

## 2- and 3-way 3-piece Bolted Ball Valves

Hoke 7 Series high performance, bi-directional ball valves exceed 50,000 cycles\* with zero leakage\*\*. The 7 Series includes an energized Teflon® stem seal and live loaded seats which require no adjustment over the life of the valve. 2–way valves can be configured for unidirectional flow by replacing standard seat rings with opposing curved disc spring seats. 7 series come standard in 316 stainless steel, and special alloys when requested. A variety of handles and remote actuation packages are available.



#### BODY MATERIAL CYCLE LIFE

**Technical Data** 

CYCLE LIFE	Exceeds 50,000
MAXIMUM OPERATING PRESSURE	2500 psig @70° F (172 bar @ 21° C)
OPERATING TEMPERATURE RANGE	-65° F to +500° F (-29° C to +232° C)
ORIFICE	0.19 to 0.81" (4.8 to 6mm)
Cv FACTORS	1.0 to 38

316 stainless steel

## Features & Benefits

### Energized Teflon® stem seal

- Exceeds 50,000 cycles, reducing costs of ownership\*
- No packing adjustments required, providing operator peace of mind
- Low operating torque for ease of operation

#### Live-loaded seats

- Compensate for wear and temperature cycling with zero leakage, providing excelling durability and reliability.\*\*
- Ensure leak-tight performance over entire pressure range simplifying ball valve specification and installation, saving time and expense.
- Optional vented ball equalizes pressure between ball orifice and center body cavity

## Static –grounded stem

- Prevents static discharge for added safety
- Quarter turn handle provides a visual indication of on/off valve position, improving safety
- Stem flats provide visual indication of valve position, improving safety
- Bottom-loaded stem prevents stem blowout for added safety

- Optional trip-proof or latching / locking handle prevents accidental opening or closing of the valve for greater security and safety
- Fully encapsulated bolts are protected from the environment, extending valve life and reducing costs

Valves are designed, manufactured and tested in compliance with: ANSI/ASME B16.34 (valves: flanged, threaded, and welding end†), API 608 (metal ball valves: flanged, threaded and welding end), API 598 (valve inspection and test), and MSS SP-99 (instrument valves)

Industry standards ensure reliability and integrity of components and systems

Top-mount actuators and brackets are designed and manufactured in compliance with ISO 5211 (industrial valve: part-turn actuator attachment)

- Allow HOKE 7 Series to easily interchange with a wide variety of pneumatic actuators
- Allow user to easily convert manual valve to pneumatic operation in the field

Special High Tolerance NPT Thread

\* For best results use a filter upstream of the valve. Dirty, erosive and corrosive fluids may affect the cycle life of the valve. Cycle life is based on working pressures less than 150 psig.

\*\* Zero leakage per API 598.

*t* When B16.34 (option B) is selected, testing is conducted in accordance with these specifications.

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## Materials of Construction



- Low pressure operation: Due to their resilient characteristics compressed O-rings apply constant dynamic force to the seats which make a leak tight seal against the ball.
- *High pressure operation:* Rising system pressure pushes the floating ball against the downstream seat enhancing the constant dynamic force generated by the O-rings which results in a leak-tight seal.
- *Thermal cycling and wear:* Due to their resilient characteristics compressed O-rings apply constant dynamic force to the seats, compensating for expansion and contraction of components due to thermal cycling and wear.
- *Bi-directional flow*: Energized seat rings utilizing compressed O-rings allow control of process fluid in both directions.

**Optional Spring Loaded Seats** Opposing curved disc spring seats (upstream only) in lieu of standard seat ring allow unidirectional flow.

- Available for 2-way valves only.
- Provide high cycle life and zero leakage.
- Located on upstream side only, no seat assembly is located on downstream side of ball for this option.

## **Materials of Construction**

316 Stainless Steel Valve with 'G' Seat and Seal Mater	rial – 15% Graphite filled Teflon® (standard)
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	DESCRIPTION	COMPONENT MATERIAL	GRADE/ASTM SPECIFICATION
1	Energized Teflon <sup>®</sup> stem seal*	Graphite-filled Teflon®/Elgiloy®	_
2	Thrust washer*	PEEK™	_
3	Stem*	316 stainless steel	A479
4	Spacer	PEEK™	—
5	Adapter ends*	316 stainless steel	CF3M/A351
6	Ferrule, front*	316 stainless steel	A479
7	Ferrule, rear	316 stainless steel	A479
8	Gyrolok <sup>®</sup> nut	316 stainless steel	A479
9	Ball*	316 stainless steel	A479
10	Seat*	Graphite-filled Teflon <sup>®</sup>	—
11	Body*	316 stainless steel	CF3M/A351
12	Body seal*	PTFE	—
13	Seat retainer*	316 stainless steel	A479
14a	Energized seat ring (standard)*	FKM (Viton <sup>®</sup> )	MIL-R-83248
14b	Energized seat ring: curved disc springs (optional)*	316 stainless steel	_
15	Retaining ring	Stainless steel	PH15-7 MO
16	Handle spacer	316 stainless steel	A479
17	Handle	316 stainless steel	A240
18	Stem nut	316 stainless steel	ASTM A194 Grade 8
19	Body bolt	316 stainless steel	ASTM A193 B8
20	Body nut	316 stainless steel	ASTM A193 B8
	Handle stop roll pin (not shown, 7D Series only)	420 stainless steel	—
	Lubricant: Energized Teflon <sup>®</sup> stem seal	non silicone-based	Krytox <sup>®</sup> 104
	Lubricant: stem	non silicone-based	Krytox <sup>®</sup> 104
	Lubricant: seat	non silicone-based	Krytox <sup>®</sup> 206

Wetted component

## Technical Data (Standard)

SEAT	15% Graphite-filled Teflon®
BODY SEAL	PTFE
ENERGIZED STEM SEAL	Graphite-filled Teflon <sup>®</sup> / Elgiloy <sup>®</sup>
THRUST WASHER	PEEK™
MAXIMUM OPERATING PRESSURE*	2500 psig @ 70° F (172 bar @ 21° C)
TEMPERATURE RANGE (LIMITED BY SEAT RING MATERIAL)	FKM (Viton®): -20° F to +450° F (-29° C to +232° C) Curved Disc Springs: -65° F to +500° F (-54° C to +260° C)

\* 3-way valves are limited to 1500 psig (103 bar)

# Pressure vs. Temperature Curves 'G' Seat and Seal Material -15% Graphite filled Teflon®(Standard)



**Pressure vs. Temperature Curves** These optional seat and seal materials are available through the 'Build to Order' matrix on pages 26 and 27.

## 'T' Seat and Seal Material -PTFE (Optional)



SEAT	PTFE
BODY SEAL	PTFE
ENERGIZED STEM SEAL	Graphite-filled Teflon <sup>®</sup> / Elgiloy <sup>®</sup>
THRUST WASHER	PEEK™
MAXIMUM OPERATING PRESSURE*	2500 psig @ 70° F (172 bar @ 21° C)
TEMPERATURE RANGE (LIMITED BY SEAT RING MATERIAL)	FKM (Viton <sup>®</sup> ): -20° F to +450° F (-29° C to +232° C) Curved Disc Springs: -65° F to +500° F (-54° C to +260° C)
2 way values limited to 150	0  psiz (102  psr)

3–way valves limited to 1500 psig (103 bar).

#### 'P' Seat and Seal Material –PEEK™ (Optional)



SEAT	PEEK™
BODY SEAL	PTFE
ENERGIZED STEM SEAL	Graphite-filled Teflon <sup>®</sup> / Elgiloy <sup>®</sup>
THRUST WASHER	PEEK™
MAXIMUM OPERATING PRESSURE*	2500 psig @ 70° F (172 bar @ 21° C)
TEMPERATURE RANGE (LIMITED BY SEAT RING MATERIAL)	FKM (Viton <sup>®</sup> ): -20° F to +450° F (-29° C to +232° C) Curved Disc Springs: -65° F to +500° F (-54° C to +260° C)
* 2 1 1: 1. 1. 1.	

3-way valves limited to 1500 psig (103 bar).

