3/4A1
2-1/4	2-1/4	225F12	225F22	101 9601-225-R-3/4A1	101 9601-225-F-3/4A1
2-3/4	2-3/4	275F12	275F22	101 9601-275-R-7/8A1	101 9601-275-F-7/8A1

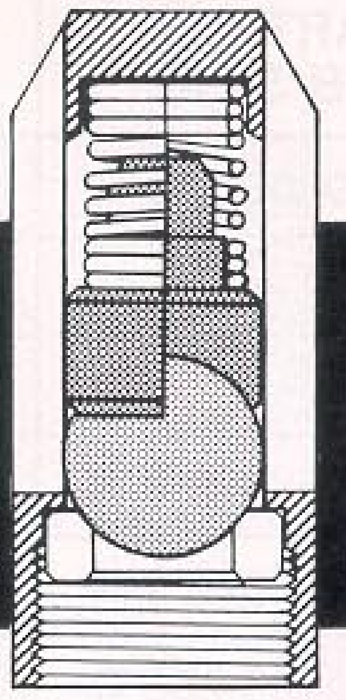
WHEN ORDERING ABOVE TOP CAGES SPECIFY PIN SIZE.



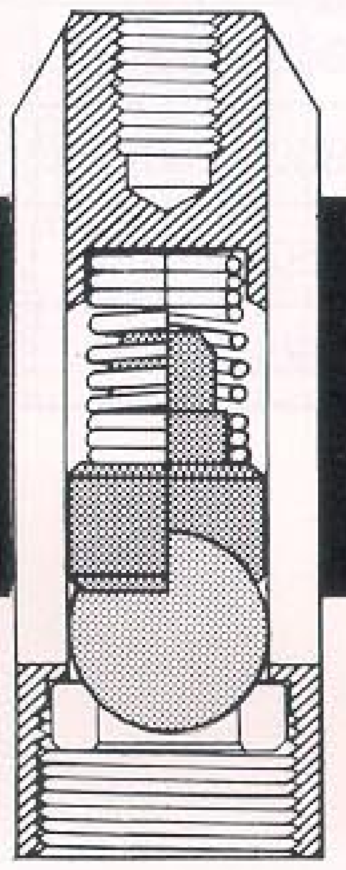
102 9602
LOWER CAGE
G2 PULLER TOP
F BOX BOTTOM

102-9602 LOWER CAGE *G2 PULLER THREAD TOP STANDING VALVE*

API SIZE″		API SEAT		PART NO. RIB SEAT	PART NO. FLAT SEAT
CAGE	SEAT	RIB	FLAT		
1-3/4	1-3/4	175F12	175F22	102 9602-175-R-G2	102 9602-175-F-G2
2	2	200F12	200F22	102 9602-200-R-G2	102 9602-200-F-G2
2-1/4	2-1/4	225F12	225F22	102 9602-225-R-G2	102 9602-225-F-G2
2-3/4	2-3/4	275F12	275F22	102 9602-275-R-G2	102 9602-275-F-G2



103 9604
CENTER CAGE
PLAIN TOP
F BOX BOTTOM



103 9604
CENTER CAGE
G2 PULLER TOP
F BOX BOTTOM

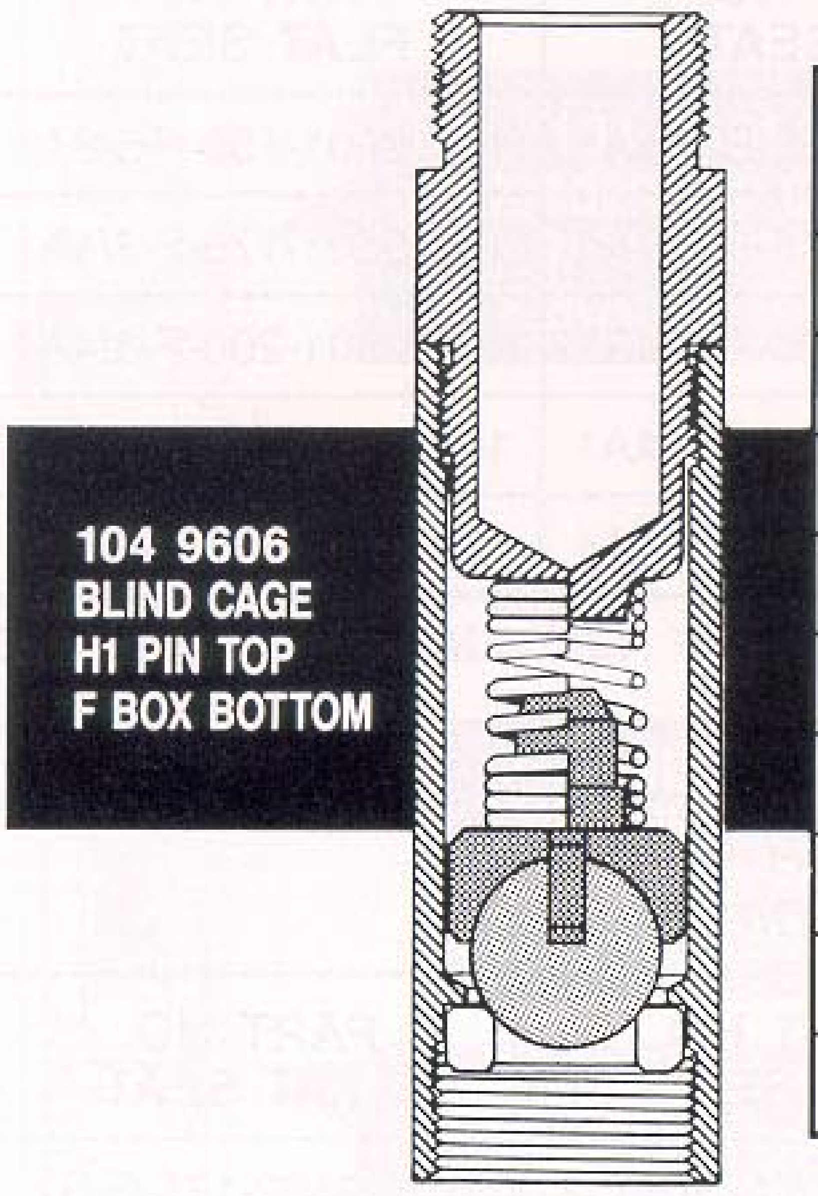
103-9604 CENTER CAGE *TOP OF PLUNGER ON TRAVELING BARREL PUMPS*

API SIZE″		API RIB SEAT	API FLAT SEAT	PART NO. RIB SEAT	PART NO. FLAT SEAT
CAGE	SEAT				
1	1	100F12	100F22	103 9614-100-R	103 9604-100-F
1-1/16	1-1/16	—	106F22	—	103 9604-106-F
1-1/4	1-1/4	—	125F22	—	103 9604-125-F
1-1/2	1-1/2	150F12	150F22	103 9604-150-R	103 9604-150-F
1-3/4	1-3/4	175F12	175F22	103 9604-175-R	103 9604-175-F
2	2	200F12	200F22	103 9604-200-R	103 9604-200-F
X2	2-1/4	X200F12	X200F22	103 9604-X200-R	103 9604-X200-F
2-1/4	2-1/4	225F12	225F22	103 9604-225-R	103 9604-225-F
2-1/2	2-1/2	250F12	250F22	103 9604-250-R	103 9604-250-F
2-3/4	2-3/4	275F12	275F22	103 9604-275-R	103 9604-275-F

WHEN ORDERING ABOVE CENTER CAGES SPECIFY PULLER TOP OR PLAIN TOP:
P = PLAIN TOP
G2 = PULLER THREAD TOP

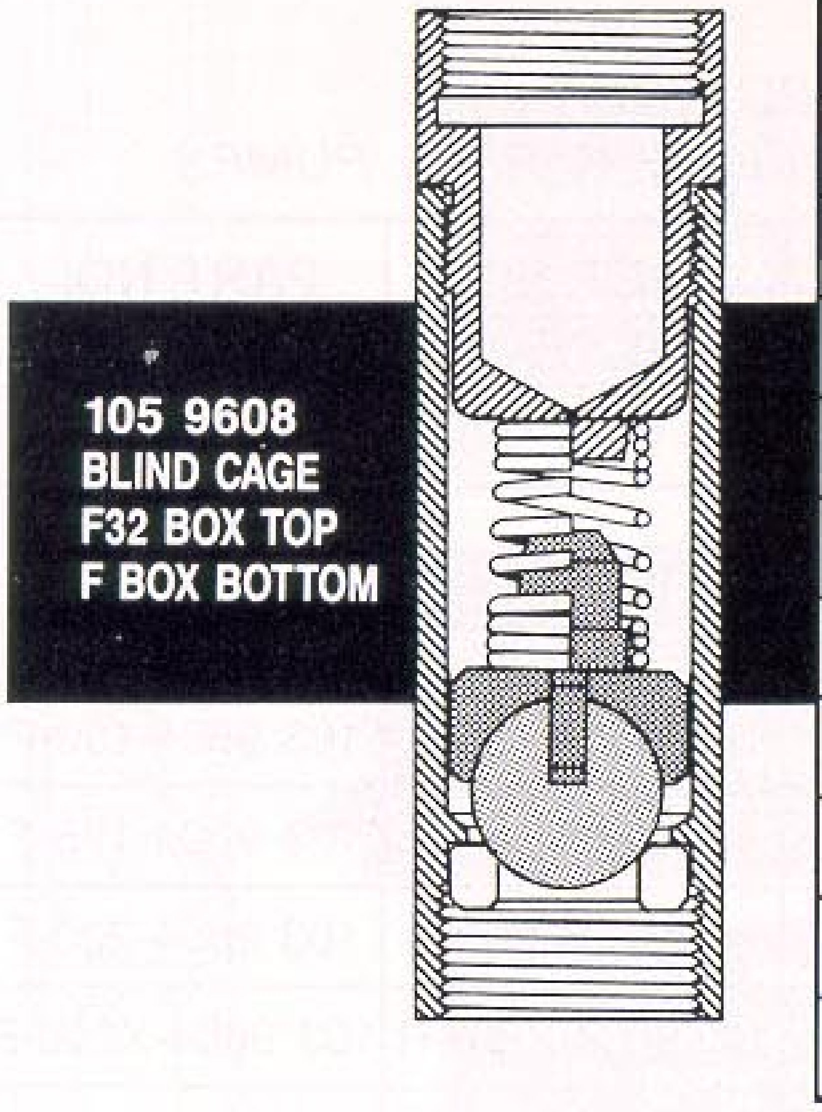
SNUBBER CAGES

104-9606 BLIND CAGE *FOR TRAVELING BOX END PLUNGER OR STANDING VALVE TO EXTENSION COLLAR — H PIN THREAD TOP*



API SIZE″ CAGE	SEAT	API SEAT RIB	FLAT	PART NO. RIB SEAT	PART NO. FLAT SEAT
1-1/16	1-1/16	—	160F22	—	104 9606-106-F
1-1/4	1-1/4	—	125F22	—	104 9606-125-F
1-1/2	1-1/2	150F12	150F22	104 9606-150-R	104 9606-150-F
1-3/4	1-3/4	175F12	175F22	104 9606-175-R	104 9606-175-F
2	2	200F12	200F22	104 9606-200-R	104 9606-200-F
2-1/4	2-1/4	225F12	225F22	104 9606-225-R	104 9606-225-F
2-1/2	2-1/2	250F12	250F22	104 9606-250-R	104 9606-250-F
2-3/4	2-3/4	275F12	275F22	104 9606-275-R	104 9606-275-F
3-3/4	3-3/4	375F12	375F22	104 9606-375-R	104 9606-375-F

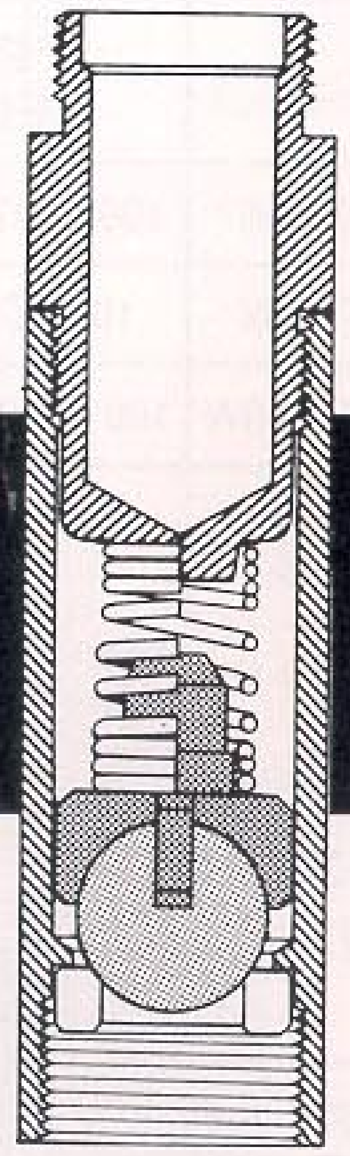
105-9608 BLIND CAGE *FOR TRAVELING PIN END PLUNGER — F BOX THREAD TOP*



API SIZE″ CAGE	SEAT	API SEAT RIB	FLAT	PART NO. RIB SEAT	PART NO. FLAT SEAT
1	1	100F12	100F22	105 9608-100-R	105 9608-100-F
1-1/16	1-1/16	—	106F22	—	105 9608-106-F
1-1/4	1-1/4	—	125F22	—	105 9608-125-F
1-1/2	1-1/2	150F12	150F22	105 9608-150-R	105 9608-150-F
1-3/4	1-3/4	175F12	175F22	105 9608-175-R	105 9608-175-F
2	2	200F12	200F22	105 9608-200-R	105 9608-200-F
2-1/4	2-1/4	225F12	225F22	105 9608-225-R	105 9608-225-F
2-1/2	2-3/4	250F12	250F22	105 9608-250-R	105 9608-250-F
2-3/4	2-3/4	275F12	275F22	105 9608-275-R	105 9608-275-F
3-3/4	3-3/4	375F12	375F22	105 9608-375-R	105 9608-375-F

SNUBBER CAGES

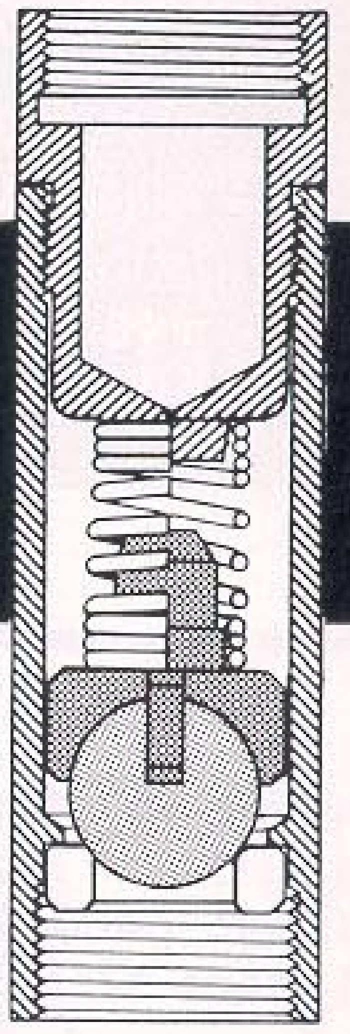
106-9610 BLIND CAGE *FOR BOTTOM DOUBLE VALVE F PIN THREAD TOP*



106 9610
BLIND CAGE
F1 PIN TOP
F BOX BOTTOM

API SIZE″		API SEAT		PART NO.	PART NO.
CAGE	SEAT	RIB	FLAT	RIB SEAT	FLAT SEAT
1	1	100F12	100F22	106 9610-100-R	106 9610-100-F
1-1/16	1-1/16	—	106F22	—	106 9610-106-F
1-1/4	1-1/4	—	125F22	—	106 9610-125-R
1-1/2	1-1/2	150F12	150F22	106 9610-150-R	106 9610-150-F
1-3/4	1-3/4	175F12	175F22	106 9610-175-R	106 9610-175-F
2	2	200F12	200F22	106 9610-200-R	106 9610-200-F
X2	2-1/4	X200F12	X200F22	106 9610-X200-R	106 9610-X200-F
2-1/4	2-1/4	225F12	225F22	106 9610-225-R	106 9610-225-F
2-1/2	2-1/2	250F12	250F22	106 9610-250-R	106 9610-250-F
2-3/4	2-3/4	275F12	275F22	106 9610-275-R	106 9610-275-F
3-3/4	3-3/4	375F12	375F22	106 9610-375-R	106 9610-375-F

109-9612 BLIND CAGE *FOR TRAVELING VALVE ON COMMON CUP PUMP — S BOX THREAD TOP*



109 9612
BLIND CAGE
S2D BOX TOP
F BOX BOTTOM

API SIZE″		API SEAT		PART NO.	PART NO.
CAGE	SEAT	RIB	FLAT	RIB SEAT	FLAT SEAT
1	1	100F12	100F22	109 9612-100-R-S2D	109 9612-100-F-S2D
1-1/2	1-1/2	150F12	150F22	109 9612-150-R-S2D	109 9612-150-F-S2D
1-3/4	1-3/4	175F12	175F22	109 9612-175-R-S2D	109 9612-175-F-S2D
2	2	200F12	200F22	109 9612-200-R-S2D	109 9612-200-F-S2D
2-1/4	2-1/4	225F12	225F22	109 9612-225-R-S2D	109 9612-225-F-S2D
2-1/2	2-1/2	250F12	250F22	109 9612-250-R-S2D	109 9612-250-F-S2D
2-3/4	2-3/4	275F12	275F22	109 9612-275-R-S2D	109 9612-275-F-S2D
3-3/4	3-3/4	375F12	375F22	109 9612-375-R-S2D	109 9612-375-F-S2D

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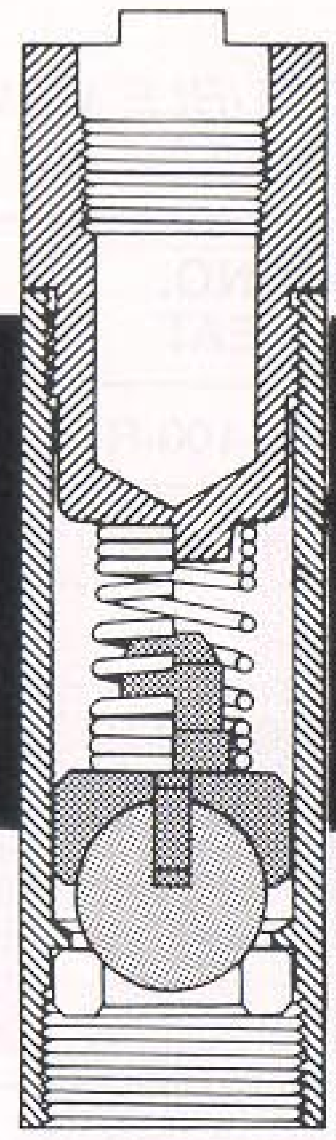
SNUBBER CAGES

109-9619 BLIND CAGE *FOR PULL TUBE TO HOLD DOWN CONNECTOR. W CLUTCH PRONGS. L PULL TUBE THREAD TOP*

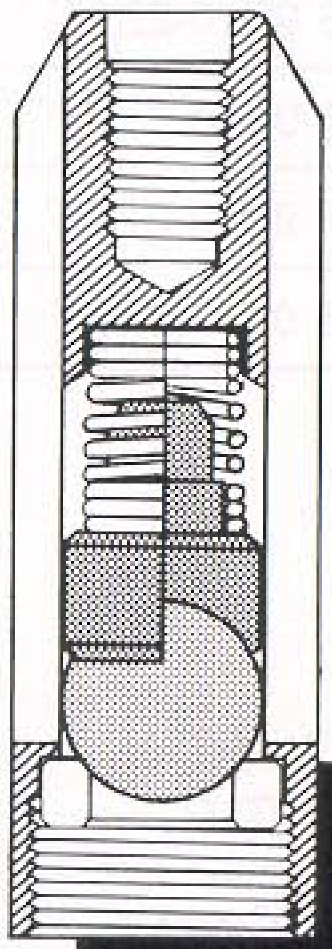


109 9619
BLIND CAGE
L2 PULL TUBE TOP
W1 CLUTCH PRONGS
F BOX BOTTOM

API SIZE" CAGE	SEAT	API SEAT RIB	FLAT	PART NO. RIB SEAT	PART NO. FLAT SEAT
1-3/4	1-3/4	175F12	175F22	109 9619-175-R-3/4L2-20W*	109 9619-175-F-3/4L2-20W*
2-1/4	2-1/4	225F12	225F22	109 9619-225-R-1L2-25W	109 9619-225-F-1L2-25W
2-3/4	2-3/4	275F12	275F22	109 9619-275-R-1-1/2L2-30W	109 9619-275-F-1-1/2L2-30W

*ALSO 1" PIPE

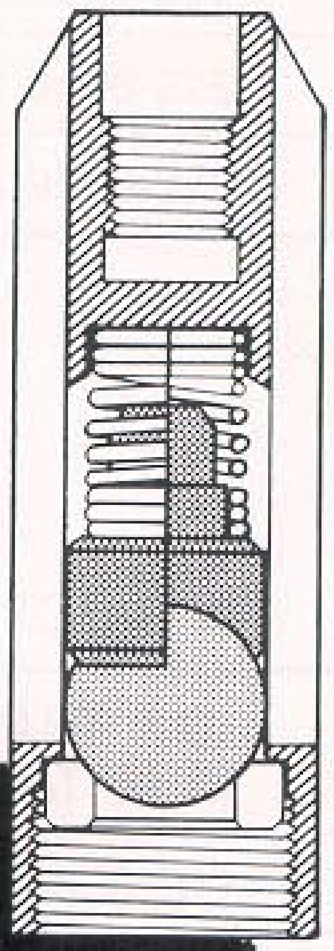
109-9621 TOP CAGE *FOR TRAVELING PLUNGER PUMPS — R VALVE ROD THREAD TOP (STRAIGHT THD.) OR L2 BOX TOP (PIPE THD.)*



109 9621 TOP CAGE
R2 VALVE ROD BOX TOP
(STRAIGHT THD.)
F BOX BOTTOM

API SIZE" CAGE	SEAT	API SEAT RIB	FLAT	PART NO. RIB SEAT	PART NO. FLAT SEAT
1-1/16	1-1/16	—	106F22	—	109 9621-106-F-5/8R2
1-1/4	1-1/4	—	125F22	—	109 9621-125-F-5/8R2
1-1/2	1-1/2	150F12	150F22	109 9621-150-R-3/4R2	109 9621-150-F-3/4R2
1-3/4	1-3/4	175F12	175F22	109 9621-175-R-3/4R2	109 9621-175-F-3/4R2
2	2	200F12	200F22	109 9621-200-R-7/8R2	109 9621-200-F-7/8R2

WHEN ORDERING ABOVE TOP CAGES, PLEASE SPECIFY:
R2 = STRAIGHT THREAD TOP
OR L2 = PIPE THREAD TOP



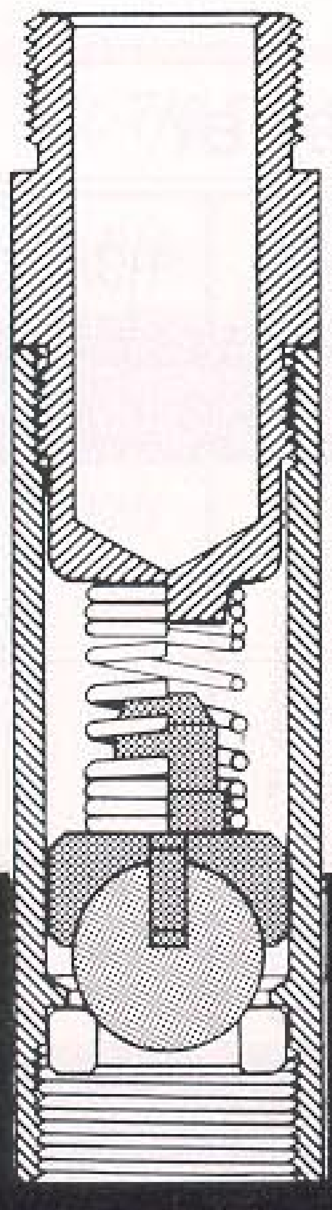
109 9621 TOP CAGE
L2 VALVE ROD BOX TOP
(PIPE THD.)
F BOX BOTTOM

WHEN ORDERING CAGES SPECIFY

COMPLETE PART NUMBER — Or if not known, refer to Cage Position Chart and Part Number Chart on next page.

- LIST 9600 SERIES NUMBER (Cage Position Chart, page 13)
- SIZE OF CAGE OR SEAT (Part Number Chart, page 17)
- RIB OR FLAT CAGE OR SEAT
- ON THE FOLLOWING CAGES, SPECIFY:
  - 9601 — Pin Size
  - 9604 — G2 Puller Top or Plain Top
  - 9621 — List Size of L2 Pipe Thread Top, or R2 Straight Thread Top
  - 9622 — Pump Bore

SNUBBER CAGES



109 9622
BLIND CAGE
C1 PIN TOP
F BOX BOTTOM

107-9622 BLIND CAGE *FOR BARREL TO HOLD DOWN — C PIN THREAD TOP (BOX TOP FOR 1-1/16″ BORE PUMPS)*

API SIZE″			API SPEC. RIB SEAT	API SPEC. FLAT SEAT	PART NO. RIB SEAT	PART NO. FLAT SEAT
CAGE	SEAT	PUMP BORE				
1-3/4	1-3/4	1-1/16	175F12	175F22	107 9622-106-R	107 9622-106-F
1-3/4	1-3/4	1-1/4	175F12	175F22	107 9622-125-R	107 9622-125-F
1-3/4	1-3/4	1-1/2 16 THD	175F12	175F22	107 9622-150-R	107 9622-150-F
1-3/4	1-3/4	1-1/2 14 THD	175F12	175F22	107 9622-X150-R	107 9622-X150-F
2-1/4	2-1/4	2	225F12	225F22	107 9622-200-R	107 9622-200-F
2-3/4	2-3/4	2-1/2	275F12	275F22	107 9622-250-R	107-9622-250-F

PART NUMBERS FOR CAGE PLUNGERS & SPRINGS

CAGE SIZE″	OPEN CAGE		BLIND CAGE	
	PLUNGER & SPRING	SPRING	PLUNGER & SPRING	SPRING
1	110 9617-100-0	111 9618-A	110 9617-100-B	111 9618-A
1-1/16	110 9617-106-0	111 9618-A	110 9617-106-B	111 9618-A
1-1/4	110 9617-125-0	111 9618-A	110 9617-125-B	111 9618-A
1-1/2	110 9617-150-0	111 9618-A	110 9617-150-B	111 9618-A
1-3/4	110 9617-175-0	111 9618-B	110 9617-175-B	111 9618-C
2	110 9617-200-0	111 9618-C	110 9617-200-B	111 9618-D
X2	110 9617-225-0	111 9618-C	110 9617-225-B	111 9618-D
2-1/4	110 9617-225-0	111 9618-C	110 9617-225-B	111 9618-D
2-3/4	110 9617-275-0	111 9618-D	110 9617-275-B	111 9618-E
3-3/4	110 9617-375-0	111 9618-E	110 9617-375-B	111 9618-F

CAGE POSITION CHART

TRAVELING BARREL PUMP

TOP OF BARREL:
101 9601
TOP OF PLUNGER
103 9604

(TO PULL TUBE FROM HOLD DOWN 109 9619)

STATIONARY BARREL PUMP

BOTTOM OF PLUNGER:
105 9608
BOTTOM OF BARREL:
107 9622
TOP OF PLUNGER:
109 9621

(BOTTOM OF BOX END PLUNGER 104 9606)
(TRAVELING VALVE ON COMMON CUP PUMP 109 9612)

TUBING PUMP

TOP OF PLUNGER:
101 9601
BOTTOM OF PLUNGER:
105 9608
STANDING VALVE:
102 9602

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PART NUMBERS & SIZES

SPECIFIC PUMP	CAGE POSITION	CAGE PART NO.	2-3/8″ BY				
			1-1/16	1-1/4	1-1/2	1-3/4	1-25/32
	TRAVELING BARREL PUMPS						
HEAVY WALL & LINER BARREL	TOP OF BARREL	101 9601	175	175			
	TOP OF PLUNGER	103 9604	106	106			
THIN WALL	TOP OF BARREL	101 9601		175	175		
	TOP OF PLUNGER	103 9604		125	150		
SOFT PAC PLUNGER	TOP OF BARREL	101 9601		175	175		*
	TOP OF PLUNGER	103 9604		125	150		
	STATIONARY BARREL PUMPS						
HEAVY WALL	TOP OF PLUNGER	109 9621	106	125			
	BOTTOM OF PLUNGER	105 9608	106	125			
	BOTTOM OF BARREL	107 9622	175	175			
THIN WALL	TOP OF PLUNGER	109 9621		125	150		
	BOTTOM OF PLUNGER	105 9608		125	150		
	BOTTOM OF BARREL	107 9622		175	175		
LINER BARREL	TOP OF PLUNGER	109 9621	106	125			
	BOTTOM OF PLUNGER	105 9608	106	125			
	BOTTOM OF BARREL	107 9622	175	175			
SOFT PAC PLUNGER	TOP OF PLUNGER	109 9621		125	150		*
	BOTTOM OF PLUNGER	105 9608		125	150		*
	BOTTOM OF BARREL	107 9622		175	175		*
	TUBING PUMPS						
	TOP OF PLUNGER	101 9601				175	175
	BOTTOM OF PLUNGER	105 9608				175	175
	STANDING VALVE	102 9602				175	175

X-200 CAGE IS FOR 2 BORE PUMP W/225 SEAT
X-225 CAGE IS FOR 2-1/4 BORE PUMP W/275 SEAT
250 CAGE USES 275 SEAT

NORMALLY USED IN API PUMPS

2-7/8″ BY				3-1/2″ BY			1.900″ BY		PUMP O.D.
1-1/2	1-3/4	2	2-1/4	2-1/4	2-1/2	2-3/4	1-1/16	1-1/4	PUMP BORE
TRAVELING BARREL PUMPS									
225 150	225 175			275 225			150 106		
		225 200			275 250			150 125	
* *		225 200			275 250		* *	* *	
STATIONARY BARREL PUMPS									
150 150 225	175 175 225		225 225 275				106 106 150		
		200 200 225			250 250 275			125 125 150	
150 150 225	175 175 225			225 225 275					
* * *		200 200 225			250 250 275		* * *	* * *	
TUBING PUMPS									
			225 225 225			275 275 275			

*SELDOM USED

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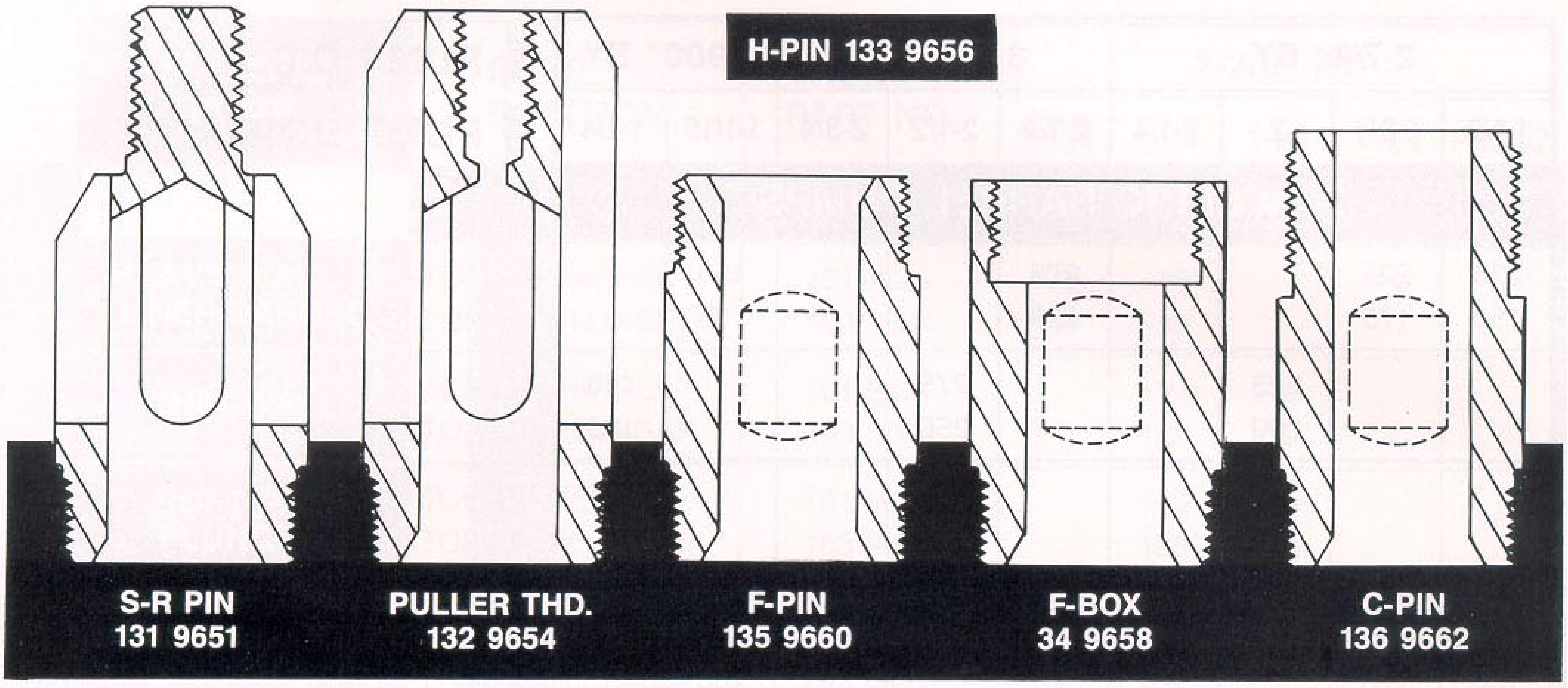
INSERT GUIDED CAGES

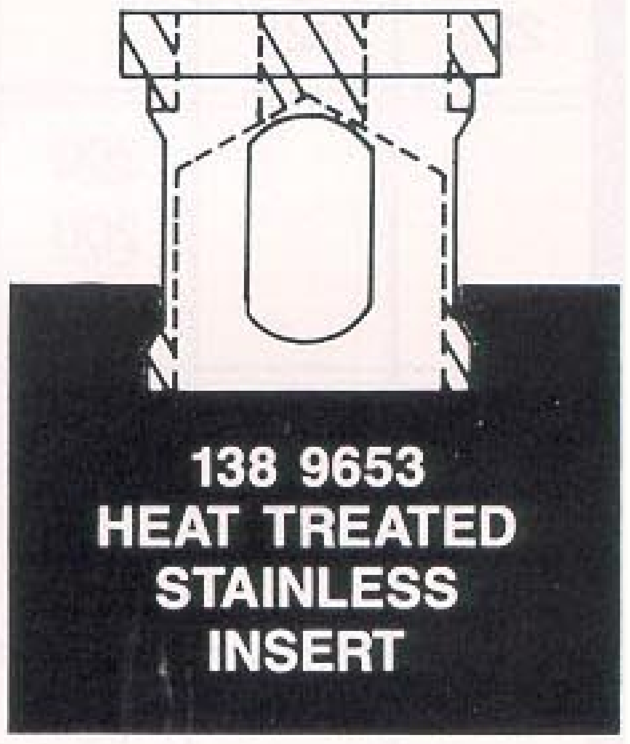
FOR USE WITH FLAT SEATS & ALTERNATE BALLS ONLY

HEAT TREATED STAINLESS INSERT — SIZES AVAILABLE: 1-1/4 TO 2-3/4"



ADVANTAGES OF BAIRD INSERT GUIDED CAGES:

- Cages contain no rubber or "O" rings, and are recommended for high-temperature service.
- Cages eliminate excessive ball travel which damages standard cages, balls and seats.
- The cage insert (not the cage) absorbs all wear and damage caused by ball travel.
- Worn inserts can be replaced, saving costs of complete cage replacement.
- All inserts are made of stainless steel and heat treated.
- Baird insert cages can be used on any API sub-surface pump.
- Insert guided cages must use a flat type seat and alternate (California Pattern) balls.
- Field tests have shown that Baird insert cages give customers longer runs on balls and seats, and cut cage replacement costs.



