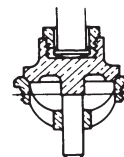


Iron Valve Options and Accessories

Seating, Packing and Gasket Materials

Iron Valve Seating Material

Material: **Bronze**
Max. Pressure: 250 SWP/500 CWP
Max. Temperature: 450°F
Service: Steam-Water, Oil, and Gas. Standard on all NIBCO® Iron Body Valves unless otherwise specified.

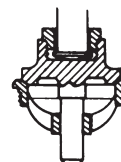


Material: **PTFE**
Max. Pressure: 250 SWP/500CWP
Max. Temperature: 450°F
Service: Oxygen, steam, and all services where the media being handled is not corrosive to the metallic parts of the valve. Standard on 2½" and 3" Automatic Stop Check.



NOTE: ASME B 31.1 Boiler and Pressure Vessel Code limits non-metallic seats to 150 PSI steam service.

Material: **Iron**
Max. Pressure: 200 CWP
Max. Temperature: 250°F
Service: Used where bronze trim is not permitted. Specify by adding (N) to Fig. No., i.e. F-000-N. Available for some NIBCO® Gate, Globe, Angle and Check Valves.



Packing and Gasket Materials

1. Standard NIBCO® iron valves are furnished with synthetic fibers and graphite packing, along with synthetic fibre gaskets. Temperature rated to 550°F. Class 250 iron valves are furnished with PTFE braided packing and reinforced graphite gaskets. For other special packing and gaskets, consult factory.
2. Alloy Iron Valves are furnished with PTFE braided packing and synthetic fibre gaskets.
3. Graphite packing and gaskets optional on some NIBCO Iron Valves. Consult factory.



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Iron Valve Options and Accessories

Operating Nut, Position Indicator, Sprocket Rims

Square Operating Nut

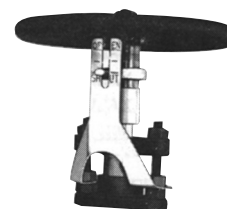
The square operating nut can be substituted for the regular handwheel when an NRS (619 & 639) valve is to be installed in an inaccessible location. It may be operated by a key or a wrench. A directional arrow indicating "open" is cast on top of the nut. All square operating nuts have a standard 2" square which facilitates opening and closing the valve with a square socket wrench as used by the Water Works. Material: Cast Iron ASTM A126 Class B. Field retrofit is standard. Some factory installed versions are available.



Position Indicator

For non-rising stem (2"-12") metal seated, (not resilient wedge,) iron body gate valves. Indicates whether it is open, partly open or closed by the position of the needle which moves as the valve is operated. Field installed.

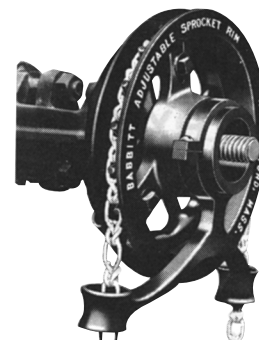
Ordering Information: Specify size and figure number of the valve to be fitted.



Adjustable Sprocket

The Adjustable Sprocket Rim will provide for remote operation of gate, globe and angle valves in high, normally out-of-reach locations. Attaches to valve wheel for instant valve open/close response. Sprocket rim made from cast iron, chain guide is malleable iron. When ordering, specify either the sprocket and chain number, or the NIBCO® valve figure number and size. The chain length must also be specified.

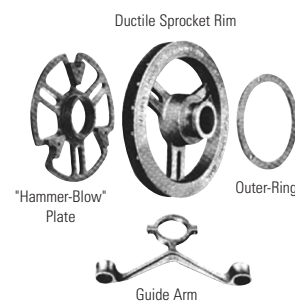
Size	Diameter of Sprocket Wheel (In.)	Weight (Lbs.)	O.D. of Valve Wheels Rim Will Fit	Chain Size	Chain Weight per 100' (Lbs.)
0	4.00	2	2-4	2	10.00
1	5.88	4	4½-5½	1/0	17.50
1½	7.50	5	6-7½	1/0	17.50
2	9.00	8	7¾-9	1/0	17.50
2½	12.50	15	9¼-12½	4/0	30.00
3	15.50	21	12¾-15½	4/0	30.00
3½	19.00	25	15¾-19	4/0	30.00
4	22.00	34	19¼-22	5/0	35.00
4½	26.00	38	22¼-26	5/0	35.00
5	30.00	46	26¼-30	5/0	35.00



