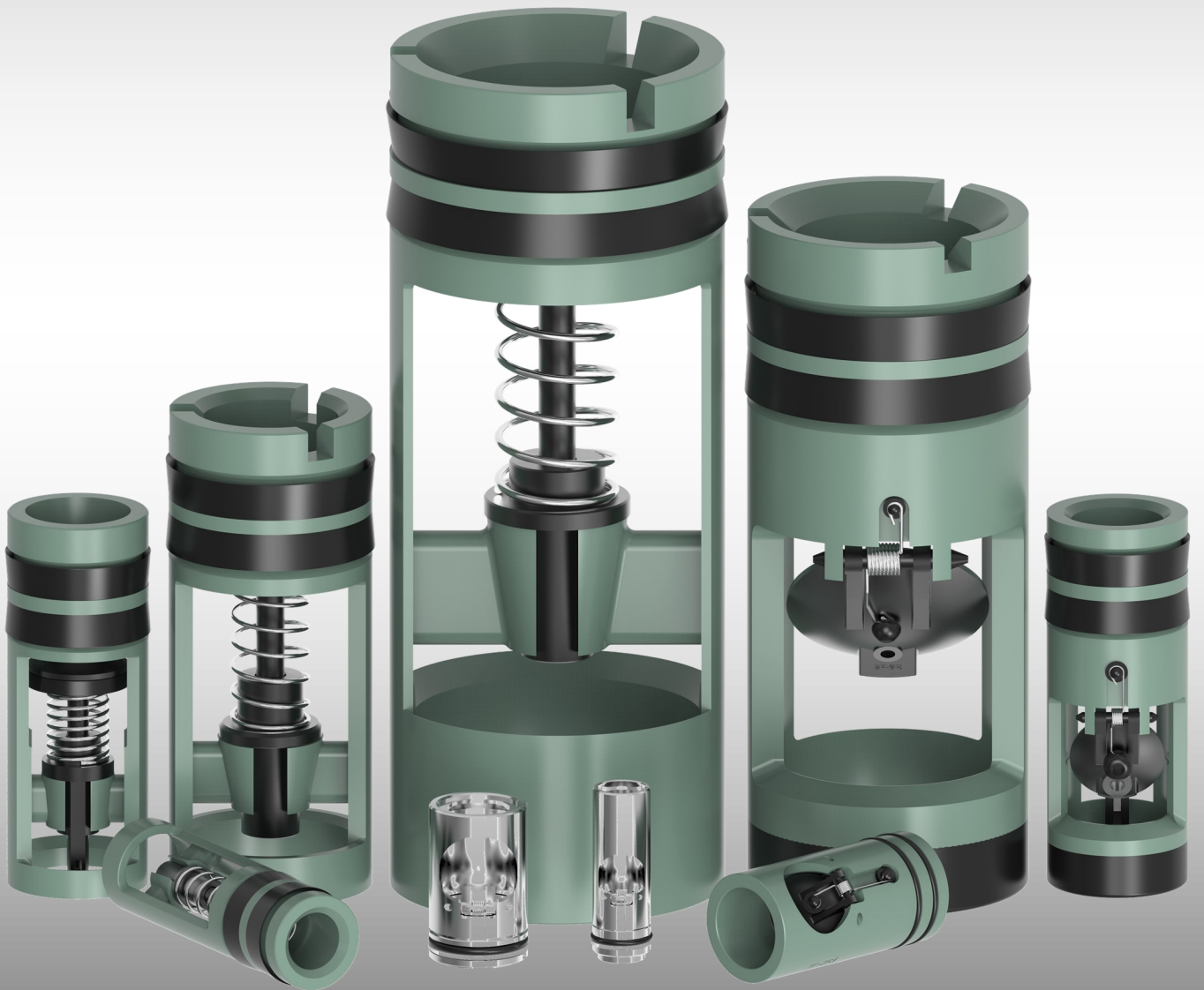




Keystone
ENERGY TOOLS

FLOAT VALVE CATALOG



Bridge the gap.

ABOUT US



Keystone Energy Tools was established to provide the industry with support and stability from an **API 8C** certified manufacturer with over fifty years of combined experience in designing, manufacturing, and delivering high-quality oilfield tools. In addition to providing complete in-house **certification**.

With our years of experience of **bridging the gap** between quality and service, customers and distributors, and performance and economy, Keystone understands the critical requirements of the oil and gas industry, from on-time delivery to competitive pricing and product availability.

By using the latest in 3D modeling for product design and by staying current with the rapid advances in manufacturing technology and quality-assurance standards, Keystone is able to manufacture and produce the most reliable products on the market today.

Our experienced sales team is dedicated, always here to support our customers and distributors and ready to answer any questions that you have regarding our products. We pride ourselves on same-day quotes and expedited shipping.

OUR NAME SAYS IT ALL:

keystone (kē'stōn')

1. the topmost stone of an arch
2. a central cohesive source of stability
3. something on which associated things depend for support

HISTORY:

Keystone was created in 2009 by Joe Ramey, founder of Access Oil Tools. Our focus is to build long-term relationships with our customers and distributors and to provide them with quality products and service with one phone call or e-mail.

The float valve product line was established in 2009, and in 2011 our product line was expanded to include **elevators, slips, rotating mouse holes, safety flex handles for slips, safety handles for tongs, safety clamps, baffle plates, valve pullers, ST-80' Dies and Inserts, stabbing guides, tong die drivers, tong blocks, becketts and bails, mud screens, and automated slip-lifting devices.**

TERMS AND CONDITIONS

QUOTATIONS

All quotations are in US dollars and are F.O.B. Company's point of manufacturing origin, unless otherwise expressly stipulated. Quotations are valid for 30 days unless otherwise stated. Lighterage, wharfage or landing charges, dues, duties, or any other charges at destination are not included in quotations or indicated by list prices unless specifically stipulated. List price and discounts on all products are subject to change without notice. Prices in effect at time of shipment or delivery whether higher or lower will prevail.

TERMS OF PAYMENT

Unless otherwise specifically stated on the invoice, terms of payment are NET THIRTY DAYS following the date of the invoice and are subject to approved credit. Payments are accepted in US dollars only. Boxing, cartage, freight, insurance, and handling are always net. Interest at the maximum rate allowable by applicable law may be charged on past due accounts. Keystone Energy Tools, LLC (K.E.T.) reserves the right to revoke credit and suspend delivery if customer fails to make payment of an invoice when due.

DELIVERY

Our responsibility ceases upon delivery to any common carrier, and we do not, unless previously instructed, insure shipments beyond the point of delivery to such carrier. We make every effort to ship all materials within the time promised by us, but we do not guarantee to do so, and all such promises are subject to delays occasioned by causes beyond reasonable control.

PENALTY CLAUSES

No penalty clause of any description in any specification of an order will be effective unless approved in writing by an officer of K.E.T., LLC.

INSURANCE

We will place insurance as nearly as possible in accordance with our customer's written instructions but do so solely on behalf of our customers and assume no liability for placing, effectiveness, or otherwise in connection with such insurance or in case of breakage, damage or loss.