## 'U' Seat and Seal Material -UHMWPE (Optional)



SEAT	UHMWPE
BODY SEAL	PTFE
ENERGIZED STEM SEAL	Graphite-filled Teflon <sup>®</sup> / Elgiloy <sup>®</sup>
THRUST WASHER	PEEK™
MAXIMUM OPERATING PRESSURE*	2500 psig @ 70° F (172 bar @ 21° C)
TEMPERATURE RANGE (LIMITED BY SEAT RING MATERIAL)	FKM (Viton <sup>®</sup> ): -20° F to +180° F (-29° C to +82° C) Curved Disc Springs: -65° F to +180° F (-54° C to +82° C)

3-way valves limited to 1500 psig (103 bar).

**Pressure vs. Temperature Curves** These optional seat and seal materials are available through the 'Build to Order' matrix on pages 26 and 27.

## 'V' Seat and Seal Material -Virgin TFE (Optional)



SEAT	TFE (virgin)
BODY SEAL	PTFE
ENERGIZED STEM SEAL	Graphite-filled Teflon <sup>®</sup> / Elgiloy <sup>®</sup>
THRUST WASHER	PEEK™
MAXIMUM OPERATING PRESSURE*	1500 psig @ 70° F (103 bar @ 21° C)
TEMPERATURE RANGE (LIMITED BY SEAT RING MATERIAL)	FKM (Viton <sup>®</sup> ): -20° F to +400° F (-29° C to +204° C) Curved Disc Springs: -65° F to +400° F (-54° C to +204° C)

\* 3-way valves limited to 1500 psig (103 bar).





SEAT	PTFE
BODY SEAL	FKM (Viton®) o-ring
ENERGIZED STEM SEAL	Graphite-filled Teflon <sup>®</sup> / Elgiloy <sup>®</sup>
THRUST WASHER	PEEK™
MAXIMUM OPERATING PRESSURE*	1500 psig @ 70° F (103 bar @ 21° C)
TEMPERATURE RANGE (LIMITED BY SEAT RING MATERIAL)	FKM (Viton <sup>®</sup> ): -20° F to +450° F (-29° C to +232° C) Curved Disc Springs: -20° F to +450° F (-29° C to +232° C)

\* 3-way valves limited to 1500 psig (103 bar).





SEAT	PTFE
BODY SEAL	PTFE
ENERGIZED STEM SEAL	Graphite-filled Teflon <sup>®</sup> / Elgiloy <sup>®</sup>
THRUST WASHER	Reinforced PTFE
MAXIMUM OPERATING PRESSURE*	2500 psig @ 70° F (172 bar @ 21° C)
TEMPERATURE RANGE (LIMITED BY SEAT RING MATERIAL)	FKM (Viton®): -20° F to +450° F (-29° C to +232° C) Curved Disc Springs: -65° F to +500° F (-54° C to +260° C)

\* 3-way valves limited to 1500 psig (103 bar).

## Dimensions: 7D Series (Cv Range = 1.0 to 3.8)











## 7D Series (Cv Range 1.0 to 3.8)

	2-WAY		3-WAY					
END CONNECTIONS	BALL ORIFICE	ORIFICE*	Cv	BALL ORIFICE	ORIFICE*	Cv		A
<sup>%</sup> Gyrolok <sup>®</sup>	0.28″	0.09″	10	0.20″	0.09″	1.0	inch	3.38
78 Gyrolox	0.20	0.09	1.0	0.20	0.09	1.0	mm	85.9
1/4″ Gyrolok®	0.28″	0.19″	1.8	0.20″	0.19″	1.7	inch	3.38
,	0.20	0117		0.20	0117		mm	85.9
%″ Gvrolok®	0.28″	0.28″	3.8	0.20″	0.20″	1.7	inch	3.38
							mm	85.9
6mm Gyrolok®	0.28″	0.16″	1.3	0.20″	0.16″	1.7	inch	3.35
				-			mm	85.1
8mm Gyrolok®	0.28″	0.23″	2.6	0.20″	0.20″	1.7	inch	3.35
							mm	85.1
10mm Gyrolok®	0.28″	0.28″	3.8	0.20″	0.20″	1.7	inch	3.43 971
							inch	2 20
¼″ female NPT	0.28″	0.28″	3.8	0.20″	0.20″	1.7	mm	58.2
							inch	3 55
¼″ male NPT	0.28″	0.28″	3.8	0.20″	0.20″	1.7	mm	90.2
							inch	3.59
¼″ Vaculok™	0.28″	0.28″	3.8	0.20″	0.20″	1.7	mm	91.2
	0.00"	0.06"		0.00"	0.00"	4.7	inch	2.30
<sup>1</sup> /4 tube socket weld	0.28″	0.26″	3.4	0.20″	0.20″	1.7	mm	58.4
2///	0.20"	0.00%	2.0	0.00%	0.00%	17	inch	2.50
here a socket weld	0.28	0.28	3.8	0.20	0.20	1.7	mm	63.5
6mm tubo sockat wold	0.20"	0.25"	2 1	0.20″	0.20″	17	inch	2.50
omm tube socket weld	0.20	0.25	5.1	0.20	0.20	1.7	mm	63.5
8mm tube socket weld	0.28″	0.28″	3.8	0.20″	0.20″	17	inch	2.50
omm tabe socket werd	0.20	0.20	5.0	0.20	0.20	1.7	mm	63.5
10mm tube socket weld	0.28″	0.28″	3.8	0.20″	0.20″	1.7	inch	2.50
	0120	0120	5.0	0.20	0120		mm	63.5
<sup>1</sup> /4" pipe butt weld sch 40	0.28″	0.28″	3.8	0.20″	0.20″	1.7	inch	1.97
							mm	50.0
<sup></sup> <sup>%″</sup> pipe butt weld sch 40	0.28″	0.28″	3.8	0.20″	0.20″	1.7	inch	1.97
							mm	50.0
¼″ pipe socket weld sch 80	0.28″	0.28″	3.8	0.20″	0.20″	1.7	inch	2.35
							mm	59.7
¼″ pipe butt weld sch 80	0.28″	0.28″	3.8	0.20″	0.20″	1.7	incn	1.97
							inch	1 07
¾″ pipe butt weld sch 80	0.28″	0.28″	3.8	0.20″	0.20″	1.7	mm	50.0
							11111	50.0

Handles

Oval handle **E** 1.44" (36.6mm) **F** 0.57" (14.5mm) **G** 1.50" (38.1mm)

Lever handle **E** 2.25" (57.2mm) **F** 0.42" (10.8mm) **G** 0.38" (9.65mm)

Consult factory for additional end connection sizes.

\* Orifice diameter and flow rate listed for the total valve. The most restrictive orifice may be either the ball or the end connection orifice. Dimensions for reference only, subject to change.