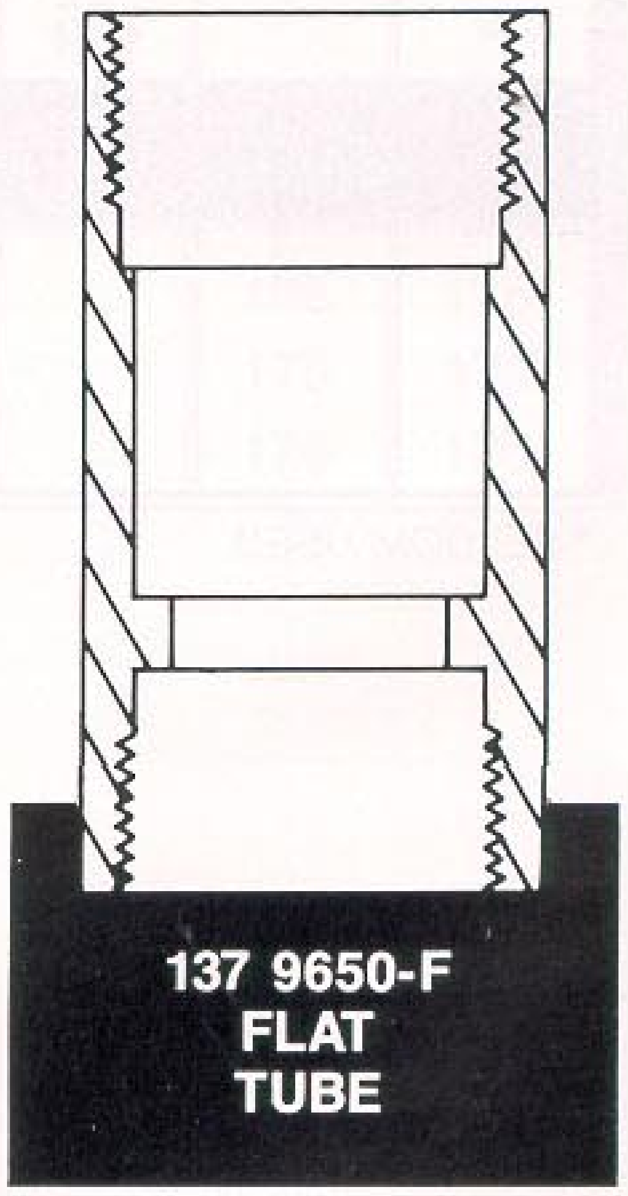
TYPICAL ASSEMBLIES: Any of the above top adapters may be screwed into the tube, against the replaceable insert, to obtain a wide variety of cages.

EXAMPLE A:

To obtain open type top cage . . . drop insert (138 9653) into tube (137 9650-F) and screw top (131 9651) into tube.

EXAMPLE B:

To obtain blind type double valve cage . . . drop insert (138 9653) into tube (137 9650-F) and screw top (135 9660) into tube.



INSERT GUIDED CAGES

FOR USE WITH FLAT SEATS & ALTERNATE BALLS ONLY

HEAT TREATED STAINLESS INSERT — SIZES AVAILABLE: 1-1/4 TO 2-3/4″

FLAT TYPE ONLY	COMPLETE CAGE PART NO.	CAGE SIZE″	PIN SIZE″	SEAT SIZE″	PUMP BORE″	WEIGHT #
TOP INSERT GUIDED CAGE — 14 THD. API SUCKER ROD PIN TOP FOR TOP OF TRAVELING BARREL ON STATIONARY PLUNGER PUMP/OR TOP OF PLUNGER ON TUBING PUMP	131 19-01-150-1	1-1/2	1-5/16	1-1/2	—	2.25
	131 19-01-150-2	1-1/2	1-1/16	1-1/2	—	2.25
	131 19-01-175-1	1-3/4	15/16	1-3/4	—	2.50
	131 19-01-175-2	1-3/4	1-1/16	1-3/4	—	2.50
	131 19-01-200-1	2	5/16	2	—	2.95
	131 19-01-200-2	2	1-1/16	2	—	2.95
	131 19-01-225-2	2-1/4	1-1/16	2-1/4	—	3.50
	131 19-01-225-3	2-1/4	1-3/16	2-1/4	—	3.50
	131 19-01-275-2	2-3/4	1-1/16	2-3/4	—	6.00
	131 19-01-275-3	2-3/4	1-3/16	2-3/4	—	6.00
CENTER INSERT GUIDED CAGE — 14 THD. G-2 PULLER THREAD TOP FOR TOP OF PLUNGER ON TRAVELING BARREL PUMP	132 19-04-150	1-1/2	—	1-1/2	—	2.00
	132 19-04-175	1-3/4	—	1-3/4	—	2.50
	132 19-04-200	2	—	2	—	2.75
	132 19-04-225	2-1/4	—	2-1/4	—	4.00
	132 19-04-275	2-3/4	—	2-3/4	—	7.50
BLIND INSERT GUIDED CAGE — 14 THD. H-PIN THREAD TOP FOR TRAVELING BOX END PLUNGER ON STATIONARY BARREL PUMP	133 19-06-125	1-1/4	—	1-1/4	—	2.00
	133 19-06-150	1-1/2	—	1-1/2	—	2.25
	133 19-06-175	1-3/4	—	1-3/4	—	2.50
	133 19-06-200	2	—	2	—	2.75
	133 19-06-225	2-1/4	—	2-1/4	—	2.75
	133 19-06-250	2-1/2	—	2-3/4	—	8.25
	133 19-06-275	2-3/4	—	2-3/4	—	6.50
BLIND INSERT GUIDED CAGE — 14 THD. F-BOX THREAD TOP FOR TRAVELING PIN END PLUNGER ON STATIONARY BARREL PUMP/OR BOTTOM OF PLUNGER ON TUBING PUMP	134 19-08-125	1-1/4	—	1-1/4	—	2.00
	134 19-08-150	1-1/2	—	1-1/2	—	2.25
	134 19-08-175	1-3/4	—	1-3/4	—	2.50
	134 19-08-200	2	—	2	—	2.75
	134 19-08-225	2-1/4	—	2-1/4	—	3.75
	134 19-08-250	2-1/2	—	2-3/4	—	8.50
	134 19-08-275	2-3/4	—	2-3/4	—	6.75

CONTINUED ON NEXT PAGE

INSERT GUIDED CAGES

FOR USE WITH FLAT SEATS & ALTERNATE BALLS ONLY

HEAT TREATED STAINLESS INSERT — SIZES AVAILABLE: 1-1/4 TO 2-3/4″

FLAT TYPE ONLY	COMPLETE CAGE PART NO.	CAGE SIZE″	PIN SIZE″	SEAT SIZE″	PUMP BORE″	WEIGHT #
BLIND INSERT GUIDED CAGE — 14 THD. F-PIN THREAD TOP FOR BOTTOM DOUBLE VALVE	135 19-10-125	1-1/4	—	1-1/4	—	2.00
	135 19-10-150	1-1/2	—	1-1/2	—	2.25
	135 19-10-175	1-3/4	—	1-3/4	—	2.50
	135 19-10-200	2	—	2	—	2.75
	135 19-10-225	2-1/4	—	2-1/4	—	3.75
	135 19-10-275	2-3/4	—	2-3/4	—	6.75
BLIND INSERT GUIDED CAGE — 16 THD. C-PIN THREAD TOP FOR BARREL TO HOLD DOWN/OR BOTTOM OF BARREL ON STATIONARY BARREL PUMP (TRAVELING PLUNGER)	136 19-12-175-2	1-3/4	—	1-1/4	1-1/4	3.00
	136 19-12-175-3	1-3/4	—	1-1/2	1-1/2	3.00
	136 19-12-225	2-1/4	—	2	2	4.50
	136 19-12-275	2-3/4	—	2-1/2	2-1/2	8.25
	136 19-12-175-2*	1-3/4	—	1-1/4	1-1/4	1.50
	136 19-12-175-3*	1-3/4	—	1-1/2	1-1/2	1.50
	136 19-12-225*	2-1/4	—	1-3/4	1-3/4	2.00
	136 19-12-275*	2-3/4	—	2-1/4	2-1/4	3.75

*LESS GUIDE

BAIRD ALSO MANUFACTURES
RELIEF, REGULATOR & BY-PASS VALVES,
GAS SAFETY VALVES & OTHER PRODUCTION TOOLS.
ASK YOUR FAVORITE SUPPLY STORE
FOR ASSISTANCE IN ORDERING BAIRD PRODUCTS.

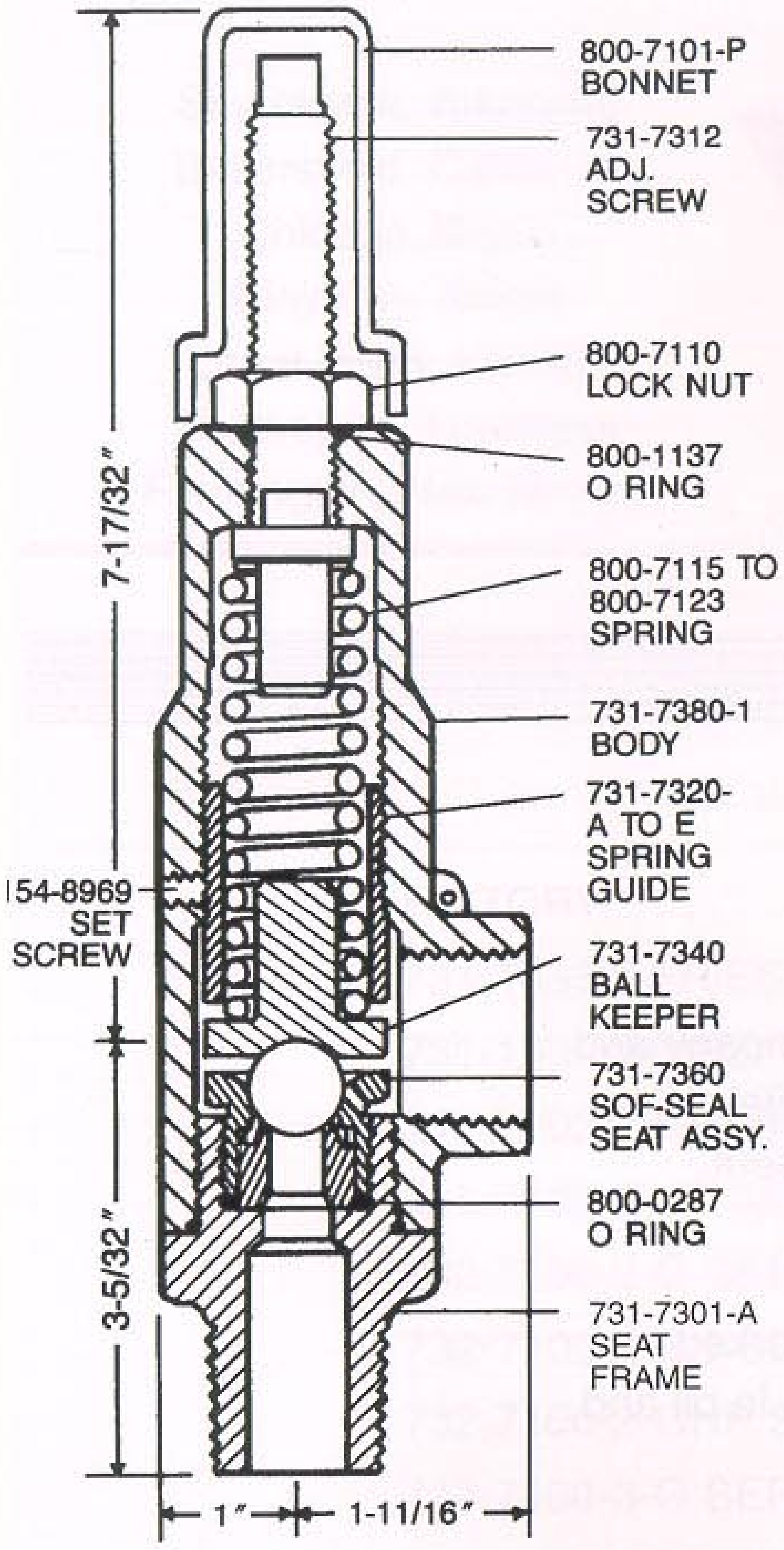
Baird

1″ GAS SAFETY VALVE

731-1-GS

PRESSURE: 15-2500 # • VOLUME: TO 2662 CFM

(NON-CODE BELOW 25 #)



INLETS AVAILABLE: Male NPT 1"
Female NPT 1", 3/4", 1/2"

OUTLET: Female NPT 1"

TEMPERATURE RANGE: -30° to +220° F

BODY: (SPECIFY)
DUCTILE IRON — Standard
316 STAINLESS — Add "316" to Model #

TRIM: Stainless with 440 Stainless Ball
Stainless with Sheralloy Ball for 316 Stainless Valve

MANUAL RELEASE LEVER: Optional — Add "H" to Model #

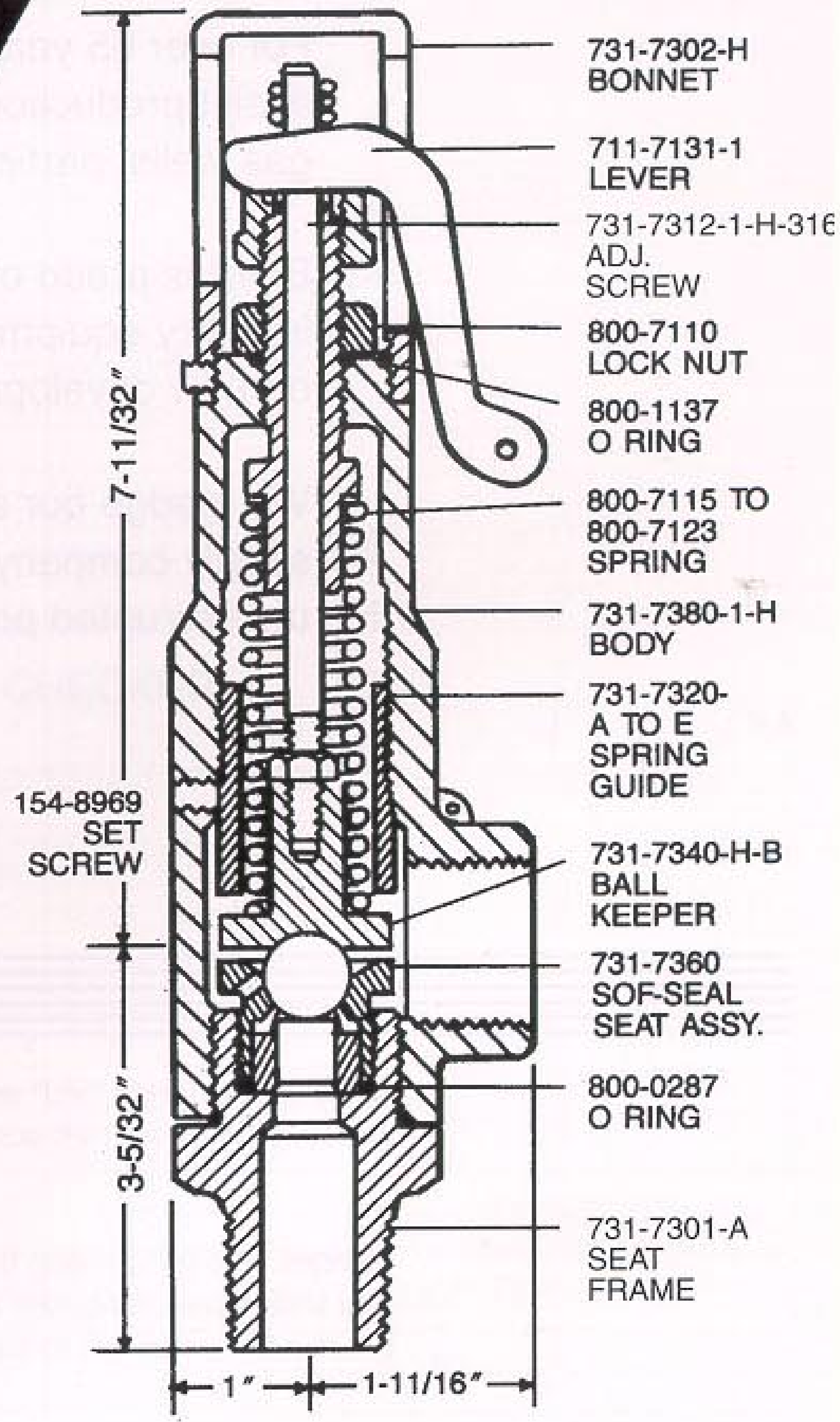
FIELD REPAIRS ARE EASILY MADE ON-SITE, REQUIRING NO SPECIAL TOOLS OR EQUIPMENT

VALVE FEATURES OUR SOF-SEAL™ PATENTED SEAT ASSEMBLY USING A METAL-TO-METAL DOUBLE SEAL SEAT WITH AN ELASTOMETER SEAL. (THIS IS NOT AN O-RING SEAL.)

APPLICATION: Recommended for overpressure protection where buildup and blowdown must be held to a minimum. Designed to meet all requirements for protection of gathering lines, transmission systems, meter runs, gas manifolds, separators and refinery service.

ASME-UV: 1/2″ ORIFICE = .196 SQ. IN., –90% SLOPE = .963

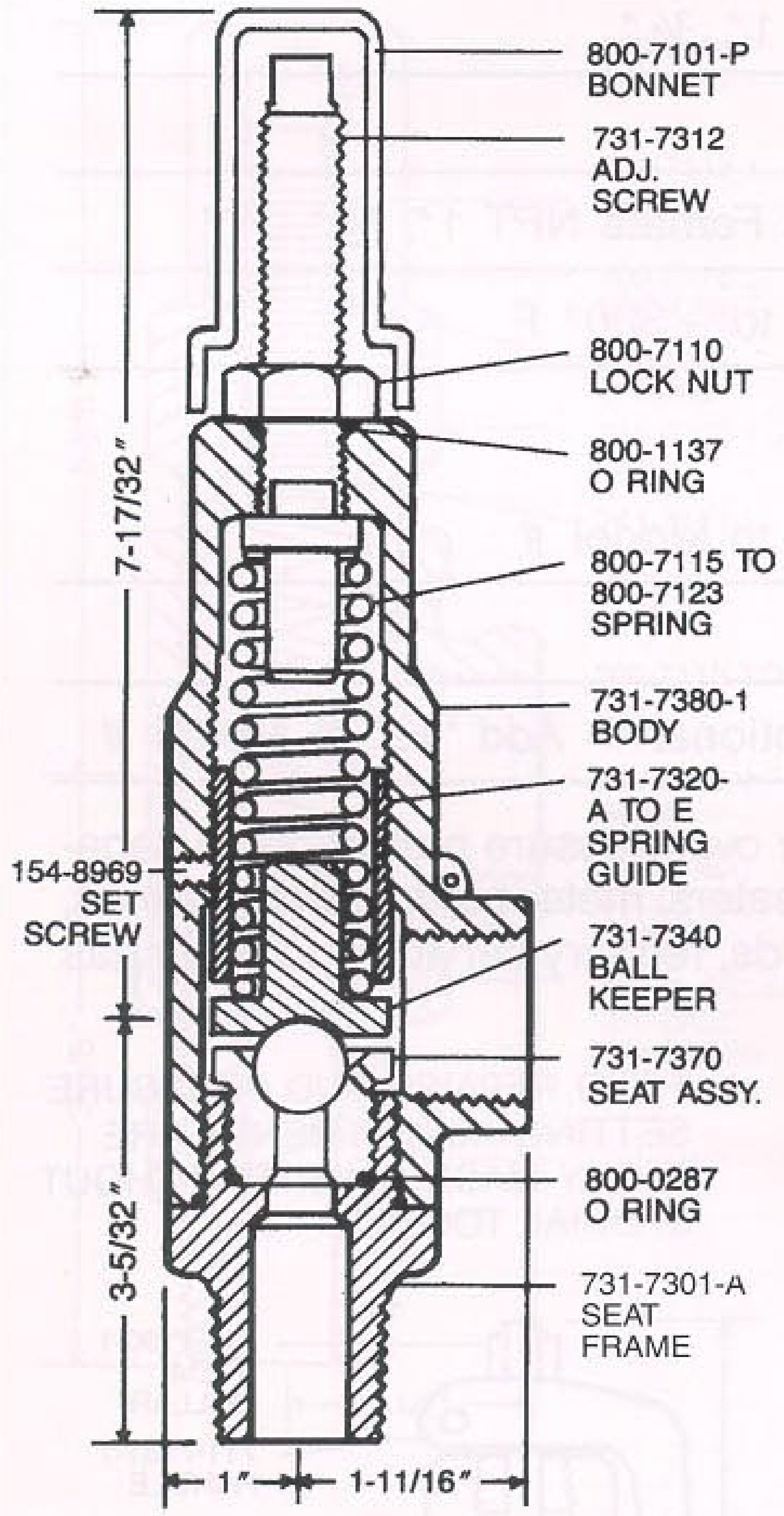
VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
731-1-GS-D-50	15 - 50#	50# = 67 CFM
731-1-GS-D-225	50 - 225#	225# = 252 CFM
731-1-GS-D-600	225 - 600#	600# = 650 CFM
731-1-GS-D-1000	600 - 1000#	1000# = 1073 CFM
731-1-GS-D-2000	1000 - 2000#	2000# = 2133 CFM
731-1-GS-D-2500	2000 - 2500#	2500# = 2662 CFM



1″ GAS SAFETY VALVE

731-1-G

PRESSURE: 15-2500 # • VOLUME: TO 2662 CFM
(NON-CODE BELOW 25 #)



INLETS AVAILABLE: Male NPT 1”
Female NPT 1”, ³/₄”, ¹/₂”

OUTLET: Female NPT 1”

TEMPERATURE RANGE: -30° to +300° F

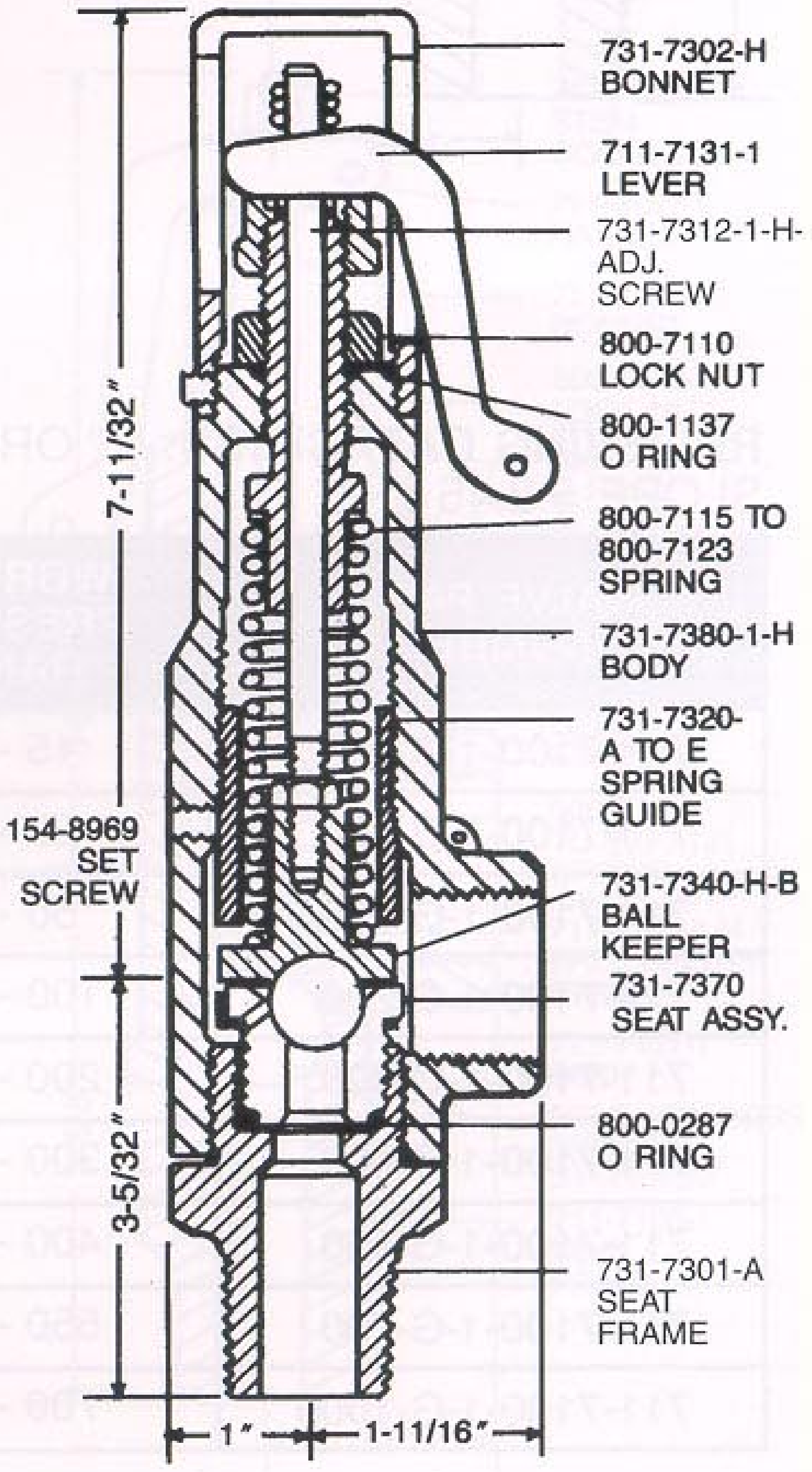
BODY: (SPECIFY)
DUCTILE IRON — Standard
316 STAINLESS — Add “316” to Model #

TRIM: Stainless with 440 Stainless Ball
Stainless with Sherallor Ball for 316 Stainless Valve

MANUAL RELEASE LEVER: Optional — Add “H” to Model #

THIS VALVE IS EQUIPPED WITH AN ALL-METAL SEAL FOR USE UNDER EXTREME TEMPERATURE CONDITIONS.

FIELD REPAIRS ARE EASILY MADE ON-SITE, REQUIRING NO SPECIAL TOOLS OR EQUIPMENT.



APPLICATION: Recommended for overpressure protection where buildup and blowdown must be held to a minimum. Designed to meet all requirements for protection of gathering lines, transmission systems, meter runs, gas manifolds, separators and refinery service.