SHIPPING WEIGHT

All weights listed are approximate net weight only, unless otherwise specified, and do not include boxing. For approximate gross weight add 10% to net weight.

CANCELLATIONS AND RETURNS

Orders for equipment of special design, size, or materials are not subject to cancellation, and all other orders are subject to a cancellation charge after having been accepted by the prescribed company office or authority. Equipment altered or made to customer's specifications is subject to special prices and conditions.

WARRANTY

K.E.T., LLC. warrants goods of our manufacture for 12 months after date of shipment to be free from any defects in material and workmanship under normal use and service when installed, used, and serviced in the manner provided and intended by K.E.T., LLC. K.E.T.'s obligation under this warranty is limited to repair or replacement, at its option, if any products manufactured by K.E.T., LLC. and are returned F.O.B. to our plant and which we determine to be defective

Under no circumstances shall K.E.T., LLC. be liable for any consequential, special, incidental, punitive, or other damages resulting from or caused by any defective materials, products, or supplies, no charge for labor, transportation or other expense involved, to either repair allegedly defective goods outside our plant, or any other charge be allowed.

THIS IS THE SOLE WARRANTY OF K.E.T., LLC. AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY AS TO THE MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE.

TABLE OF CONTENTS

	Page No.
About Us	2
Terms & Conditions	3
PRODUCTS	
Float Valves	9-18
Float Valve Overview	5
Plunger Type Valves	6
Flapper Type Valves	7-8
Dimensional Data	9
Tool Joint Specification	10
Bit Sub Information	11
Float Valve Repair Kits	12
Valve Pullers	13
Dual Flapper Check Valves	14
Float Valve Ordering Information	15-20
Baffle Plates	21
Mud screens	22
Contact Information	23



FLOAT VALVE OVERVIEW

Valve Body

Keystone cages are manufactured for today's increasingly harsh drilling environment. All cages are cast out of alloy steel and are heat treated to a hardness equal to or less than 22 Rockwell C (≤ 22 Rockwell C 2 HR) to address the corrosive effects of hydrogen-sulfide gas (H₂S). Keystone's integral cages are manufactured from one-piece casting and are not welded together the way some other competitors produce their cages. This means that you receive a superior and more reliable cage.

*Stainless steel cages are available upon request.

Integral Plunger Valves

All of Keystone's plunger valves are machined from one solid piece of material to produce a more reliable float valve and reduce the risk of down hole valve failure. Other leading manufacturers use two separate pieces of material to construct their plungers, which are invariably either shrunk fit, screwed, or welded together.

Flapper Valves

All Keystone standard-service flapper valves are made of low-alloy steel and then case hardened for wear resistance, thus giving a longer operating life.

Elastomers

Available elastomers are nitrile butadiene (NBR, Buna-N) and Viton® (fluoroelastomer, FKM)(H₂S Applications), Aflas for steam applications.

Application	Material	Temperature
Standard	Nitrile(Buna)	212 Deg F
Hi-Temp	Viton	450 Deg F
H ₂ S	Viton	450 Deg F
Steam	Aflas	475 Deg F

Sour-Gas (H₂S) Service

Available in both F and G models.

Springs

Model G and F utilize high alloy springs as follows; Elgiloy, Inconel® or stainless steel springs come standard on all our valves. These high alloy springs are good for sour gas (H₂S) applications and are significantly more resistant to corrosion when compared with the standard-service springs provided by most other manufacturers.

Interchangeability

All Keystone drill-pipe float valves and replacement parts are manufactured to standard industry dimensions and are interchangeable with other major manufacturers' parts.

Rated Operating Pressure

Standard valves - 7,500 PSI working pressure

High pressure valves - 10,000 & 15,000 PSI working pressure

- **10K & 15K Model F Valves**

- Stainless Steel cage and parts

- **10K & 15K Model G Valves**

- Cast alloy steel with stainless steel flapper and seal retainer.

Pressure-Tested With Test Charts

Keystone is the first drill pipe float valve manufacturer to offer a certified, pressure- tested float valve. Since 2017 we have offered and sold pressure tested [float valves](#) with high-and-low pressure test charts to our customers, upon request.

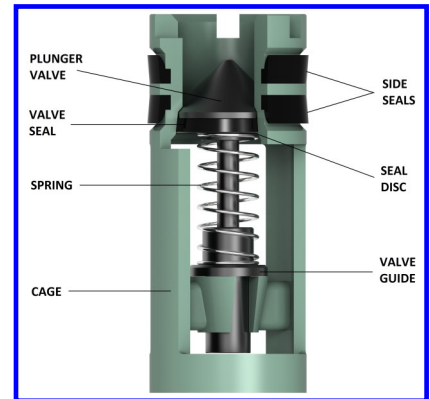
Note: If multiple Model G or Model F float valves are to be run in a string, it is **not** recommended that they be stacked. They should be separated to prevent the top valve from crushing. Coil tubing float valves may be stacked when they are run.

PLUNGER-TYPE VALVES

MODEL
F

PLUNGER TYPE-STANDARD

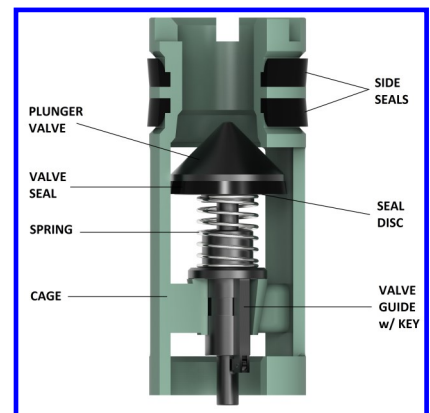
The Model F is a plunger-type float valve that provides a positive instantaneous shut off, providing constant fluid control while drilling. The Model F is a reliable and economical selection under standard drilling operations



MODEL
FC

PLUNGER TYPE-AUTOMATIC FILL

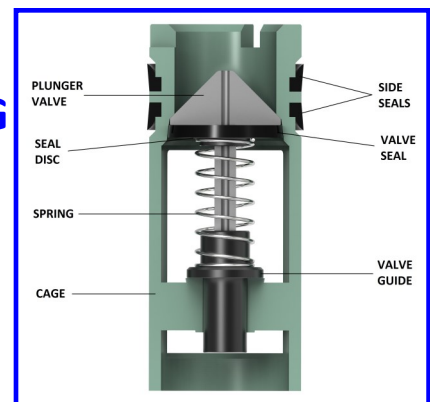
The Model FC Automatic-Fill plunger-type float valve incorporates a unique key assembly and slotted valve stem to hold the plunger open during run in of the drill pipe and allows the pipe to fill from the bottom, saving time, reducing mess, and avoiding hazards. The plunger is automatically



MODEL
FA

PLUNGER TYPE-PRESSURE MONITORING

The Model FA Pressure-Monitoring plunger-type float valve has a special port running through the plunger of the float valve. This valve is used when monitoring the bit head for gas pressure and allowing differential pressure measuring when required. The port also permits partial automatic fill during run in.



