

MODEL FT15

SIGHT GLASS GAGE VALVE

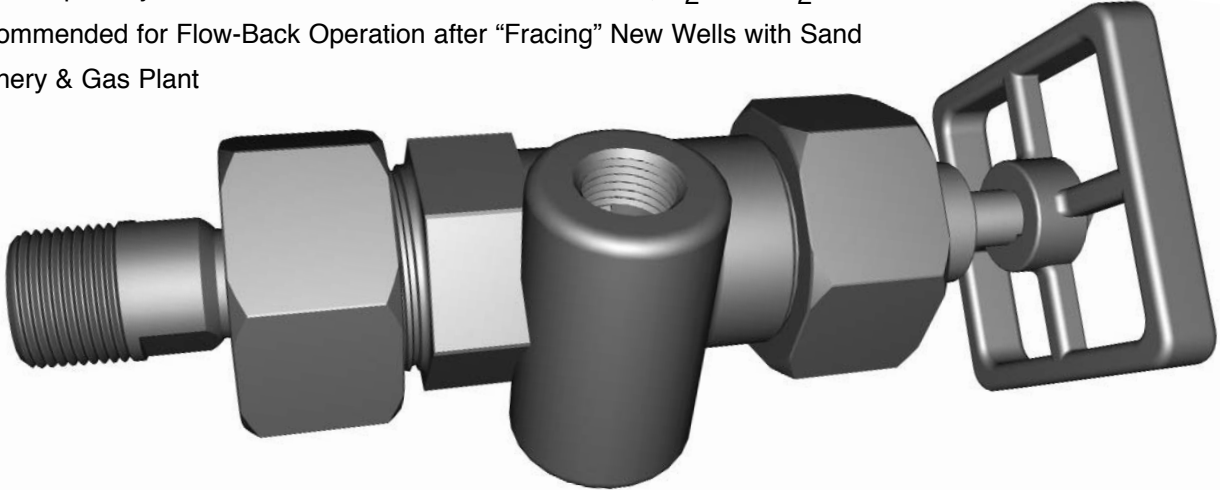
“FREE TURN”
valves for
flat glass
gages

Bulletin FT15
Issued 1/06
Replaces 10/04

NO-FREEZE VALVES

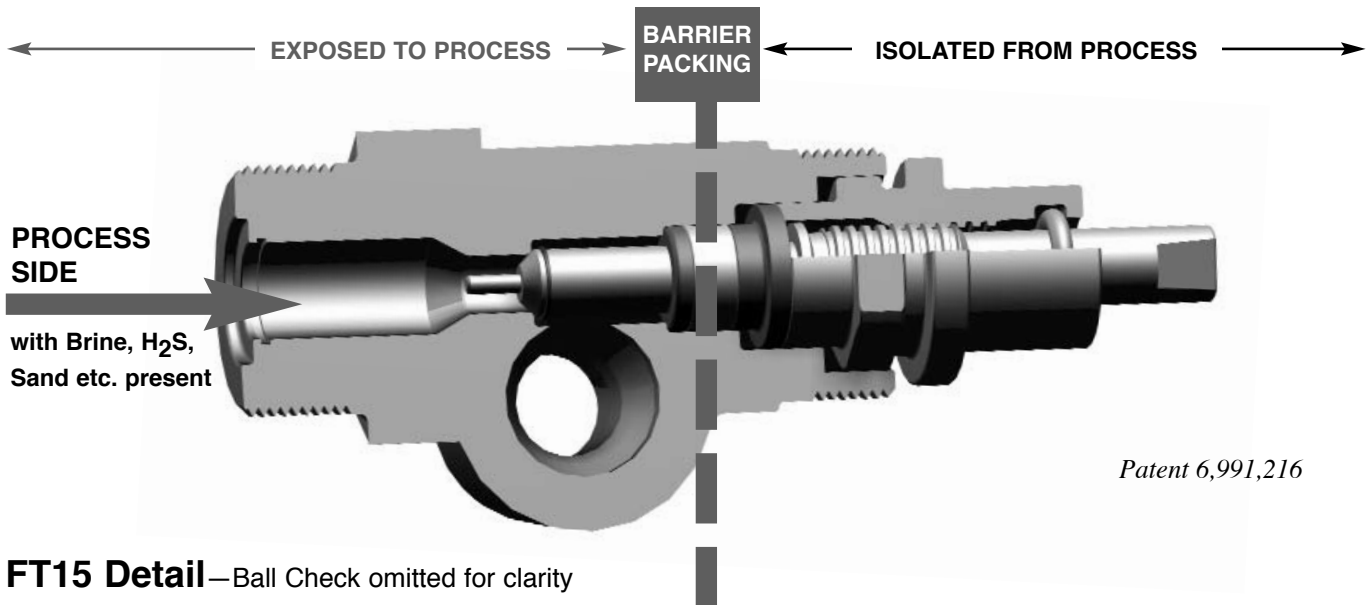
4000 PSIG @ 100°F
NACE MR-01-75 conformance

