

2N0

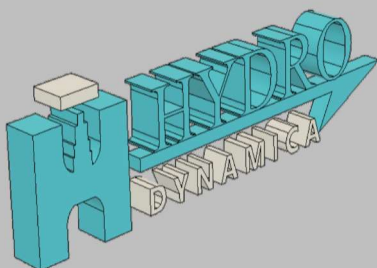
Natural Gas, MINI GAS Valves, Soft Seat, 1/8" Bore,



The MINI GAS Needle Valve is designed for gas sampling, calibration, shut off and bleeding, specifically for the natural gas industry. Design features include metal-to-metal Bonnet to Body seal, blow out proof stem with safety metal to metal back seating. The double o'ring and double PTFE back-up rings below the stem thread, provides extra sealing characteristics for valve, ensuring a more environmentally friendly valve. The removable soft seat design provides for an easy bubble tight shut-off in continuous service. The mini valve offering comes in 1/4" NPT connections, FNPT x FNPT, FNPT x MNPT, MNPT x FNPT, MNPT x MNPT, with 316SS and A108 CS as standard construction materials, and Delrin AF@ seats. OPTIONAL construction materials and seat materials available upon request, A105CS, 300 Series Stainless, Hastelloy C, Incoloy 825, Inconel 625, Monel 400 and Kel-F optional seat material.



All Products and Materials Sourced & Manufactured in North America.



**HYDRODYNAMICA VALVE
Manufacturing Corporation**

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Ph: 403-720-7700

Contacts:

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NEW Valve Features

- Added Dust Cap - Dust Cap with "ISOLATE" indicator and "CLOSE" and Direction Arrow
- Dual O'ring and Back-up Ring - Maximizing Stem to Bonnet sealing.
- Re-designed Soft Seat to maximize wall thicknesses (Strengthening seat to prevent damage at maximum testing and certification pressures.)
- Added turned corners on the Valve Body- turned Corners is a Standard Bar Size 1 1/8"Ø, Allowing for Bar feed production from Bar Stock and no need for flat finishing Surfaces which would be milled. Eliminate a deburring process. Valve Body has a different appearance.
- Overall "OPEN" height increased by 0.300". Both Bonnet and Stem increased in Length.

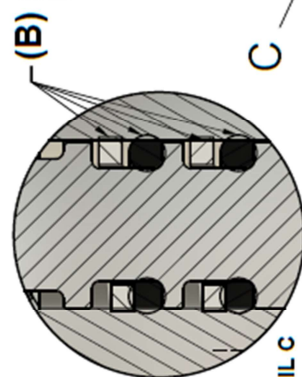
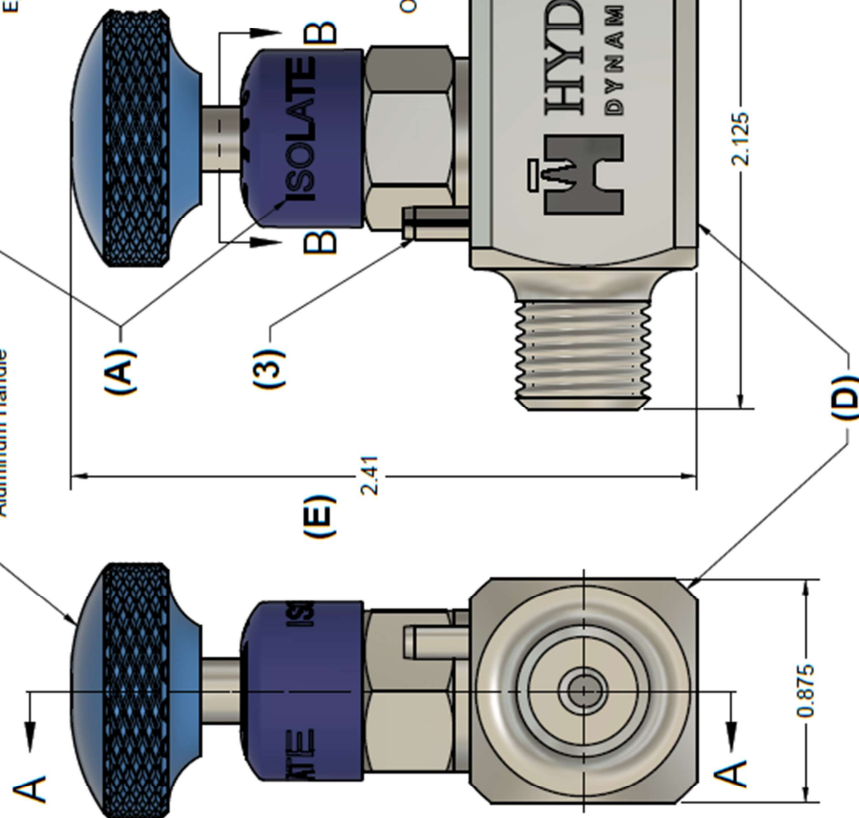
STANDARD Valve Features