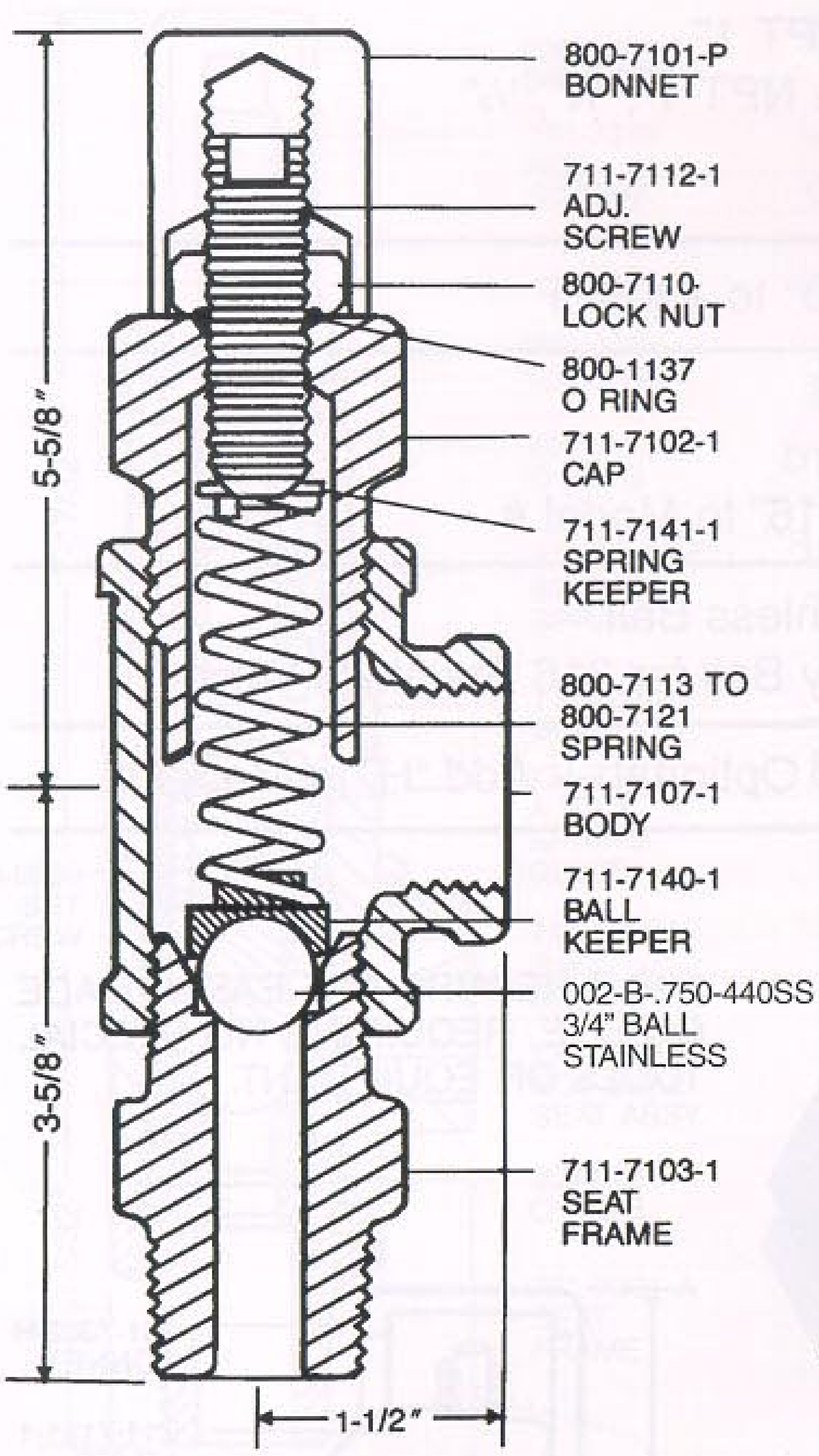
ASME-UV: ½″ ORIFICE = .196 SQ. IN., −90% SLOPE = .963

VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
731-1-G-D-50	15 - 50#	50# = 67 CFM
731-1-G-D-225	50 - 225#	225# = 252 CFM
731-1-G-D-600	225 - 600#	600# = 650 CFM
731-1-G-D-1000	600 - 1000#	1000# = 1073 CFM
731-1-G-D-2000	1000 - 2000#	2000# = 2133 CFM
731-1-G-D-2500	2000 - 2500#	2500# = 2662 CFM

1″ GAS SAFETY VALVE

711-7100-1-G

PRESSURE: 15-1000 # • VOLUME: TO 2731 CFM



INLETS AVAILABLE: Male NPT 1″, ¾″

OUTLET: Female NPT 1″

INLET ADAPTORS AVAILABLE: Female NPT 1″, ¾″, ½″

TEMPERATURE RANGE: −65° to +300° F

BODY: (SPECIFY)
FORGED STEEL — Standard
316 STAINLESS — Add "316" to Model #

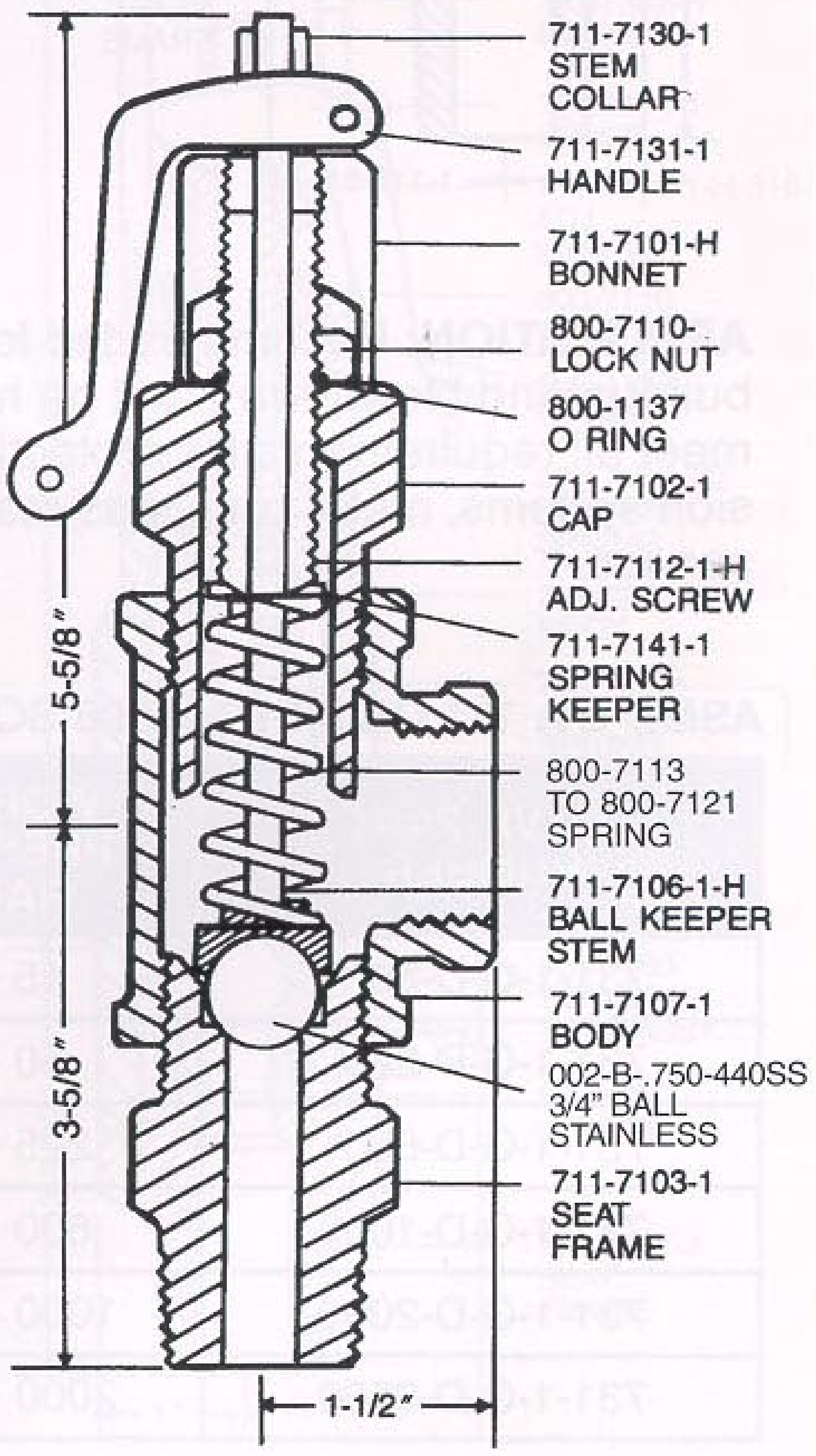
TRIM: Stainless Steel

MANUAL RELEASE LEVER: Optional — Add "H" to Model #

APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, meter runs, gathering lines, transmission systems, gas manifolds, refinery service and other gas systems.

FIELD REPAIRS AND PRESSURE SETTING ADJUSTMENTS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS.

VALVES FURNISHED WITH METAL-TO-METAL SEAL. TAMPER-PROOF BONNET AND WIRE SEAL.



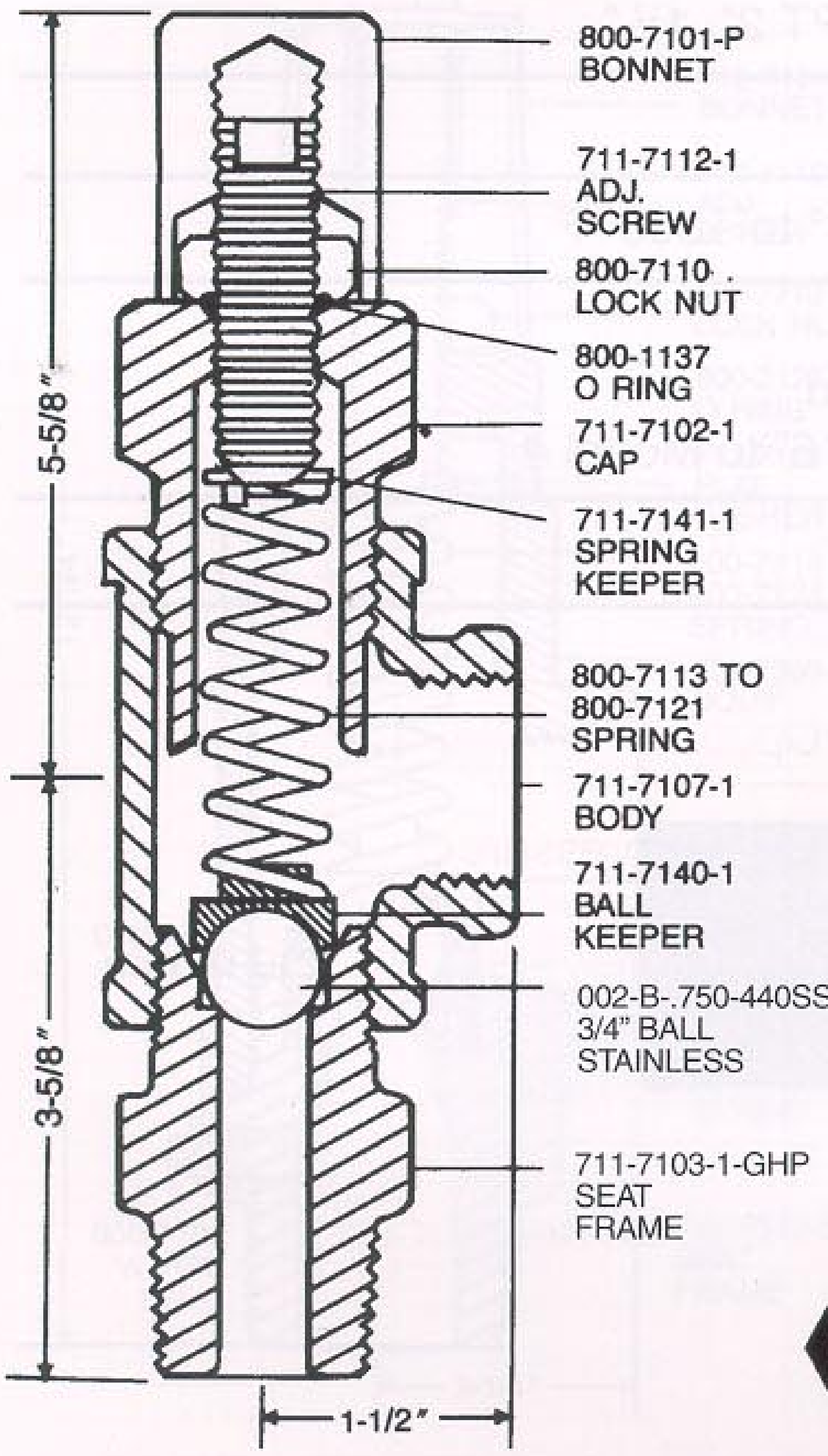
RELIEVING CAPACITIES: ½" ORIFICE = .196 SQ. IN., 90%
SLOPE = 2.45

VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
711-7100-1-G-25	15 - 25#	25# = 103 CFM
711-7100-1-G-50	25 - 50#	50# = 170 CFM
711-7100-1-G-100	50 - 100#	100# = 305 CFM
711-7100-1-G-200	100 - 200#	200# = 575 CFM
711-7100-1-G-300	200 - 300#	300# = 844 CFM
711-7100-1-G-400	300 - 400#	400# = 1114 CFM
711-7100-1-G-550	400 - 550#	550# = 1518 CFM
711-7100-1-G-700	550 - 700#	700# = 1922 CFM
711-7100-1-G-1000	700 - 1000#	1000# = 2731 CFM

1″ GAS SAFETY VALVE

711-7100-1-GHP

PRESSURE: 15-2000# • VOLUME: TO 3332 CFM



INLETS AVAILABLE: Male NPT 1″, ¾″

OUTLET: Female NPT 1″

INLET ADAPTORS AVAILABLE: Female NPT 1″, ¾″, ½″

TEMPERATURE RANGE: −65° to +300° F

BODY: (SPECIFY)
FORGED STEEL — Standard
316 STAINLESS — Add "316" to Model #

TRIM: Stainless Steel

MANUAL RELEASE LEVER: Optional — Add "H" to Model #

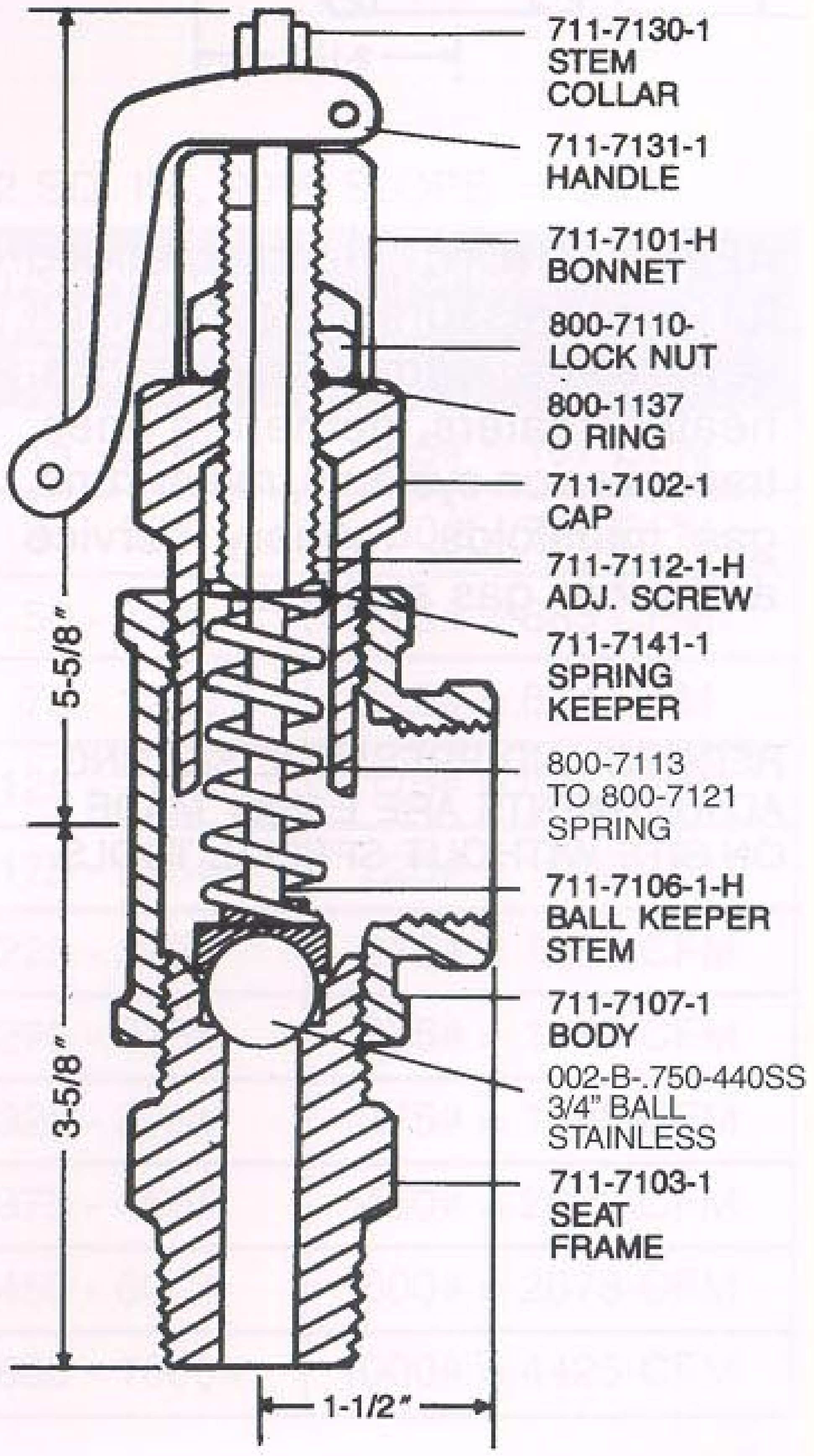
APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, meter runs, gathering lines, transmission systems, gas manifolds, refinery service and other gas systems.

VALVES FURNISHED WITH METAL-TO-METAL SEAL. TAMPER-PROOF BONNET AND WIRE SEAL.

FIELD REPAIRS AND ADJUSTMENTS ARE EASILY MADE ON-SITE, REQUIRING NO SPECIAL TOOLS OR EQUIPMENT.

RELIEVING CAPACITIES: ⅜″ ORIFICE = .110 SQ. IN., 90% SLOPE = 1.5

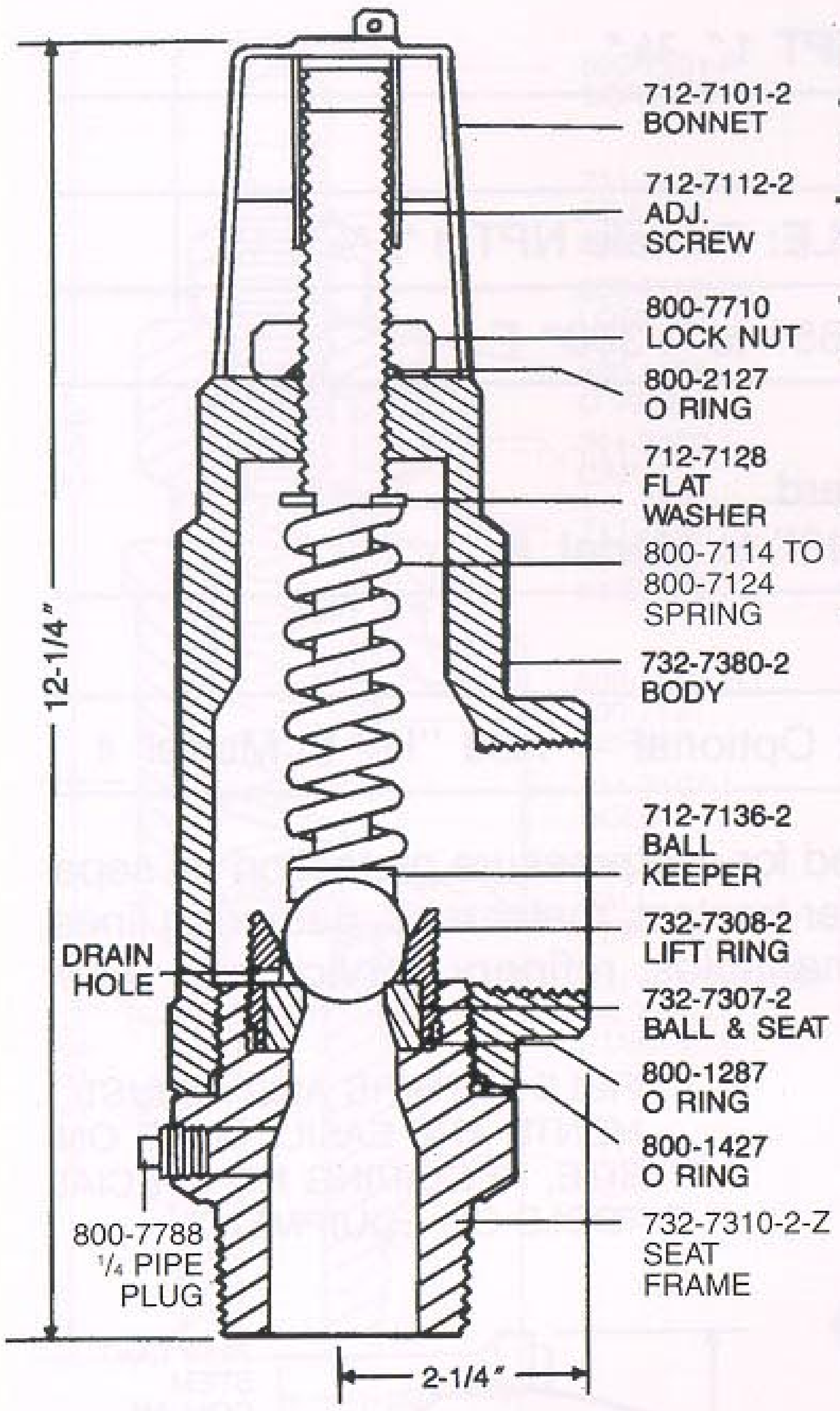
VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
711-7100-1-GHP-50	15 - 50#	50# = 104 CFM
711-7100-1-GHP-100	50 - 100#	100# = 187 CFM
711-7100-1-GHP-225	100 - 225#	225# = 393 CFM
711-7100-1-GHP-350	225 - 350#	350# = 599 CFM
711-7100-1-GHP-600	350 - 600#	600# = 1012 CFM
711-7100-1-GHP-800	600 - 800#	800# = 1342 CFM
711-7100-1-GHP-1100	800 - 1100#	1100# = 1837 CFM
711-7100-1-GHP-1300	1100 - 1300#	1300# = 2167 CFM
711-7100-1-GHP-2000	1300 - 2000#	2000# = 3322 CFM



2″ GAS SAFETY VALVE

732-7100-2-G

PRESSURE: 15-1000 # • **VOLUME: TO 4425 CFM**
(NON-CODE BELOW 25#)



INLETS AVAILABLE: Male NPT 2", 1½"

OUTLET: Female NPT 2"

TEMPERATURE RANGE: -30° to +300° F

BODY: (SPECIFY)
DUCTILE IRON — Standard
316 STAINLESS — Add "316" to Model #

TRIM: Stainless Steel

A METAL-TO-METAL SEAL INSURES LONG RUNS. VALVE COMPLETE WITH TAMPER-PROOF BONNET AND WIRE SEAL.

APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, gathering lines, transmission systems, meter runs, gas manifolds, refinery service and other gas systems.

REPAIRS AND PRESSURE SETTING ADJUSTMENTS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS.

ASME-UV: ¾″ ORIFICE = .442 SQ. IN., 90% SLOPE = 3.97

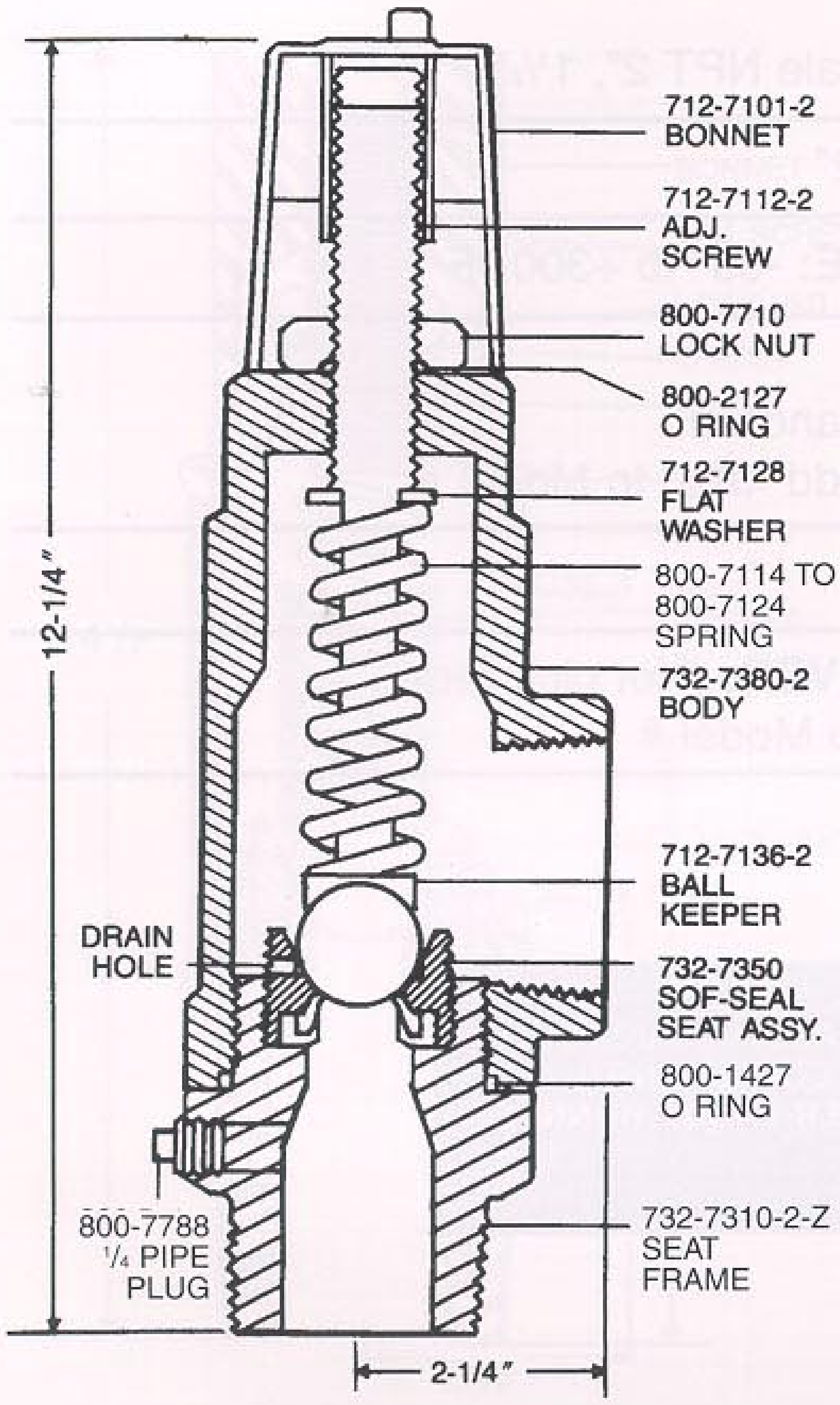
VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
732-7100-2-G-25	15 - 25#	25# = 167 CFM
732-7100-2-G-50	25 - 50#	50# = 276 CFM
732-7100-2-G-75	50 - 75#	75# = 385 CFM
732-7100-2-G-125	75 - 125#	125# = 604 CFM
732-7100-2-G-175	125 - 175#	175# = 822 CFM
732-7100-2-G-225	175 - 225#	225# = 1040 CFM
732-7100-2-G-275	225 - 275#	275# = 1259 CFM
732-7100-2-G-325	275 - 325#	325# = 1477 CFM
732-7100-2-G-375	325 - 375#	375# = 1695 CFM
732-7100-2-G-450	375 - 450#	450# = 2023 CFM
732-7100-2-G-600	450 - 600#	600# = 2678 CFM
732-7100-2-G-1000	600 - 1000#	1000# = 4425 CFM

2″ GAS SAFETY VALVE

732-7100-2-GS

Baird

PRESSURE: 15-1000 # VOLUME: TO 4425 CFM
(NON-CODE BELOW 25#)



INLETS AVAILABLE: Male NPT 2", 1½"

OUTLET: Female NPT 2"

TEMPERATURE RANGE: -30° to +220° F

BODY: (SPECIFY)
DUCTILE IRON — Standard
316 STAINLESS — Add "316" to Model #

TRIM: Stainless Steel

A SOF-SEAL™ METAL-TO-METAL SEAT ASSEMBLY INSURES LONG RUNS UNDER ADVERSE CONDITIONS. FURNISHED COMPLETE WITH TAMPER-PROOF BONNET AND WIRE SEAL.

APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, gathering lines, transmission systems, meter runs, gas manifolds, refinery service and other gas systems.

FIELD REPAIRS AND PRESSURE SETTING ADJUSTMENTS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS.

ASME-UV: ¾″ ORIFICE = .442 SQ. IN., 90% SLOPE = 3.97

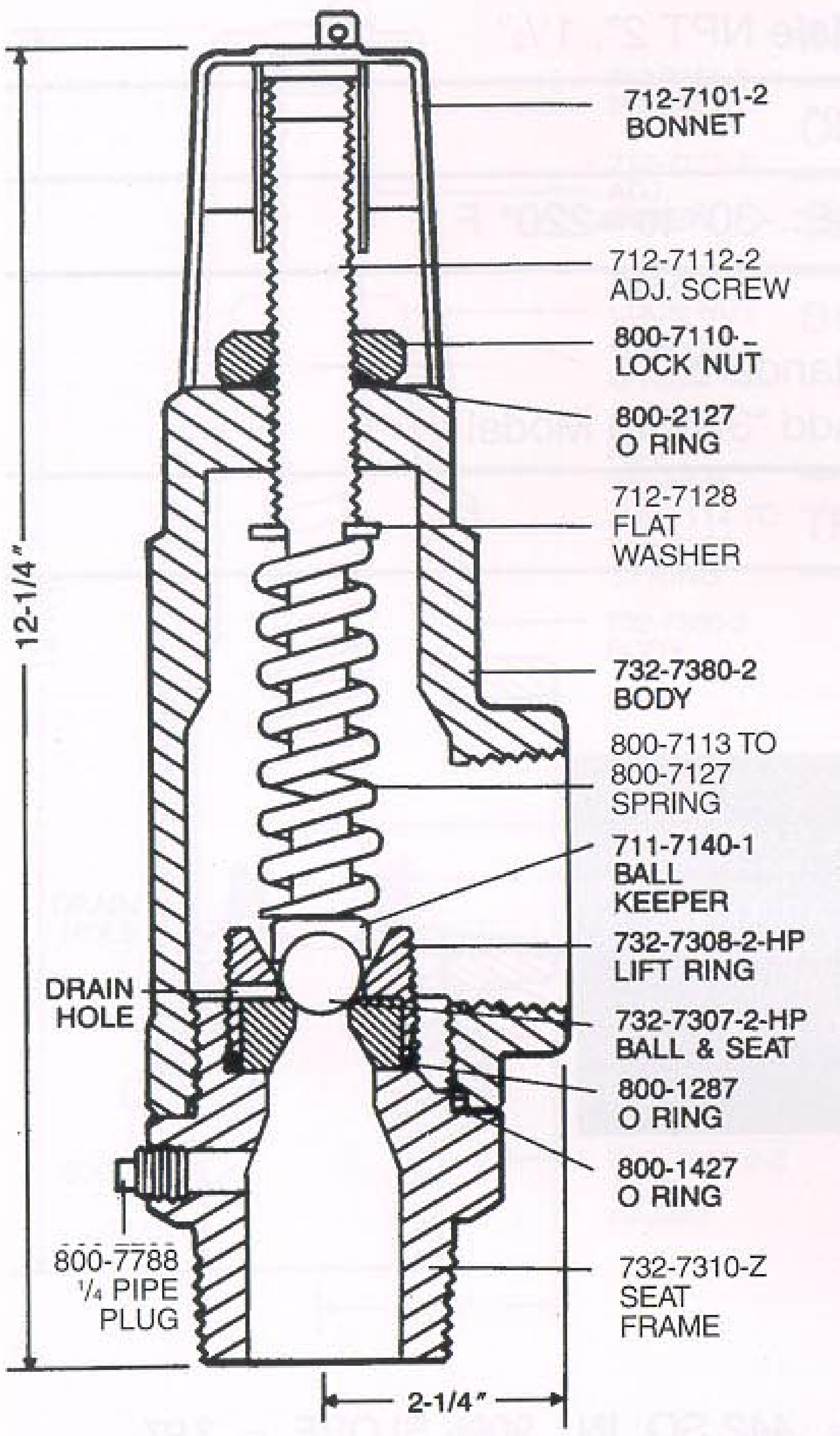
VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
732-7100-2-GS-25	15 - 25#	25# = 167 CFM
732-7100-2-GS-50	25 - 50#	50# = 276 CFM
732-7100-2-GS-75	50 - 75#	75# = 385 CFM
732-7100-2-GS-125	75 - 125#	125# = 604 CFM
732-7100-2-GS-175	125 - 175#	175# = 822 CFM
732-7100-2-GS-225	175 - 225#	225# = 1040 CFM
732-7100-2-GS-275	225 - 275#	275# = 1259 CFM
732-7100-2-GS-325	275 - 325#	325# = 1477 CFM
732-7100-2-GS-375	325 - 375#	375# = 1695 CFM
732-7100-2-GS-450	375 - 450#	450# = 2023 CFM
732-7100-2-GS-600	450 - 600#	600# = 2678 CFM
732-7100-2-GS-1000	600 - 1000#	1000# = 4425 CFM

2″ GAS SAFETY VALVE

732-7100-2-GHP

PRESSURE: 15-2500 # • VOLUME: TO 6773 CFM

(NON-CODE BELOW 25#)



INLETS AVAILABLE: Male NPT 2", 1 1/2"

OUTLET: Female NPT 2"

TEMPERATURE RANGE: -65° to +300° F

BODY: (SPECIFY)
DUCTILE IRON — Standard
316 STAINLESS — Add "316" to Model #

TRIM: Stainless Steel

MANUAL RELEASE LEVER: (Not pictured)
Optional — Add "H" to Model #

METAL-TO-METAL SEAL ASSURES LONG RUNS UNDER ADVERSE CONDITIONS. FURNISHED WITH TAMPER-PROOF BONNET AND WIRE SEAL.

APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, gathering lines, transmission systems, meter runs, gas manifolds, refinery service and other gas systems.

FIELD REPAIRS AND PRESSURE SETTING ADJUSTMENTS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS.