- Oil & Gas Separators
- Compressor Scrubbers
- Especially Suited for Natural Gas Service with Brine, H₂S or CO₂
- Recommended for Flow-Back Operation after “Fracing” New Wells with Sand
- Refinery & Gas Plant



EXCLUSIVE DESIGN... ISOLATED WORKING THREADS

- **Sealed Workings**—Not vulnerable to process corrosion
- **Cost Savings**— “FT” valves stay operable—no need to add double block valves
- **Clean & Readable Sight Glasses**— Operable gage valves permit sight glass to be isolated from vessel & accessed for cleaning
- **Safer Operation**—Large wrench not needed to break loose a frozen valve stem operating under high pressure.
- **Environmental Advantage**— Operator is assured that valve stem is in correct position because the stem stays free to turn. Ball checks are designed to shut off automatically in event of glass breakage but they will not work when valve is partially open. A broken sight glass with no ball check protection can result in environmental spill.



FT15 Detail—Ball Check omitted for clarity

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MODEL FT15

OFFSET PATTERN UNION BONNET INTEGRAL SEAT		OPTIONAL	
		STANDARD	
VESSEL CONNECTION			
Union	3/8" NPTM		X
	1/2" NPTM		X
	3/4" NPTM	X	
	1" NPTM (Non-Float)		X
Spherical Union	1/2" NPTM		X
	3/4" NPTM		X
	1" NPTM		X
Socket Weld	1/2" S/W Male		X
	3/4" S/W Male		X
	1" S/W Male (Non-Float)		X
Solid Shank	1/2" NPTM		X
	3/4" NPTM		X
	1" NPTM		X
Flanged			X
UNION VESSEL SEAL			
	Viton™	X	
	Buna		X
	Aflas™ (to 400°F Steam)		X
	Hi-Temp (to 525°F Steam)		X
	TFE		X
	Omitted		X
GAGE CONNECTION			
Rigid	1/2" NPTF	X	
	3/4" NPTF		X
Socket Weld	1/2" S/W F		X
	3/4" S/W F		X
Flanged			X
VENT / DRAIN CONNECTION			
Rigid	1/2" NPTF	X	
	3/4" NPTF		X
STEM PACKING			
	TFE (up to 500°F)	X	
	GRAFOIL™		X
TRIM			
	T304 SS	X	
	T316 SS		X
BALL CHECK SHUT-OFF			
Horizontal Lower & Upper		X	
Omitted (acceptable for ASME service)			X
Vacuum-Horizontal Lower & Upper			X
HANDWHEEL WITH STANDARD PITCH THREAD		X	
SEAT DIAMETER	3/8" Ø	X	

STANDARD BENEFITS

O-Ring Seal



Union Nut omitted for clarity

O-Ring improves sealing in union when minor piping misalignment is present. No more paper gaskets!

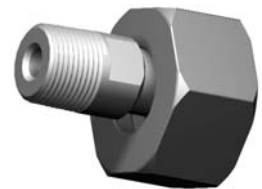
Replacement Ring size: Parker 2-116

Conventional metal to metal union is designed with one flat face and one beveled face. Tightening the union nut causes

the two halves to crush together and seal without need of a gasket. However when misalignment is present there may be inadequate compression to make a seal.