## Dimensions: 7E Series (Cv Range = 4.0 to 12.5)









#### 7E Series (Cv Range = 4.0 to 12.5)

	2-WAY		3-WAY					
END CONNECTIONS	BALL ORIFICE	ORIFICE*	Cv	BALL ORIFICE	ORIFICE*	Cv		A
<sup>3</sup> ∕″ Gvrolok®	0.50″	0.30″	4 5	0.42″	0.30″	40	inch	3.31
78 Gyrolok	0.50	0.50	ч.5	0.42	0.50	4.0	mm	84.1
1/2″ Gyrolok®	0.50″	0.42″	75	0.42″	0.42″	4.0	inch	3.80
/2 09:0101	0.50	01.12	715	0112	01.12		mm	96.5
34″ Gyrolok®	0.50″	0.50″	12.5	0.42″	0.42″	4.0	inch	3.80
,	-						mm	96.5
12mm Gyrolok®	0.50″	0.39″	7.0	0.42″	0.39″	4.0	inch	3.80
	-						inch	96.5
18mm Gyrolok®	0.50″	0.50″	12.5	0.42″	0.42″	4.0	inch	3.80
							inch	2 25
%″ female NPT	0.50″	0.50″	12.5	0.42″	0.42″	4.0	mm	82.5
	-						inch	3 25
1⁄2″ female NPT	0.50″	0.50″	12.5	0.42″	0.42″	4.0	mm	82.5
							inch	3.27
½″ Vaculok™	0.50″	0.50″	12.5	0.42″	0.42″	4.0	mm	83.1
							inch	2.36
%" tube socket weld	0.50″	0.30″	4.5	0.42″	0.30″	4.0	mm	59.9
1/" to be an alwater and a	0.50%	0.40%	75	0.42"	0.42"	4.0	inch	2.36
<sup>9</sup> 2 tube socket weld	0.50	0.42	7.5	0.42	0.42	4.0	mm	59.9
<sup>3</sup> / <sup>"</sup> tubo cockot wold	0.50"	0.50"	12.5	0.42"	0 42"	4.0	inch	2.36
<sup>9</sup> /4 tube socket weld	0.50	0.50	12.5	0.42	0.42	4.0	mm	59.9
12mm tube socket weld	0.50″	0.42″	75	0.42″	0.42″	40	inch	2.36
12mm tube socket werd	0.50	0.12	7.5	0.12	0.12	1.0	mm	59.9
18mm tube socket weld	0.50″	0.50″	12.5	0.42″	0.42″	4.0	inch	2.36
							mm	59.9
<sup>3</sup> <sup>∞</sup> pipe socket weld	0.50″	0.50″	12.5	0.42″	0.42″	4.0	inch	2.36
				_			mm	59.9
½″ pipe socket weld	0.50″	0.50″	12.5	0.42″	0.42″	4.0	inch	2.36
	-						inch	2 10
¾″ pipe butt weld sch 40	0.50″	0.42″	7.5	0.42″	0.42″	4.0	mm	2.10
	-						inch	2 10
½" pipe butt weld sch 40	0.50″	0.50″	12.5	0.42″	0.42″	4.0	mm	53.3
							inch	2.10
¾″ pipe butt weld sch 80	0.50″	0.42″	7.5	0.42″	0.42″	4.0	mm	53.3
	0.50%	0.50"	10.5	0.40%	0.40"		inch	2.10
<sup>1</sup> / <sub>2</sub> pipe butt weld sch 80	0.50″	0.50″	12.5	0.42″	0.42″	4.0	mm	53.3

#### Handles

Oval handle E 2.14" (54.4mm) F 1.50" (38.1mm) G 2.08" (52.8mm)

Lever handle E 3.72" (94.5mm) F 0.62" (15.7mm) G 0.63" (15.9mm)

Consult factory for additional end connection sizes.

## Dimensions: 7F Series (Cv Range = 7.5 to 38.0)







### 7F Series (Cv Range = 7.5 to 38.0)

	2-WAY				3-WAY			
END CONNECTIONS	BALL ORIFICE	ORIFICE*	Cv	BALL ORIFICE	ORIFICE*	Cv		Α
1" Gyrolok®	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	5.60
I Gylolok	0.00	0.00	50.0	0.05	0.05	9.0	mm	142
25mm Gyrolok®	0.88″	0.88″	38.0	0.63″	0.63″	90	inch	3.69
251111 0910101	0.00	0.00	50.0	0.05	0.05	210	mm	93.7
<sup>3</sup> 4″ female NPT sch 80	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	3.69
							mm	93.7
1″ female NPT sch 80	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	3.45
· · · · · · · · · · · · · · · · · · ·	0.00	0.00	50.0	0.05	0.05	510	mm	87.6
1″ tube socket weld	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	3.45
T tube socket werd	0.00	0.00	50.0	0.05	0.05	5.0	mm	87.6
25mm tube socket weld	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	3.45
25mm tube socket werd	0.00	0.00	50.0	0.05	0.05	5.0	mm	87.6
<sup>3</sup> / <sup>"</sup> nine socket weld	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	3.45
» pipe socket werd	0.00	0.00	50.0	0.05	0.05	5.0	mm	87.6
1" nine socket weld	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	3.45
i pipe socket weld	0.00	0.00	50.0	0.05	0.05	5.0	mm	87.6
$\frac{34''}{100}$ nine butt weld sch 40	0.88″	0.75″	27.0	0.63″	0.63″	9.0	inch	3.45
<sup>74</sup> pipe butt weid 3ch 40	0.00	0.75	27.0	0.05	0.63″	9.0	mm	87.6
1" pipe butt weld sch 40	0.88″	0.88″	38.0	0.63″	0.63″	9.0	inch	3.45
1 pipe butt weid sch 40	0.00	0.00	50.0	0.05	0.05	9.0	mm	87.6
3/1" pipe butt weld sch 80	0.88″	0.75″	27.0	0.63"	0.63"	9.0	inch	3.45
<sup>74</sup> pipe batt weld scil 80	0.86	0.75	27.0	0.03	0.05	9.0	mm	87.6
1" pipe butt weld sch 80	0.88"	0.88″	38.0	0.63″	0.63"	9.0	inch	3.45
i pipe butt weld scil 80	0.00	0.00 38.0	50.0	0 0.63	0.05	9.0	mm	87.6

## Handles

Oval handle E 2.61" (66.3mm) F 1.75" (44.4mm) G 2.54" (64.5mm)

Lever handle E 5.44" (138mm) F 0.80" (20.4mm) G 0.75" (19.0mm)

Consult factory for additional end connection sizes.

\* Orifice diameter and flow rate listed for the total valve. The most restrictive orifice may be either the ball or the end connection orifice. Dimensions for reference only, subject to change.

## Accessories: Handles



\* Standard handle for 7 Series



316 Stainless Steel





## How to Order: Standard Valves

Use the following list to order standard valves that are readily available from your local HOKE distributor. If your application requires a customized valve, use the 'Build to Order' matrix on page 26 for 2-way valves or page 27 for 3-way valves.

## 2-way Valves

All valves listed in this matrix are built with the following components as standard:

- 316 stainless steel body\* •
- 15% graphite-filled Teflon® • seat\*
- PTFE body seal\*
- Graphite-filled Teflon<sup>®</sup>/316 stainless steel energized stem seal\*
- PEEK<sup>™</sup> thrust washer\*
  316 stainless steel body bolt
- 316 stainless steel ball\*
- 316 stainless steel handle
- FKM (Viton®) seat rings\*
- Standard cleaning
- \* Wetted components

2 way valves			
END CONNECTION (ALL PORTS)	END CONNECTION SIZE	ACTUATION METHOD	PART NUMBER
	1⁄4″	Lever handle	7D2GG04G04YKS10V
	3%″	Lever handle	7D2GG06G06YKS10V
	1/2″	Lever handle	7E2GG08G08YKS10V
	3⁄4″	Lever handle	7F2GG12G12YKS10V
Gyrolok®	1″	Lever handle	7F2GG16G16YKS10V
Gyrolok	1⁄4″	Oval handle	7D2GG04G04YNS10V
	∛8″	Oval handle	7D2GG06G06YNS10V
	1/2″	Oval handle	7E2GG08G08YNS10V
Metric Sizes 6mm, 8mm, 10mm, 12mm,	3⁄4″	Oval handle	7F2GG12G12YNS10V
18mm, and 25mm	1″	Oval handle	7F2GG16G16YNS10V
dre diso avdilable	1⁄4″	Normally closed spring return pneumatic	7D2GG04G04Y6S10V
	∛8″	Normally closed spring return pneumatic	7D2GG06G06Y6S10V
	1/2″	Normally closed spring return pneumatic	7E2GG08G08Y6S10V
	3/4″	Normally closed spring return pneumatic	7F2GG12G12Y6S10V
	1″	Normally closed spring return pneumatic	7F2GG16G16Y6S10V
	1⁄4″	Lever handle	7D2GF04F04YKS10V
	∛8″	Lever handle	7D2GF06F06YKS10V
	1/2″	Lever handle	7E2GF08F08YKS10V
	3⁄4″	Lever handle	7F2GF12F12YKS10V
	1″	Lever handle	7F2GF16F16YKS10V
	1⁄4″	Oval handle	7D2GF04F04YNS10V
	3%″	Oval handle	7D2GF06F06YNS10V
Female NPT	1/2″	Oval handle	7E2GF08F08YNS10V
	3⁄4″	Oval handle	7F2GF12F12YNS10V
	1″	Oval handle	7F2GF16F16YNS10V
	1⁄4″	Normally closed spring return pneumatic	7D2GF04F04Y6S10V
	∛8″	Normally closed spring return pneumatic	7D2GF06F06Y6S10V
	1/2″	Normally closed spring return pneumatic	7E2GF08F08Y6S10V
	3⁄4″	Normally closed spring return pneumatic	7F2GF12F12Y6S10V
	1″	Normally closed spring return pneumatic	7F2GF16F16Y6S10V