FLOAT VALVE INSTALLATION: Simply lubricate the side seals and slide the float valve into the cavity of the float sub or the bored-out drill collar.

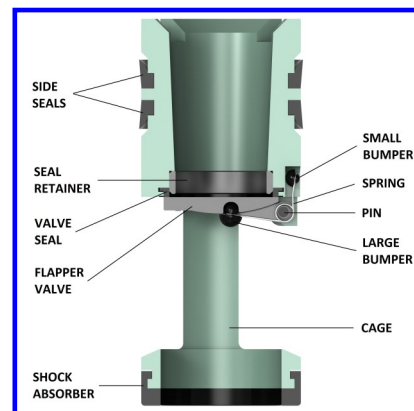
Caution: fill drill pipe regularly when going in the hole. Failure to do this can cause damage to the drill pipe and float valve.

FLAPPER-TYPE VALVES

MODEL
G

FLAPPER TYPE-STANDARD

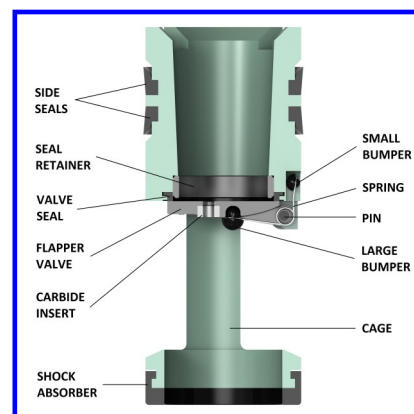
The Model G is a flapper-type float valve that, when opened, offers an unobstructed bore through the float valve. The uniquely designed flapper closes rapidly to prevent shavings from entering the drill string when circulation stops and also assists primary BOP equipment in maintaining internal pressure control. The valve will fully open when the first joint is raised from the hole, preventing pulling wet joints.



MODEL
GA

FLAPPER TYPE-PRESSURE MONITORING

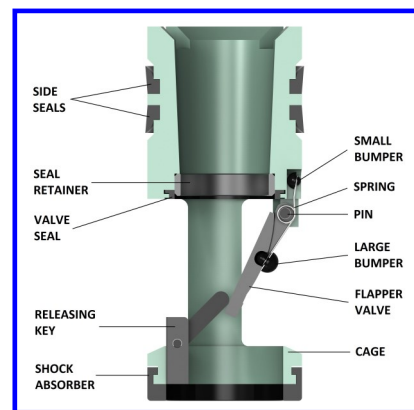
The Model GA Pressure-Monitoring flapper-type float valve is indistinguishable from the Model G with the exception of a tungsten-carbide insert in the flapper valve. The insert has a quarter-inch orifice through the center that allows for differential pressure monitoring. The orifice also allows for partial automatic filling of the drill pipe during run in.



MODEL
GC

FLAPPER TYPE-AUTOMATIC FILL

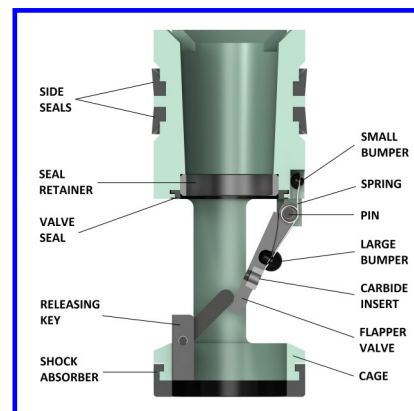
The Model GC Automatic-Fill flapper-type float valve incorporates a unique self-releasing key assembly that holds the flapper partially open during run in, allowing the pipe to fill from the bottom. This eliminates the need for filling the drill pipe from the top, saving time and money. The valve will fully open when the first joint is raised from the hole, preventing pulling wet joints while avoiding the environmental and safety risks related to having mud on the rig floor. The valve can be run with the automatic-fill option or in the standard, closed position.



MODEL
GCA

FLAPPER TYPE-AUTO FILL PRESSURE MONITORING

The Model GCA Automatic-Fill/Pressure-Monitoring flapper-type float valve includes all the advantages of the Models G, GC, and GA. An unobstructed bore through the float valve, when open, permits automatic partial filling of the drill pipe from the bottom and measuring differential pressures when necessary.

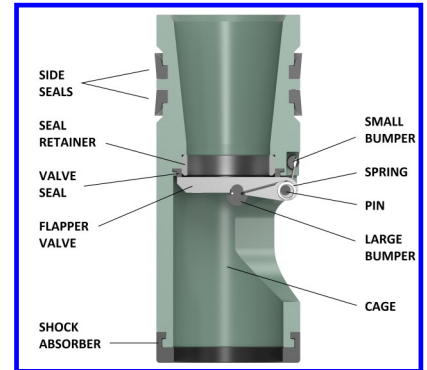


FLAPPER-TYPE VALVES

**MODEL
GS**

FLAPPER TYPE-HIGH FLOW WELLS

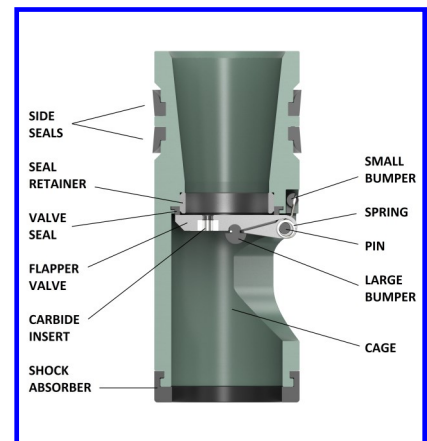
The Model GS is a flapper-type float valve designed for high flowing corrosive wells. The cage is designed to maximize the amount of flow possible through it, while maintaining its rated pressure. The GS valve uses a unique flapper made with a relief groove backed by a safe-guard pocket, protecting the pin and spring from excessive wear that can be caused by harsh-corrosive drilling environments. The GS are also stackable, allowing you to run two valves simultaneously.



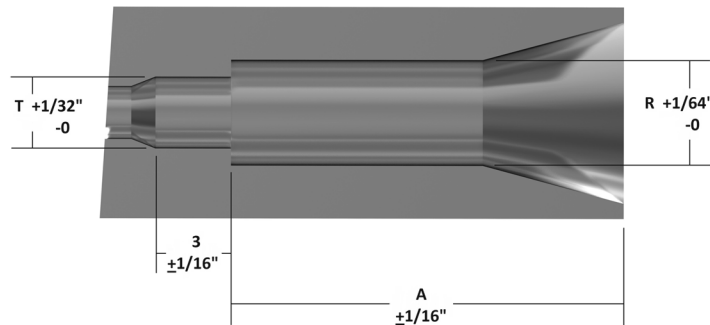
**MODEL
GAS**

FLAPPER TYPE-HIGH FLOW PRESSURE MONITORING

The Model GAS is a flapper-type float valve designed for high flowing corrosive wells and Pressure-Monitoring. The GAS is indistinguishable from the GS with exception of a tungsten-carbide insert in the flapper valve. The orifice also allows for partial automatic filling of the drill pipe during run in.