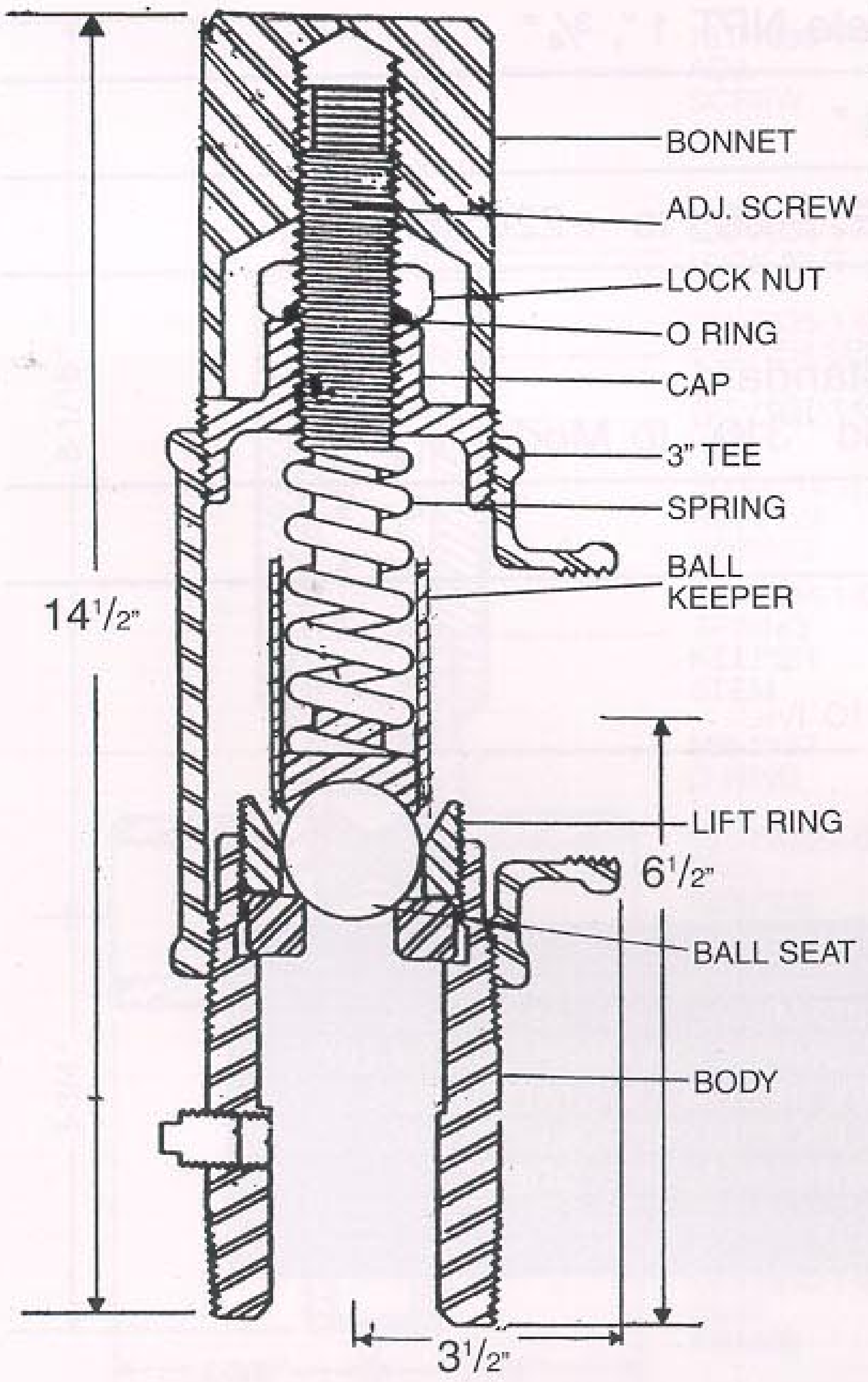
ASME-UV: ½″ ORIFICE = .196 SQ. IN., 90% SLOPE = 2.45

VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING + 10%
732-7100-2-GHP-25	15 - 25#	25# = 103 CFM
732-7100-2-GHP-50	25 - 50#	50# = 170 CFM
732-7100-2-GHP-100	50 - 100#	100# = 305 CFM
732-7100-2-GHP-200	100 - 200#	200# = 575 CFM
732-7100-2-GHP-300	200 - 300#	300# = 844 CFM
732-7100-2-GHP-400	300 - 400#	400# = 1114 CFM
732-7100-2-GHP-550	400 - 550#	550# = 1518 CFM
732-7100-2-GHP-700	550 - 700#	700# = 1922 CFM
732-7100-2-GHP-800	700 - 800#	800# = 2192 CFM
732-7100-2-GHP-900	800 - 900#	900# = 2461 CFM
732-7100-2-GHP-1100	900 - 1100#	1100# = 3000 CFM
732-7100-2-GHP-2000	1100 - 2000#	2000# = 5426 CFM
732-7100-2-GHP-2500	2000 - 2500#	2500# = 6773 CFM

3" GAS SAFETY VALVE

713-7100-3-G

PRESSURE: 10-600 # • **VOLUME: TO 7421 CFM**



INLETS AVAILABLE: Male NPT 3"

OUTLET: Female NPT 3"

TEMPERATURE RANGE: -30° to +300° F

BODY: DUCTILE IRON — Standard

TRIM: Stainless Steel

A METAL-TO-METAL SEAL INSURES LONG RUNS. VALVE COMPLETE WITH TAMPER-PROOF BONNET ;AND WIRE SEAL.

APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, gathering lines, transmission systems, meter runs, gas manifolds, refinery service and other gas systems.

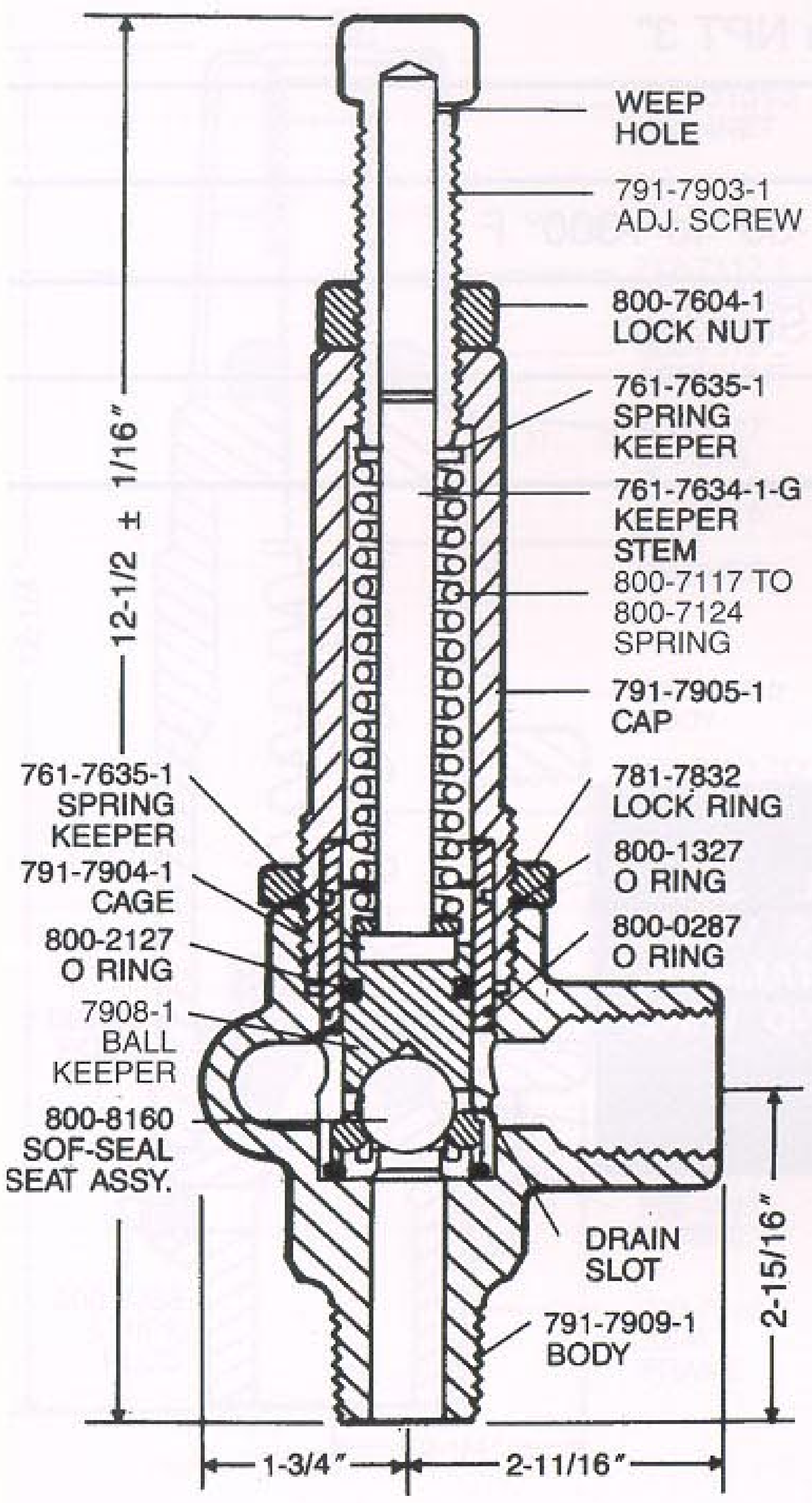
REPAIRS AND PRESSURE SETTING ADJUSTMENTS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS.

VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
713-7100-3-G-25	10 - 25#	25# = 464 CFM
713-7100-3-G-75	25 - 75#	75# = 1069 CFM
713-7100-3-G-125	75 - 125#	125# = 1674 CFM
713-7100-3-G-175	125 - 175#	175# = 2279 CFM
713-7100-3-G-225	175 - 225#	225# = 2884 CFM
713-7100-3-G-275	225 - 275#	275# = 3489CFM
713-7100-3-G-350	275 - 350#	350# = 4396 CFM
713-7100-3-G-600	350 - 600#	600# = 7421 CFM

1" GAS SAFETY VALVE

791-GS

PRESSURE: 50-1600 # • VOLUME: TO 7862 CFM



INLETS AVAILABLE: Male NPT 1″, ¾″

OUTLET: Female NPT 1″

TEMPERATURE RANGE: −30° to +220° F

BODY: (SPECIFY)
CARBON STEEL — Standard
316 STAINLESS — Add "316" to Model #

TRIM: Stainless Steel

A SOF-SEAL™ METAL-TO-METAL SEAT ASSEMBLY INSURES LONG RUNS UNDER ADVERSE CONDITIONS. VALVE IS ACTIVATED BY UPSTREAM STATIC PRESSURE WHICH PRODUCES A RAPID ROLL SPRING OR "POP" ACTION. WIRE SEAL INCLUDED.

APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, gathering lines, transmission systems, meter runs, gas manifolds, refinery service and other gas systems.

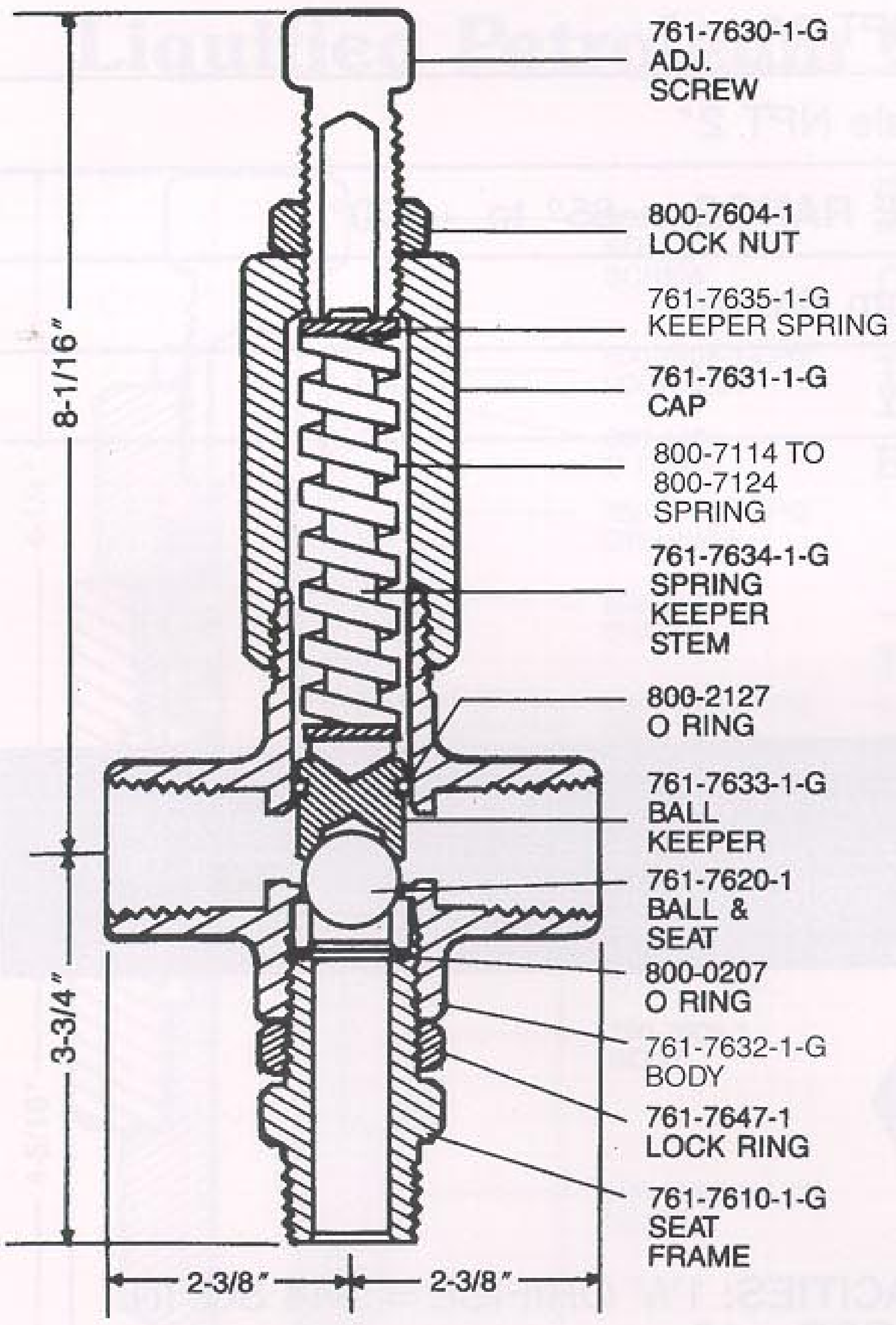
FIELD REPAIRS AND PRESSURE SETTING ADJUSTMENTS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS.

VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
791-GS-250	50 - 250#	250# = 1283 CFM
791-GS-600	250 - 600#	600# = 2989 CFM
791-GS-900	600 - 900#	900# = 4451 CFM
791-GS-1250	900 - 1250#	1250# = 6156 CFM
791-GS-1600	1250 - 1600#	1600# = 7862 CFM

1" GAS SAFETY VALVE

761-7601-1-G

PRESSURE: 25-1500 # • VOLUME: TO 9155 CFM



INLETS AVAILABLE: Male NPT 1", ¾"

OUTLET: Female NPT 1"

TEMPERATURE RANGE: −65° to +300° F

BODY: (SPECIFY)
ALUMINUM BRONZE — Standard
316 STAINLESS — Add "316" to Model #
MONEL — Add "MM" to Model #

TRIM: Sheralloy

LARGE CAPACITY, UNRESTRICTED FLOW AND POP-OPEN PLUNGER ACTION IS ASSURED BY FULL BORE INNER BODY. HIGH LIFT SPRINGS AND A TRIPLE SEAL SEAT.

APPLICATION: Recommended for overpressure protection where build-up and blowdown must be held to a minimum. Designed to meet all protection requirements for gathering lines, transmission systems, meter runs, gas manifolds, separators and refinery service.

FIELD REPAIRS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS. ADJUSTMENT SCREW AND WIDE SELECTION OF SPRINGS ASSURES EXACT PRESSURE SETTINGS.

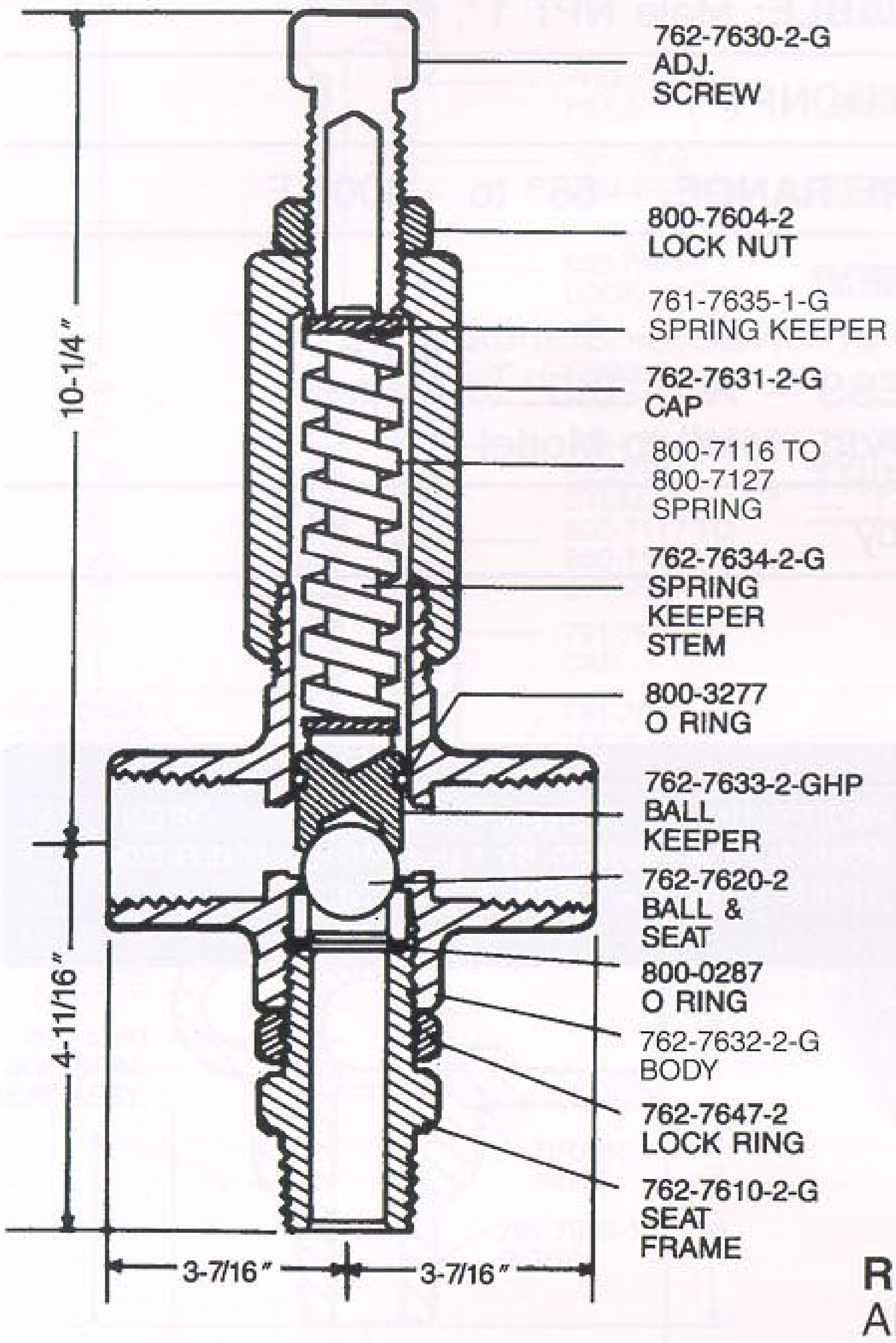
RELIEVING CAPACITIES: ¾" ORIFICE = .442 SQ. IN., 90% SLOPE = 5.5*

VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
761-7601-1-G-50	25 - 50#	50# = 383 CFM
761-7601-1-G-100	50 - 100#	100# = 685 CFM
761-7601-1-G-175	100 - 175#	175# = 1139 CFM
761-7601-1-G-300	175 - 300#	300# = 1895 CFM
761-7601-1-G-450	300 - 450#	450# = 2803 CFM
761-7601-1-G-750	450 - 750#	750# = 4618 CFM
761-7601-1-G-1500	750 - 1500#	1500# = 9155 CFM

2" GAS SAFETY VALVE

762-7601-2-G

PRESSURE: 20-2000 # • VOLUME: TO 12180 CFM



INLET: Male NPT 2″

OUTLET: Female NPT 2″

TEMPERATURE RANGE: −65° to +300° F

BODY: Aluminum Bronze

TRIM: Sheralloy

LARGE CAPACITY, UNRESTRICTED FLOW AND POP-OPEN PLUNGER ACTION IS ASSURED BY FULL BORE INNER BODY. HIGH LIFT SPRINGS AND A TRIPLE SEAL SEAT.

RELIEVING CAPACITIES: 1⅛" ORIFICE = .944 SQ. IN.
APPROX. 90% SLOPE = 12

VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
792-7601-2-G-50	20 - 50#	50# = 836 CFM
792-7601-2-G-100	50 - 100#	100# = 1496 CFM
792-7601-2-G-150	100 - 150#	150# = 2156 CFM
792-7601-2-G-200	150 - 200#	200# = 2816 CFM
792-7601-2-G-250	200 - 250#	250# = 3176 CFM
792-7601-2-G-300	250 - 300#	300# = 4136 CFM
792-7601-2-G-600	300 - 600#	600# = 8096 CFM
792-7601-2-G-900	600 - 900#	900# = 12056 CFM
792-7601-2-G-1200	900 - 1200#	1200# = 16016 CFM
*792-7601-2-GHP-2000	1200 - 2000#	2000# = 12180 CFM

*(¾" ORIFICE — .90% SLOPE 5.5)

APPLICATION: Recommended for overpressure protection where build-up and blowdown must be held to a minimum. Designed to meet all protection requirements for gathering lines, transmission systems, meter runs, gas manifolds, separators and refinery service.

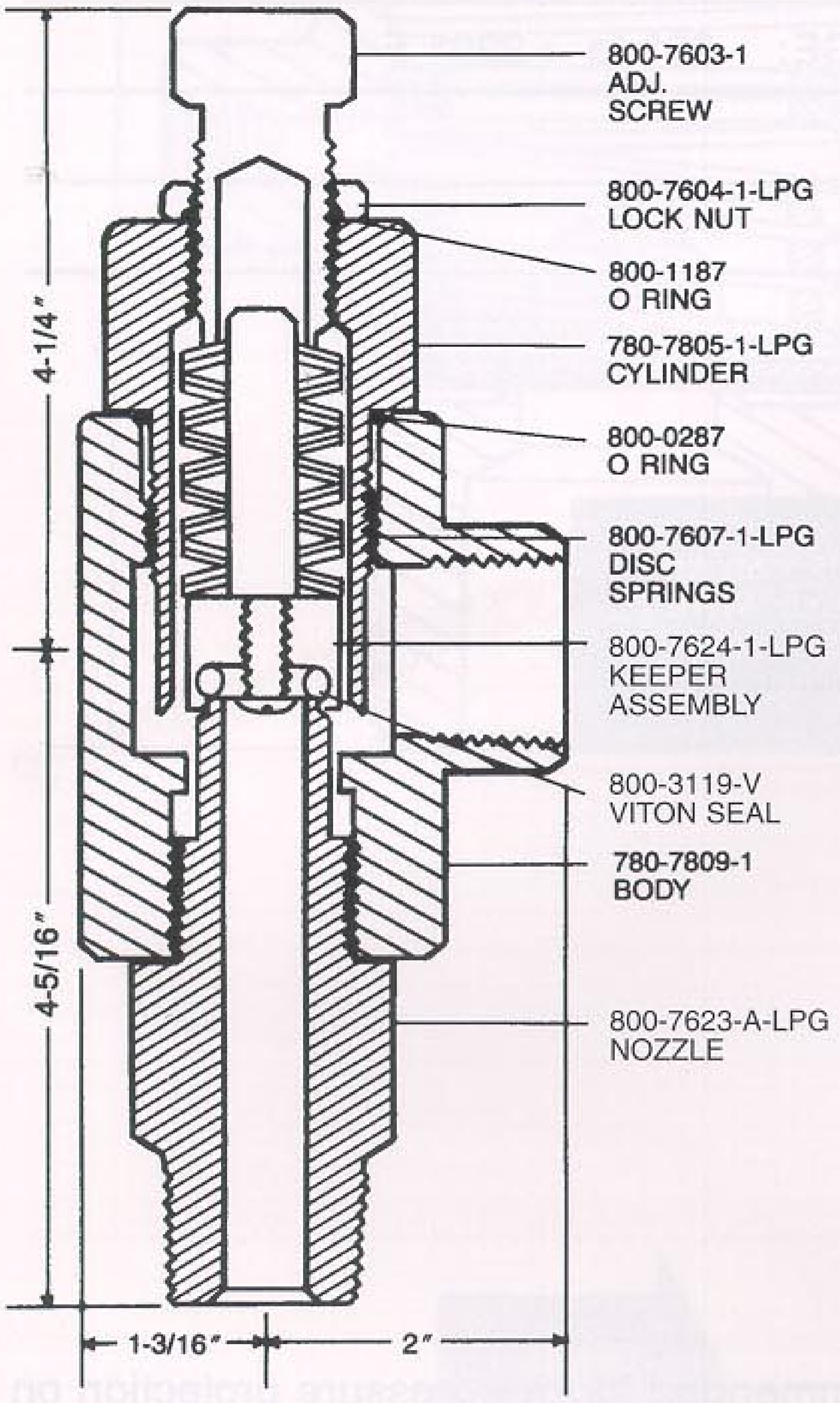
FIELD REPAIRS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS. ADJUSTMENT SCREW AND WIDE SELECTION OF SPRINGS ASSURES EXACT PRESSURE SETTINGS.

1" LPG RELIEF VALVE

780-7801-1-LPG

PRESSURE: 10-3000 # • VOLUME: TO 115 GPM

Liquified Petroleum Gas Service (Butane-Propane)



INLETS AVAILABLE: Male NPT 1", ¾"

OUTLET: Female NPT 1"

TEMPERATURE RANGE: −65° to +300° F

BODY: (SPECIFY)
CARBON STEEL — Standard
316 STAINLESS — Add "316" to Model #

TRIM: Stainless Steel

SEAL: Viton

SOFT VITON SEAL IS COMPOUNDED TO WITHSTAND MINUS -65° TEMPERATURES, INSURING THE VALVE WILL NOT VAPOR BLEED EITHER BEFORE OR AFTER RELIEF ACTION.

FIELD REPAIRS AND PRESSURE SETTING ADJUSTMENTS ARE EASILY MADE ON-SITE WITHOUT SPECIAL TOOLS.

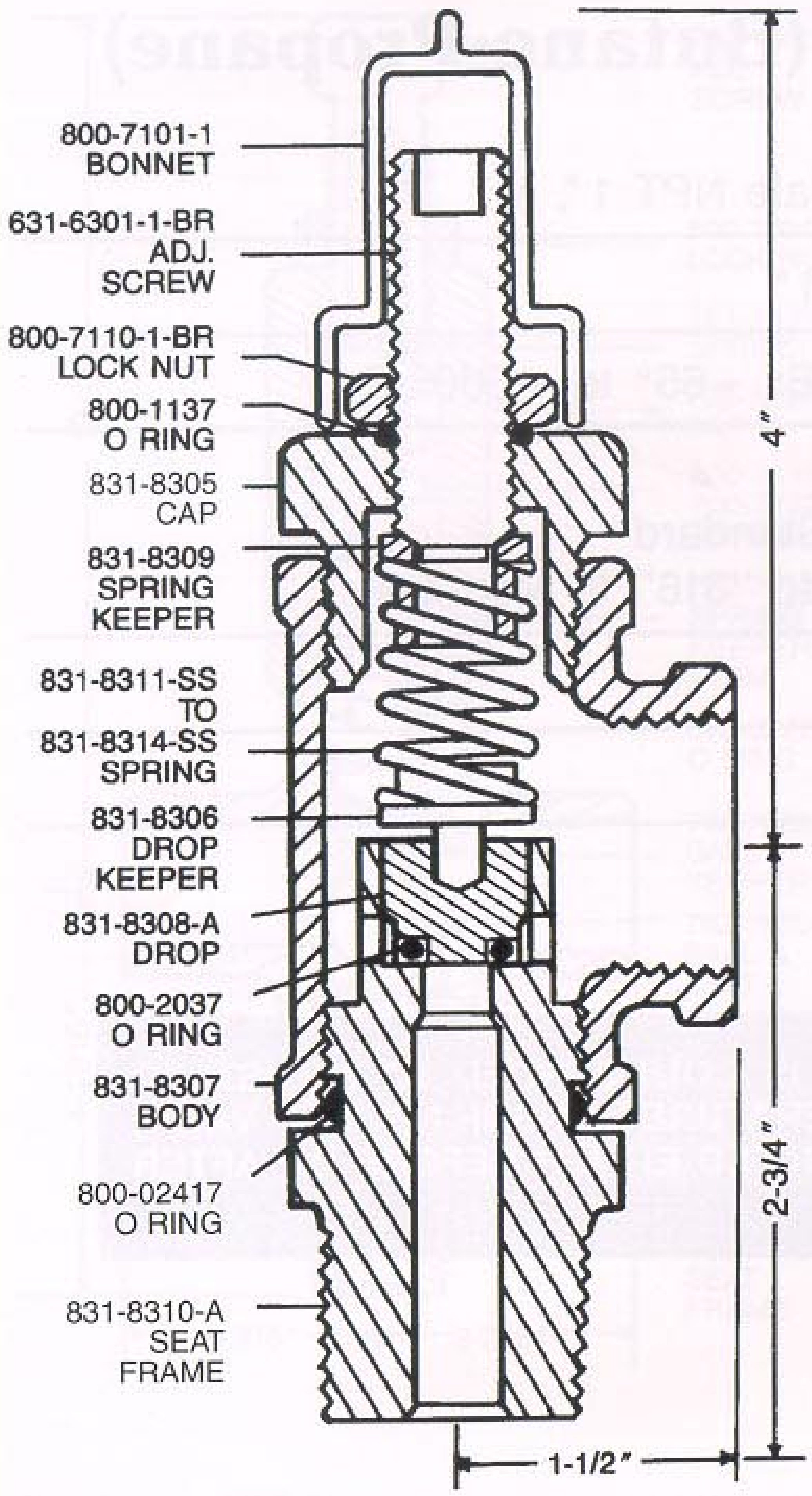
APPLICATION: Designed for use in butane/propane service where extremely difficult sealing and temperature conditions prevail. This valve will effect an absolute, weep-proof seal. For use with butane and propane lines, tanks, pumps and storage facilities.

CARBON STEEL 316-SS	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND NUMBER	SEAT BORE	CAP COLOR CODE
780-7801-1-LPG-250	10-250 #	10-50	THIN 1x1 22	9/16"	WHITE
780-7801-1-LPG-900	250-900 #	25-100	REG. 1x1 19	9/16"	YELLOW
780-7801-1-LPG-3000	900-3000 #	30-115	REG. 2x2 22	9/16"	GREEN

1" GAS SAFETY VALVE

831-GS-CEV

PRESSURE: 15-300 # • **VOLUME: TO 387 CFM**
(NON-CODE BELOW 25#)



INLETS AVAILABLE: Male NPT 1″, ¾″, ½″

OUTLET: Female NPT 1″

TEMPERATURE RANGE: −20° to +220° F

BODY: Brass

TRIM: Brass

THE PLUNGER OR DROP HAS AN O-RING SEAL. FURNISHED WITH TAMPER-PROOF BONNET AND WIRE SEAL.

This gas service valve is an automatic pressure relieving device activated by static pressure upstream of the valve and characterized by a rapid full opening or pop action.

APPLICATION: Recommended for overpressure protection on separators, compressor tanks, heater-treaters, meter runs, gathering lines, transmission systems, gas manifolds, refinery service and other gas systems.