Hammer-Blow Sprocket

The Adjustable Hammer-Blow Sprocket Rim is for use with hard-to-operate gate, globe and angle valves in overhead locations. The Hammer-Blow plate and rim are made of tough, shock resistant ductile iron to withstand heavy, valve releasing impact. The chain guide is malleable iron. When ordering, specify the sprocket number, chain number and length, or the NIBCO valve figure number, size and the chain length.

Ductile Rim Guide with Hammer Blow Complete	Diameter of Sprocket Wheel (In.)	Weight (Lbs.)	Diameter of Valve Wheels Rim Will Fit	Chain Size	Chain Weight per 100' (Lbs.)
2	9.00	13	7¾-9	1/0	17.50
2½	12.50	22	9¼-12½	4/0	30.00
3	15.50	30	12¾-15½	4/0	30.00
3½	19.00	35	15¾-19	4/0	30.00
4	22.00	55	19¼-22	5/0	35.00
4½	26.00	78	22¼-26	5/0	35.00
5	30.00	78	26¼-30	5/0	35.00



Sprocket Rim Selection Guide

	#1½	#2	#2½	#3	#3½	#4	#4½	#5
Fig. F-617-O Size Valve Rim will fit		2, 2½, 3	4, 5, 6	8	10, 12		14, 16, 18	20, 24
Fig. F-619 Size Valve Rim will fit	2, 2½	3	4, 5, 6	8	10, 12		14, 16	
Fig. F-667-O Size Valve Rim will fit		2, 2½, 3	3, 4, 5		6, 8	10, 12		
Fig. F-669 Size Valve Rim will fit	2	2½	3, 4, 5		6, 8, 10	12		

Iron Valve Options and Accessories

Stem Extensions

Stem Extension

Stem extensions are designed to permit remote operation of gate, globe or angle valves by providing an extension to the valve stem long enough to reach from the valve to the desired remote operating location.

The extension consists of a length of steel tube with a coupling on one end to attach to the valve, and a coupling on the other end to attach to a handwheel or some other type of operating device.

The stem extension is made to accept the handwheel from the valve to which it is being attached. Therefore, Extensions are not supplied with a handwheel unless it is special ordered.

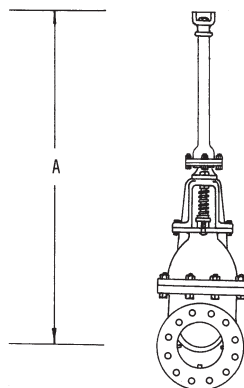
Orders or inquiries for stem extensions to be attached to a NIBCO® valve must include the dimension from the center line of the valve waterway to the top of the handwheel. This dimension is the "A" distance as shown below. Please specify separately coupling sets for iron valve extensions.

Adequate support must be provided for long stem extensions exceeding 12 ft. of "A" dimension. This support should be rigid and of sufficient strength to prevent "wind-up," deflection or transfer of abnormal loads to the valve. This is a custom-built requirement provided by the customer.

Minimum "A" dimensions:

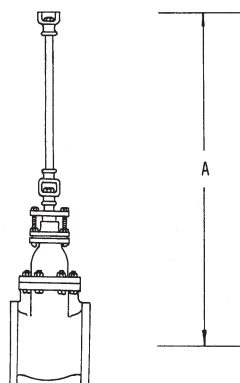
Rising Stem Valve

Valve Size	"A"	
	In.	mm.
2"	21.00	533
2½"	21.50	546
3"	23.50	597
4"	28.00	711
5"	31.00	787
6"	35.00	889
8"	45.00	1,143
10"	53.50	1,359
12"	63.00	1,600



Non-Rising Stem Valve

Valve Size	"A"	
	In.	mm.
2"	19.56	497
2½"	21.06	535
3"	21.94	557
4"	24.25	616
5"	25.50	648
6"	29.50	749
8"	35.06	891
10"	38.88	988
12"	44.56	1,132



Iron Valve Options and Accessories

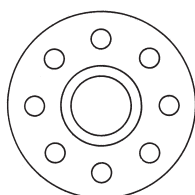
Floor Stands

Floor Stands

Floor stands are designed for operating gate, globe and angle valves that are installed in inaccessible places under a floor. For your convenience, they are available in two heights (20" and 32"). They are also available with an indicator so the position of the disc (wedge) can be read at a glance.