FLOATING SHANK

Vessel Connector "floats" off center by 1/8" in all directions, more than any other brand. Combined float in upper and lower valves allows for up to ±1/4" variation in vessel centers.



NAME PLATE INSTRUCTIONS

Safety ball check operation instructions provided on name plate

CORROSION RESISTANT SS TRIM

Stem, ball, packing washer & follower

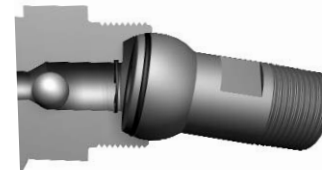
TFE STEM PACKING

Low friction turning

OPTIONAL

SPHERICAL UNION

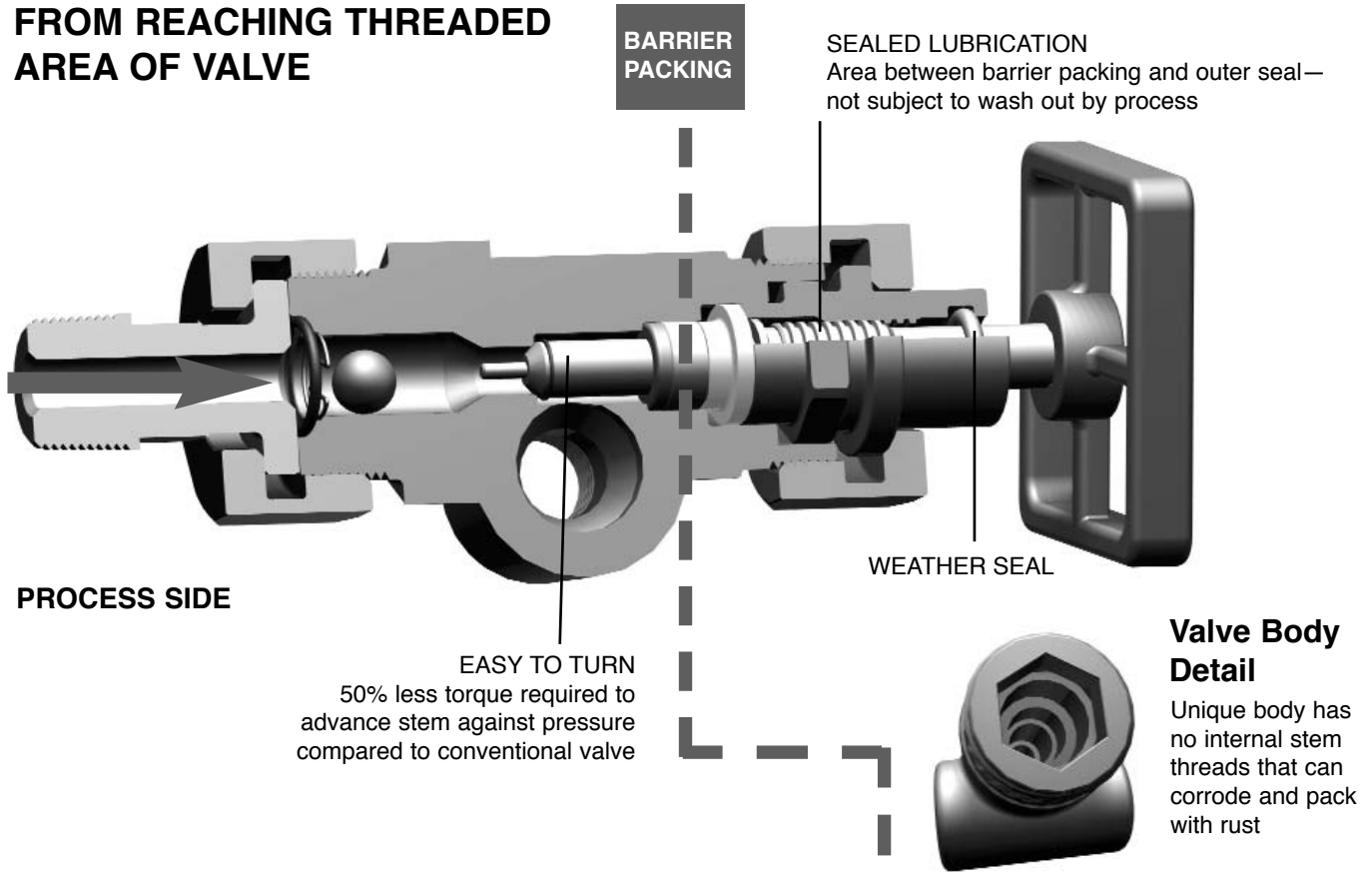
Recommended when misalignment of fittings causes a plain union to leak—for use with side or back connected gages