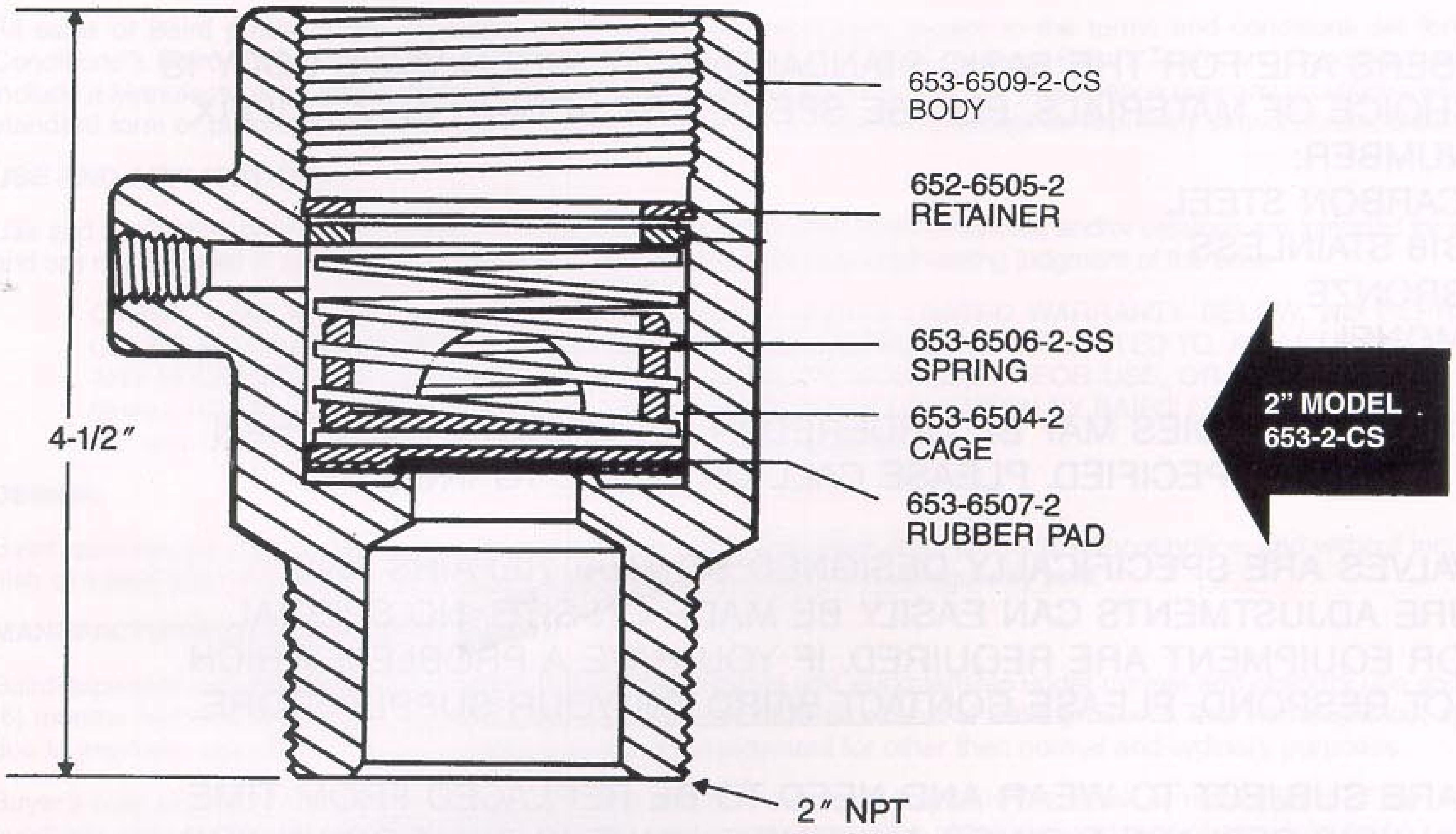
ASME-UV: ⅜″ ORIFICE = .110 SQ. IN., −90% SLOPE = 1.125

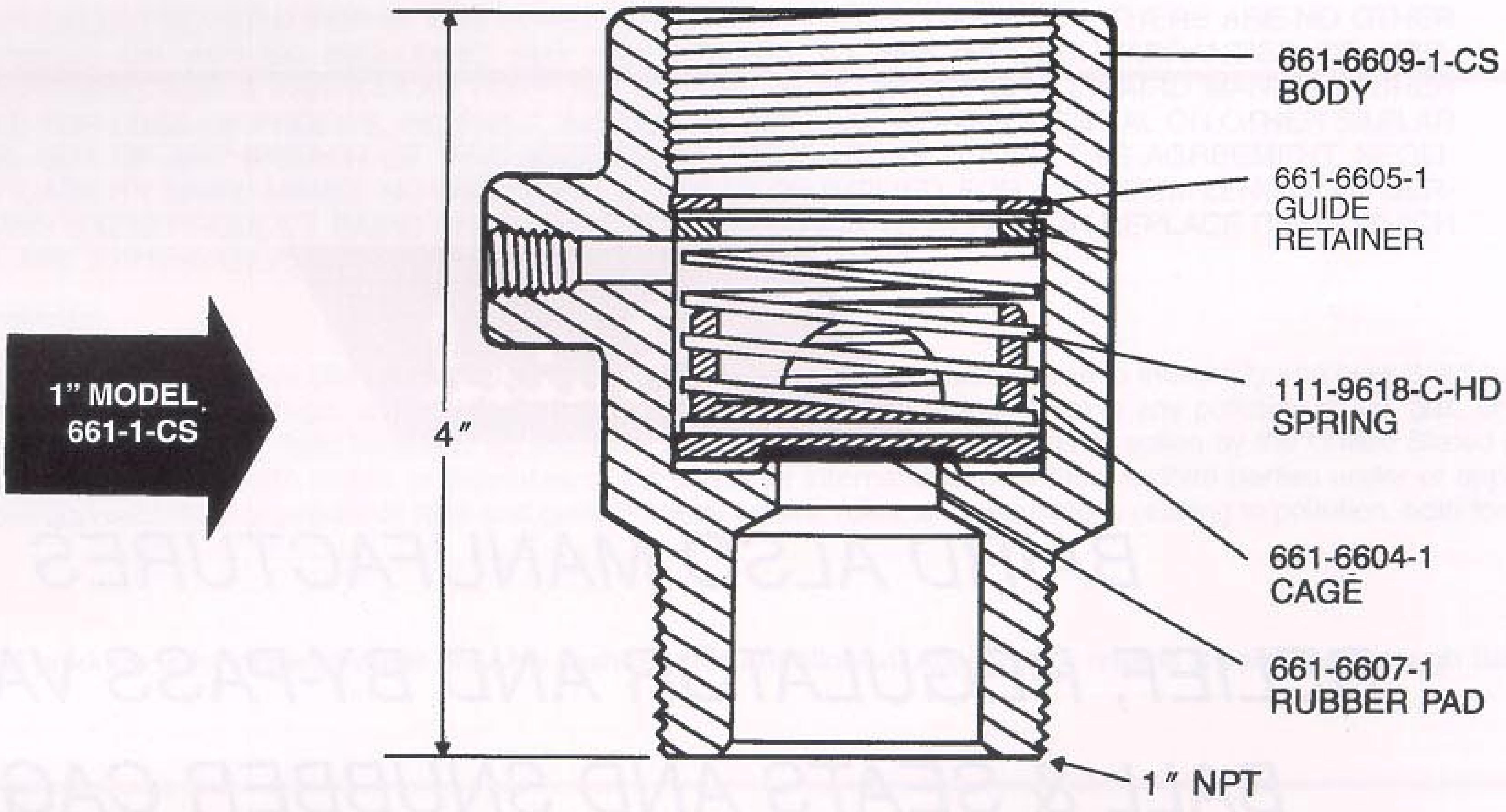
VALVE PART NUMBER	WORKING PRESSURE RANGE	CFM OF AIR AT MAXIMUM SETTING +10%
831-GS-CEV-45	15 - 45#	45# = 72 CFM
831-GS-CEV-125	45 - 125#	125# = 171 CFM
831-GS-CEV-200	125 - 200#	200# = 264 CFM
831-GS-CEV-300	200 - 300#	300# = 387 CFM

(Set pressure +10% of set pressure +14.7) × .963 = CFM

NEW! BAIRD VALVE CHECKER

2" MODEL: 653-2-CS
1" MODEL: 661-1-CS





Baird VALVE CHECKER: Installed in front of the safety valve inlet, permits the operator to monitor valves with periodic pressure checks. This gives assurance that the valve is relieving properly at the set pressure, and reclosing as it should.

When using the VALVE CHECKER, the pressure is applied through the ¼" inlet. The spring-loaded check valve design insures that the pressure travels only to the valve for the test. When the test is finished, the normal functioning of the manifold returns with flow through the VALVE CHECKER.

The Baird VALVE CHECKER is available in 1" and 2" sizes with standard male by female threads. Other threads are available on request.

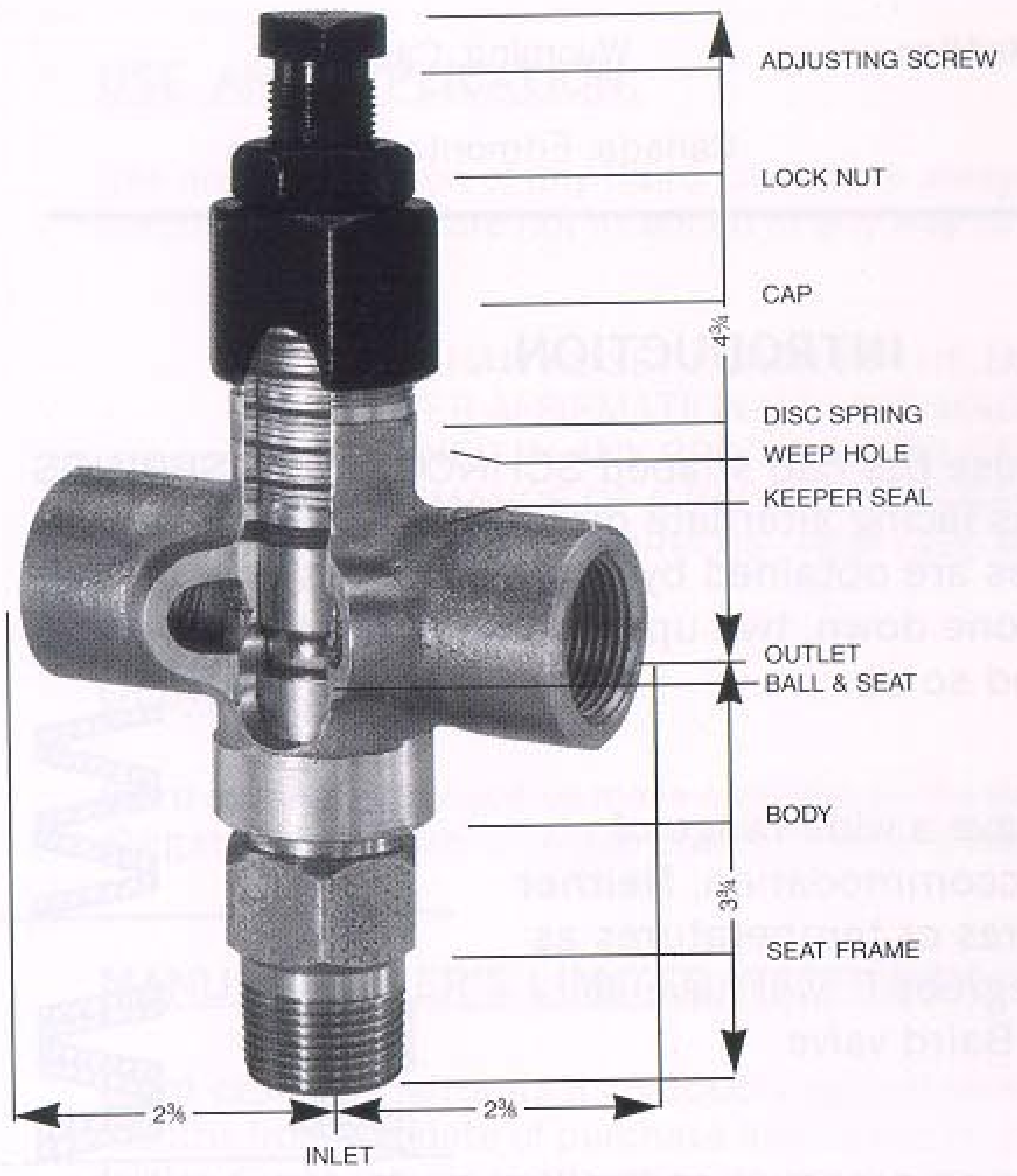
Baird®

1" LIQUID RELIEF VALVE

761 7601-1

High Pressure --- **Pressure Control** ---- **Medium Volume**

To ---- 25,000# To ---- 115 GPM



Designed for protection against over-pressure for vessels, pumps, lines, etc. It is a rugged and versatile valve capable of handling a wide range of pressures.

BODY: 1" Aluminum-Bronze, 316SS or Monel

BALL & SEAT: Sherallow® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

INLET: 1" Male NPT, 3/4" Male NPT or 1/2" Female NPT

OUTLET: Dual - 1" Female NPT

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

USE ONLY AS DIRECTED

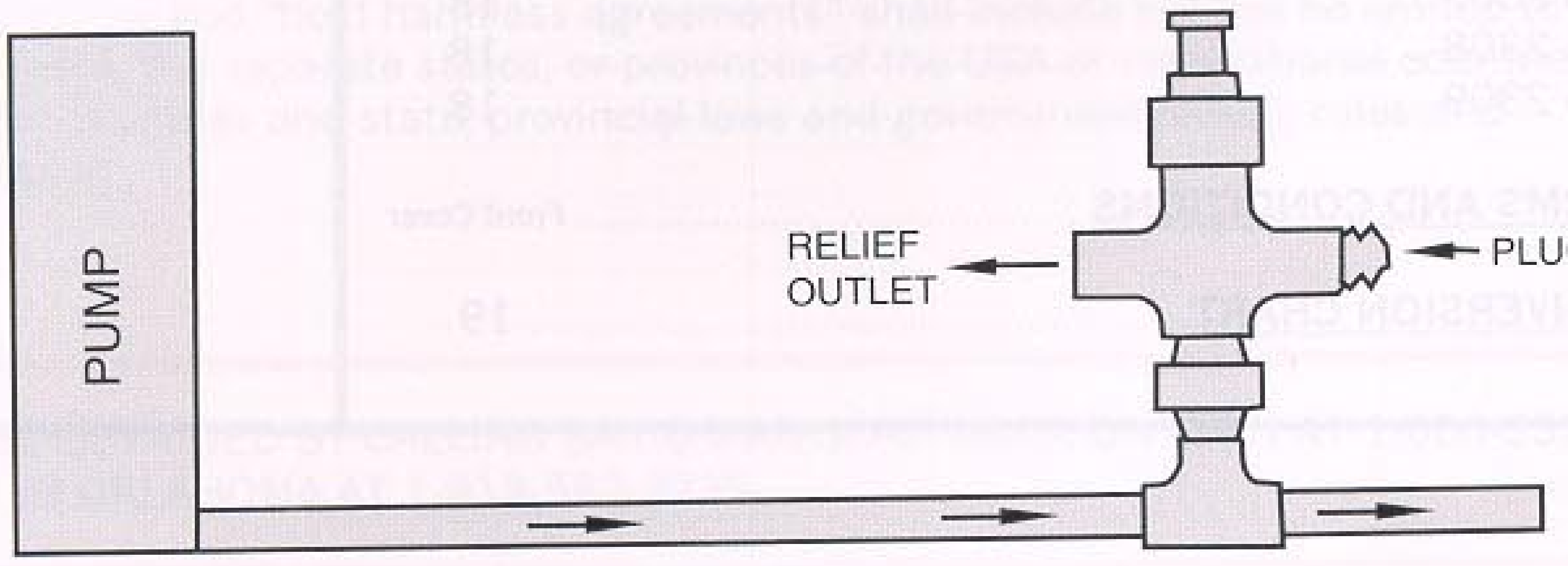
Do not deviate from Manufacturer's recommended pressure range and mode of installation.

ALUMINUM-BRONZE PART NUMBER	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND QUANTITY	SEAT ORIFICE DIAMETER	CAP COLOR CODE
761 7601-1-LLP	50-600#	8-50	Thin 1 X 1 (23)	3/4"	White
761 7601-1-LP	300-1500#	25-100	Reg 1 X 1 (18)	3/4"	Yellow
761 7601-1-MP	500-3000#	15-115	Reg 2 X 2 (22)	3/4"	Green
761 7601-1-HP	1000-6000#	Not Verified	Reg 2 X 2 (20)	1/2"	Red
761 7601-1-XHP	1500-10000#	Not Verified	Reg 3 X 3 (21)	1/2"	Black
761 7601-1-SHP	2500-16000#	Not Verified	Reg 3 X 3 (21)	3/8"	Brown
761 7601-1-UHP	5000-25000#	Not Verified	Reg 2 X 2 (60)	1/4"	Tan

MATERIAL SPECIFICATIONS:

- **Standard valve is** Aluminum-Bronze valve.
- **Add "316" to part number for** 316 Stainless Steel valve.
- **Add "MM" to part number for** Monel valve.

METHOD OF INSTALLATION →



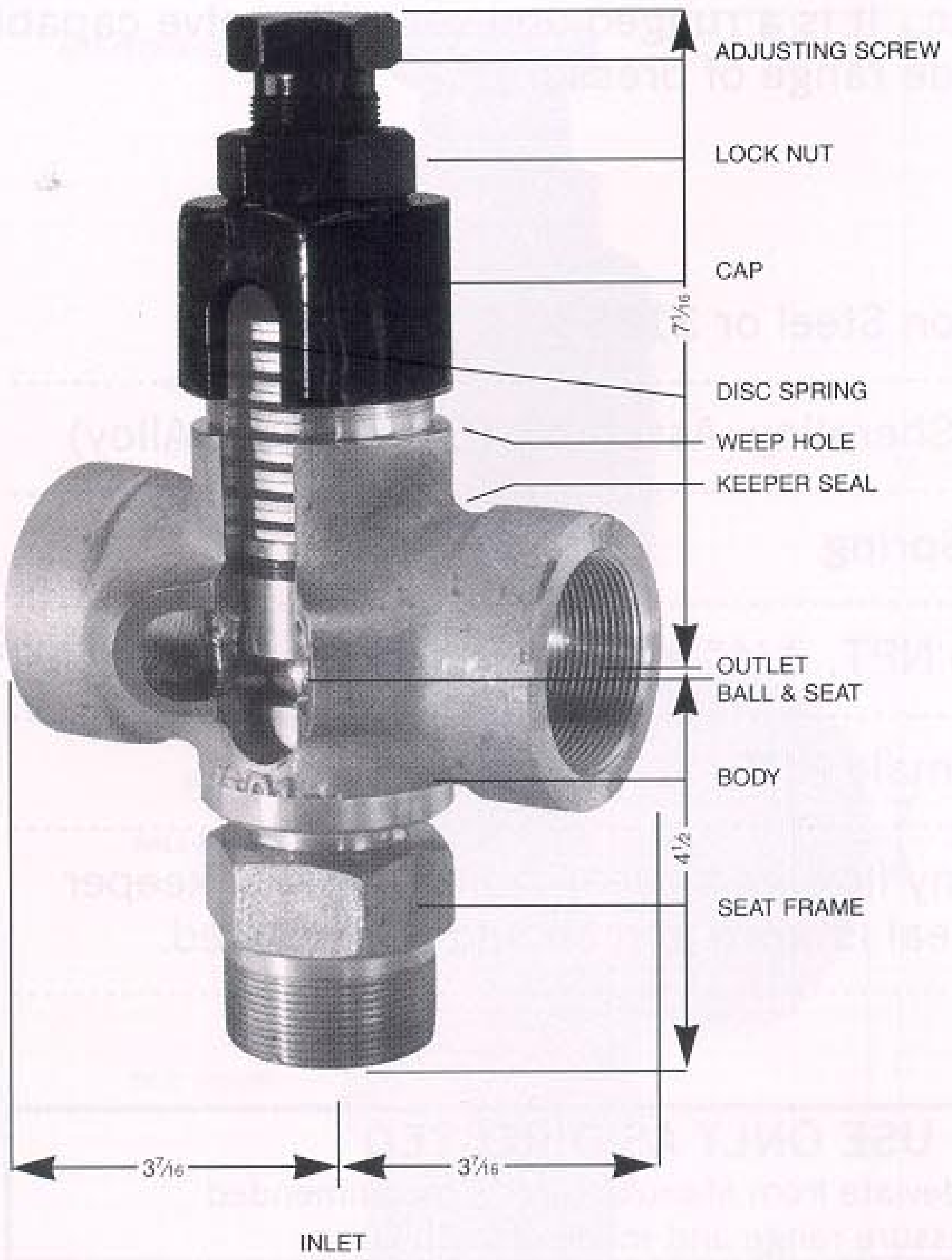
2" LIQUID RELIEF VALVE

Baird®

762 7601-2

High Pressure ---- **Pressure Control** ---- **High Volume**

To ---- 18,000# To ---- 210 GPM



Designed for protection against over-pressure for vessels, pumps, lines, etc. It is a rugged and versatile valve capable of handling a wide range of pressures.

BODY: 2" Aluminum-Bronze, 316SS or Monel

BALL & SEAT: Sheralloy® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

INLET: 2" Male NPT, 1-1/2" Male NPT or Victaulic

OUTLET: Dual - 2" Female NPT or Victaulic

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

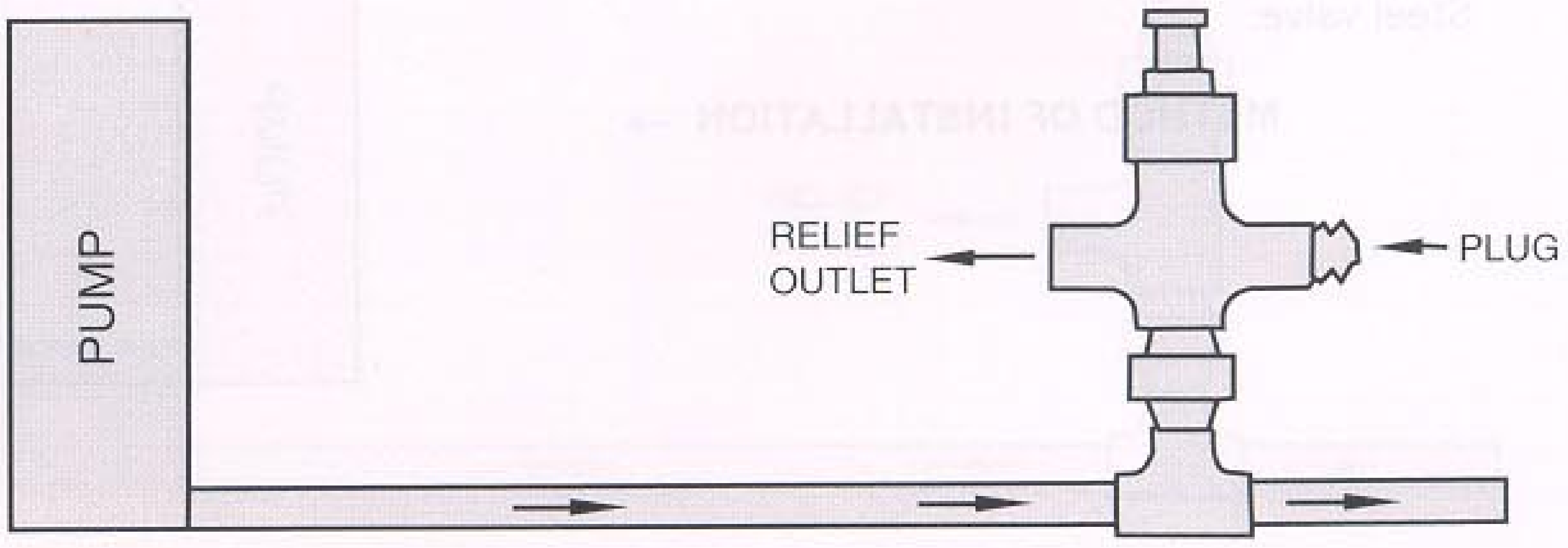
USE ONLY AS DIRECTED
Do not deviate from Manufacturer's recommended pressure range and mode of installation.

ALUMINUM-BRONZE PART NUMBER	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND QUANTITY	SEAT ORIFICE DIAMETER	CAP COLOR CODE
762 7601-2-LLP	100-600#	35-100	Thin 1 X 1 (19)	1-1/8"	White
762 7601-2-LP	400-1500#	30-135	Reg 1 X 1 (15)	1-1/8"	Yellow
762 7601-2-MP	500-4000#	35-210	Reg 2 X 2 (18)	1-1/8"	Green
762 7601-2-HP	1000-8000#	Not Verified	Reg 3 X 3 (18)	1-1/8"	Red
762 7601-2-XHP	2500-10000#	Not Verified	Reg 3 X 3 (18)	3/4"	Black
762 7601-2-SHP	2500-12000#	Not Verified	Reg 3 X 3 (18)	3/4"	Brown
762 7601-2-UHP	3000-18000#	Not Verified	Reg 3 X 3 (18)	1/2"	Tan

MATERIAL SPECIFICATIONS:

- **Standard valve is** Aluminum-Bronze valve.
- **Add " 316" to part number for** 316 Stainless Steel valve.
- **Add "MM" to part number for** Monel valve.

METHOD OF INSTALLATION →



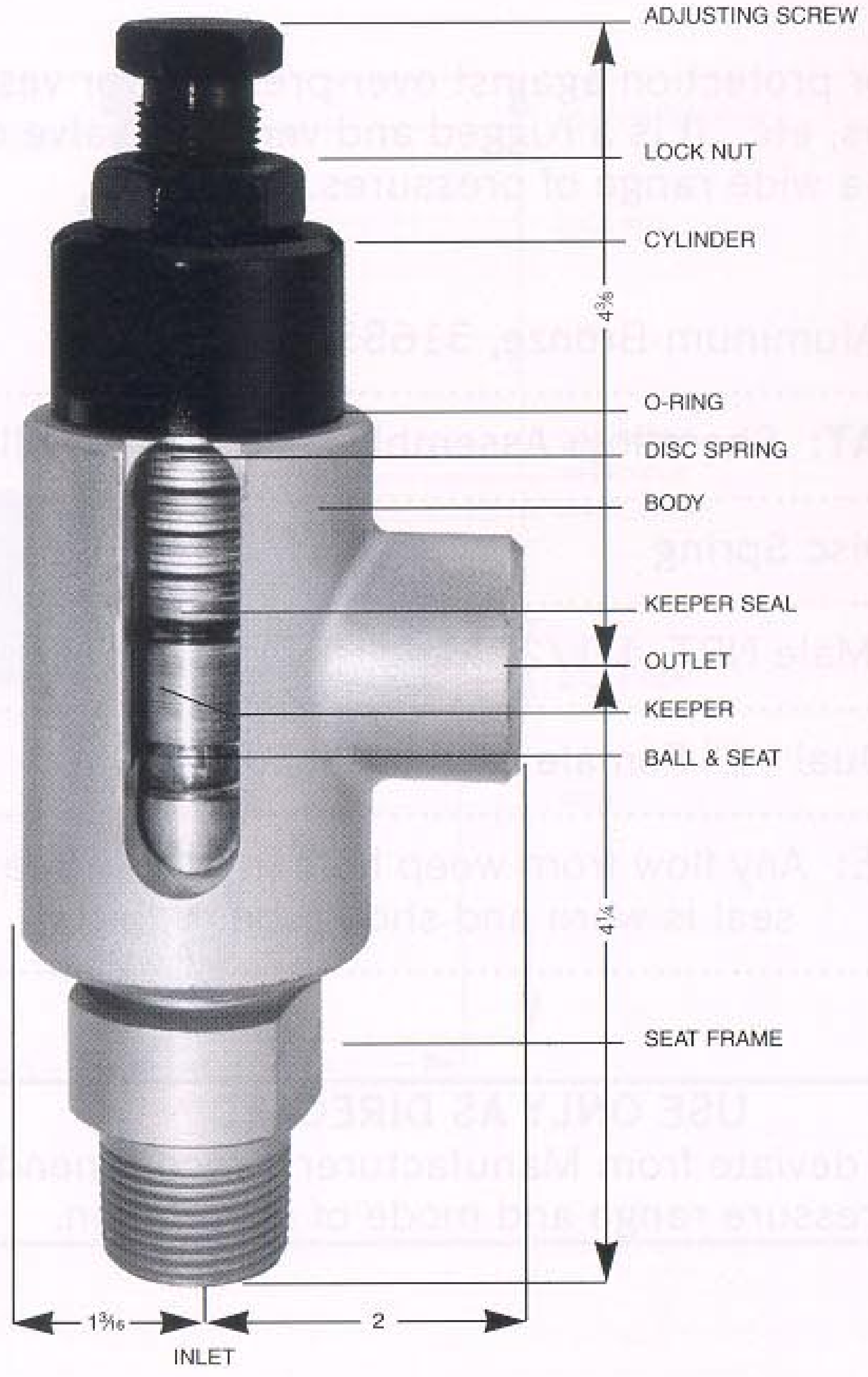
1" LIQUID RELIEF VALVE

780 7801-1

High Pressure ---- **Pressure Control** ---- **High Volume**

To ---- 16,000#

To ---- 115 GPM



Designed for protection against over-pressure for vessels, pumps, lines, etc. It is a rugged and versatile valve capable of handling a wide range of pressures.

BODY: 1" Carbon Steel or 316SS

BALL & SEAT: Sheralloy® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

INLET: 1" Male NPT, 3/4" Male NPT or 1/2" Female NPT

OUTLET: 1" Female NPT

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

USE ONLY AS DIRECTED

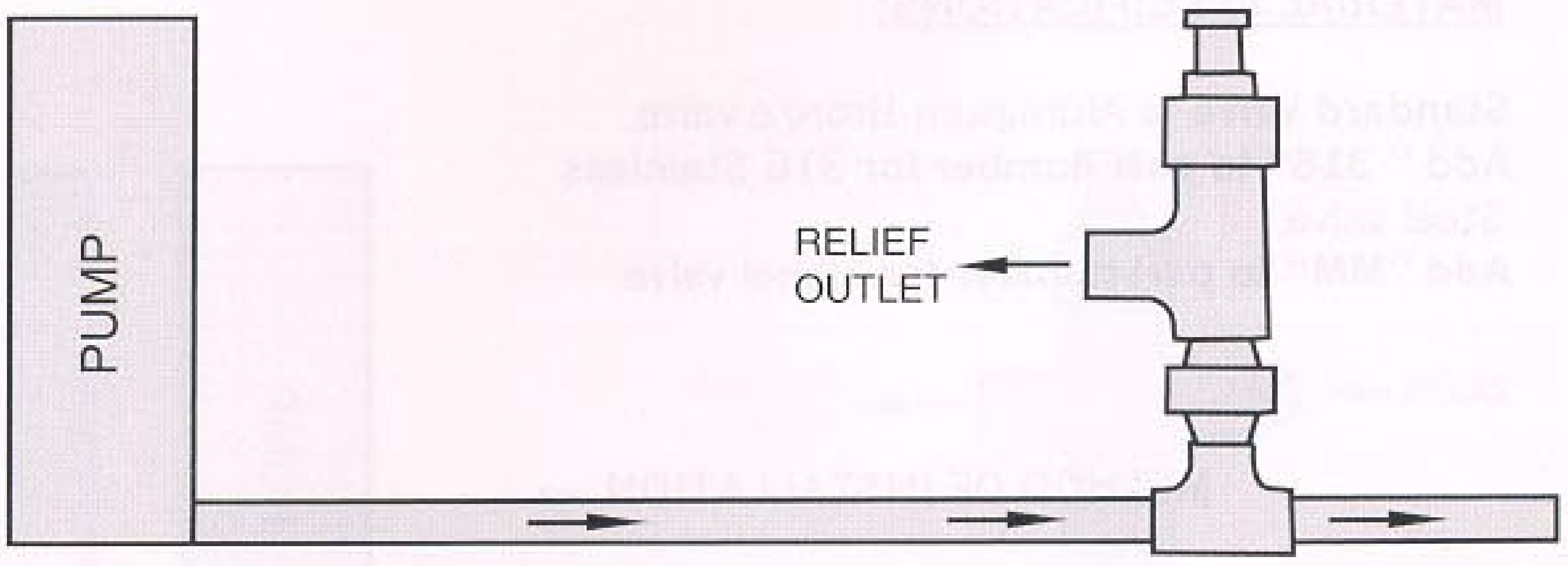
Do not deviate from Manufacturer's recommended pressure range and mode of installation.

CARBON STEEL PART NUMBER	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND QUANTITY	SEAT ORIFICE DIAMETER
780 7801-1-LLP	50-600#	8-50	Thin 1 X 1 (23)	3/4"
780 7801-1-LP	300-1500#	25-100	Reg 1 X 1 (18)	3/4"
780 7801-1-MP	500-3000#	15-115	Reg 2 X 2 (22)	3/4"
780 7801-1-HP	1000-6000#	Not Verified	Reg 2 X 2 (20)	1/2"
780 7801-1-XHP	1500-10000#	Not Verified	Reg 3 X 3 (21)	1/2"
780 7801-1-SHP	2500-16000#	Not Verified	Reg 3 X 3 (21)	3/8"

MATERIAL SPECIFICATIONS:

- **Standard valve is** Carbon Steel valve.
- **Add "316" to part number for** 316 Stainless Steel valve.

METHOD OF INSTALLATION →

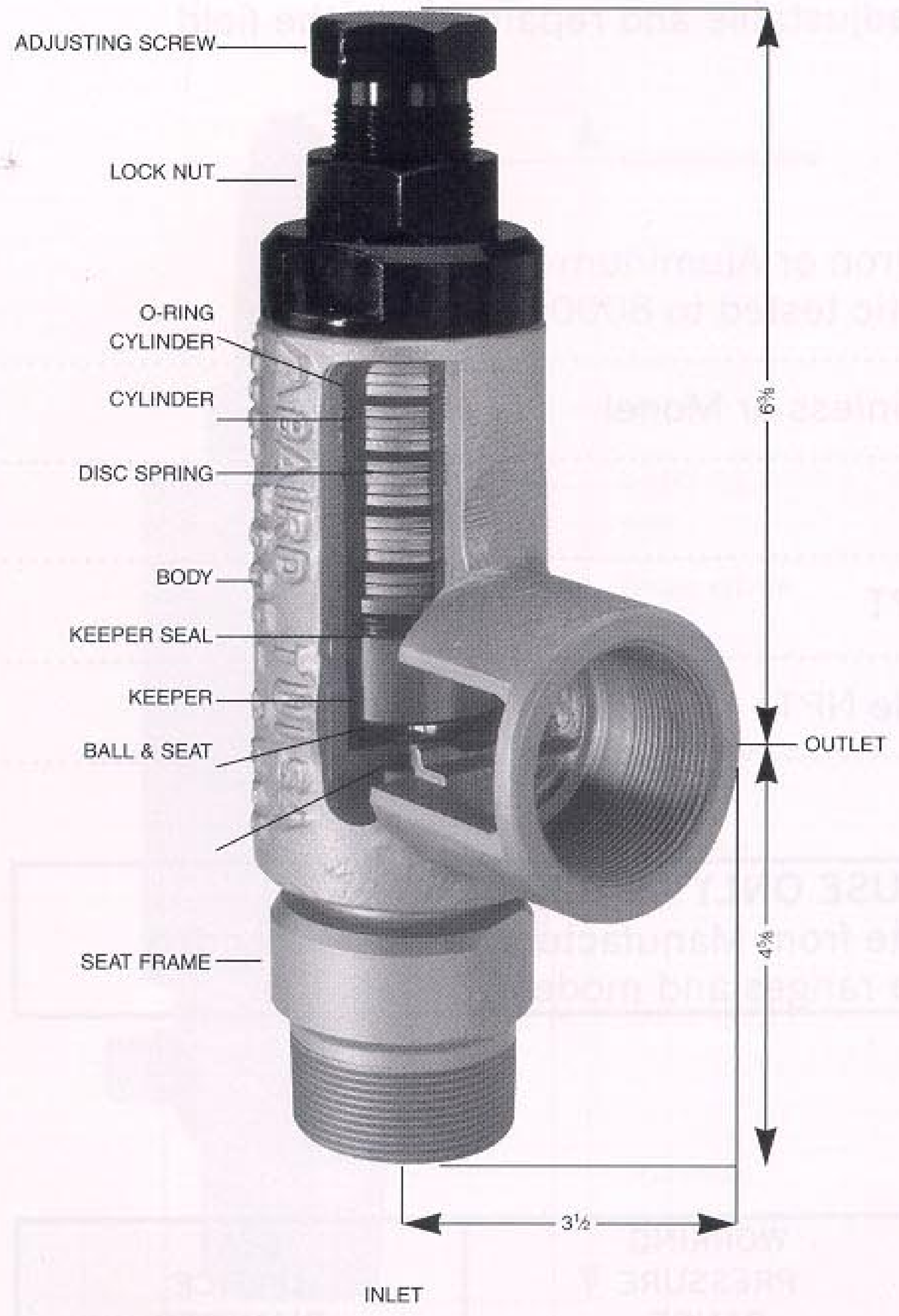


2" LIQUID RELIEF VALVE

782 7801-2

High Pressure ---- **Pressure Control** ---- **High Volume**

To ---- 10,000# To ---- 210 GPM



Designed for protection against over-pressure for vessels, pumps, lines, etc. It is a rugged and versatile valve capable of handling a wide range of pressures.