Floor Stand Base
Template

9" outside diameter
7½" bolt circle diameter
¾" hole diameter

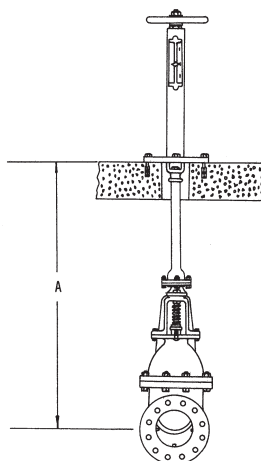


When ordering a floor stand – the dimension from the centerline of the valve waterway to the top of the floor must be furnished. This dimension is the "A" dimension pictured below. The NIBCO valve figure number and size must also be furnished and specify valve stem coupling for use with floor stand. Nothing extra is needed, except the floor mounting bolts which will vary depending on the floor construction.

Minimum "A" dimensions:

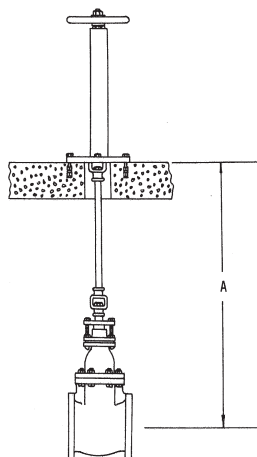
Rising Stem Valve

Valve Size	"A"	
	In.	mm.
2"	28.50	724
2½"	29.00	737
3"	31.00	787
4"	36.00	914
5"	39.00	991
6"	43.00	1,092
8"	53.00	1,346
10"	60.50	1,537
12"	70.00	1,778



Non-Rising Stem Valve

Valve Size	"A"	
	In.	mm.
2"	26.56	675
2½"	28.06	713
3"	28.75	730
4"	31.19	792
5"	32.44	824
6"	36.31	922
8"	42.69	1,084
10"	45.88	1,165
12"	52.06	1,322



Without
Indicator



With
Indicator

NIBCO INC. reserves the right to change materials, options and accessories without notice.

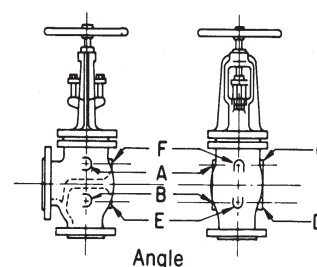
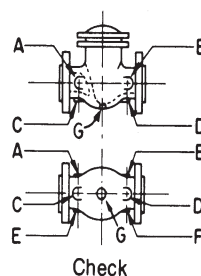
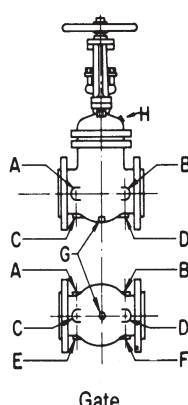
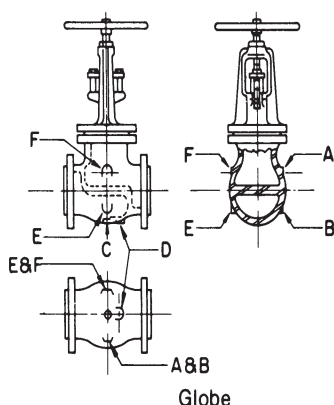
Iron Valve Options and Accessories

Tapping, Boss Locations, By-Passes*

Boss Locations

All NIBCO® iron valves are available with tapping for drain and special tapping. Boss locations and symbols and tapping procedures are in accordance with MSS By-Pass and Drain Connection Standard SP-45. All tappings are plugged at no extra charge. When Bosses are ordered tapped, the standard size of tapping is in accordance with the following table taken from MSS Specification SP-45, table 1.