DIMENSIONAL DATA



$A = L$ (Length of Float Valve) + Length of Tool Joint Pin + 1/4" Clearance

Valve Size	D Diameter of Valve	R (D + 1/32") Diameter Recess F/ Valve	L Valve Length	T* Baffle Plate Recess Diameter	**Valve I.D. Model F	**Valve I.D. Model G
1R	1-21/32"	1-11/16"	5-7/8"	1-5/16"	1"	N/A
1F-2R	1-29/32"	1-15/16"	6-1/4"	1-1/2"	1-1/4"	1"
2F-3R	2-13/32"	2-7/16"	6-1/2"	1-29/32"	1-9/16"	1-1/4"
3F	2-13/16"	2-27/32"	10"	2-7/16"	1-7/8"	1-5/8"
3.5IF	3-1/8"	3-5/32"	10"	2-11/16"	1-7/8"	1-5/8"
4R	3-15/32"	3-1/2"	8-5/16"	2-15/16"	2-5/16"	1-31/32"
4F	3-21/32"	3-11/16"	12"	3-1/4"	2-1/2"	2-3/16"
5R	3-7/8"	3-29/32"	9-3/4"	3-3/8"	2-3/4"	2-1/4"
5F-6R	4-25/32"	4-13/16"	11-3/4"	4-9/32"	3-1/4"	2-7/8"
6F	5-11/16"	5-23/32"	14-5/8"	5-3/16"	4-1/8"	N/A

* Disregard if this diameter is the same or smaller than the standard tool joint I.D.

** All 10M Model F valve I.D.s are 1/8" reduced and all 10M Model G valves I.D.s are 7/32" reduced then listed above.**

TOOL JOINT SPECIFICATION

TOOL JOINT TYPES	MODEL SIZES									
	1R	1F-2R	2F-3R	3F	3.5IF	4R	4F	5R	5F-6R	6F
API REGULAR	2-3/8"	2-7/8"	3-1/2"			4-1/2"		5-1/2" 5-9/16"*	6-5/8" 7-5/8"	8-5/8"
HUGHES OR REED ACME	2-3/8"	2-7/8"	3-1/2"			4-1/2"		5-1/2" 5-9/16"	6-5/8"	
UNION TOOL	2-3/8"	2-7/8" 3-1/2"					4-1/2"	5-1/2" 5-9/16"*	6-5/8"†	
HUGHES OR REED DOUBLE STREAM-LINE		2-7/8" 2-3/8"	3-1/2"	4" 4-1/2"			5"	5-1/2" 5-9/16"*		
API FULL HOLE		2-3/8"	2-7/8"	3-1/2"	4"	4-1/2"	4-1/2"*			6-5/8"*
REED ACME FULL HOLE				3-1/2"*			4-1/2"*		5-1/2" 5-9/16"*	
HUGHES ACME STREAMLINE		2-3/8"	2-7/8"	3-1/2" *			4-1/2"*		5-1/2" 5-9/16"*	
HUGHES XTRA HOLE			2-7/8"	3-1/2"			4-1/2"	5"	5-1/2" 5-9/16"*	
REED SEMI-INTERNAL FLUSH			2-7/8"	3-1/2"			4-1/2"	5"		
API INTERNAL FLUSH		2-3/8"	2-7/8"		3-1/2"		4"	4-1/2"*		
HYDRIL TYPE IF(INT .FLUSH EXT. UP-SET)		2-3/8"*	2-7/8"*	3-1/2"*				4-1/2"	5"	
HYDRIL EIU (EXT. INT. UPSET)				3-1/2"		4"	4-1/2"		5-1/2" 5-9/16"*	6-5/8"
HYDRIL TYPE F (EXT. FLUSH)	2-7/8" 3-1/2"*			4-1/2" 5"		5-1/2" 5-9/16"		6-5/8"		
HUGHES EXT. FLUSH ACME		3-1/2"	4-1/2"			5-1/2" 5-9/16"		6-5/8"		
HUGHES EXT. FLUSH FULL HOLE				4-1/2"						

* Indicates that the float subs id these sizes have a smaller ID. † Indicates interchangeability. Models G and GA, are available in sizes 1F-2R thru 5F-6R. Models GC and GCA are available in sizes 2F-3R thru 5F-6R. Models F and FA are available in all sizes. Model FC is available in sizes 2F-3R thru 6F.

BIT AND SHANK SIZES

Bit Size (in.)	3-1/4	3-3/8	4-1/2	4-3/4	5-1/2	6	6-1/8	6-1/4	6-1/2	6-3/4	7-1/8	8-1/4	8-1/2	8-3/4	9-1/2	9-3/4	10-1/2	11	12-1/4	13-1/2	20	24	25
Std. API Pin Shank Size (in.)	2-3/8	2-3/8	2-3/8	2-7/8	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	3-1/2	4-1/2	4-1/2	4-1/2	4-1/2	6-5/8	6-5/8	6-5/8	6-5/8	6-5/8	6-5/8	7-5/8	7-5/8	7-5/8

BIT SUB INFORMATION

VALVE SIZE	THREAD SIZE	TOOL JOINT TYPE	STANDARD OD	FACE TO SHOULDER OR FACE TO FACE	
1R	2-3/8"	API REGULAR	3-1/8"	18"	
1F-2R	2-7/8"		3-3/4"	20"	
2F-3R	3-1/2"		4-1/4"	20"	
4R	4-1/2"		5-1/2"	24"	
5R	5-1/2"		6-3/4"	28"	
5F-6R	6-5/8"		7-3/4"	30"	
5F-6R	7-5/8"		8-7/8"	30"	
6F	8-5/8"		10"	30"	
3F	3-1/2"		API FULL HOLE	4-5/8"	24"
3.5 IF	4"			5-1/4"	24"
4F	4-1/2"	5-3/4"		28"	
5F-6R	5-1/2"	7"		30"	
6F	6-5/8"	8"		30"	
1F-2R	2-3/8"	API IF	3-3/8"	18"	
2F-3R	2-7/8"	API IF BOX X PIN	4-1/8"	20"	
3.5 IF	3-1/2"	API IF	4-3/4"	24"	
4F	4"		5-3/4"	28"	
5R	4-1/2"		6-3/8"	28"	
5F-6R	5-1/2"		7-3/8"	30"	
6F	6-5/8"		8-3/4"	30"	

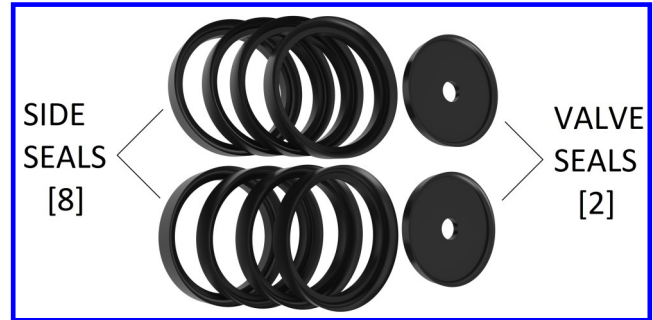
The information guide above is for reference purposes only. Please use appropriate API specifications when manufacturing these subs.