#### 3-way Valves

•			
END CONNECTION (ALL PORTS)	END CONNECTION SIZE	ACTUATION METHOD	PART NUMBER
	1/4″	Lever handle	7D3GG04G04G04YKS1V
	%″	Lever handle	7D3GG06G06G06YKS1V
	1/2″	Lever handle	7E3GG08G08G08YKS1V
	3/4″	Lever handle	7F3GG12G12G12YKS1V
Gyrolok®	1″	Lever handle	7F3GG16G16G16YKS1V
dyrolok	1/4″	Oval handle	7D3GG04G04G04YNS1V
	∛%″	Oval handle	7D3GG06G06G06YNS1V
	1/2″	Oval handle	7E3GG08G08G08YNS1V
Metric Sizes 6mm, 8mm, 10mm, 12mm,	3/4″	Oval handle	7F3GG12G12G127YNS1V
18mm, and 25mm are also available	1″	Oval handle	7F2GG16G16G16YNS1V
	1/4″	Double acting pneumatic (switching)	7D3GG04G04G04Y5S1V
	%″	Double acting pneumatic (switching)	7D3GG06G06G06Y5S1V
	1/2″	Double acting pneumatic (switching)	7E3GG08G08G08Y5S1V
	3/4″	Double acting pneumatic (switching)	7F3GG12G12G12Y5S1V
	1″	Double acting pneumatic (switching)	7F3GG16G16G16Y5S1V

6mm 8mm

10mm

708

Z10

W08

W10

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## How to Order: Build to Order for 2-way Valves

Use the matrix below to customize your 7 Series valve. Use the chart on page 25 to order standard, readily available 7 Series valves. **Standard items in bold.** 



22mm

25mm

722

Z25

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W25

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How to Order: Build to Order for 3–way Valves Use the matrix below to customize your 7 Series valve. Use the chart on page 25 to order standard, readily available 7 Series valves. Standard items in bold.