BODY: 2" Carbon Steel, 316SS or Aluminum-Bronze

BALL & SEAT: Sheralloy® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

INLET: 2" Male NPT

OUTLET: 2" Female NPT

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

USE ONLY AS DIRECTED

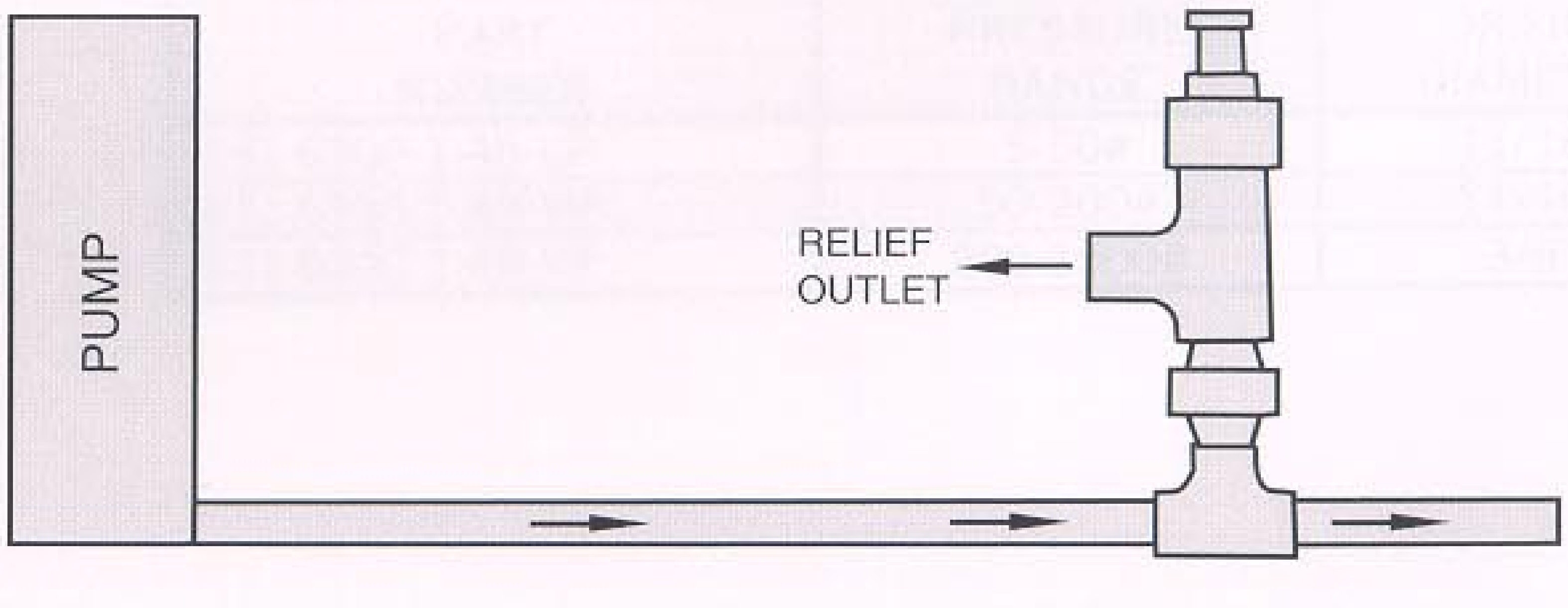
Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

CARBON STEEL PART NUMBER	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND QUANTITY	SEAT ORIFICE DIAMETER
782 7801-2-LLP	100-600#	15-100	Thin 1 X 1 (19)	1-1/8"
782 7801-2-LP	400-1500#	30-135	Reg 1 X 1 (15)	1-1/8"
782 7801-2-MP	500-4000#	35-210	Reg 2 X 2 (18)	1-1/8"
782 7801-2-HP	1000-8000#	Not Verified	Reg 3 X 3 (18)	1-1/8"
782 7801-2-XHP	2500-10000#	Not Verified	Reg 3 X 3 (18)	3/4"

MATERIAL SPECIFICATIONS:

- **Standard valve is** Carbon Steel valve.
- **Add "316" to part number for** 316 Stainless Steel valve.
- **Add "AB" to part number for** Aluminum-Bronze valve.

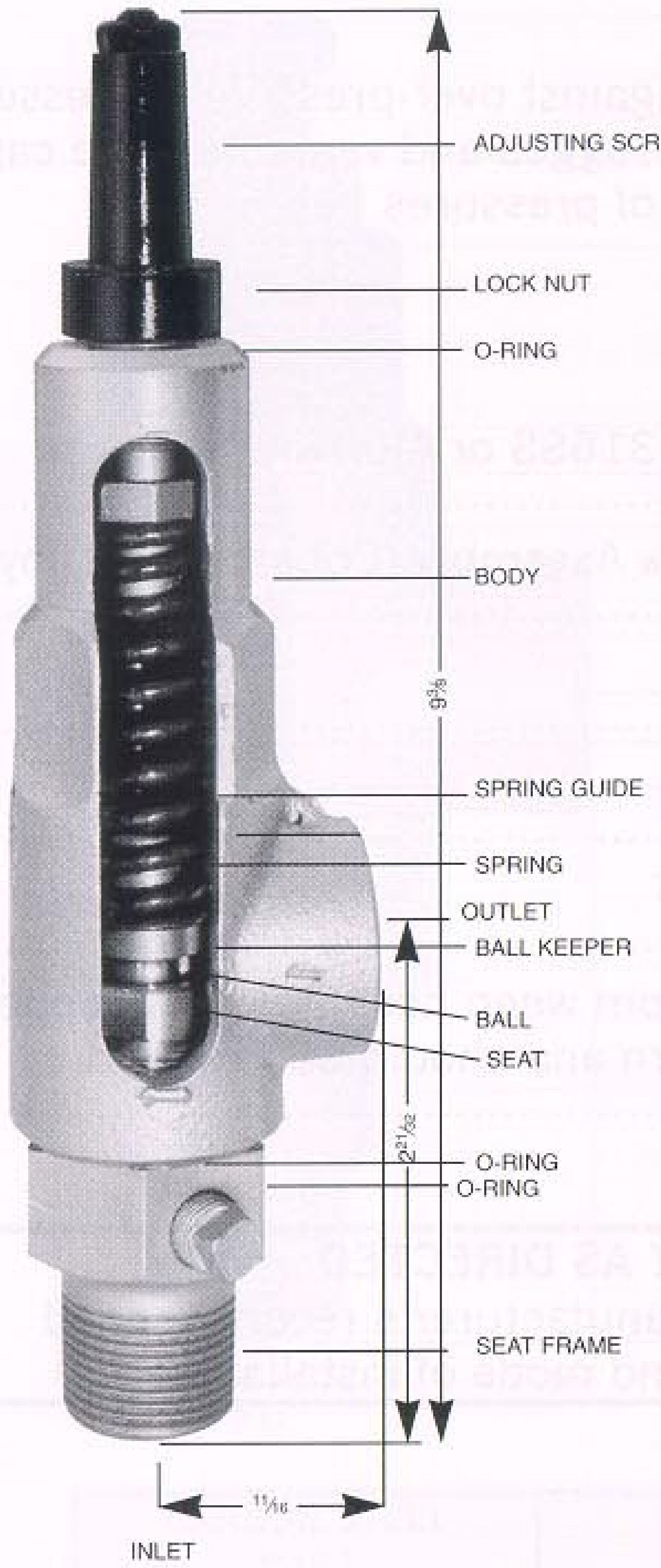
METHOD OF INSTALLATION →



1" LIQUID RELIEF VALVE

621 1-D

Low Pressure ---- Pressure Control ---- Low Volume



A rugged, economical valve for low pressure, low volume applications. It is adjustable and repairable in the field or in the line.

BODY: 1" Ductile Iron or Aluminum-Bronze (Static tested to 8000#)

BALL & SEAT: Stainless or Monel

SPRING: Coil

INLET: 1" Male NPT

OUTLET: 1" Female NPT

USE ONLY AS DIRECTED
Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

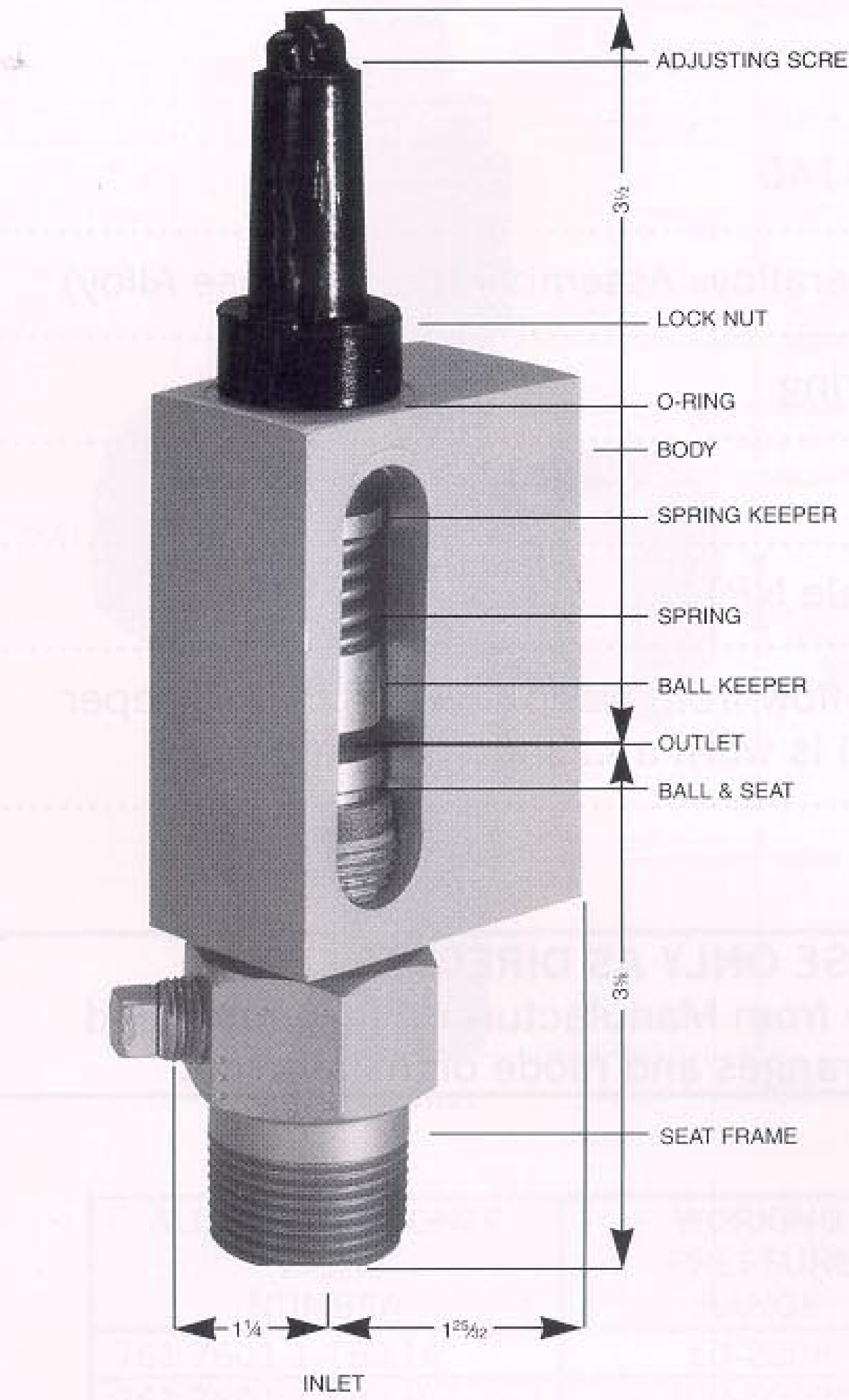
DUCTILE IRON PART NUMBER	WORKING PRESSURE RANGE	SEAT ORIFICE DIAMETER
621 1-D-2	15-200#	9/16"
621 1-D-15	200-1500#	3/8"

ALUMINUM-BRONZE PART NUMBER	WORKING PRESSURE RANGE	SEAT ORIFICE DIAMETER
621 1-AB-2	15-200#	9/16"
621 1-AB-15	200-1500#	3/8"

1" LIQUID RELIEF VALVE

631 6300-1

High Pressure ---- Pressure Control ---- Low Volume



A rugged, economical valve for low pressure, low volume applications. It is adjustable and repairable in the field or in the line.

BODY: 1" Carbon Steel or Aluminum-Bronze

BALL & SEAT: Stainless or Monel

SPRING: Coil

INLET: 1" Male NPT or 3/4" Male NPT

OUTLET: 1" Female NPT

USE ONLY AS DIRECTED

Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

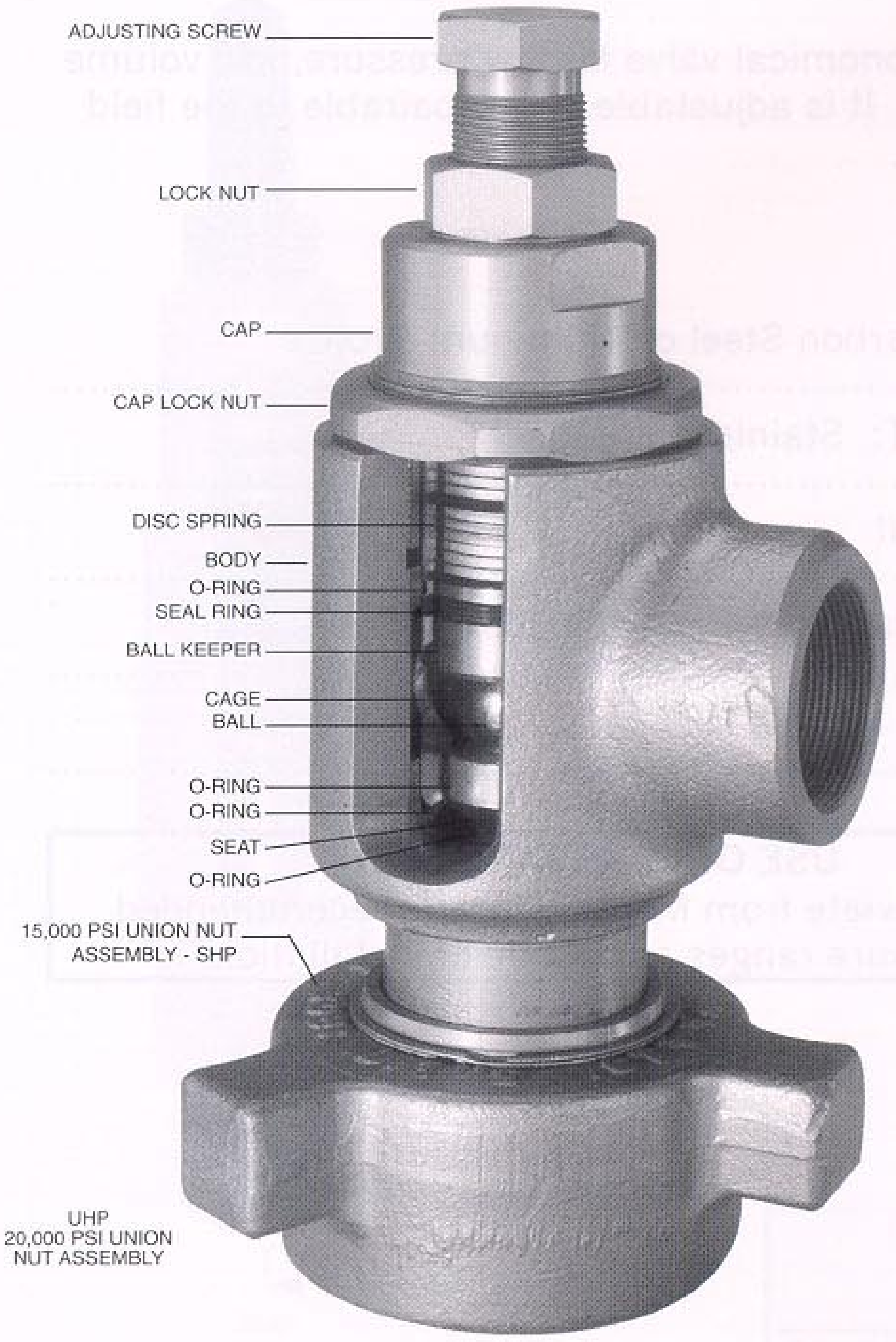
CARBON STEEL PART NUMBER	WORKING PRESSURE RANGE	SEAT ORIFICE DIAMETER
631 6300-1-BS-LP	5-50#	11/16"
631 6300-1-BS-MP	50-200#	11/16"
631 6300-1-BS-HP	200-1500#	3/8"
631 6300-1-MBS-LP	5-50#	11/16"
631 6300-1-MBS-MP	50-200#	11/16"
631 6300-1-MBS-HP	200-1500#	3/8"

ALUMINUM-BRONZE PART NUMBER	WORKING PRESSURE RANGE	SEAT ORIFICE DIAMETER
631 6300-1-AB-LP	5-50#	11/16"
631 6300-1-AB-MP	50-200#	11/16"
631 6300-1-AB-HP	200-1500#	3/8"

2" LIQUID RELIEF VALVE

992 9902-2

High Pressure ---- Pressure Relief



992-9902-2-(SHP-UHP)

Designed for protection against over-pressure for pumps. It is rugged and versatile valve is capable of handling a wide range of pressures.

BODY: 2" ASTM 4140

BALL & SEAT: Sheralloy® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

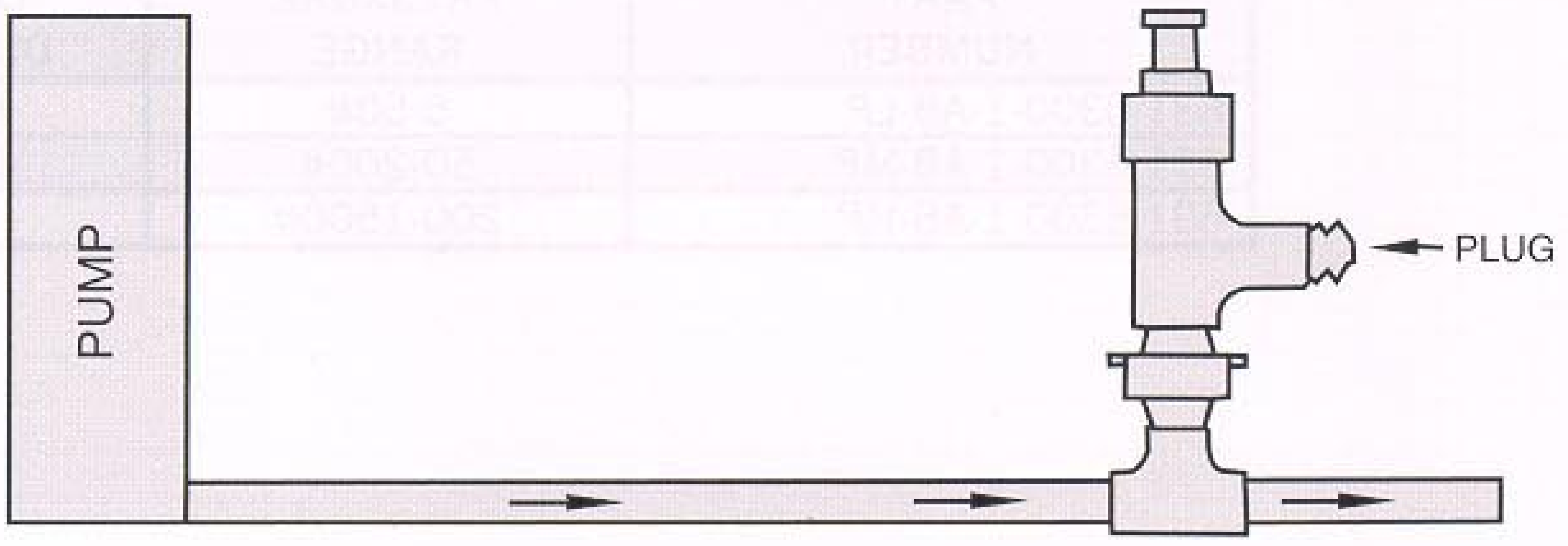
INLET: Union

OUTLET: 2" Female NPT

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

USE ONLY AS DIRECTED
Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

ASTM 4140 PART NUMBER	WORKING PRESSURE RANGE	SPRING ARRANGEMENT AND QUANTITY	CAP COLOR CODE
992 9902-2-HP	1000-8000#	3 X 3 (18)	Red
992 9902-2-XHP	2500-10000#	3 X 3 (18)	Black
992 9902-2-SHP	2500-15000#	3 X 3 (18)	Brown
992 9902-2-UHP	3000-20000#	3 X 3 (18)	Beige



← METHOD OF INSTALLATION

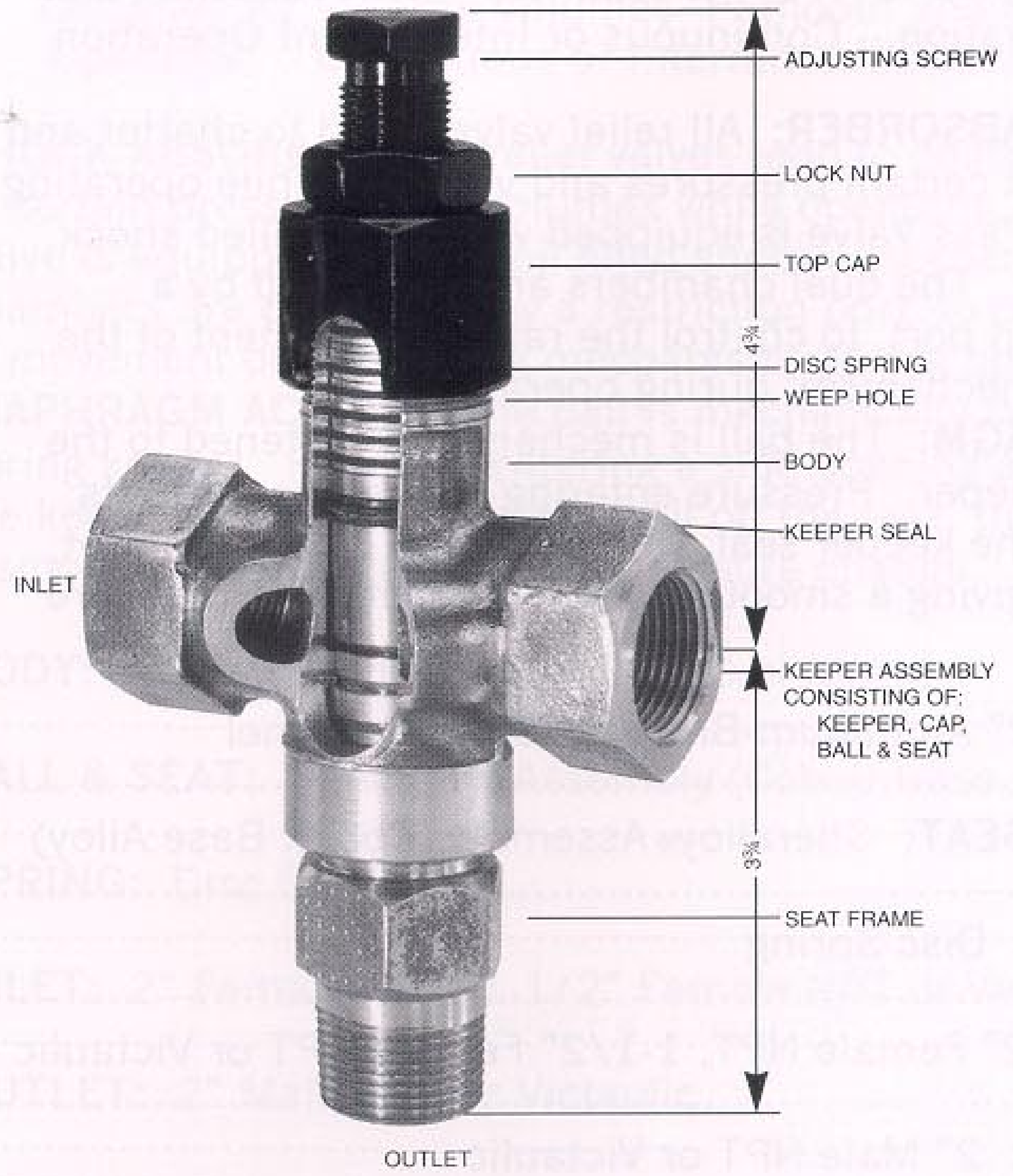
1" BY-PASS LIQUID RELIEF VALVE

(Tied Ball)

761 7601-1-TB

Medium Pressure ---- Diaphragm Action ---- Medium Volume

To ---- 3500# To ---- 55 GPM



This valve was designed for pumping through one side and out the other with a built in relief. By tying the ball to the keeper, the over-pressure simply lifts the whole spring assembly with a diaphragm action allowing relief out the bottom.

BODY: Aluminum-Bronze, 316SS or Monel

BALL & SEAT: Sheralloy® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

INLET: 1" Female NPT

OUTLET: 1" Male NPT or 3/4" Male NPT

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

ONLY AS DIRECTED

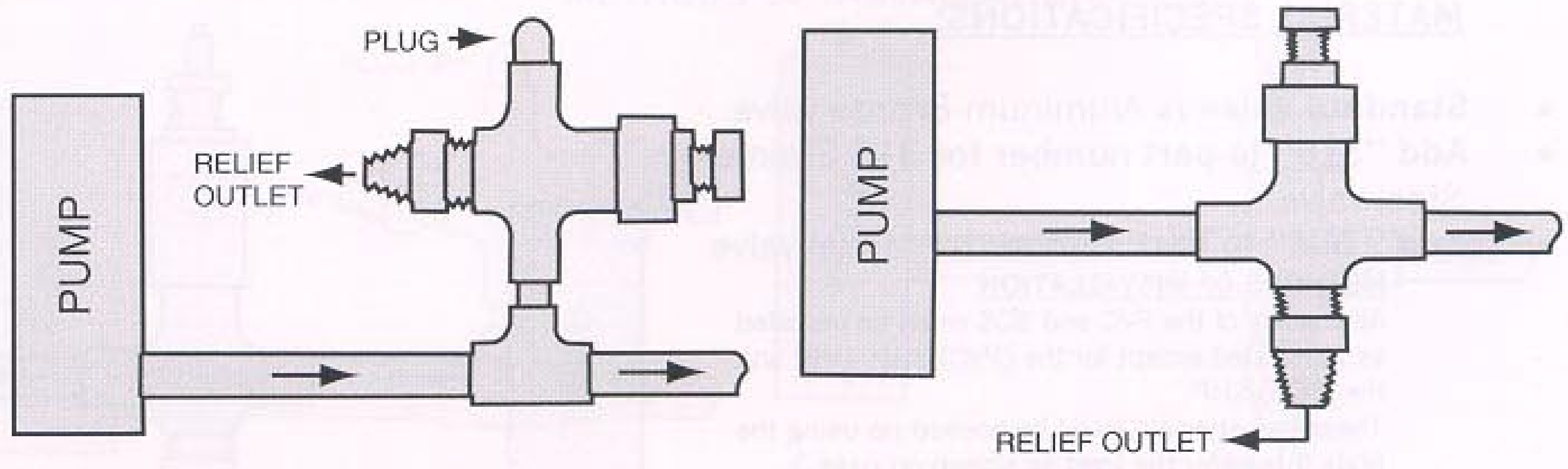
Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

ALUMINUM-BRONZE PART NUMBER	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND QUANTITY	SEAT ORIFICE DIAMETER	CAP COLOR CODE
761 7601-1-TB-LLP	50-200#	8-40	Thin 1 X 1 (17)	.625	White
761 7601-1-TB-LP	100-1000#	15-45	Reg 1 X 1 (15)	.625	Yellow
761 7601-1-TB-MP	500-1500#	15-55	Reg 2 X 2 (18)	.625	Green
761 7601-1-TB-HP	1000-2000#	15-45	Reg 3 X 3 (18)	.625	Red
761 7601-1-TB-XHP	1500-3500#	Not Verified	Reg 4 X 4 (20)	.625	Black

MATERIAL SPECIFICATIONS:

- **Standard valve is** Aluminum-Bronze valve.
- **Add "316" to part number for** 316 Stainless Steel valve.
- **Add "MM" to part number for** Monel Valve.

METHODS OF INSTALLATION →



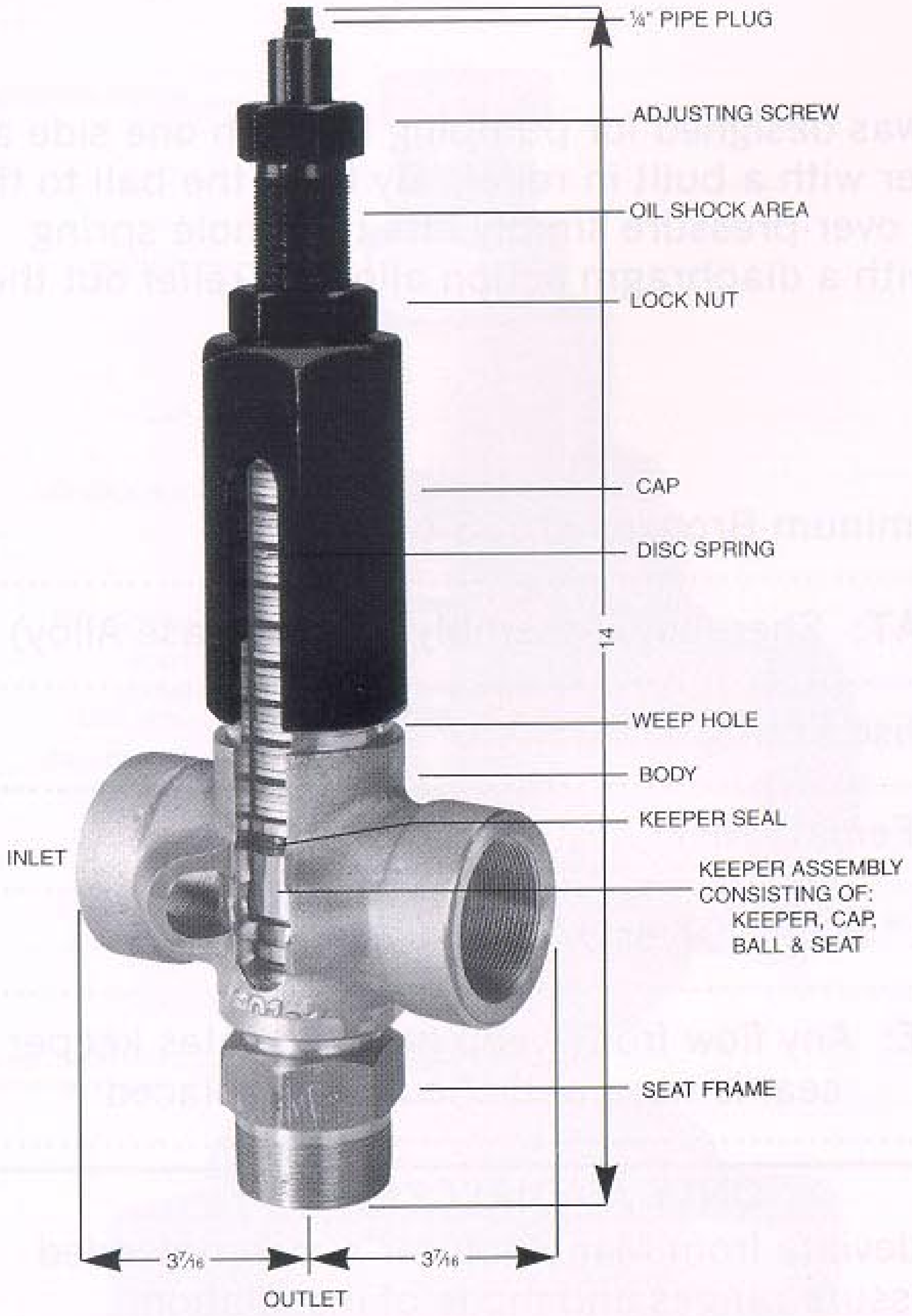
2" BY-PASS LIQUID RELIEF VALVE

762 7601-2-SOS

Medium Pressure ---- Highest Volume

To ---- 5,000#

To ---- 320 GPM



SHOCK ABSORBER CONTROL

Designed for -- Large Volumes -- Smooth and Quiet Operation -- Continuous or Intermittent Operation

SHOCK ABSORBER: All relief valves tend to chatter and vibrate at certain pressures and volumes while operating. This By-Pass Valve is equipped with an oil filled shock absorber. The dual chambers are connected by a restriction port, to control the rate of movement of the sealing mechanism, during operation.

DIAPHRAGM: The ball is mechanically fastened to the spring keeper. Pressure entering a side opening acts against the keeper seal, which lifts the ball of the seat, thereby giving a smooth, sensitive reaction to pressure change.