FLOAT VALVE REPAIR KITS

MODEL **F** MODEL **FC**

RUBBER REPAIR KIT F

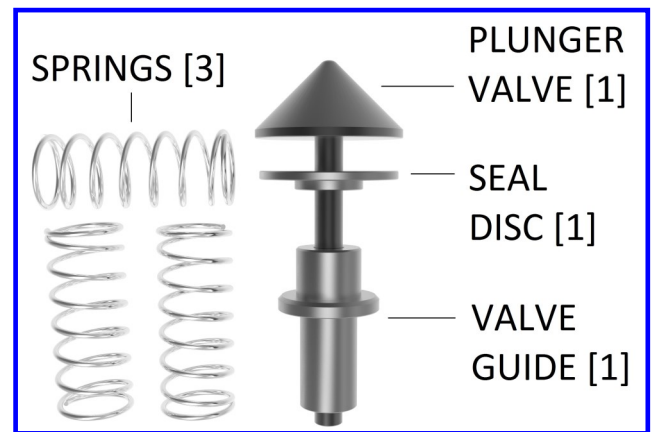
MODEL **FA**



MODEL **F** MODEL **FC**

METAL REPAIR KIT F

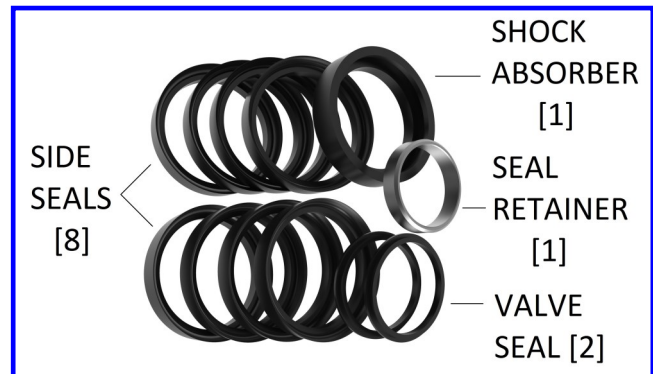
MODEL **FA**



MODEL **G** MODEL **GA**

RUBBER REPAIR KIT G

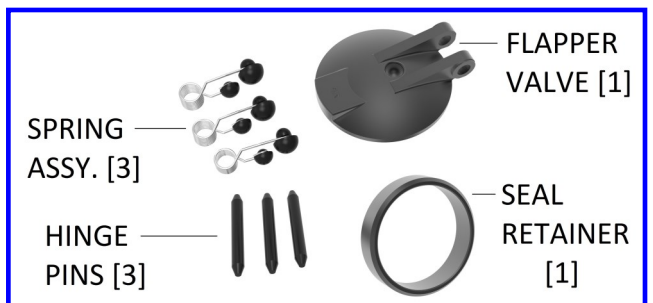
MODEL **GC** MODEL **GCA** MODEL **GS** MODEL **GAS**



MODEL **G** MODEL **GA**

METAL REPAIR KIT G

MODEL **GC** MODEL **GCA** MODEL **GS** MODEL **GAS**



VALVE PULLERS

MODEL

F

MODEL

FC

MODEL F (TOP) PULLER

The model F valve (top) puller is designed to remove float valves from the top of the sub. Simply squeeze the forks together and press against the head of the valve plunger. Once the forks are engaged with the cage the valve can be pulled. Disengage by sliding the separator away from the valve and squeezing the forks together and the puller can be removed.



MODEL

FA

MODEL

F

MODEL

FC

MODEL F (BOTTOM) PULLER

The Model F Valve Puller makes easy work of removing stuck or tight float valves from the sub or drill collar. Simply engage the special catch into the bottom of the float valve, rotate 90°, and then simply slide the bumper into the stop and the float valve is removed.

Note: when using the puller to remove a Model FC valve, special care must be taken when engaging the catch so that it does not make contact with the releasing key.



MODEL

FA

MODEL

G

MODEL

GA

MODEL G PULLER

The Model G Valve Puller is dual-purpose tool. In addition to removing tight or stuck float valves from subs or drill collars, it assists in removing and installing the seal-retaining ring when changing out the valve seal.



MODEL

GC

MODEL

GCA

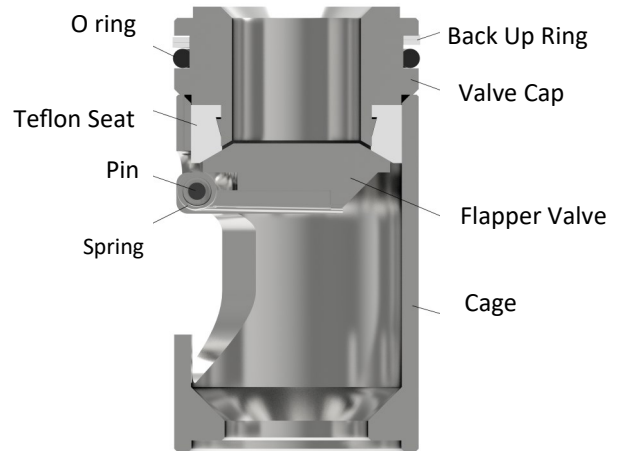
DUAL FLAPPER CHECK VALVES

MODEL **DFCV**

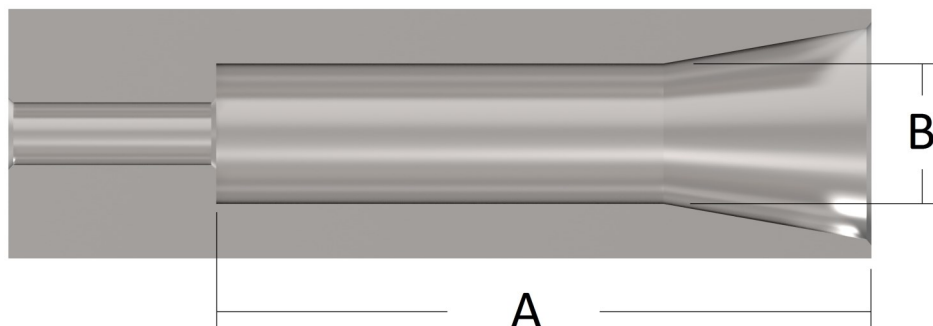
DUAL FLAPPER CHECK VALVE F/COIL TUBING

SIZE	ASSEMBLY	WEIGHT	O.D	I.D	LENGTH EA.	STACKED	SUB I.D/ B
3/4"	480111000	0.75	.750"	.380"	1.820"	3.590"	0.760"
1"	480111100	1	.990"	.560"	3.000"	5.875"	1.000"
1 1/4"	480111200	1.01	1.245"	.578"	2.520"	5.040"	1.255"
1 5/16"	480111400	1.1	1.305"	.688"	2.375"	4.690"	1.313"
1 1/2"	480111500	1.22	1.490"	.810"	2.720"	5.380"	1.500"
1 11/16"	480112100	1.45	1.680"	1.020"	2.720"	5.380"	1.688"
1 7/8"	480112150	1.6	1.870"	1.150"	3.230"	6.460"	1.880"
1 7/8" (1F-2R)	480113100	1.6	1.900"	1.000"	3.940"	7.880"	1.910"
2 1/8"	480112200	1.7	2.120"	1.480"	3.410"	6.750"	2.130"