	<u>7E3 G G08 G08 G08 </u>	<b>/ K</b>	<u>S</u> 2	2 <u>V</u>	Т					
SERIES 7D30 7E3 0 7F3 0 (See	NUMBER         Cv Range 1.0–3.8         Cv Range 4.0–12.5         Cv Range 7.5–38.0         pages 20-22)				A	NSIB Blai BA EATR VF	<b>16.3</b> nk-Sta NSI/A <b>/NG</b>	4 andar ASME B S Viton®	d 16.34 Cl 2) (stand	ass 800* lard)
<b>SEAT &amp;</b> G 15 T PT <b>P</b> PE	SEAL MATERIAL 5% Graphite filled Teflon® IFE EEK <sup>TM</sup> Consult factory if valve is actuated					K K - E E -	Calrez <sup>®</sup> -50° to PDM -54° to	® (–58° o +232 (–65° t o +121°	° C) ° C) ° C) ° C)	)°F/ F/
U UI V Vi O P1 R P1	HMWPE pneumatically rgin TFE IFE/FKM O-ring IFE/Reinforced PTFE washer				B S	ODY I TEM I 2 3 3 3	BOLI NUT 16 sta 16 sta	<b>ainles</b> ainless iant**	<b>SY NUT</b> s steel steel –N	iace
<b>PORT 1</b> See '	Ports' table below				— C	LEAN elow)	ING	OPTI	ONS (se	ee
PORT 2 See '	Ports' table below					S S F	itand IPS-1	ard clo and -2	eaning   2	per
See '	END Ports' table below					р В С	er HP	PS-18	vice clea	ning per
Y 31 H Ha M M	I6 stainless steel (standard) astelloy® C-276 onel® 400		* Val	ves proof te	ested to 1.	.5× work	ina pre	≤ ssure an	d taaaed r	per B16.34.
Cons ACTUAT Leve	r Handles (see page 24)	Por	** Per is so † Refa	NACE MR0 atisfactory er to page 2	175/ISO15 for use in 29 for spe	5156, the its inten cification	user m ded en ns.	ust dete vironme	rmine if thinn the second s	is product
Cons ACTUAT Leve K 31 S 31	Full factory for other materials FION OPTIONS Tr Handles (see page 24) 16 stainless steel (standard) 16 stainless steel, locking	Por	** Per is so t Refe <b>t 1 / 1</b>	NACE MRO atisfactory er to page 2 Port 2	175/ISO15 for use in 29 for spe 2 / PO FEMALE	5156, the its inten cification ort 3 TUBE SOCKET	user m ded en ns. TUBE BUTT	Vironme PIPE SOCKET	SCH 80 PIPE BUTT	SCH 40 PIPE BUTT
Cons <i>ACTUAT</i> <i>Leve</i> K 31 S 31 <i>Ergo</i> 2 31	Full factory for other materials <b>FION OPTIONS</b> <b>r Handles (see page 24)</b> <b>16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> <b>16 stainless steel locking</b>	<b>Por</b>	** Per is so t Ref t 1 / I SIZE %	NACE MR0 atisfactory er to page 2 Port 2 GYROLOK® G02	175/ISO1 <u>3</u> for use in 29 for spe <b>2 / Po</b> <b>5 FEMALE</b> NPT —	5156, the its inten cification ort 3 TUBE SOCKET WELD —	USER M ded en ns. TUBE BUTT WELD —	Vironme PIPE SOCKET WELD —	SCH 80 PIPE BUTT WELD —	SCH 40 PIPE BUTT WELD
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31	sult factory for other materials <b>TION OPTIONS</b> <b>r Handles (see page 24)</b> <b>16 stainless steel (standard)</b> <b>16 stainless steel, locking</b> <b>nomic Oval Handles (see page 24)</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, locking</b>	Por series	** Per is so t Ref t SIZE	NACE MR0 atisfactory er to page 2 Port 2 GYROLOK <sup>®</sup> G02 G04 G04	175/ISO1 <u>3</u> for use in 29 for spe 2/PO FEMALE NPT – F04	5156, the its inten cification TUBE SOCKET WELD — TO4 TO4	user m ded en ns. TUBE BUTT WELD — —	Vironme Vironme PIPE SOCKET WELD – P04	SCH 80 PIPE BUTT WELD  B04	SCH 40 PIPE BUTT WELD — H04
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 4 31	sult factory for other materials <b>TION OPTIONS</b> <b>T Handles (see page 24)</b> <b>16 stainless steel (standard)</b> <b>16 stainless steel, locking</b> <b>nomic Oval Handles (see page 24)</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, extended (standard length = 4</b> ") <b>16 stainless steel, latching (locking</b> )	Por series 7D3	** Per is so t Refo t 1 / / SIZE %" ¼" %" 6mm	NACE MR0 atisfactory er to page 2 Port 2 GYR0L0K° G02 G04 G06 Z06	175/ISO15 for use in 29 for spe 2 / PO 5 FEMALE NPT — FO4 — — FO4 — —	5156, the its inten cification ort 3 TUBE SOCKET WELD TO4 TO4 TO6 W06	USET M ded em ns. TUBE BUTT WELD — — — —	PIPE SOCKET WELD P04 	SCH 80 PIPE BUTT WELD — B04 B06 —	SCH 40 PIPE BUTT WELD — H04 H06 —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M 7	sult factory for other materials <b>FION OPTIONS</b> <b>r Handles (see page 24)</b> <b>16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> 16 stainless steel, locking 16 stainless steel, locking 16 stainless steel, extended (standard length = 4") 16 stainless steel, latching/locking 19 per plated carbon steel	Por series 7D3	** Per is sc t Refe <b>t 1 / /</b> SIZE %" ¼" ¾" 6mm 8mm	NACE MR0 atisfactory for to page 2 Port 2 GVR0L0K <sup>®</sup> G02 G04 G06 Z06 Z08	175/ISO12 for use in 29 for spe 2 / PO 2 / PO 5 (1) 5	5156, the its inten cification TUBE SOCKET WELD — TO4 TO4 TO6 W06 W08	USER M ded em ns. TUBE BUTT WELD — — — — — — — — — — — —	VITON ME VITON ME SOCKET WELD P04 — — — — — — — — — — — — —	SCH 80 PIPE BUTT WELD — BO4 BO6 — — —	SCH 40 PIPE BUTT WELD — H04 H06 — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31	Final factory for other materials <b>FION OPTIONS</b> <b>If Andles (see page 24)</b> <b>If Stainless steel (standard)</b> If stainless steel, locking <b>Inomic Oval Handles (see page 24)</b> If stainless steel, locking If stainless steel, locking If stainless steel, extended (standard length = 4") If stainless steel, latching/locking Inc-plated carbon steel If stainless steel	Por series 7D3	** Per is sc t Refa <b>t 1 / 1</b> SIZE ½" ¼" ¾" 6mm 8mm 10mm	NACE MR0 atisfactory er to page 2 Port 2 GYROLOK* G02 G04 G06 Z06 Z08 Z10	175/ISO12 for use in 29 for spe 2 / Po 2 / Po 5 5 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	5156, the its inten cification TUBE SOCKET WELD TO4 TO4 TO6 W06 W08 W10	USER M ded en ns. TUBE BUTT WELD       	PIPE SOCKET WELD P04 — — — — — — — — — — — — — — — — — — —	SCH 80 PIPE BUTT WELD — B04 B06 — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31	sult factory for other materials <b>TION OPTIONS</b> <b>r Handles (see page 24)</b> <b>16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> 16 stainless steel, locking 16 stainless steel, locking 16 stainless steel, extended (standard length = 4") 16 stainless steel, latching/locking 16 stainless steel 16 stainless steel	Por series 7D3	** Per is so t Refa <b>t 1 / 1</b> SIZE %" ¼" %" 6mm 8mm 10mm ¼" 34"	NACE MR0 atisfactory er to page 2 Port 2 GYR0L0K* G02 G04 G06 Z06 Z06 Z06 Z06 Z06 Z08 Z10 G04 G04	175/ISO12 for use in 29 for spe 2 / Poo 2 / Poo 5 female NPT F04   F04   F04   F04  F04  F04  F04  F04  F04  F04  F04  F04  F04  F05 F05 F05 F05 F05 F05 F05 F05 F05 F05	5156, the its inten cification TUBE SOCKET WELD TO4 TO4 TO6 W06 W06 W08 W10 TO4 TO4 TO6	USER M ded en ns. TUBE BUTT WELD — — — — — — — — — — — — — — — — — — —	PIPE SOCKET WELD P04          	SCH 80 PIPE BUTT WELD — B04 B06 — — B04 B06 — — B04 B06	SCH 40 PIPE BUTT WELD — H04 H06 — — — H06
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu	sult factory for other materials <b>TION OPTIONS</b> <b>r Handles (see page 24)</b> <b>16 stainless steel (standard)</b> <b>16 stainless steel, locking</b> <b>nomic Oval Handles (see page 24)</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, extended (standard length = 4</b> ") <b>16 stainless steel, latching/locking</b> <b>nc-plated carbon steel</b> <b>16 stainless steel</b> <b>17 steel</b> <b>18 stainless steel</b> <b>19 stainless steel</b> <b>10 stainless steel</b> <b>10 stainless steel</b> <b>11 </b>	Por series 7D3	** Per is sc t Refa <b>t 1 / 1</b> size %" '4" %" '4" %" '6mm 8mm 10mm %" %" '4" %" '4" %" '4" %"	NACE MR0 atisfactory er to page 2 Port 2 GYROLOK* G02 G04 G06 Z06 Z08 Z10 G04 G06 G06 G06 G08	175/ISO12 for use in 29 for spe 2 / Poo FEMALE NPT — FO4 — — FO4 — — FO4 FO6 FO8	5156, the its inten cification <b>DOM:</b> <b>TUBE</b> <b>SOCKET</b> WELD — TO4 TO6 W06 W06 W06 W06 W010 TO4 TO6 TO6 TO8	TUBE BUTT WELD — — — — — — — — — — — — — — — — — — —	PIPE SOCKET WELD  PO4    PO6 PO8	SCH 80 PIPE BUTT WELD — B04 B06 — — B04 B06 B04 B06 B08	SCH 40 PIPE BUTT WELD — H04 H06 — — H06 H08