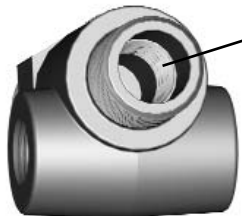
Provides ± 8° movement to compensate for angular misalignment. Also provides for center-to-center variation when used with elbow fittings or with a "close hook-up" gage. Matching spherical surfaces can be made up repeatedly w/o leakage.

NEW MODEL FT15

PACKING STOPS PROCESS FROM REACHING THREADED AREA OF VALVE



“OLD STYLE” CONVENTIONAL GAGE VALVE



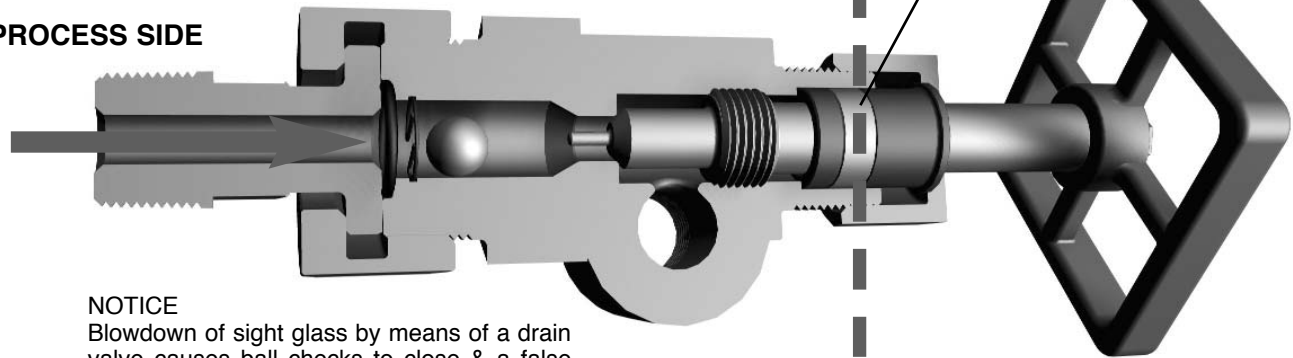
Valve Body Detail

Threads exposed to process. Corrosion occurs—threads pack with rust. Valve freezes, usually in open position

WARNING—Using excessive force to turn valve stem may 1) break the connecting pipe nipple to the sight glass or 2) cause the stem to twist off

LEAK POINT
Leak at packing commonly occurs when wrench is used to turn valve stem

PROCESS SIDE

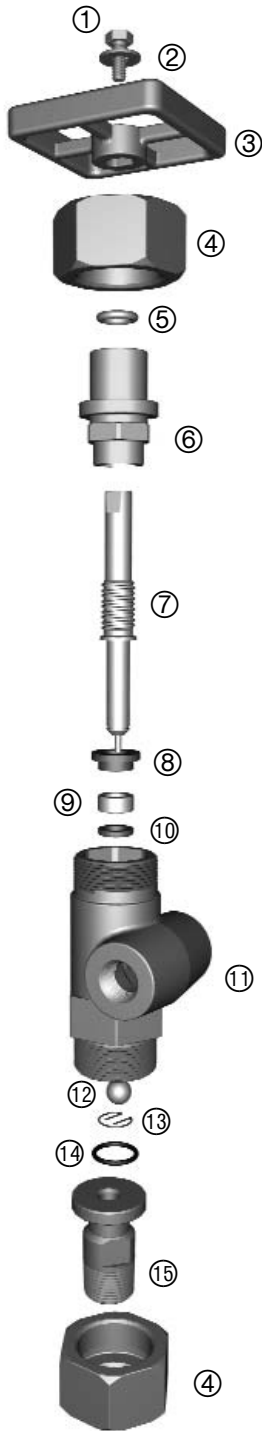


NOTICE

Blowdown of sight glass by means of a drain valve causes ball checks to close & a false level will result until balls are re-set. Valve stem must be moved to closed position in order to dislodge the ball from its seat. Balls cannot be reset when valve is frozen open.