- Cages, caps, and flappers are manufactured from heat-treated stainless steel.
- Elgiloy springs
- Viton elastomers.
- Working Pressure 10,000 PSI
- Stackable



$$A = SL \text{ (Stacked Length)} + \text{Length of Tool Joint Pin} + .063'' + .010 / -.000$$



STANDARD SERVICE VALVES

MODEL **F**

PLUNGER TYPE

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	TOP PULLER ASSEMBLY	WEIGHT (lbs)	BOTTOM PULLER ASSEMBLY	WEIGHT (lbs)
1R	480131200	1.44	15929800	0.37	16012200	0.28	N/A	N/A	911200	12.4
1F-2R	480131422	1.68	16011300	0.47	16012300	0.35	N/A	N/A	911200	12.4
2F-3R	480132432	3.05	16011400	0.91	16012400	0.55	933600	4.26	912432	12.65
3F	480133400	5.63	16011500	1.42	16012500	0.60	933600	4.26	913400	13.05
3.5 IF	480133600	7.08	16011500	1.42	16012600	0.94	933600	4.26	913400	13.05
4R	480134200	7.3	16011700	2.25	16012700	1.09	934200	8.7	914200	8.0
4F	480134400	9.9	16011800	2.95	16012800	0.88	934210	9.0	914400	13.4
5R	480135200	10.58	16011900	3.68	16012900	1.0	934225	8.7	914400	13.4
5F-6R	480135462	18.01	16012000	4.910	16013000	1.23	934250	12.25	914400	13.4
6F	480136400	27.63	16012100	8.48	16013100	1.95	934265	9.0	916400	13.0

MODEL **FA**

PLUNGER TYPE-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	TOP PULLER ASSEMBLY	WEIGHT (lbs)	BOTTOM PULLER ASSEMBLY	WEIGHT (lbs)
1R	480121200	1.5	15929805	1.0	16012200	0.1	N/A	N/A	911200	6.0
1F-2R	480121422	1.5	16011305	1.0	16012300	0.1	N/A	N/A	911200	6.0
2F-3R	480122432	2.5	16011405	2.0	16012400	0.8	933600	8.0	912432	8.0
3F	480123400	5.0	16011505	2.0	16012500	1.0	933600	10.0	913400	10.0
3.5 IF	480123600	5.0	16011505	2.0	16012605	1.0	933600	10.0	913400	10.0
4R	480124200	7.0	16011705	2.0	16012700	1.0	934200	12.0	914200	12.0
4F	480124400	9.5	16011805	2.0	16012800	1.0	934210	13.0	914400	13.4
5R	480125200	9.5	16011905	3.5	16012900	1.0	934225	15.0	914400	13.4
5F-6R	480125462	16.0	16012005	5.0	16013000	1.1	934250	19.0	914400	13.4
6F	480126400	28.0	16012105	5.0	16013100	1.2	934265	21.0	916400	21.0

MODEL **FC**

PLUNGER TYPE-AUTOMATIC FILL

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	TOP PULLER ASSEMBLY	WEIGHT (lbs)	BOTTOM PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480182432	2.5	70017100	2.0	16012400	0.8	933600	8.0	912432	8.0
3F	480183400	5.0	70017300	2.0	16012500	1.0	933600	10.0	913400	10.0
3.5 IF	480183600	5.0	70017300	2.0	16012600	1.0	933600	10.0	913400	10.0
4R	480184200	7.0	70017400	2.0	16012700	1.0	934200	12.0	914200	12.0
4F	480184400	9.5	70017500	3.0	16012800	1.0	934210	13.0	914400	13.4
5R	480185200	9.5	70017600	4.0	16012900	1.0	934225	15.0	914400	13.4
5F-6R	480185462	16.0	70017700	5.0	16013000	1.1	934250	19.0	914400	13.4
6F	480186400	28.0	70017800	5.0	16013100	2.0	934265	21.0	916400	21.0

STANDARD SERVICE VALVES

MODEL **G**

FLAPPER TYPE

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
1F-2R	480151422	2.0	51988400	0.7	51988300	0.5	901422	7.0
2F-3R	480152432	3.5	16013200	0.8	16013800	0.6	902432	8.0
3F	480153400	5.0	16013300	1.0	16013900	1.0	903400	10.0
3.5 IF	480153600	5.5	16013300	1.0	51982000	1.0	903400	10.0
4R	480154200	7.0	16013400	1.1	16014000	1.5	904200	12.0
4F	480154400	8.0	16013500	1.4	16014100	1.6	904400	13.0
5R	480155200	9.0	16013600	1.6	16014200	1.6	905200	15.0
5F-6R	480155462	18.0	16013700	1.8	16014300	2.0	905462	19.0

MODEL **GA**

FLAPPER TYPE-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
1F-2R	480161422	2.0	52070800	0.7	51988300	0.5	901422	7.0
2F-3R	480162432	3.5	17135000	0.8	16013800	0.6	902432	8.0
3F	480163400	5.0	17136700	1.0	16013900	1.0	903400	10.0
3.5 IF	480163600	5.5	17136700	1.0	51982000	1.0	903400	10.0
4R	480164200	7.0	17116000	1.1	16014000	1.5	904200	12.0
4F	480164400	8.0	17136800	1.4	16014100	1.6	904400	13.0
5R	480165200	9.0	17136900	1.6	16014200	1.6	905200	15.0
5F-6R	480165462	18.0	17134200	1.8	16014300	2.0	905462	19.0

MODEL **GC**

FLAPPER TYPE-AUTOMATIC FILL

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480192432	3.5	16013200	0.8	16013800	0.6	902432	8.0
3F	480193400	5.0	16013300	1.0	16013900	1.0	903400	10.0
3.5 IF	480193600	5.5	16013300	1.0	51982000	1.0	903400	10.0
4R	480194200	7.0	16013400	1.1	16014000	1.5	904200	12.0
4F	480194400	8.0	16013500	1.4	16014100	1.6	904400	13.0
5R	480195200	9.0	16013600	1.6	16014200	1.6	905200	15.0
5F-6R	480195462	18.0	16013700	1.8	16014300	2.0	905462	19.0

MODEL **GCA**

FLAPPER TYPE-AUTO FILL-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480192433	3.5	17135000	0.8	16013800	0.6	902432	8.0
3F	480193401	5.0	17136700	1.0	16013900	1.0	903400	10.0
3.5 IF	480193601	5.5	17136700	1.0	51982000	1.0	903400	10.0
4R	480194201	7.0	17116000	1.1	16014000	1.5	904200	12.0
4F	480194401	8.0	17136800	1.4	16014100	1.6	904400	13.0
5R	480195201	9.0	17136900	1.6	16014200	1.6	905200	15.0
5F-6R	480195463	18.0	17134200	1.8	16014300	2.0	905462	19.0