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do	Final factory for other materials FION OPTIONS r Handles (see page 24) 16 stainless steel (standard) 16 stainless steel, locking momic Oval Handles (see page 24) 16 stainless steel, locking 16 stainless steel, locking 16 stainless steel, extended (standard length = 4") 16 stainless steel, latching/locking nc-plated carbon steel 16 stainless steel 16 stainless steel 16 stainless steel 17 matic Actuator <sup>+</sup> ouble acting (air to open/air to close, 180° rotation)	Por series 7D3	** Per is sc t Refa <b>t 1 /</b> <b>size</b> %" <b>4</b> %" %" %" %" %" %" %"	NACE MR0 atisfactory er to page 2 Port 2 GVR0L0K° G02 G04 G06 Z06 Z06 Z06 Z06 Z06 G04 G06 G04 G06 G08 G10	175/ISO12 for use in 29 for spe 2 / PO 2 / PO 2 / PO 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0 5 0	TUBE SOCKET WELD TUBE SOCKET WELD TO6 W06 W06 W06 W06 W08 W10 T04 T06 T08 T10	TUBE BUTT WELD 	PIPE SOCKET WELD  PO4    PO6 PO8 	SCH 80 PIPE BUTT WELD — B04 B06 — — B04 B06 B08 B08 —	SCH 40 PIPE BUTT WELD — H04 H06 — — H06 H08 —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp	FION OPTIONS THANDLES (see page 24) 16 stainless steel (standard) 16 stainless steel, locking momic Oval Handles (see page 24) 16 stainless steel, locking 16 stainless steel, locking 16 stainless steel, locking 16 stainless steel, latching/locking 17 nc-plated carbon steel 16 stainless steel 16 stainless steel 16 stainless steel 17 nc-plated carbon steel 16 stainless steel 16 stainless steel 17 nc-plated carbon steel 16 stainless steel 16 stainless steel 17 nc-plated carbon steel 18 stainless steel 19 nc-plated carbon steel 10 stainless steel 10 nc-plated carbon steel 10 stainless steel 10 nc-plated carbon steel 10 stainless steel 10 nc-plated carbon steel 10 nc-plated carbon steel 10 stainless steel 10 nc-plated carbon steel 10 nc-plat	Por series 7D3	** Per is sc t Refe <b>t 1 / 1</b> size % " 4" % " 4" % " 4" % " 4" % " 4" % " 4" % " 4" % " 1"	NACE MR0 atisfactory for to page 2 <b>PORT 2</b> <b>GYROLOK</b> <sup>®</sup> G02 G04 G06 Z08 Z10 G04 G06 G08 G10 G12	175/ISO12 for use in 29 for spe 2 / PO 2 / PO 2 / PO 5 / P	5156, the its inten cification TUBE SOCKET WELD TO4 TO4 TO6 W06 W006 W006 W006 W010 TO4 T04 T06 T04 T06 T04 T06 T08 T10 T12	TUBE BUTT WELD             	PIPE SOCKET WELD — PO4 — — — PO4 — — — PO6 PO8 — — PO6 PO8 — —	SCH 80 PIPE BUTT WELD — BO4 BO6 — — BO4 BO6 BO8 — — BO4 BO6 BO8 — — —	SCH 40 PIPE BUTT WELD — H04 H06 — H06 H08 — H06 H08 — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp	sult factory for other materials <b>TION OPTIONS</b> <b>T Handles (see page 24)</b> <b>16 stainless steel (standard)</b> <b>16 stainless steel, locking</b> <b>nomic Oval Handles (see page 24)</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, locking</b> <b>16 stainless steel, latching/locking</b> <b>nc-plated carbon steel</b> <b>16 stainless steel</b> <b>17 matic Actuator</b> <sup>†</sup> <b>18 output for the open/air to close, 180° rotation</b> ) <b>19 origin return (180° rotation)</b>	Por series 7D3	** Per is sc t Refe t 1 / 1 SIZE %" 14" %" 10mm ¼" %" 10" %" ½" %" 34" 34" 1" 6mm	NACE MR0 atisfactory er to page 2 Port 2 GYROLOK <sup>e</sup> G02 G04 G06 Z06 Z08 Z10 G04 G06 G08 G10 G12 — Z06	175/ISO12 for use in 29 for spe 2 / Poo 2 / Poo 2 / Poo 5 / Poo 5 / Poo 5 / Poo 6 / Poo 6 / Poo 7 / Po	5156, the its inten cification TUBE SOCKET WELD — T04 T06 W06 W08 W10 T04 T06 W08 W10 T04 T06 T08 T10 T10 T10 T10 T10 W06	TUBE BUTT WELD     SO4  SO4  SO4  SI6  SI6 	PIPE SOCKET WELD P04  P04  P06 P08  P06 P08    P06 P08             	SCH 80 PIPE BUTT WELD — B04 B06 — — B04 B06 — — B04 B06 B08 — — — — — — — — — — — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — H06 H08 — H06 H08 — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp Clean	<pre>sult factory for other materials TION OPTIONS r Handles (see page 24) 16 stainless steel (standard) 16 stainless steel, locking momic Oval Handles (see page 24) 16 stainless steel, locking 16 stainless steel, locking 16 stainless steel, latching/locking 16 stainless steel 17 and the steel 18 stainless steel 19 acting (air to open/air to close, 180° rotation) 19 oring return (180° rotation) 10 oring return</pre>	Por series 7D3	** Per is sc f Refe <b>t 1 / 1</b> SIZE %" ¼" %" ¼" %" ¼" %" ½" %" ¾" ½" %" ¾" ¼" %" ¾" ½" %" ¾" ½" %" %" ¾" %" ¾" ½" %" %" %" %" %" %	NACE MR0 atisfactory er to page 2 GYROLOK* G02 G04 G06 Z06 Z08 Z10 G04 G06 G08 G10 G04 G06 G08 G10 G12 — Z06 Z08	175/ISO12 for use in 29 for spe 2 / Poo 2 / Poo 2 / Poo 2 / Poo 2 / Poo 4 5 5 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	5156, the its inten cification TUBE SOCKET WELD  TO4 TO6 W06 W08 W10 TO4 TO6 T08 T10 T04 T06 T08 T10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 W06 W08 W10 T04 W06 W08 W10 T04 W06 W08 W10 T04 W06 W06 W08 W10 T04 W06 W06 W08 W10 W06 W08 W10 T04 W06 W06 W08 W10 T04 W06 W06 W08 W10 T04 W06 W06 W08 W10 T04 W06 W06 W08 W10 W06 W08 W10 T04 W06 W08 W10 T04 W06 W08 W10 T04 W06 W08 W10 T04 W06 W08 W10 W06 W08 W10 T04 W06 W08 W10 T04 T04 T06 W06 W08 W10 T04 T06 W06 W08 W10 W06 W08 W10 T04 T06 W08 W08 W10 W06 W08 W10 W06 W08 W10 W06 W08 W10 W06 W08 W10 W06 W08 W10 W10 W10 W06 W08 W10 W10 W10 W10 W10 W10 W10 W10 W10 W10	TUBE BUTT WELD — — — — — — — — — — — — — — — — — — —	PIPE SOCKET WELD P04  P04  P06 P08  P06 P08  - - - - - - - - - - - - - - - - -	SCH 80 PIPE BUTT WELD — BO4 BO6 — — BO4 BO6 BO8 BO8 — — — — — — — — — — — — — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — H06 H08 — H06 H08 — — — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp Clean HPS-1	Solution for the second sec	Por series 7D3 7E3	** Per is sc t Refa 51ZE %" 14" 3%" 6mm 8mm 10mm 44" 3%" 12" 5%" 34" 1" 6mm 8mm 10mm	NACE MR0 atisfactory er to page 2 GYROLOK <sup>®</sup> G02 G04 G06 Z08 Z10 G04 G06 G06 G08 G10 G12 — Z06 Z08 Z10	175/ISO12 for use in 29 for spe 2 / Poo 2 / Poo 2 / Poo 2 / Poo 2 / Poo 5 / Po	5156, the its inten cification TUBE SOCKET WELD  TO4 TO6 W06 W08 W10 TO4 TO6 T08 T00 T04 T06 T08 T00 T04 T06 W06 W10 T12  W06 W08 W10	TUBE BUTT WELD 	PIPE SOCKET WELD PO4  PO4  PO6 PO8  PO6 PO8  - - - - - - - - - - - - - - - - -	SCH 80 PIPE BUTT WELD — BO4 BO6 — — BO4 BO6 BO8 — — — — — — — — — — — — — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — — H06 H08 — — — — — — — — — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp Clean HPS-1	Solution for the state of th	Por series 7D3 7E3	** Per is sc t Refa 512E %" 14" %" 14" %" 14" 36" 6mm 8mm 10mm 14" 34" 12" 6mm 8mm 10mm 10mm 12mm	NACE MR0 atisfactory er to page 2 Port 2 GYROLOK <sup>®</sup> G02 G04 G06 Z08 Z10 G04 G06 G08 G10 G12  Z06 Z08 Z10 Z12 Z06 Z08 Z10	175/ISO12 for use in 29 for spe 2/Po 2/Po 2/Po 4 506 508 	5156, the its inten cification <b>DUBE</b> <b>SOCKET</b> WELD — T04 T06 W06 W08 W10 T04 T04 T06 W08 W10 T04 T08 T10 T12 — W06 W08 W10 V12 W10	TUBE BUTT WELD 	PIPE SOCKET WELD PO4  PO4  PO4  PO6 PO8  PO6 PO8  PO6 PO8  - - - - - - - - - - - - - - - - -	SCH 80 PIPE BUTT WELD — B04 B06 — B04 B06 B04 B06 B08 — — — — — — — — — — — — — — — — — — —	SCH 40           PIPE BUTT           WELD           —           H04           H06           —           H06           —           H06           —           H06           —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp Clean HPS-1	Final factory for other materials <b>FION OPTIONS r Handles (see page 24) 16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> 16 stainless steel, locking   16 stainless steel, latching/locking   16 stainless steel   16 stainless steel   16 stainless steel   17 matic Actuator <sup>t</sup> 18 ouble acting (air to open/air to close, 180° rotation)   19 oring return (180° rotation)   10 oring return (180° rotation)   11 oring Options   12 Cleaning procedure to remove oil and grease from metal valve parts with solvent vapor- and solvent ultrasonic vapor degreasers.	