Size of valve (In.)	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
Size of Drain Tapping (In.)														
Series A (steam)	½	½	½	½	¾	¾	¾	1	1	1	1	1	1	1

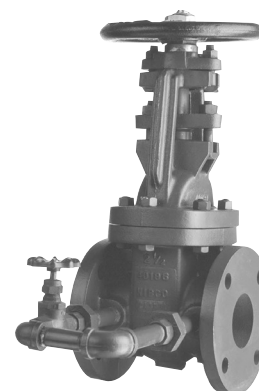


By-Passes*

A By-Pass can be used to equalize pressure at inlet and outlet before opening main valve; facilitates easy valve operation. Can also be used for preheating outlet lines and eliminate damage from too fast expansion. The built up type By-Pass is available on all NIBCO iron valves and is attached in accordance with MSS By-Pass and Drain Connection Standard SP-45. The By-Pass valve used on standard iron valves is a globe valve. Specify by adding (Z) to Fig. No, i.e. F-000-Z.

Main Valve Size (In.)	4	5	6	8	10	12	14	16	18	20	24
By-Pass Valve Size (In.)	½	¾	¾	¾	1	1	1	1	1	1	1

Sizes of By-Pass valves on NIBCO® Iron Gate, Globe, Angle and regular Swing Check Valves conform to MSS Specification SP-45, Table II, Series A for steam service.



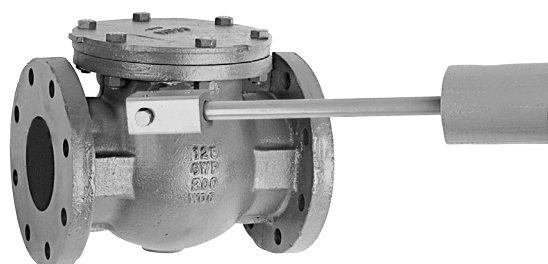
Iron Check Valve Options and Accessories

Lever and Weight/Spring (factory installed only)

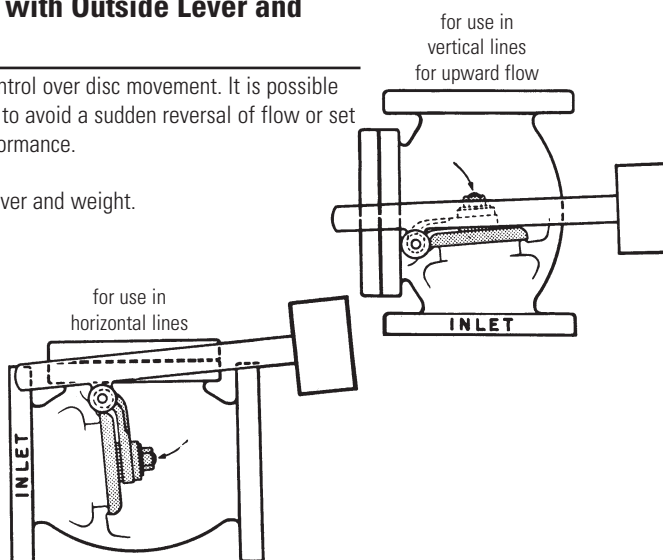
Iron Body Swing Check Valves are available with Outside Lever and Weight or Lever and Spring

The lever and weight arrangement is used to maintain exterior control over disc movement. It is possible to assist the disc to close rapidly where quick action is necessary to avoid a sudden reversal of flow or set the lever and weight at any position to get desired operating performance.

Illustrated below are some commonly accepted positions of the lever and weight.



Lever and weight mounted to assist the disc in closing.



The lever and weight is mounted on the right side of the valve when facing the inlet. Available on Figure no. F-918 in sizes 2½"–12".

Lever and spring provides more positive control in closing the disc. Tension of the spring may be adjusted to control the pressure against the disc.