STANDARD SERVICE VALVES

MODEL **GS** FLAPPER TYPE

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
3.5 IF	480603600	7.0	16013300-GS	0.94	51982000	1.42	903400	10.0
4R	480604200	9.0	16013400-GS	1.09	16014000	2.25	904200	12.0
4F	480604400	10.0	16013500-HS	0.88	16014100	2.95	904400	13.0
5R	480605200	11.0	16013600-GS	1	16014200	3.68	905200	15.0
5F-6R	480605462	20.0	16013700-GS	1.23	16014300	4.91	905462	19.0

MODEL **GAS** FLAPPER TYPE-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
3.5 IF	480563600	7.0	17136700-GAS	1.42	16012600	0.94	903400	10.0
4R	480465200	9.0	17116000-GAS	2.25	16012700	1.09	904200	12.0
4F	480564400	10.0	17136800-GAS	2.95	16012800	0.88	904400	13.0
5R	480565200	11.0	17136900-GAS	3.68	16012900	1	905200	15.0
5F-6R	480565462	20.0	17134200-GAS	4.91	16013000	1.23	905462	19.0

H₂S/HIGH TEMP SERVICE VALVES

MODEL **F**

H₂S/HT

PLUNGER TYPE

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	TOP PULLER ASSEMBLY	WEIGHT (lbs)	BOTTOM PULLER ASSEMBLY	WEIGHT (lbs)
1R	480301200	1.5	15929800	1.0	71081701	0.5	N/A	N/A	911200	6.0
1F-2R	480301422	1.5	16011300	2.0	71081801	0.7	N/A	N/A	911200	6.0
2F-3R	480302432	2.5	16011400	2.0	71081901	0.8	933600	8.0	912432	8.0
3F	480303400	5.0	16011500	2.0	71082001	1.0	933600	10.0	913400	10.0
3.5 IF	480303600	5.0	16011500	2.0	71082101	1.0	933600	10.0	913400	10.0
4R	480304200	7.0	16011700	2.0	71082201	1.0	934200	12.0	914200	12.0
4F	480304400	9.5	16011800	3.0	71082301	1.0	934210	13.0	914400	13.4
5R	480305200	9.5	16011900	4.0	71082401	1.0	934225	15.0	914400	13.4
5F-6R	480305462	16.0	16012000	5.0	71082501	1.1	934250	19.0	914400	13.4
6F	480306400	28.0	16012100	5.0	71082601	2.0	934265	21.0	916400	21.0

MODEL **FA**

H₂S/HT

PLUNGER TYPE-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	TOP PULLER ASSEMBLY	WEIGHT (lbs)	BOTTOM PULLER ASSEMBLY	WEIGHT (lbs)
1F-2R	480351422	1.62	16011305	1.0	71081801	0.4	N/A	N/A	911200	6.0
2F-3R	480352432	2.5	16011405	2.0	71081901	0.8	933600	8.0	912432	8.0
3F	480353400	5.0	16011505	2.0	71082001	1.0	933600	10.0	913400	10.0
3.5 IF	480353600	5.0	16011505	2.0	71082101	1.0	933600	10.0	913400	10.0
4R	480354200	7.0	16011705	2.0	71082201	1.0	934200	12.0	914200	12.0
5R	480355200	10.5	16011905	3.7	71082401	1.2	934225	8.7	914400	13.4
5F-6R	480355462	16.0	16012005	5.0	71082501	1.1	934250	19.0	914400	13.4

MODEL **F-10M**

H₂S/HT

PLUNGER TYPE-10,000 PSI STAINLESS STEEL

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	TOP PULLER ASSEMBLY	WEIGHT (lbs)	BOTTOM PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480132432-10M	3.05	16011400-10M	.91	71081901-10M	0.8	933600	8.0	912432	8.0
3.5 IF	480133600-10M	7.08	16011500-10M	1.42	71082101-10M	1.0	933600	10.0	913400	10.0
4R	480134200-10M	7.3	16011700-10M	2.25	71082201-10M	1.0	934200	12.0	914200	12.0
5R	480135200-10M	10.58	16011900-10M	3.71	71082401-10M	1.2	934225	8.7	914400	13.4
5F-6R	480135462-10M	18.01	16012000-10M	5.0	71082501-10M	1.1	934250	19.0	914400	13.4

MODEL **F-15M**

H₂S/HT

PLUNGER TYPE-15,000 PSI STAINLESS STEEL

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	TOP PULLER ASSEMBLY	WEIGHT (lbs)	BOTTOM PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480132432-15M	3.05	16011400-15M	.91	71081901-15M	0.8	933600	8.0	912432	8.0
3.5 IF	480133600-15M	7.08	16011500-15M	1.42	71082101-15M	1.0	933600	10.0	913400	10.0
4R	480134200-15M	7.3	16011700-15M	2.25	71082201-15M	1.0	934200	12.0	914200	12.0
5R	480135200-15M	10.58	16011900-15M	3.71	71082401-15M	1.2	934225	8.7	914400	13.4
5F-6R	480135462-15M	18.01	16012000-15M	5.0	71082501-15M	1.1	934250	19.0	914400	13.4

*NOTE - 10K & 15K PSI drill pipe float valves I.D.'s are 1/8" reduced than 7500 PSI valves. Refer to [page 8](#) for valve I.D.'s.

H₂S/HIGH TEMP SERVICE VALVES

MODEL G

H₂S/HT

FLAPPER TYPE

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
1F-2R	480311422	2.0	51997300	0.7	51997200	0.5	901422	N/A
2F-3R	480312432	3.5	71085901	0.8	71082701	0.6	902432	8.0
3F	480313400	5.0	71086001	1.0	71082801	1.0	903400	10.0
3.5 IF	480313600	5.5	71086001	1.0	52125001	1.0	903400	10.0
4R	480314200	7.0	71086101	1.1	71082901	1.5	904200	12.0
4F	480314400	8.0	71086201	1.4	71083001	1.6	904400	13.0
5R	480315200	9.0	71086301	1.6	71083101	1.6	905200	15.0
5F-6R	480315462	18.0	71086401	1.8	71083201	2.0	905462	19.0

MODEL GA

H₂S/HT

FLAPPER TYPE-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
1F-2R	480261422	2.0	52070801	0.7	51997200	0.5	901422	7.0
2F-3R	480262432	3.5	17135001	0.8	71082701	0.6	902432	8.0
3F	480263400	5.0	17136701	1.0	71082801	1.0	903400	10.0
3.5 IF	480263600	5.0	17136701	1.0	52125001	1.0	903400	10.0
4R	480264200	7.0	17116001	1.1	71082901	1.5	904200	12.0
4F	480264400	8.0	17136801	1.4	71083001	1.6	904400	13.0
5R	480265200	9.0	17136901	1.6	71083101	1.6	905200	15.0
5F-6R	480265462	12.0	17134201	1.8	71083201	2.0	905462	19.0