BODY: 2" Aluminum-Bronze, 316SS or Monel

BALL & SEAT: Sheralloy® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

INLET: 2" Female NPT, 1-1/2" Female NPT or Victaulic

OUTLET: 2" Male NPT or Victaulic

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

USE ONLY AS DIRECTED

Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

ALUMINUM-BRONZE PART NUMBER	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND QUANTITY	SEAT ORIFICE DIAMETER	CAP COLOR CODE
762 7601-2-SOS-LLP	150-400#	5-200	Thin 1 X 1 (45)	1-1/4"	White
762 7601-2-SOS-LP	250-1000#	15-260	Reg 1 X 1 (36)	1-1/4"	Yellow
762 7601-2-SOS-MP	500-2000#	45-320	Reg 2 X 2 (42)	1-1/4"	Green
762 7601-2-SOS-HP	1000-3500#	90-250	Reg 3 X 3 (45)	1-1/4"	Red

BOTTOM INLET	(SEE INSTALLATION PARAGRAPH BELOW FOR "SHP" MODEL)				
762 7601-2-SOS-SHP	1000-5000#	Not Verified	Reg 3 X 3 (45)	1-1/4"	Brown

MATERIAL SPECIFICATIONS:

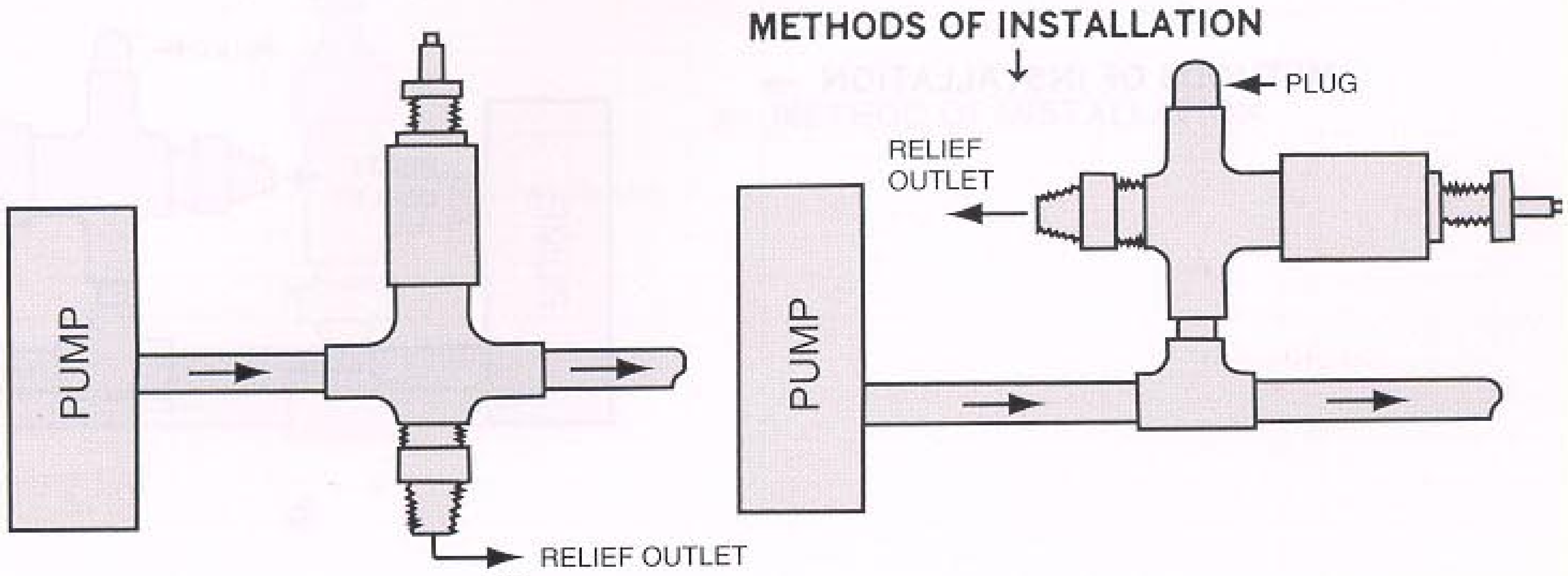
- **Standard valve is** Aluminum-Bronze valve.
- **Add "316" to part number for** 316 Stainless Steel valve.
- **Add " MM" to part number for** Monel valve.

METHODS OF INSTALLATION

All models of the PVC and SOS must be installed as illustrated except for the (PVC) SHP, UHP and the (SOS) SHP.

These two specials must be hooked up using the Male thread for the Inlet as shown on page 3.

METHODS OF INSTALLATION



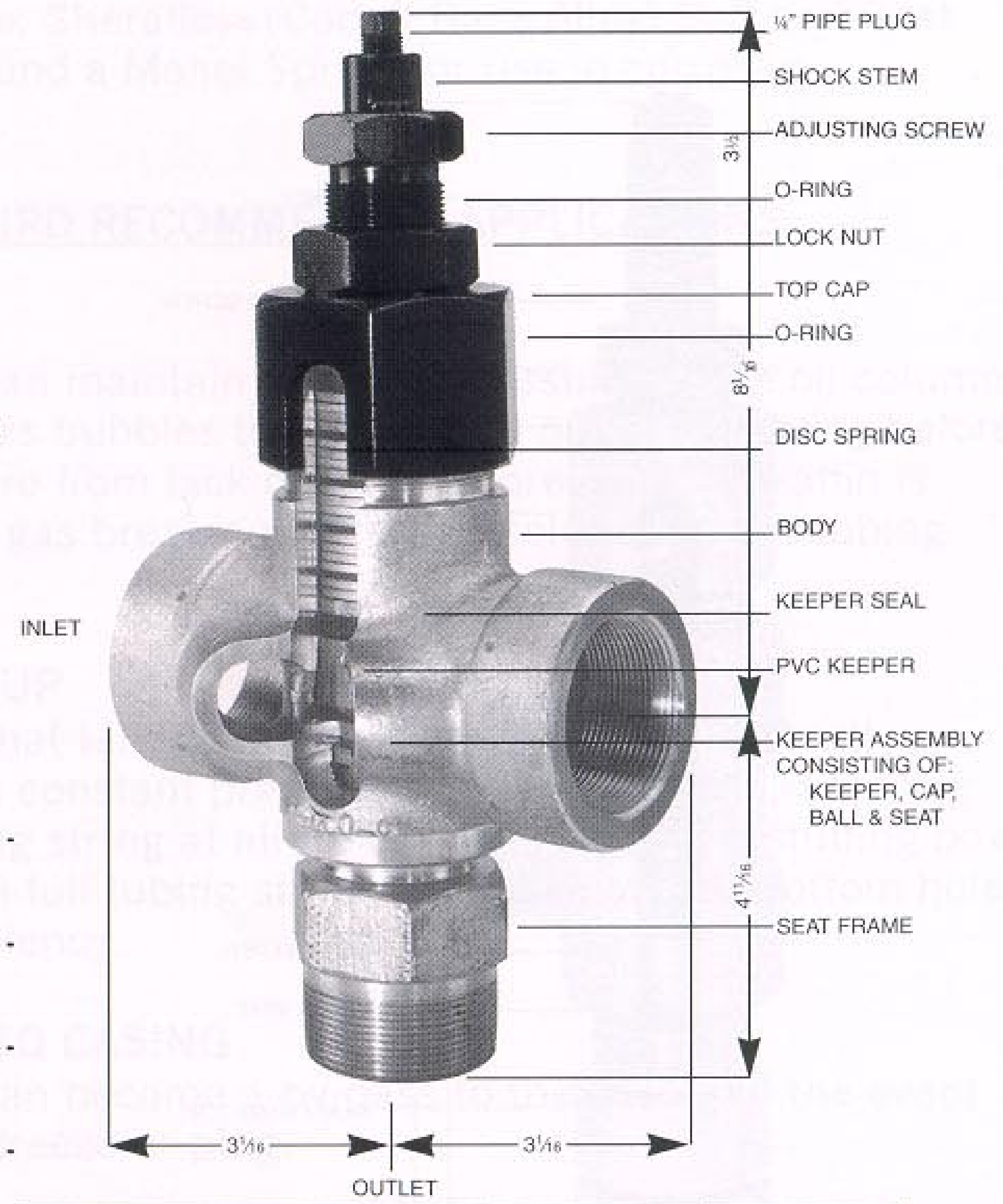
2" BY-PASS LIQUID RELIEF VALVE

762 7601-2-PVC

High Pressure ---- **High Volume**
To ---- 10,000# To ---- 210 GPM

SHOCK ABSORBER CONTROL

Designed for -- Large Volumes -- Smooth and Quiet Operation -- Continuous or Intermittent Operation



SHOCK ABSORBER: All relief valves tend to chatter and vibrate at certain pressures and volumes while operating. This By-pass Valve is equipped with an oil filled shock absorber. The dual chambers are connected by a restriction port, to control the rate of movement of the sealing mechanism, during operation.
DIAPHRAGM ACTION: The ball is mechanically fastened to the spring keeper. Pressure entering a side opening acts against the keeper seal, which lifts the ball off the seat, thereby giving a smooth, sensitive reaction to pressure change.

BODY: 2" Aluminum-Bronze, 316SS or Monel

BALL & SEAT: Sheralloy® Assembly (Cobalt Base Alloy)

SPRING: Disc Spring

INLET: 2" Female NPT, 1-1/2" Female NPT or Victaulic

OUTLET: 2" Male NPT or Victaulic

WEEP HOLE: Any flow from weep hole indicates keeper seal is worn and should be replaced.

USE ONLY AS DIRECTED
Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

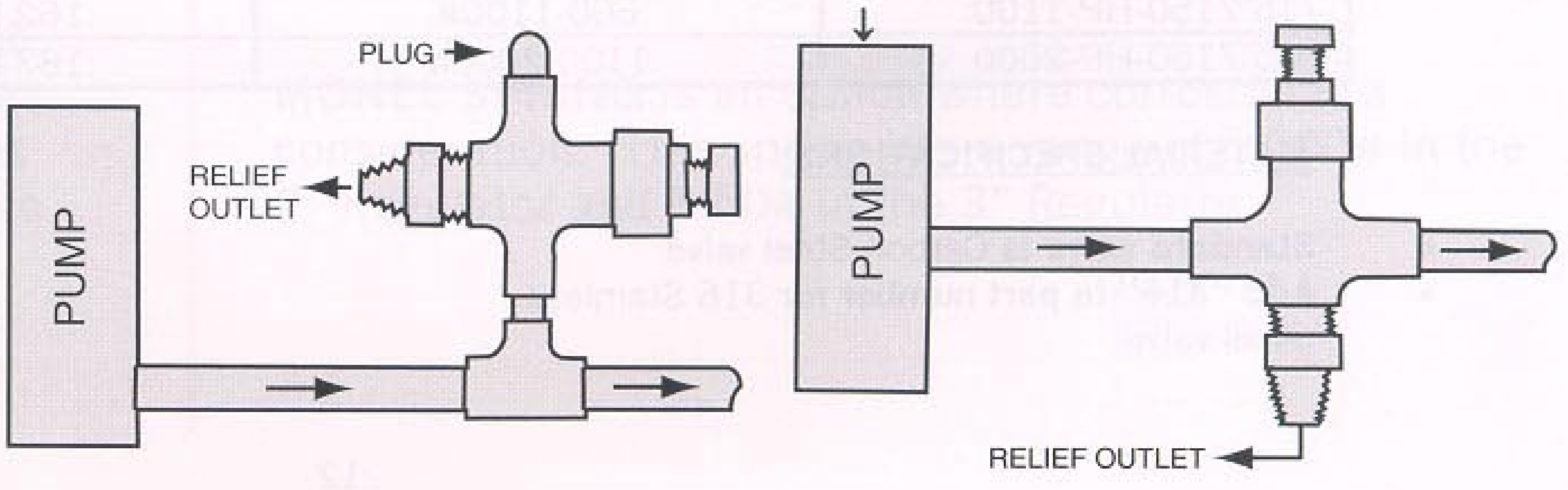
ALUMINUM-BRONZE PART NUMBER	WORKING PRESSURE RANGE	VOLUME (GPM) AT 25% OVER SET PRESSURE	SPRING ARRANGEMENT AND QUANTITY	SEAT ORIFICE DIAMETER	CAP COLOR CODE
762 7601-2-PVC-LLP	100-400#	15-75	Thin 1 X 1 (19)	1"	White
762 7601-2-PVC-LP	200-1000#	20-105	Reg 1 X 1 (16)	1"	Yellow
762 7601-2-PVC-MP	500-2000#	25-210	Reg 2 X 2 (18)	1"	Green
762 7601-2-PVC-HP	1000-3000#	30-180	Reg 3 X 3 (18)	1"	Red
762 7601-2-PVC-XHP	1500-4000#	20-60	Reg 4 X 4 (20)	1"	Black
BOTTOM INLET	(SEE INSTALLATION PARAGRAPH BELOW FOR "SHP" AND "UHP" MODELS)				
762 7601-2-PVC-SHP	1000-8000#	Not Verified	Reg 3 X 3 (18)	1"	Brown
762 7601-2-PVC-UHP	2500-10000#	Not Verified	Reg 3 X 3 (18)	3/4"	Beige

MATERIAL SPECIFICATIONS:

- **Standard valve is** Aluminum-Bronze valve.
- **Add "316" to part number for** 316 Stainless Steel valve.
- **Add "MM" to part number for** Monel valve.

METHODS OF INSTALLATION
All models of the PVC and SOS must be installed as illustrated except for the (PVC) SHP, UHP and the (SOS) SHP.
These two specials must be hooked up using the Male thread for the Inlet as shown on page 3.

METHODS OF INSTALLATION



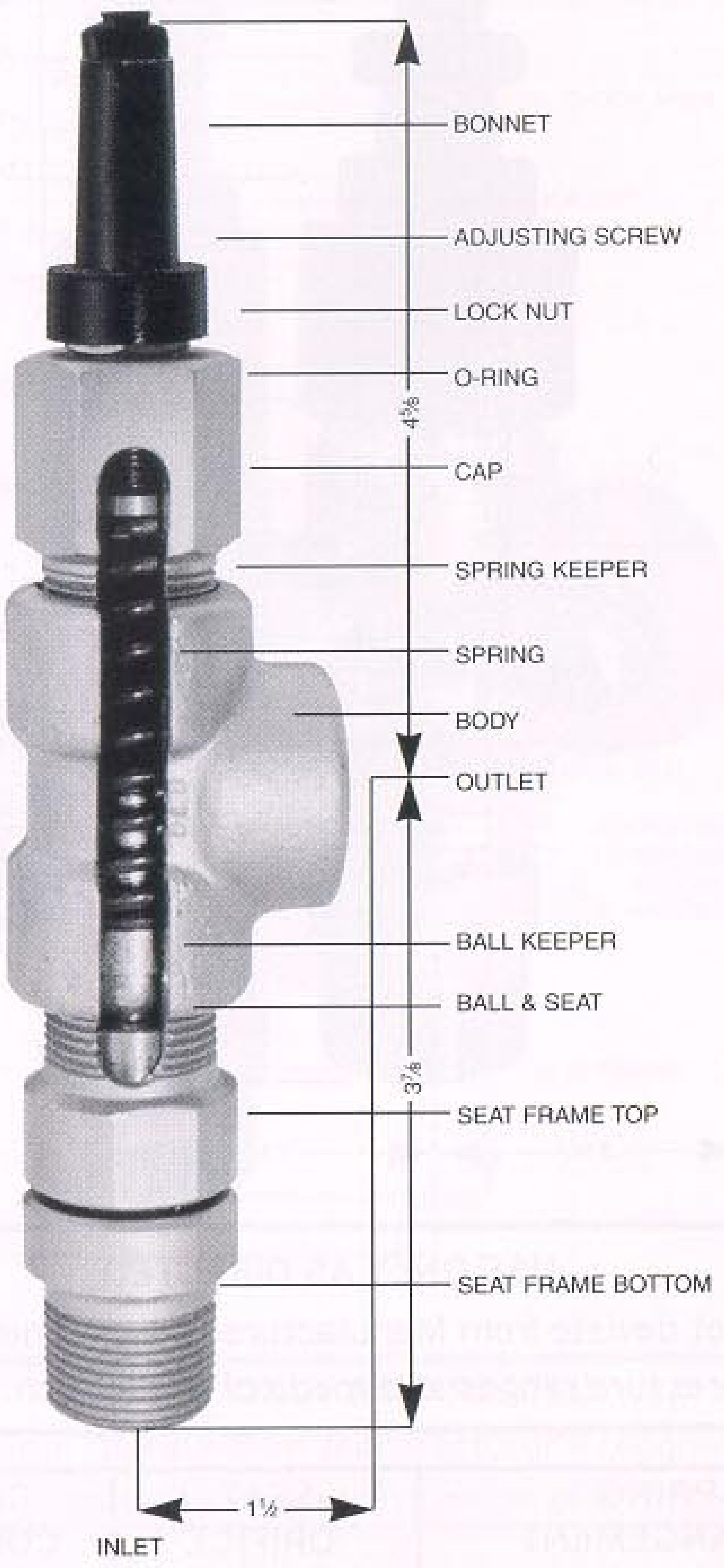
Baird®

1" PRESSURE RELIEF VALVE

BPR® Back Pressure Regulator

715 7150

Medium Pressure ---- Pressure Control ---- Medium Volume



Designed as an inexpensive 1" steel pressure control valve. **May be used as a relief or back pressure valve.** This valve was patterned from our 7100 1" gas valve, but the ball and seat are more durable for more severe liquid service. May also be used for gas.

BODY: 1" Carbon Steel or 316SS

BALL & SEAT: Sherralloy® Assembly (Cobalt Base Alloy) or Stainless

SPRING: Coil

INLET: 1" Male NPT, 3/4" Male NPT, 1" Female NPT, 1/2" Female NPT or 1" Male - 1/2" Female NPT

OUTLET: 1" Female NPT

MANUAL RELEASE LEVER ALSO AVAILABLE ON REQUEST

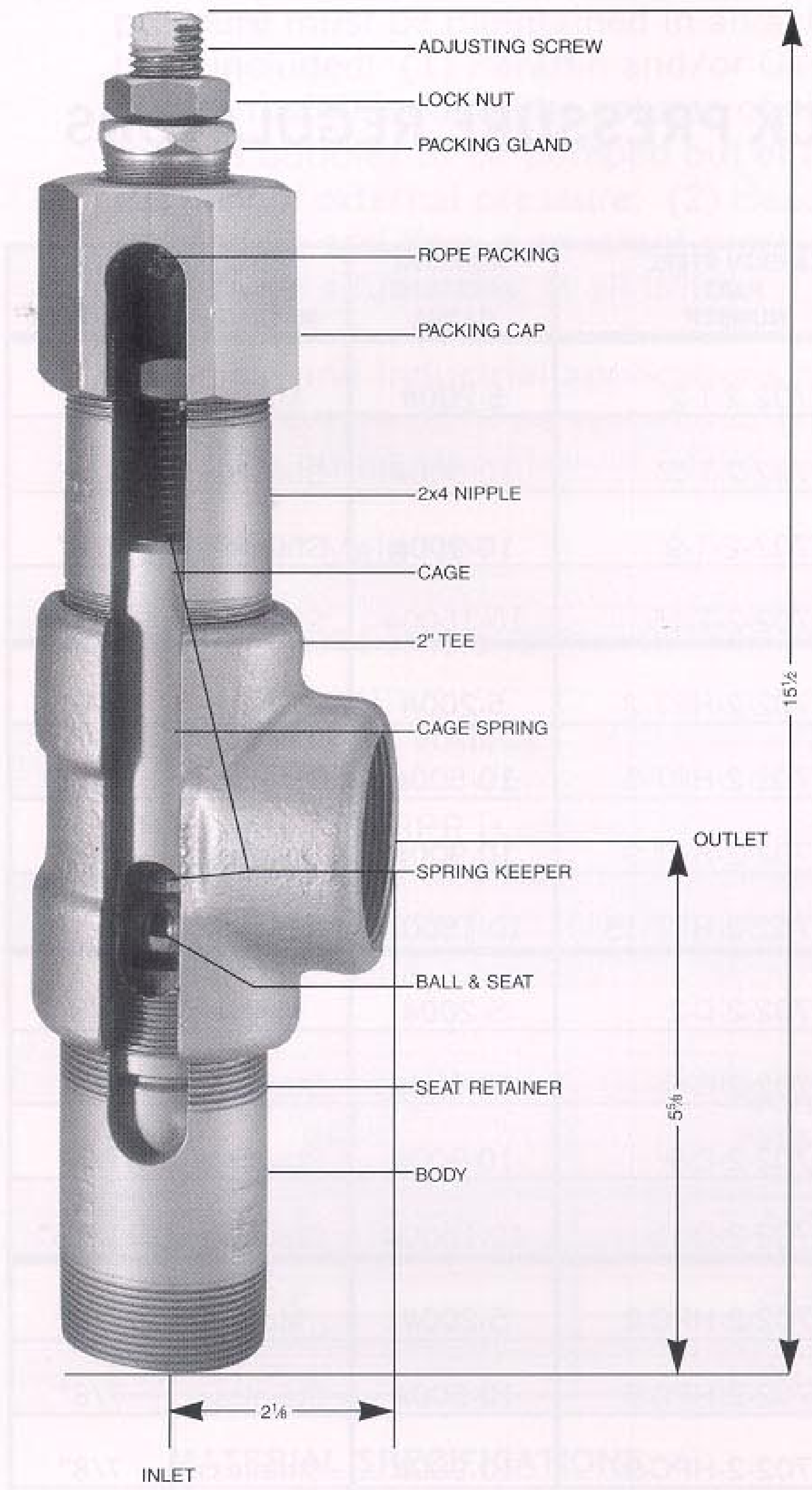
CARBON STEEL PART NUMBER	WORKING PRESSURE RANGE	COIL SPRING DIAMETER	SEAT ORIFICE DIAMETER
715 7150-100	10-100#	.091 Dia. Wire	1/2"
715 7150-300	100-300#	.125 Dia. Wire	1/2"
715 7150-550	300-550#	.162 Dia. Wire	1/2"
715 7150-1000	550-1000#	.187 Dia. Wire	1/2"
715 7150-HP-225	10-225#	.091 Dia. Wire	3/8"
715 7150-HP-600	225-600#	.125 Dia. Wire	3/8"
715 7150-HP-1100	600-1100#	.162 Dia. Wire	3/8"
715 7150-HP-2000	1100-2000#	.187 Dia. Wire	3/8"

MATERIAL SPECIFICATIONS:

- **Standard valve is** Carbon Steel valve.
- **Add "316" to part number for** 316 Stainless Steel valve.

2" and 3" BPR® Back Pressure Regulator (OLD STYLE)

770 7702-2 & 773 7702-3



The Baird "Old Style" BPR® was made in 1950. Ever since that time, the Baird Back Pressure Regulator has been universally accepted by the oil and gas industry as a sure solution to a variety of production problems. As a result, it is widely stocked in oil field supply stores.

Originally offered in a limited number of models and optional features, today the Baird BPR is available in several models with numerous options designed to serve a broad range of industry applications.

THE BAIRD BACK PRESSURE REGULATOR is offered in 2" and 3" for pressures up to 2500#. It is available in 2" X 11-1/2" thread or 3" line pipe thread. Other available options are: Sheralloy® (Cobalt Base Alloy) Ball and Seat Assembly and a Monel Spring for use in corrosive conditions.

BAIRD RECOMMENDED APPLICATIONS

PARAFFIN
The BPR can maintain a steady pressure on the oil column, allowing gas bubbles to be pumped out of the string before they rupture from lack of external pressure. Paraffin is caused by gas breaking out of the solution in the tubing string.

HEADING UP
For wells that tend to head up and flow, the BPR will maintain a constant pressure on the oil column, assuring a full tubing string at all times. This saves the stuffing box rubbers. A full tubing string will also increase bottom hole pump efficiency.

BY-PASS TO CASING
The BPR can become a by-pass to the casing in the event lead lines freeze or plug.

RELIEF - On separators and casing.

CHECK VALVES - With plastic lines and to insure "Full Line" operation with LACT units.

BAIRD OFFERS A CHOICE OF 3 SPRINGS FOR THE BPR's

(Interchangeable on 2" or 3" BPR's)

17-755 SPRING, as normally furnished, will hold pressures from 10-900#. If Regulator is equipped with small bore seat, this spring is approved for pressures up to 1500#. These ratings are for the 2" Regulator. 17-755 Spring in the 3" Regulator has a rating of 10-500#.

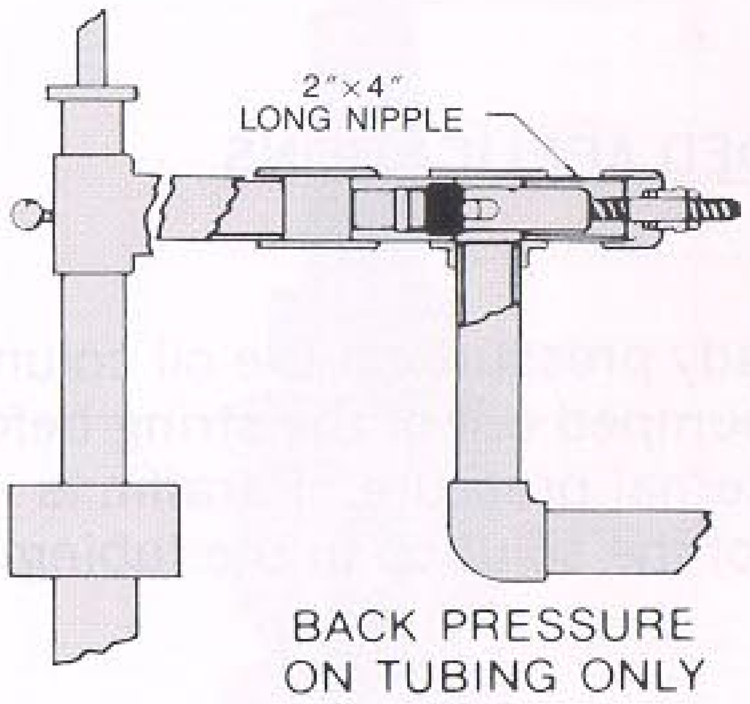
STAINLESS SPRING is an option for a range of 10-500# in the 2" Regulator and 10-200# in the 3" Regulator.

MONEL SPRING is an option where corrosion is a consideration. This spring has a range of 5-200# in the 2" Regulator and 5-50# in the 3" Regulator.

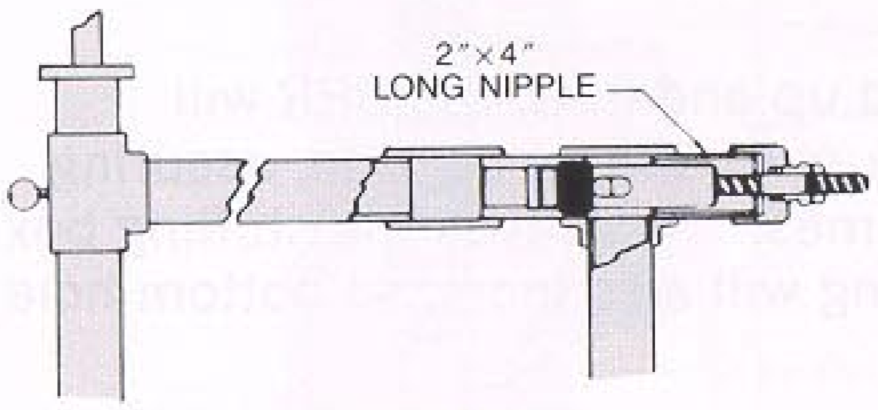
2" and 3" BPR® Back Pressure Regulator (OLD STYLE)

770 7702-2 & 773 7702-3

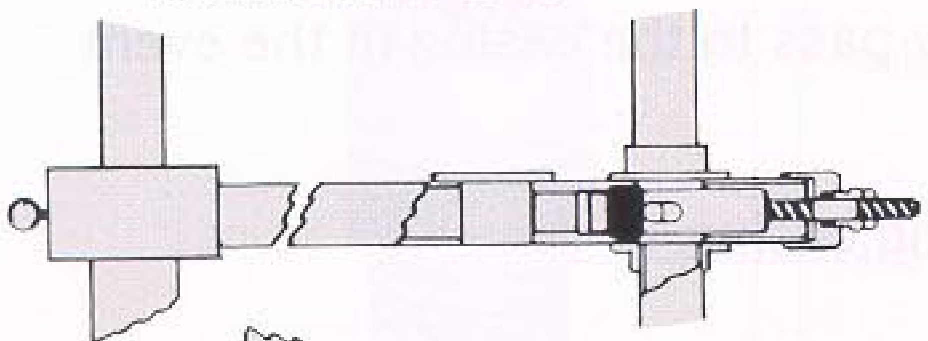
The Original BPR® TYPICAL HOOKUPS

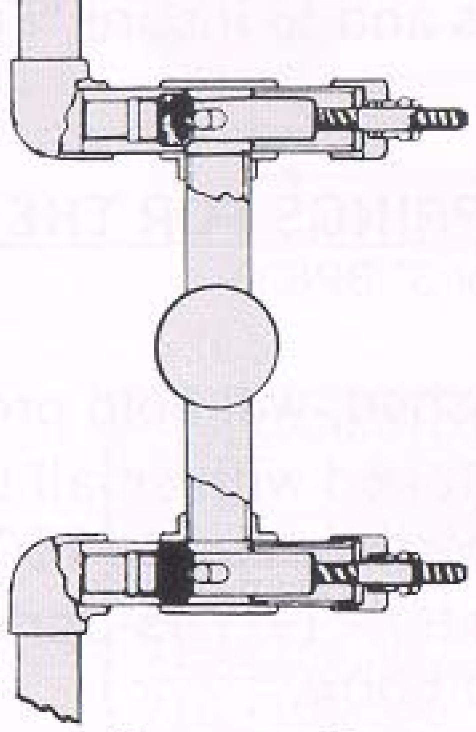


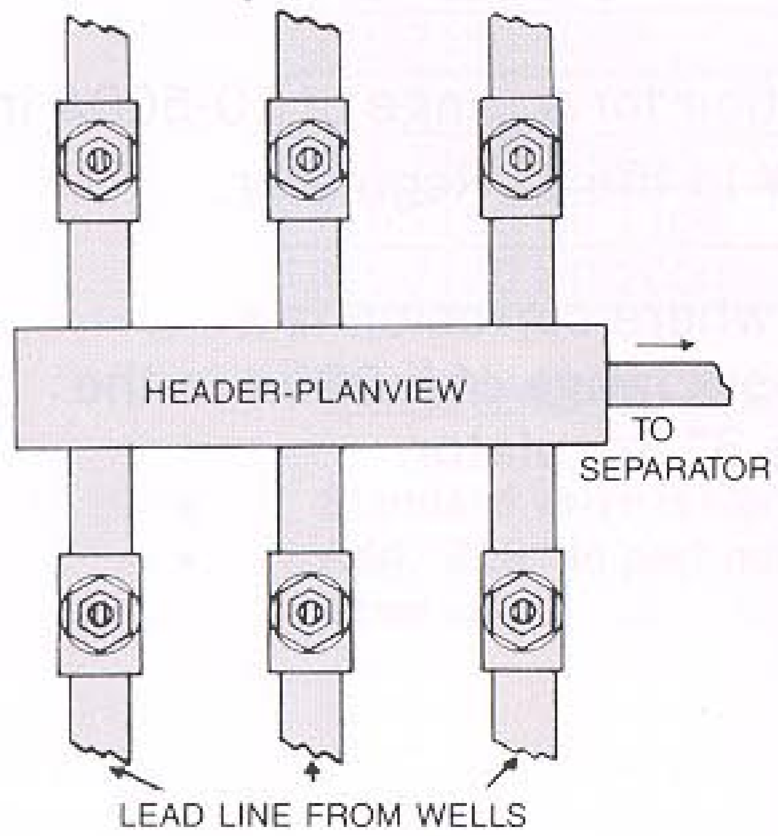
BACK PRESSURE ON TUBING ONLY



SEPARATE CONTROL OF TUBING AND CASING







770-7702-2-T
2" Series BPR
Outside Adjustment
w/std. Tee & Nipple
Carbon Steel / Wt. 13.00#

770-7702-2-HPT
2" Series BPR
Outside Adjustment
w/HP Tee & Nipple
Carbon Steel / Wt. 15.25#

770-7702-2-C
2" Series BPR
Outside Adjustment
w/Std. Cross & Nipple
Carbon Steel / Wt. 16.00#

770-7702-2-HPC
2" Series BPR
Outside Adjustment
w/HP Cross & Nipple
Carbon Steel / Wt. 19.50#

773-7702-3-T & HPT
3" Series BPR
Outside Adjustment
w/Std. Tee & Nipple
Carbon Steel / Wt. 31.00#
"HPT" Wt. 32.00#

BACK PRESSURE REGULATORS

CARBON STEEL PART NUMBER	WORKING PRESSURE RANGE	COIL SPRING MATERIAL	SEAT ORIFICE DIAMETER
770 7702-2-T-2	5-200#	Monel	7/8"
770 7702-2-T-5	10-500#	Stainless	7/8"
770 7702-2-T-9	10-900#	Stainless	7/8"
770 7702-2-T-15	10-1500#	Stainless	11/16"
770 7702-2-HPT-2	5-200#	Monel	7/8"
770 7702-2-HPT-5	10-500#	Stainless	7/8"
770 7702-2-HPT-9	10-900#	Stainless	7/8"
770 7702-2-HPT-15	10-1500#	Stainless	11/16"
770 7702-2-C-2	5-200#	Monel	7/8"
770 7702-2-C-5	10-500#	Stainless	7/8"
770 7702-2-C-9	10-900#	Stainless	7/8"
770 7702-2-C-15	10-1500#	Stainless	11/16"
770 7702-2-HPC-2	5-200#	Monel	7/8"
770 7702-2-HPC-5	10-500#	Stainless	7/8"
770 7702-2-HPC-9	10-900#	Stainless	7/8"
770 7702-2-HPC-15	10-1500#	Stainless	11/16"
773 7702-3-T-50	5-50#	Monel	1-5/16"
773 7702-3-T-200	10-200#	Stainless	1-5/16"
773 7702-3-HPT-400	10-400#	Stainless	1-5/16"
773 7702-3-HPT-500	10-500#	Stainless	1-5/16"

MATERIAL SPECIFICATIONS:

- **Add "SH" to part number for** Sheralloy® (Cobalt Base (Alloy) Ball & Seat Assembly.