Por series 7D3 7E3	** Per is sc t Refa 512E %" 14" %" 14" %" 14" %" 14" %" 14" %" 14" 8mm 10mm 10mm 10mm 10mm 12mm	NACE MR0 atisfactory er to page 2 PORT 2 GYROLOK <sup>®</sup> G02 G04 G06 Z08 Z10 G04 G06 G08 G10 G12 — Z06 Z08 Z10 C12 Z06 Z08 Z10 Z12 Z14 Z15	175/ISO12 for use in 29 for spe 2 / Poo 2 / Po	5156, the its inten cification <b>DUBE</b> <b>SOCKET</b> WELD — T04 T06 W06 W06 W00 W10 T04 T06 T08 T10 T12 — W06 W08 W10 T12 W14 W10 W12 W14	USER M ded env ns. UBE BUTT WELD      SO4   SO4   SO4   SO4   SO4   SO4   SO4    SO4     SO4             	PIPE SOCKET WELD  PO4  PO4  PO6 PO8  PO6 PO8  - - - - - - - - - - - - - - - - -	SCH 80 PIPE BUTT WELD — B04 B06 — — B04 B06 B08 — — — B04 B06 B08 — — — — — — — — — — — — — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — H06 H08 — H06 H08 — — — — — — — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Da 6 Sp Clean HPS-2	Final State of the state of	Por series 7D3	** Per is sc t Refa 512E % '4' % '4' % '4' % '4' % '6mm % '4' % '34' 1'' 6mm % '4'' % '34'' 1'' 6mm 8mm 10mm 12mm 12mm 12mm 12mm 12mm 12mm 12	NACE MR0 atisfactory er to page 2 PORT 2 GYROLOK <sup>®</sup> G02 G04 G06 Z06 Z08 Z10 G04 G06 G08 G10 G12 — Z06 Z08 Z10 G12 — Z06 Z08 Z10 G12 Z12 Z14 Z15 Z15 Z16	175/ISO12 for use in 29 for spe 2 / Poo 2 / Poo 2 / Poo 2 / Poo 4	5156, the its inten cification TUBE SOCKET WELD — TO4 TO4 TO6 W06 W06 W06 W06 W00 TO4 T04 T06 T04 T06 T04 T06 W06 W00 W10 T12 — W06 W08 W10 T12 W16 W15 W15 W16	TUBE BUTT WELD — — — — — — — — — — — — — — — — — — —	PIPE socket WELD  PO4   PO6 PO8  PO6 PO8             -	SCH 80 PIPE BUTT WELD — B04 B06 — — B04 B06 B08 — — — — — — — — — — — — — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — H06 H08 — H06 H08 — H06 H08 — — — — — — — — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M 2i N 31 Pneu 5 Da 6 Sp Clean HPS-1 HPS-2	Final State Sta	Por series 7D3 7E3	** Per is sc t Refa SIZE % '4'' % '2'' % '4'' % '4'' % '4'' % '4'' % '34'' 1'' 6mm 8mm 10mm 12mm 12mm 14mm 15mm 16mm	NACE MR0 atisfactory er to page 2 <b>GYROLOK®</b> G02 G04 G06 Z06 Z08 Z10 G04 G06 G08 G10 G12 — Z06 Z08 Z10 G12 — Z10 Z12 Z14 Z15 Z16 Z18	175/ISO12 for use in 29 for spe 2 / Poo 2 / Poo 2 / Poo 2 / Poo 4	5156, the its inten cification TUBE SOCKET WELD — TO4 TO4 TO6 W06 W06 W06 W00 TO4 T04 T06 T08 T10 T12 — W06 W08 W10 T12 — W06 W08 W10 W112 W14 W15 W16 W18	TUBE BUTT WELD — — — — — — — — — — — — — — — — — — —	PIPE SOCKET WELD — PO4 — — PO6 PO8 — — PO6 PO8 — — — PO6 PO8 — — — — — — — — — — — — — — — — — — —	SCH 80 PIPE BUTT WELD — BO4 BO6 — — BO4 BO6 BO8 — — — BO4 BO6 BO8 — — — — — — — — — — — — — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — H06 H08 — H06 H08 — H06 H08 — H06 H08 — H06 H08 — H06 H08 H08 H08 H08 H08 H08 H08 H08 H08 H08
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp Clean HPS-1 HPS-2	Final State of the state of	Por series 7D3 7E3	** Per is sc t Refa SIZE % ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	NACE MR0 atisfactory er to page 2 CYROLOK <sup>®</sup> G02 G04 G06 Z06 Z08 Z10 G04 G06 G08 G10 G12 — Z06 Z08 Z10 G12 Z14 Z15 Z16 Z14 Z15 Z16 Z18 G12	175/ISO12 for use in 29 for spe 2 / Poo 2 / Poo 2 / Poo 2 / Poo 2 / Poo 2 / Poo 4 / Po	5156, the its inten cification <b>DOLT</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b> <b>TOL</b>	TUBEE BUTT WELD — — — — — — — — — — — — — — — — — — —	PIPE SOCKET WELD  PO4  PO4  PO4  PO6 PO8  PO6 PO8  - - - - - - - - - - - - - - - - -	SCH 80 PIPE BUTT WELD — B04 B06 — — B04 B06 — — — B04 B06 B08 — — — — — — — — — — — — — — — — — — —	SCH 40 PIPE BUTT WELD — H04 H06 — H06 H08 — H06 H08 — — — — — — — — — — — — — — — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Da 6 Sp Clean HPS-1 HPS-2 HPS-18	Full factory for other materials <b>FION OPTIONS r Handles (see page 24) 16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> 16 stainless steel, locking         16 stainless steel, locking         16 stainless steel, locking         16 stainless steel, locking         16 stainless steel, latching/locking         16 stainless steel, latching/locking         16 stainless steel <b>Imatic Actuator</b> <sup>†</sup> ouble acting (air to open/air to close, 180° rotation)         oring return (180° rotation) <b>Diffections</b> Cleaning procedure to remove oil and grease from         metal valve parts with solvent vapor- and solvent         ultrasonic vapor degreasers.         Cleaning procedure to remove dirt, oil, and grease         from non-metallic parts with non-ionic detergent and         water solution.         Cleaning procedure to remove oil, grease, and other	<b>Por</b> <b>SERIES</b> 7D3 7E3	** Per is sc t Refa SIZE %" '4" %" '4" %" '4" %" '4" %" '4" %" '4" %" '4" %" '4" %" '4" %" '4" %" '4" %" '4" ** '4 ** '4 ** '4 ** '4 '4 ** '4 ** '4 ** '4 ** '4 ** '4 ** '4 ** '4 * '4 * '4 ** '4 * '4 * '4 * '4 ** '4 * '4 * '4 * '4 ** '4 * '4 * '4 * '4 ** '4 * '4 * '4 ** '4 * '4 * '4 * '4 '4 '4 '4 '4 '4 '4 '4 '4 '4 '4 '4 '4	NACE MR0 atisfactory er to page 2 PORT 2 GVR0L0K <sup>e</sup> G02 G04 G06 Z06 Z08 Z10 G04 G06 G08 G10 G12  Z06 Z08 Z10 Z12 Z14 Z15 Z16 Z18 G12 G14	175/ISO12 for use in 29 for spe 2 / Poo 2 / Po	5156, the its inten cification TUBE SOCKET WELD T04 T04 T06 W06 W08 W10 T04 T04 T06 T08 T10 T12 W06 W08 W10 W12 W14 W15 W16 W18 T12 	TUBE BUTT WELD 	ust dete           vironme           Pipe           SOCKET           WELD           P04           —           —           P04           —           P04           —	SCH 80 PIPE BUTT WELD B04 B06  B04 B06 B08  B04 B06 B08   B04 B06 B08             -	SCH 40 PIPE BUTT WELD — H04 H06 — H08 — H06 H08 — — — — — — — — — — — — — — — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Do 6 Sp Clean HPS-1 HPS-2 HPS-18	Solut factory for other materials <b>FION OPTIONS r Handles (see page 24) 16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> 16 stainless steel, locking         16 stainless steel, locking         16 stainless steel, locking         16 stainless steel, locking         16 stainless steel, latching/locking         16 stainless steel, latching/locking         16 stainless steel <b>Imatic Actuator</b> <sup>†</sup> ouble acting (air to open/air to close, 180° rotation)         oring return (180° rotation) <b>Dimensional Cleaning</b> procedure to remove oil and grease from metal valve parts with solvent vapor- and solvent ultrasonic vapor degreasers.         Cleaning procedure to remove dirt, oil, and grease from non-metallic parts with non-ionic detergent and water solution.         Cleaning procedure to remove oil, grease, and other contaminates from the valve and fitting components prior to assembly for inductrial	Por series 7D3 7E3	** Per is sc f Refa SIZE %" 14" %" 14" %" %" 34" 10mm 10mm 14" %" 34" 10mm 12mm 10mm 12mm 10mm 12mm 14mm 15mm 16mm 18mm 34" 34" 1"	NACE MR0 atisfactory er to page 2 PORT 2 GVROLOK* G02 G04 G06 Z08 Z10 G04 G06 G08 G10 G12  Z06 Z08 Z10 Z12 Z14 Z15 Z16 Z12 Z14 Z15 Z16 Z18 G12 G12 G14 G16	175/ISO12 for use in 29 for spe 2 / Poo 2 / Po	5156, the its inten cification TUBE SOCKET WELD T04 T04 T06 W06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T04 T04 T04 T04 T04 T04 T04 T0	TUBE BUTT WELD 	Ust dete vironme SOCKET WELD P04  P04  P06 P08  P06 P08  P06 P08  - - - - - - - - - - - - - - - - -	SCH 80 PIPE BUTT WELD B04 B06  B04 B06 B08  B04 B06 B08  B12  B12  B12  B12  B12  B12  B12	SCH 40 PIPE BUTT WELD — H04 H06 — H04 H06 H08 — H06 H08 — H06 H08 — H06 H08 H08 H08 H08 H08 H06 H08 H08 H06 H08 H06 H08 H06 H08 H06 H08 H06 H08 H06 H08 H06 H08 H06 H08 H07 H06 H08 H06 H08 H07 H06 H08 H07 H06 H08 H07 H06 H08 H07 H07 H07 H07 H07 H07 H07 H07 H07 H07