MODEL GC

H₂S/HT

FLAPPER TYPE-AUTOMATIC FILL

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480332432	3.5	71085901	0.8	71082701	0.6	902432	8.0
3F	480333400	5.0	71086001	1.0	71082801	1.0	903400	10.0
3.5 IF	480333600	5.0	71086001	1.0	52125001	1.0	903400	10.0
4R	480334200	7.0	71086101	1.1	71082901	1.5	904200	12.0
4F	480334400	8.0	71086201	1.4	71083001	1.6	904400	13.0
5R	480335200	9.0	71086301	1.6	71083101	1.6	905200	15.0
5F-6R	480335462	12.0	71086401	1.8	71083201	2.0	905462	19.0

MODEL GCA

H₂S/HT

FLAPPER TYPE-AUTO FILL-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480452433	3.5	17135001	0.8	71082701	0.6	902432	8.0
3F	480453401	5.0	17136701	1.0	71082801	1.0	903400	10.0
3.5 IF	480453601	5.5	52075502	1.0	52125001	1.0	903400	10.0
4R	480454201	7.73	17116002	1.1	71082901	1.5	904200	12.0
4F	480454401	8.0	17136801	1.4	71083001	1.6	905200	15.0
5R	480455201	9.0	17136901	1.6	71083101	1.6	905200	15.0
5F-6R	480455463	18.0	17134201	1.8	71083201	2.0	905462	19.0

H₂S/HIGH TEMP SERVICE VALVES

MODEL G-10M

H₂S/HT

FLAPPER TYPE-10,000 PSI

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480152432-10M	3.5	71085901-10M	0.8	71082701-10M	0.6	902432	8.0
3.5 IF	480313600-10M	5.5	71086001-10M	1.0	52125001-10M	1.0	903400	10.0
4R	480154200-10M	7.73	71086101-10M	1.1	71082901-10M	1.5	904200	12.0
5R	480155200-10M	9.0	71086301-10M	1.6	71083101-10M	1.6	905200	15.0
5F-6R	480155462-10M	18.0	16013700-10M	1.8	71083201-10M	2.0	905462	19.0

*NOTE - 10,000 PSI drill pipe float valves I.D.'s are 7/32" reduced than 7500 PSI valves. Refer to [page 8](#) for valve I.D.'s.

MODEL G-15M

H₂S/HT

FLAPPER TYPE—15,000 PSI

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
2F-3R	480152432-10M	3.5	71085901-10M	0.8	71082701-10M	0.6	902432	8.0
3.5 IF	480313600-10M	5.5	71086001-10M	1.0	52125001-10M	1.0	903400	10.0
4R	480154200-10M	7.73	71086101-10M	1.1	71082901-10M	1.5	904200	12.0
5R	480155200-10M	9.0	71086301-10M	1.6	71083101-10M	1.6	905200	15.0
5F-6R	480155462-10M	18.0	16013700-10M	1.8	71083201-10M	2.0	905462	19.0

*NOTE - 15,000 PSI drill pipe float valves I.D.'s are 7/32" reduced than 7500 PSI valves. Refer to [page 8](#) for valve I.D.'s.

MODEL GS

H₂S/HT

FLAPPER TYPE

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
3.5 IF	480683600	7.0	71086001-GS	1.42	52125001	0.94	903400	10.0
4R	480684200	9.0	71086101-GS	2.25	71082901	1.09	904200	12.0
4F	480684400	10.0	71086201-GS	2.95	71083001	0.88	904400	13.0
5R	480685200	11.0	71086301-GS	3.68	71083101	1	905200	15.0
5F-6R	480685462	20.0	71086401-GS	4.91	71083201	1.23	905462	19.0

MODEL GAS

H₂S/HT

FLAPPER TYPE-PRESSURE MONITORING

SIZE	ASSEMBLY	WEIGHT (lbs)	METAL REPAIR KIT	WEIGHT (lbs)	RUBBER REPAIR KIT	WEIGHT (lbs)	PULLER ASSEMBLY	WEIGHT (lbs)
3.5 IF	480693600	7.0	17136701-GAS	1.42	52125001	0.94	903400	10.0
4R	480694200	9.0	17116001-GAS	2.25	71082901	1.09	904200	12.0
4F	480694400	10.0	17136801-GAS	2.95	71083001	0.88	904400	13.0
5R	480695200	11.0	17136901-GAS	3.68	71083101	1	905200	15.0
5F-6R	480695462	20.0	17134201-GAS	4.91	71083201	1.23	905462	19.0

BAFFLE PLATES

**BAFFLE
PLATES**

Baffle plates can be placed on top of the drill-pipe float valve or the drill bit to help prevent damage from recorders or other wire-line tools that are dropped down the string.

BAFFLE PLATES

RING AND SPIDER TYPE



RING TYPE



SPIDER TYPE

PART NO.	CONNECTION TYPE/SIZE	DPFV SIZE	TYPE	WEIGHT	BAFFLE PLATE OD
K-91701 **	2-7/8" API REG	1F-2R	SPIDER	0.5	1.94
K-91702 **	3-1/2" API REG	2F-3R	RING	0.4	2.28
K-91703 **	4-1/2" API REG	4R	RING	0.8	3.22
K-91704 **	5-9/16" API REG	5R	RING	1.3	3.87
K-91705 **	6-5/8" API REG	5F-6R	RING	1.5	4.63
K-91706 **	7-5/8" API REG	5F-6R	RING	1.7	5.33
K-91707 **	8-5/8" API REG	6F	RING	2.2	6.18
K-91711 ***	REPLACED BY K-91721	3F	SPIDER	0.6	2.75
K-91712 ***	4-1/2" API FH	4F	RING	0.9	3.36
K-91713 ***	5-9/16" API FH	5F-6R	RING	1.5	4.63
K-91714 **	6-5/8" API FH	6F	RING	2.2	5.45
K-91721 *	3-1/2" API FH	3F	SPIDER	0.6	2.63
K-91722*	4-1/2" API FH 4-1/2" API REG 5-9/16" API REG	4F 4R 5R	SPIDER	0.7	3.44
K-91723*	5-9/16" FH 6-5/8" FH/ 6-5/8" REG	5F-6R 5F-6R	SPIDER	1.0	4.68
K-91724 *	6-5/8" API FH	6F	SPIDER	1.0	6.56
K-91725 *	3-1/2" API IF	3.5IF	SPIDER	0.6	3.06
K-91726 *	REPLACED BY K-91722	5R	SPIDER	0.8	3.76
K-91741 ***	3-1/2" API IF	3.5IF	RING	0.7	3.06
K-91742 ***	4-1/2" API IF	5R	RING	1.6	4.22
K-91743 ***	2-7/8" API IF	2F-3R	SPIDER	0.7	2.44
K-91744 ***	4" API IF / 4-1/2"XH	4F	RING	1.0	3.88

* For use on float. **For use on bit. ***For use in joint.



Keystone

ENERGY TOOLS



Keystone is your leading manufacturer of
Certified, Pressure-Tested DP Float Valves.

Model F-Plunger / Model G-Flapper

For more information, please contact us at:

Keystone Energy Tools

3711 Melancon Rd.

Broussard, LA 70518

Sales Inquiries: Sales@k-e-t.com

www.k-e-t.com

Office: 1-337-365-4411

Fax: 1-337-365-4456

Bridge the gap.