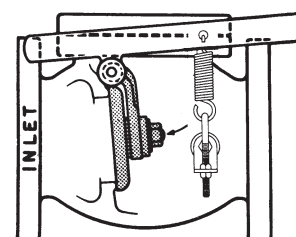


Fig. No. F-918-BL&S

Silicone lubricant is used in production of butterfly, flanged steel ball valves, and iron check valves at the Blytheville, Arkansas, Plant

Multi-turn Iron Valves: Gate, Globe, Angle and Check

The silicone used is in the form of grease, and is applied to the seat.

High Performance butterfly valves do **NOT** use silicone in assembly.

NOTE: Valves that are assembled and tested without silicone lubricants in this plant have a potential exposure to air-born silicone as well as during shipping after they leave the plant. Therefore, NIBCO cannot certify valves produced in the Blytheville plant to be 100% silicone free.

Special Ordered Check Valves:

We will, upon request, assemble check valves that are described as "Assembled-Dry". These valves are assembled **NOT** using the silicone grease.

NIBCO® Check Valves may be installed in both horizontal and vertical lines with upward flow or in any intermediate position. They will operate satisfactorily in a declining plane (no more than 15°).

WARNING: Do not use for reciprocating air compressor service.

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Iron Check Valve Options and Accessories

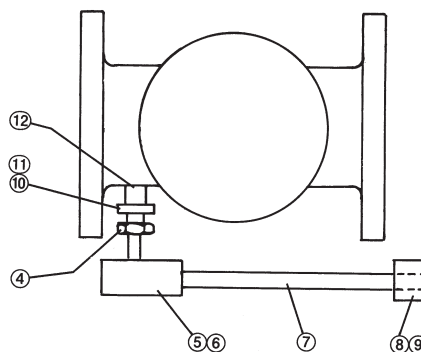
Lever and Weight/Spring Parts • Gear Operators

(factory installed only)

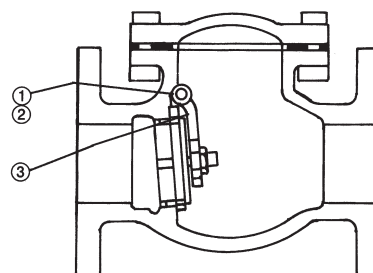
Parts for Iron Body Swing Check Valves with Outside Lever and Weight or Lever and Spring

Parts for Lever and Weight (F-918-BL&W)			Qty.
*1	Hanger and Spindle Key	Steel	1
*2	Hanger Pin	Brass ASTM B16	1
*3	Hanger	Ductile Iron	1
*4	Pack Nut	Brass	1
*5	Coupling	Steel	1
*6	Coupling Set Screw	Steel	2
7	Lever	Steel	1
8	Weight	Steel	1
9	Weight Set Screw	Steel	2
*10	Pack Gland	Zinc-Plated Powdered Iron	1
*11	Packing Rope	Non-Asbestos Fibers	1
*12	Stuffing Box	Brass ASTM B16	1
*13	Coupling and Lever Spring Pin	Steel	1

*Parts common to both F-918-BL&W and F-918-BL&S.



Parts for Lever and Spring (F-918-BL&S) (not pictured)		Qty.
Bracket Spacer	Steel 1020	1
Bracket	Steel	1
Bracket Bolt	Steel	2
Eye Bolt	Steel	1
Eye Bolt Nut	Steel	2
Hanger and Spindle Key	Steel	1
Lever	Steel	1
Spring	Steel	1



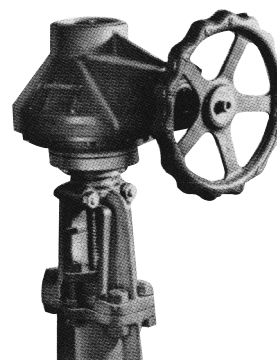
Gear Operators

Gearing is applied to valves to provide ease of operation.

Bevel Gears are the most versatile in that they have good efficiency. Gears are weatherproofed and Babbitt® sprockets may be applied.

When ordering gear operators, always provide the following information:

1. Valve size
2. Figure number
3. Pressure of media
4. Temperature of media



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