USE ONLY AS DIRECTED
Do not deviate from Manufacturer's recommended pressure ranges and mode of installation.

2" BPR® Back Pressure Regulator (NEW STYLE)

772 2-T

The Baird 772 BPR Back Pressure Regulator was designed for normal or heavy duty service in any application where an upstream fluid pressure must be maintained in an active flowing system. Applications have included: (1) Paraffin and/or Gas Lock where a steady pressure can be maintained on the column of oil within the tubing, thus allowing the gas bubbles to be pumped out of the string before they rupture from the lack of external pressure; (2) Heading Up for wells that have a tendency to head up and flow, a constant pressure maintained on the oil column will assure a full string at all times.

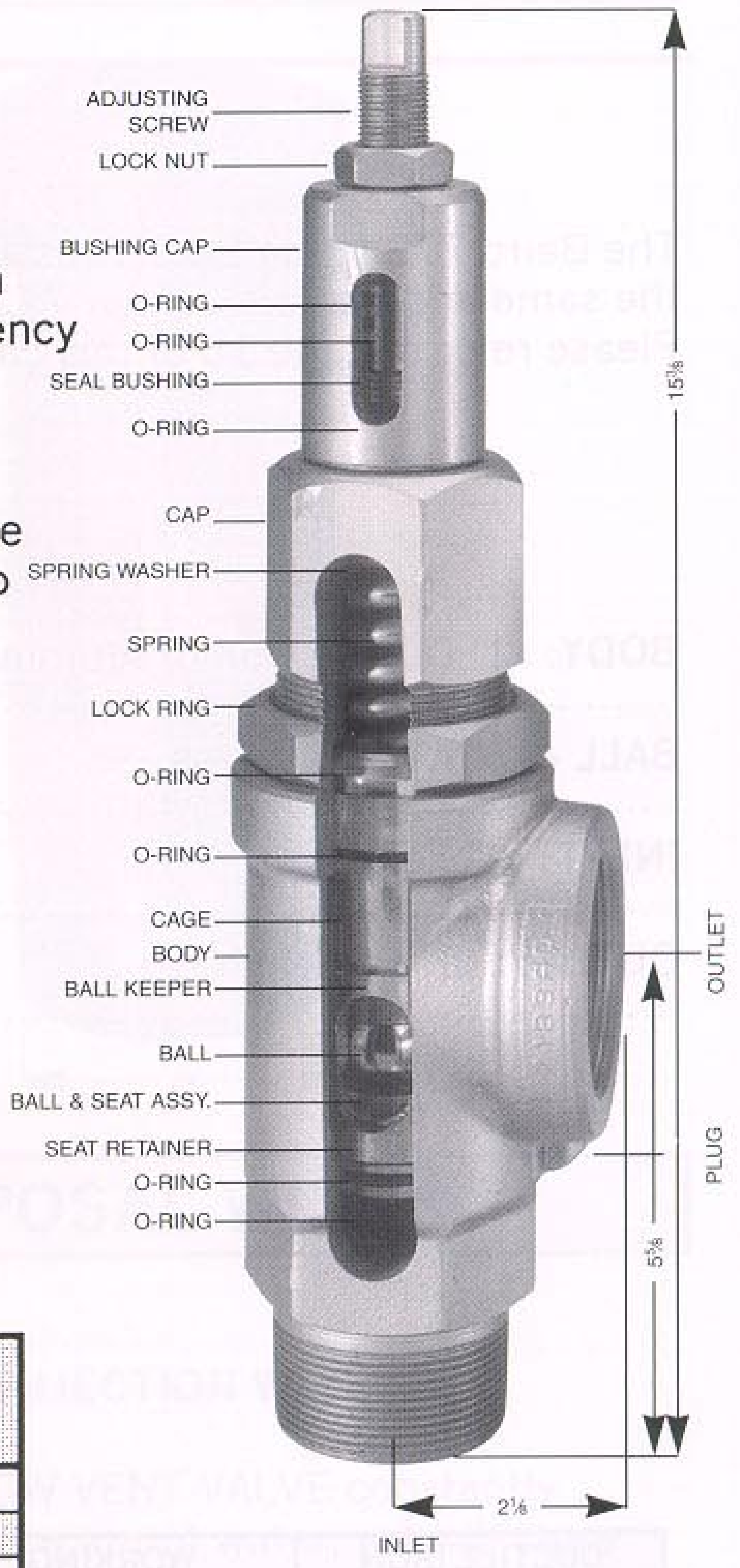
Chemical and Industrial applications range from use as a brine discharge valve in reverse osmosis systems to an Inline Back Pressure Regulator to eliminate pump starvation in a fluid pumping system.

INLET: 2" Male NPT

OUTLET: 2" Female NPT

TEMPERATURE RANGE: -65° F to +300° F

The Baird 772 BPR is offered in four material combinations and five pressure ranges to accommodate from normal to severe corrosive environments with 5-2500# PSI Set Pressures. Available in Single Outlet (T) or Dual Outlet (C) for Back Pressure Regulator multiple hook-ups.



DUCTILE IRON PART NUMBER	WORKING PRESSURE RANGE	SEAT ORIFICE DIAMETER
772 2-T-2-P	5-200#	7/8"
772 2-T-5-P	10-500#	7/8"
772 2-T-9-P	25-900#	7/8"
772 2-T-15-P	200-1500#	11/16"
772 2-T-25-P	1500-2500#	11/16"

MATERIAL SPECIFICATIONS:

- **Standard valve is** Ductile Iron with Stainless Ball & Seat for normal conditions.
- **Add "SH" to part number for** Ductile Iron with Sheralloy® (Cobalt Base Alloy) Ball & Seat for improved life under normal conditions. Chrome silicone spring.
- **Add "AB" to part number for** Aluminum-Bronze with Stainless trim and Sheralloy® (Cobalt Base Alloy) Ball & Seat for optimum corrosion or salt water environments.
- **Add "316" to part number for** 316 Stainless Steel with Sheralloy® (Cobalt Base Alloy) Ball & Seat for optimum corrosion resistance.

NOTE: Sheralloy® is a Cobalt Base Alloy - Non-Corrosive Non-Magnetic - 59 Rockwell/C Hardness.

Fully adjustable and field repairable. To order repair kit, add kit number to part number.
For example: 772-2-T-2-P-K2

REPAIR KITS:

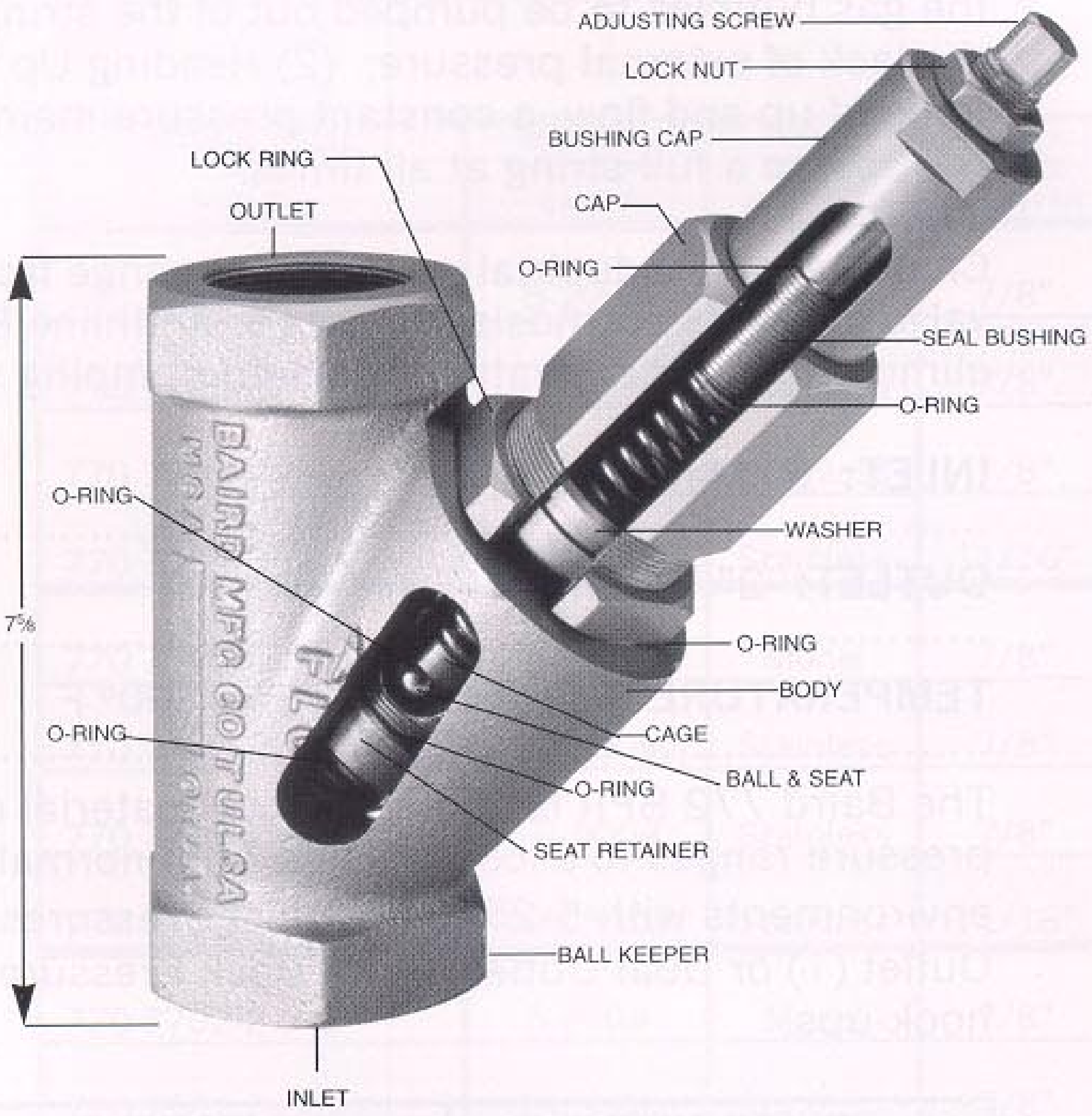
K1 Includes all O-rings.
K2 Includes all O-rings and Ball & Seat.
K3 Includes all O-rings, Ball & Seat, Spring, Ball Keeper and Spring Washer.
K4 Includes all O-rings, Ball & Seat, Spring, Ball Keeper, Seat Retainer, Cage and Spring Washer.

NOTE: When converting to or from a 772-2-T-25-P, the K4 is required.
(If a pressure range change is desired, order the K3 Kit)

2" INLINE BPR® Back Pressure Regulator (NEW STYLE)

772 2-INL

The Baird 772 Inline Back Pressure Regulator has the same applications as our 772-2-T Type Regulator. Please refer to page 15 of this catalog for information.



BODY: 2" Ductile Iron or Aluminum-Bronze

BALL & SEAT: Stainless

INLET: 2" Female NPT

OUTLET: 2" Female NPT

DUCTILE IRON PART NUMBER	WORKING PRESSURE RANGE	SEAT ORIFICE DIAMETER
772 2-INL-D-2	5-200#	7/8"
772 2-INL-D-5	10-500#	7/8"
772 2-INL-D-9	25-900#	7/8"
772 2-INL-D-15	200-1500#	11/16"
772 2-INL-D-25	1500-2500#	11/16"

MATERIAL SPECIFICATIONS:

- **Standard valve is** Ductile Iron with Stainless Ball & Seat for normal conditions.
- **Add "AB" to part number for** Aluminum-Bronze with Stainless trim and Sherallloy® (Cobalt Base Alloy) Ball & Seat for corrosive or salt water environments.

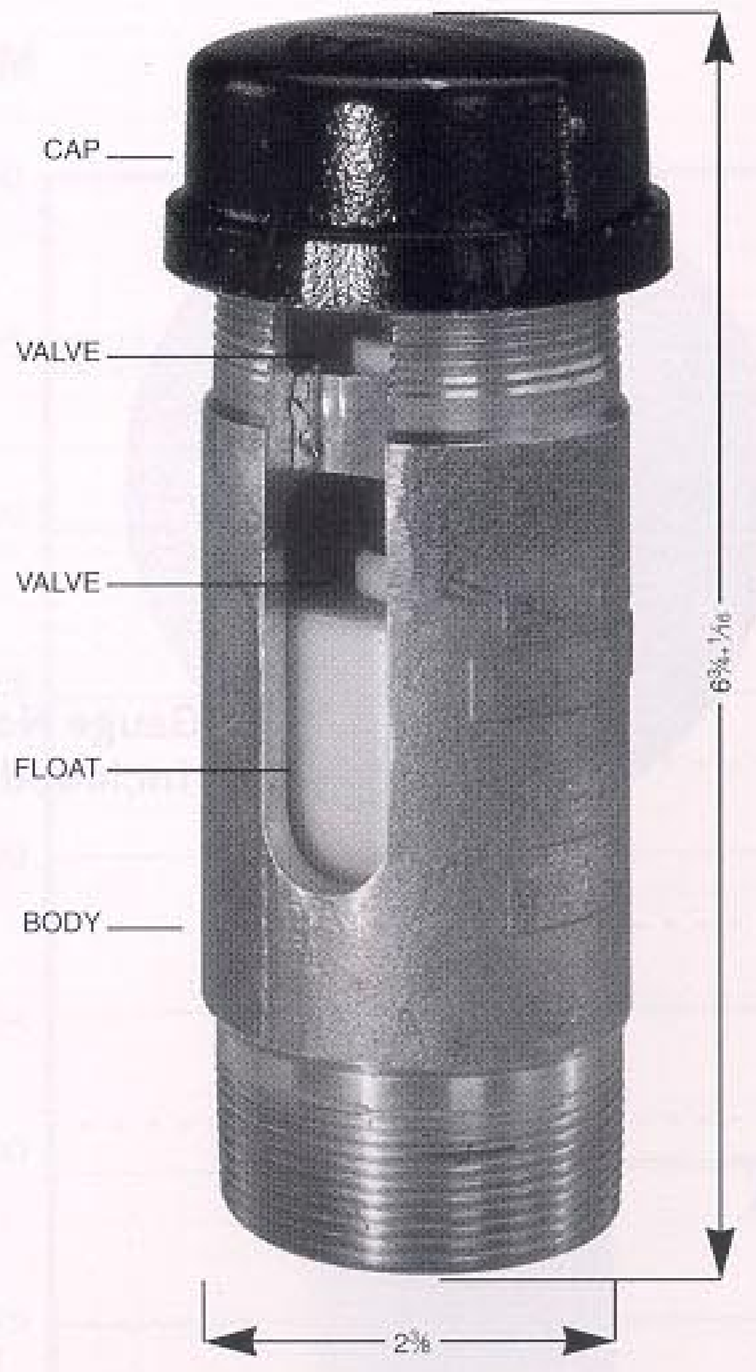
REPAIR KITS:

K1 Includes all O-rings.
K2 Includes all O-rings and Ball & Seat.
K3 Includes all O-rings, Ball & Seat, Spring, Ball Keeper, and Spring Washer.
K4 Includes all O-rings, Ball & Seat, Spring, Ball Keeper, Seat Retainer, Cage, and Spring Washer.

Note: When converting to or from a 772-2-INL-D-25, the K4 Kit is required.
(If a pressure change is desired, order the K3 Kit)

2" OVERFLOW VENT VALVE

276 1301-2 & 277 1305-B-2



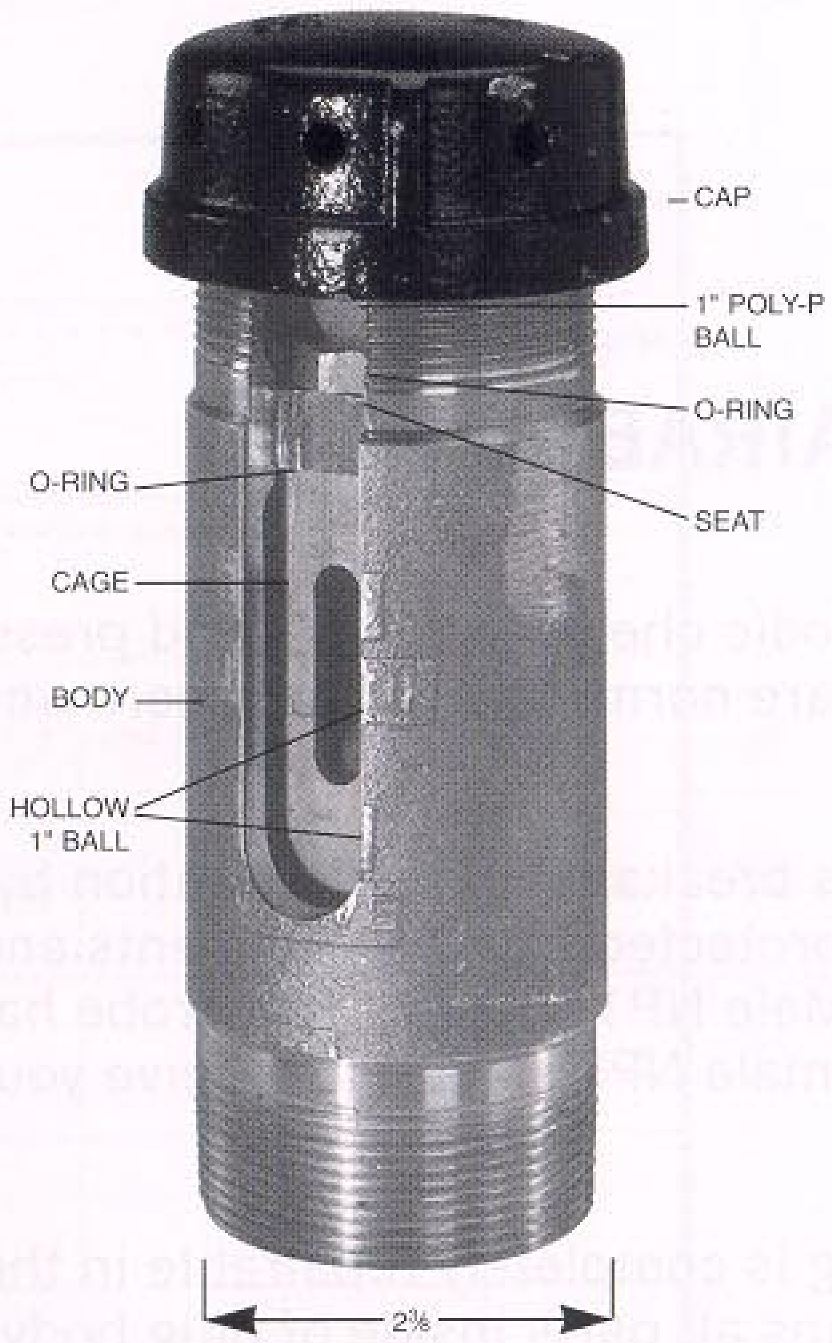
← **PART NO.**
276-1301-2

Made of Aluminum-Bronze
with a Polyethylene HD float,
Nitrate O-ring and
Polyethylene HD valves.
Tested to 1000#

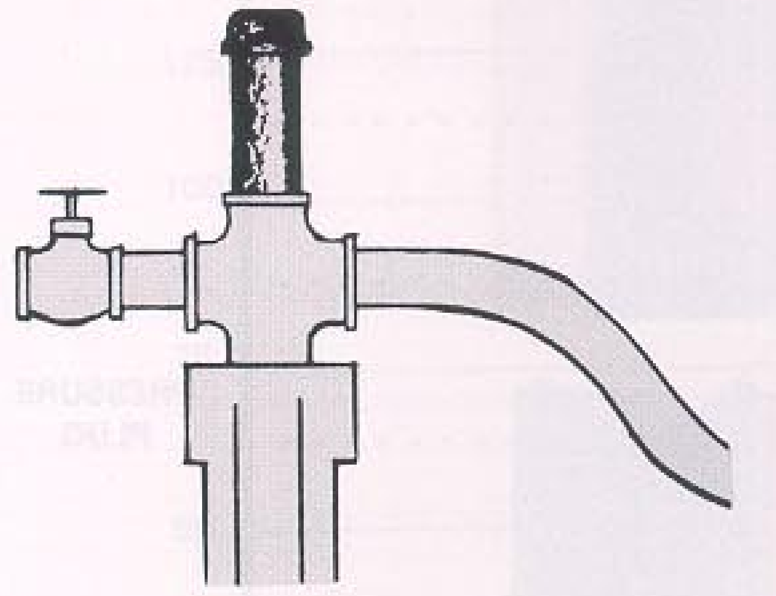
PART NO. →
277-1305-B-2

FOR EXCESSIVE GAS

Patent Pending
Made of Aluminum-Bronze
with Brass Cage & Seat
for excessive gas flow.
Tested to 1000#

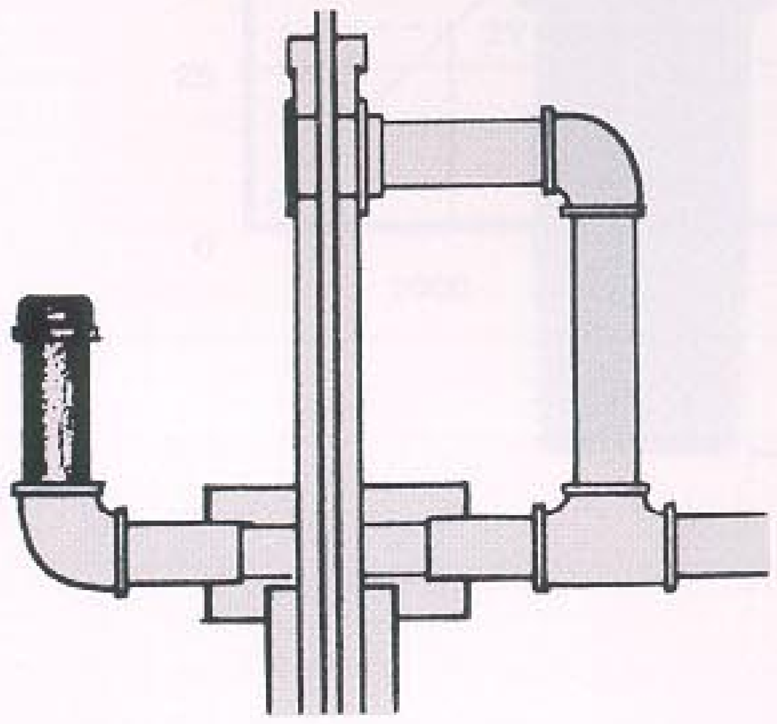


FOR WATERFLOOD AND SALTWATER DISPOSAL WELLS



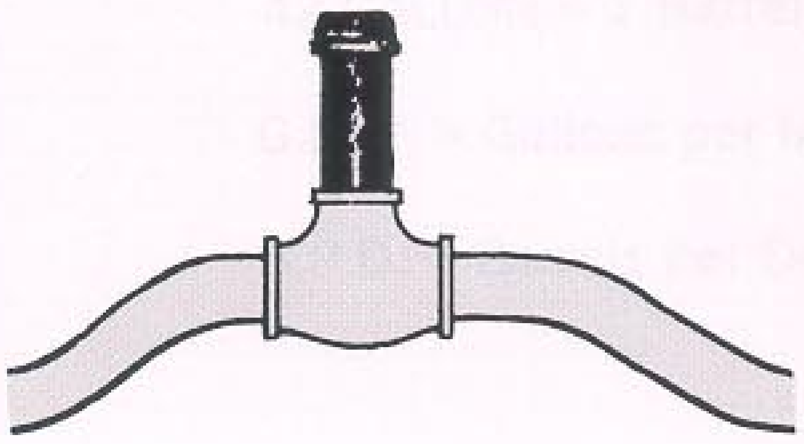
← FOR DISPOSAL OR INJECTION WELLS...

The BAIRD OVERFLOW VENT VALVE constantly bleeds off air and gas from the in-put water, yet will close from the top side should the well go on vacuum. This prevents air from entering the well.



← FOR PUMPING WELLS...

When it is desirable to vent the casing for efficient production procedure, the BAIRD OVERFLOW VENT VALVE acts as a safety valve. Should the fluid rise in the casing, the plastic float will also rise, creating a tight shut-off to prevent the loss of fluid around the well head.

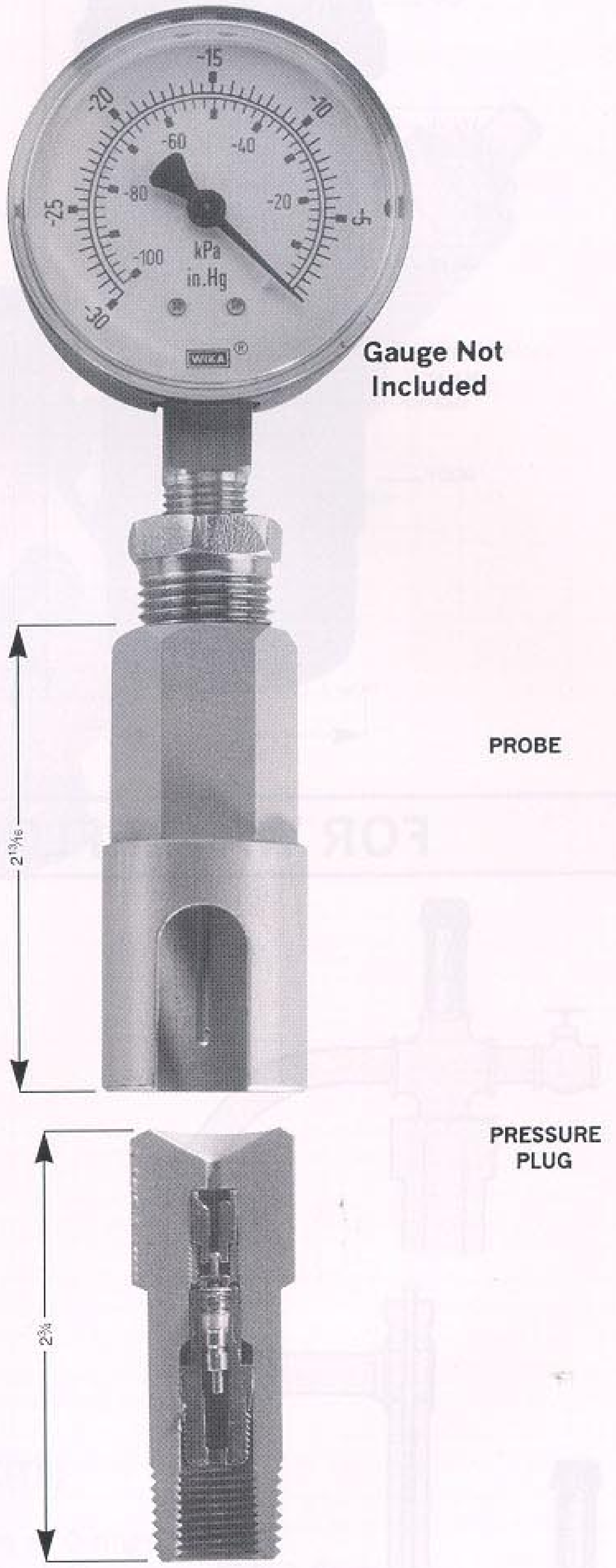


← FOR SALTWATER LINES...

When installed at high spots on long lines, the BAIRD OVERFLOW VENT VALVE will bleed off the air, preventing air pockets, which restrict fluid flow.

PRESSURE PLUG and PROBE

To Eliminate PERMANENT GAUGES



REPAIRABLE PLUG

For periodic checking of wellhead pressure or in any systems where gauges are normally used as a permanent device.

Prevents breakage and deterioration by using one master gauge. The plug is protected from the elements and has both 1/4" Female NPT x 1/2" Male NPT thread. The probe has either 1/4" Female NPT or 1/2" Female NPT thread to receive your gauge.

The plug is completely repairable in the field. A repair kit is available. It contains all parts inside of plug body.

The tool is made of 303 Stainless Steel. The valve assembly is the same as used in ordinary high pressure equipment. **Assembly has been tested to 5000#.**

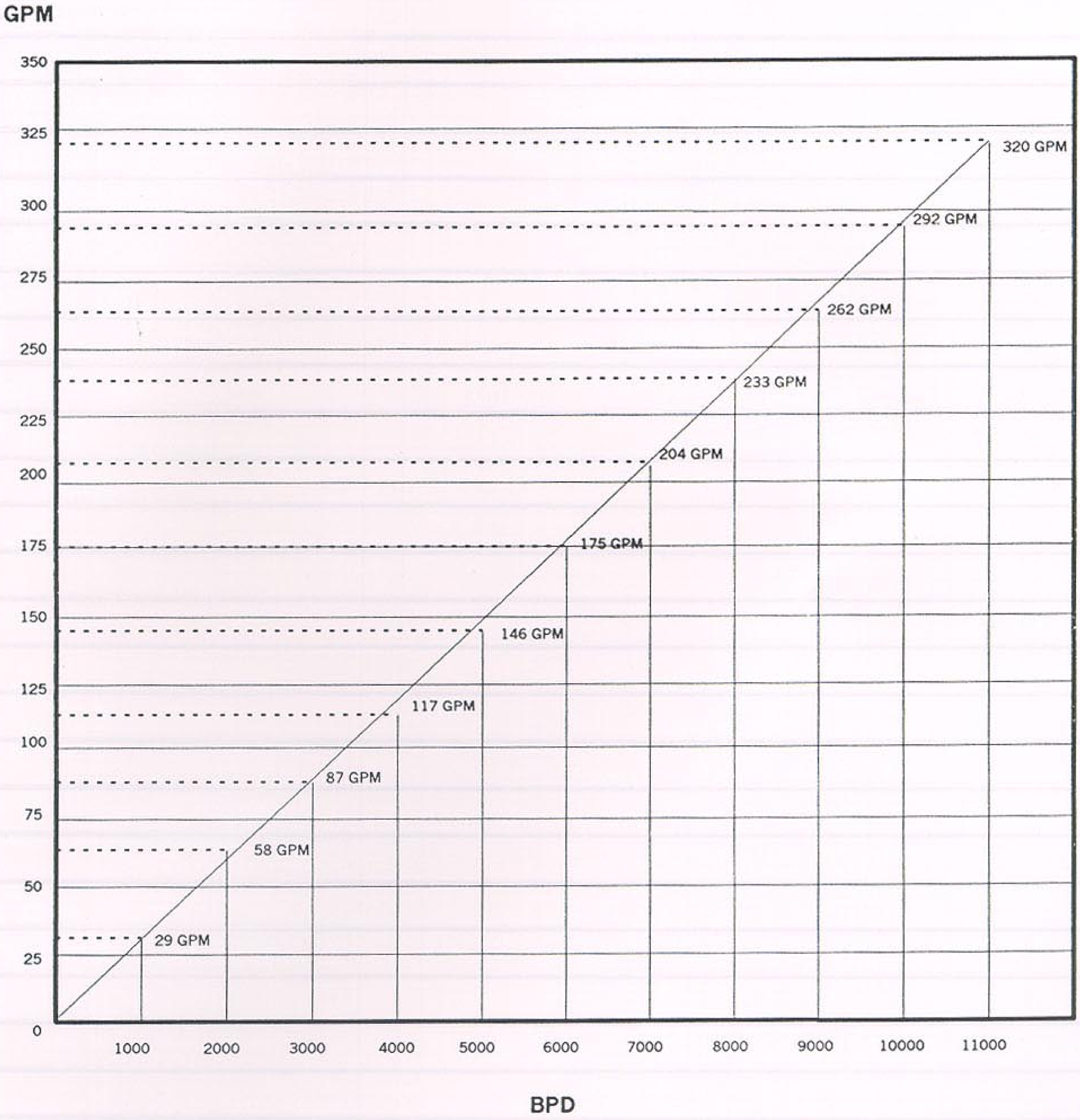
303SS PART NUMBER	DESCRIPTION AND SIZE
265 2302	PRESSURE PLUG only 1/4" Female NPT x 1/2" Male NPT
265 2308	PROBE only 1/4" Female NPT
265 2309	PROBE only 1/2" Female NPT
265 2319	REPAIR KIT for Pressure Plug only

MATERIAL SPECIFICATIONS:

- **Add "316" to part number for** Stainless Steel pressure plug or probe.

CONVERSION CHART

GPM to BPD



42 GALLON = 1 Barrel of Oil

G.P.M. = Gallons per Minute

B.P.D. = Barrels per Day