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M Zi N 31 Pneu 5 Da 6 Sp Clean HPS-1 HPS-2 HPS-18	Solut factory for other materials <b>FION OPTIONS r Handles (see page 24) 16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> 16 stainless steel, locking   16 stainless steel, locking   16 stainless steel, locking   16 stainless steel, locking   16 stainless steel, latching/locking   16 stainless steel latching/locking   16 stainless steel   16 stainless steel   17 matic Actuator <sup>†</sup> 18 ouble acting (air to open/air to close, 180° rotation)   19 oring return (180° rotation)   10 oring return (180° rotation)   10 oring procedure to remove oil and grease from   11 with solvent vapor- and solvent   11 ultrasonic vapor degreasers.   12 Cleaning procedure to remove dirt, oil, and grease   13 from non-metallic parts with non-ionic detergent and   14 water solution.   15 Cleaning procedure to remove oil, grease, and other   16 contaminates from the valve and fitting   17 components prior to assembly for industrial   18 original	<b>Por</b> <b>SERIES</b> 7D3 7E3	** Per is sc f Refa SIZE % '4' '4' % '6mm 8mm 10mm 14'' % '34'' 1'' 6mm 8mm 10mm 12mm 12mm 12mm 14mm 15mm 16mm 18mm 34'' '2'' '34'' 1'' 18mm	NACE MR0 atisfactory er to page 2 PORT 2 GVR0L0K* G02 G04 G06 Z08 Z10 G04 G06 Z08 Z10 G12  Z06 Z08 Z10 G12 Z12 Z14 Z15 Z16 Z18 G12 G14 G12 G14 G16 Z18 G12 G14 G16 Z18 G16 Z18	175/ISO12 for use in 29 for spe 2/PO 2/PO 2/PO 2/PO 2/PO 2/PO 2/PO 2/PO	5156, the its inten cification TUBE SOCKET WELD T04 T06 W06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W06 W10 T04 T04 T06 W06 W10 T04 T04 T06 W06 W10 T04 T04 T06 W06 W10 T04 T04 T06 W06 W10 T04 T04 T06 W06 W10 T04 T04 T06 W06 W10 T04 T04 T06 W06 W10 T04 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T04 T06 W10 T12 T12 W10 T12 W10 T12 W10 T12 W10 T12 W10 T12 W10 T12 W10 T12 W10 T12 W10 T12 W10 W10 T12 W10 W10 W10 T12 W10 W10 W10 W10 T12 W110 W10 W10 W10 W10 W10 W10 W10 W10 W1	TUBE BUTT WELD — — — — — — — — — — — — — — — — — — —	Ust dete vironme SOCKET WELD P04  P04  P06 P08  P06 P08  P06 P08  - P06 P08  P06 P08  P06 P08  P12  P12  P12  P12  P16  P12  P16  P16  P16 P16 P16 P16 P16 P16 P16 P16 P16 P16	SCH 80 PIPE BUTT WELD B04 B06  B04 B06 B08  B04 B06 B08    B04 B06 B08    B12  B12  B12  B16  B16 	SCH 40 PIPE BUTT WELD — H04 H06 — — — H06 H08 — — — — — — — — — — — — — — — — — — —
Cons ACTUAT Leve K 31 S 31 Ergo 3 31 4 31 L 31 M 2i N 31 Pneu 5 Da 6 Sp Clean HPS-1 HPS-2 HPS-18	Built factory for other materials <b>TION OPTIONS r Handles (see page 24) 16 stainless steel (standard)</b> 16 stainless steel, locking <b>nomic Oval Handles (see page 24)</b> 16 stainless steel, locking   16 stainless steel, locking   16 stainless steel, locking   16 stainless steel, locking   16 stainless steel, latching/locking   16 stainless steel latching/locking   17 nc-plated carbon steel   16 stainless steel <b>Imatic Actuator</b> <sup>t</sup> 17 ouble acting (air to open/air to close, 180° rotation)   18 origination return (180° rotation)   19 origination return (180° rotation)   10 origing return (180° rotation)   10 origing return (180° rotation)   11 origination return (180° rotation)   12 origination return (180° rotation)   13 origination return (180° rotation)   14 origination return (180° rotation)   15 origination return (180° rotation)   16 origination return (180° rotation)   17 origination return (180° rotation)   18 origination return (180° rotation)   19 origination return (180° rotation)   10 origination return (180° rotation)   10 origination return (180° rotation)   11 origination return (180° rotation)   12 origination return (180° rotation)   13 origination return (180° rotation)   14 origination return (180° rotation)   15 origination return (180° rotation)   16 origination return (180° rotation)   17 origination return (180° rotation) </th <th><b>Рог</b> <b>SERIES</b> 7D3 7E3</th> <th>** Per is so t Refa SIZE %" 14" %" 14" %" 14" %" 14" %" 14" 8mm 10mm 12mm 10mm 12mm 14mm 10mm 12mm 14mm 15mm 16mm 18mm 20mm 20mm</th> <th>NACE MR0 atisfactory er to page 2 PORT 2 GVR0L0K° G02 G04 G06 Z08 Z10 G04 G06 Z08 Z10 G12  Z06 Z08 Z10 G12 G14 Z15 Z16 Z18 G12 G14 G16 Z18 Z18 G12 G14 G16 Z18 Z20 G72</th> <th>175/ISO12 for use in 29 for spe 2/PO FEMALE NP F04  F04 F06 F08  F04 F06 F08  F04 F06 F08  - - - - - - - - - - - - - - - - -</th> <th>5156, the its inten cification TUBE SOCKET WELD TO4 TO4 TO6 W06 W08 W10 TO4 TO4 T06 W08 W10 T04 T06 T04 T06 W08 W10 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T04 T04 T04 T04 T04 T04 T04 T0</th> <th>USER M ded env ns. TUBE BUTT WELD — — — — — — — — 504 — — — — — 504 — — — — — — — — — — — — — — — — — — —</th> <th>Ust dete vironme SOCKET WELD P04  P04  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P04  P06 P08  P16 P16 P16 P16 P16 P16 P16 P16 P16 P16</th> <th>SCH 80           PIPE BUTT           B04           B06              B04           B06              B04           B06              B04           B06                 B04           B06           B08   B12              B16                </th> <th>SCH 40 PIPE BUTT WELD — H04 H06 — — — — — — — — — — — — — — — — — — —</th>	<b>Рог</b> <b>SERIES</b> 7D3 7E3	** Per is so t Refa SIZE %" 14" %" 14" %" 14" %" 14" %" 14" 8mm 10mm 12mm 10mm 12mm 14mm 10mm 12mm 14mm 15mm 16mm 18mm 20mm 20mm	NACE MR0 atisfactory er to page 2 PORT 2 GVR0L0K° G02 G04 G06 Z08 Z10 G04 G06 Z08 Z10 G12  Z06 Z08 Z10 G12 G14 Z15 Z16 Z18 G12 G14 G16 Z18 Z18 G12 G14 G16 Z18 Z20 G72	175/ISO12 for use in 29 for spe 2/PO FEMALE NP F04  F04 F06 F08  F04 F06 F08  F04 F06 F08  - - - - - - - - - - - - - - - - -	5156, the its inten cification TUBE SOCKET WELD TO4 TO4 TO6 W06 W08 W10 TO4 TO4 T06 W08 W10 T04 T06 T04 T06 W08 W10 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T06 W08 W10 T04 T04 T04 T04 T04 T04 T04 T04 T04 T0	USER M ded env ns. TUBE BUTT WELD — — — — — — — — 504 — — — — — 504 — — — — — — — — — — — — — — — — — — —	Ust dete vironme SOCKET WELD P04  P04  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P06 P08  P04  P06 P08  P16 P16 P16 P16 P16 P16 P16 P16 P16 P16	SCH 80           PIPE BUTT           B04           B06              B04           B06              B04           B06              B04           B06                 B04           B06           B08   B12              B16	SCH 40 PIPE BUTT WELD — H04 H06 — — — — — — — — — — — — — — — — — — —

## 28 HOKE High Cycle Ball Valves