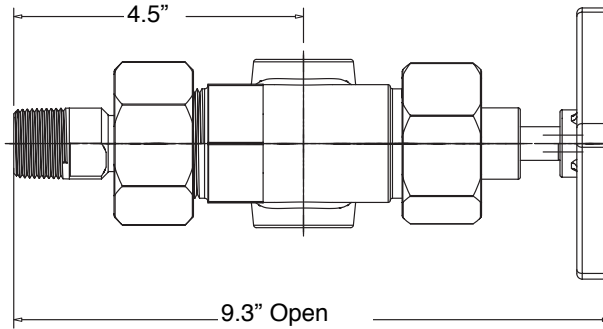
MODEL FT15 PARTS LIST

WEIGHT: 12.5 lbs (5.7 kg) per set



ITEM	DESCRIPTION	MATERIAL—Standard	MATERIAL—Optional
1	Screw	Steel	SS
2	Washer	Steel	SS
3	Hand Wheel	Ductile Iron	
4	Nut	Forged Steel	T316 SS
5	Lube & Weather Seal	TFE	
6	Packing Bonnet	T304 SS	
7	Stem	T316 SS	
8	Follower	T304 SS	
9	Packing	TFE standard	Grafoil™ optional
10	Packing Washer	T304 SS	
11	Body	Forged Steel, A-105	T316 SS
12	Ball	T304 SS	T316 SS
13	Snap Ring	SS	
14	O-Ring, Size 2-116	Viton™ standard	Various
15	Floating Shank	Forged Steel, A-105	T316 SS

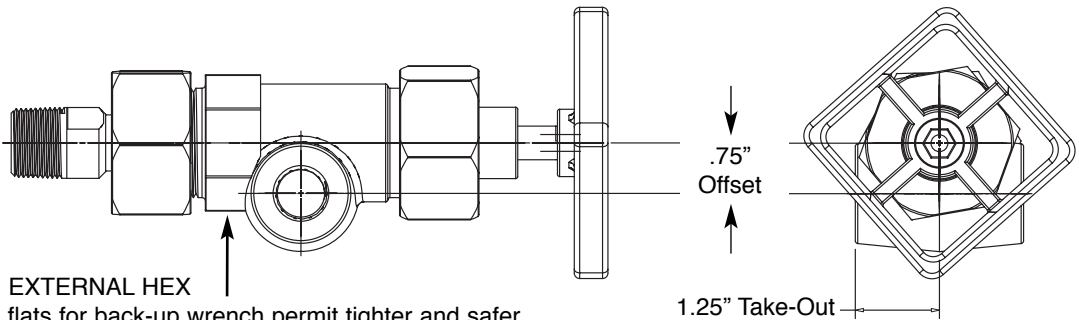
All materials conform to NACE MR-01-75



TO TIGHTEN PACKING:

When tightening packing, stem travels with bonnet towards seat. In closed position, seating contact prevents further downward movement of packing bonnet.

Valve must be at least partially open before packing nut can be tightened.



EXTERNAL HEX flats for back-up wrench permit tighter and safer installation when making up union

PRESSURE/TEMPERATURE RANGES

Maximum working pressure, PSI

	-300°F	-50°F	-20°F	100°F	200°F	300°F	400°F	500°F	600°F	750°F
	-184°C	-46°C	-29°C	38°C	93°C	149°C	204°C	260°C	316°C	399°C
Forged Steel			4000	4000	3900	3820	3740	3500	3150	2625
Heat Treated Steel		4000	4000	4000	3900	3820	3740	3500	3150	2625
Stainless Steel	4000	4000	4000	4000	3900	3820	3740	3500	3150	2625

Grafoil Packing Req'd

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