- Metal to Metal - Body to Bonnet Seals that are in compression, no in tension (Mitigates Risks of Stress Cracking at Joint - Isolates process contaminants from Joint Thread)
- Packing below Stem Threads - (Prevents corrosion and process contamination of critical Stem Thread)
- Bonnet Lock Pin - (Provides a Tamper Proof bonnet and indicator)
- Rolled Stem Threads, NOT Cut. - (Higher Strength, smooth surface finish on stem thread provides for smooth action and longer service life.)
- Round Knurled Handle - Eliminates accidental opening of the valve when stored in a service vehicle or in a Lab.

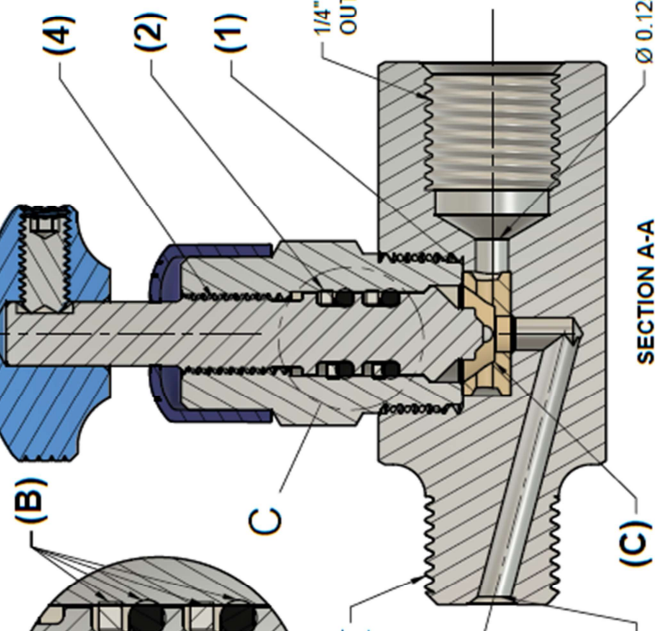


SECTION B-B

(5)
Ø 1.00 Knurled
Aluminum Handle



DETAIL C
O'Ring/Backup Ring



SECTION A-A

Interpret drawing in accordance with ANSI Y14.5M-2009			
Tolerances unless otherwise specified			
Units	XX	XXX	XXXX
Inch	± 0.1	± 0.02	± 0.005
mm	± 2.5	± 0.50	± 0.13
Angular	± 2° Surface Finish		
Third Angle Projection			

HYDRODYNAMICA VALVE MANUFACTURING CORPORATION
TITLE: 2NOM4F4VSDS16
 MINI GAS VALVE, 1/4"MNPT x 1/4"FNPT, 0.125" Bore, Delrin Soft Seat, FKM V1238-95D O'Ring, PTFE Backup, Rd. Blue Aluminum Handle, 316SS, 6000 psi

APPR'D. by:	SIZE	CODE	PROJECT: MINI Gas Valve	DWG NO:	REV
CHK'D by:	B		SCALE: 2:1	2NOM4F4VSDS16	000
DRAWN by: Edward Stamler	2019-09-30		WEIGHT		SHEET: 1/2

PROPRIETARY AND CONFIDENTIAL:
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Engineering Design Specifications

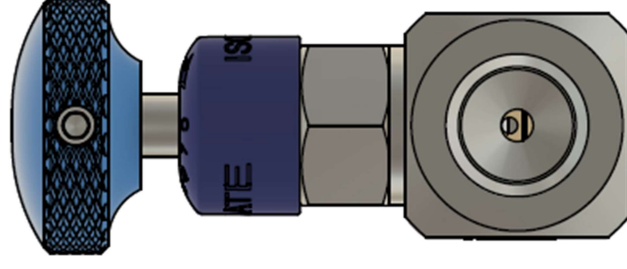
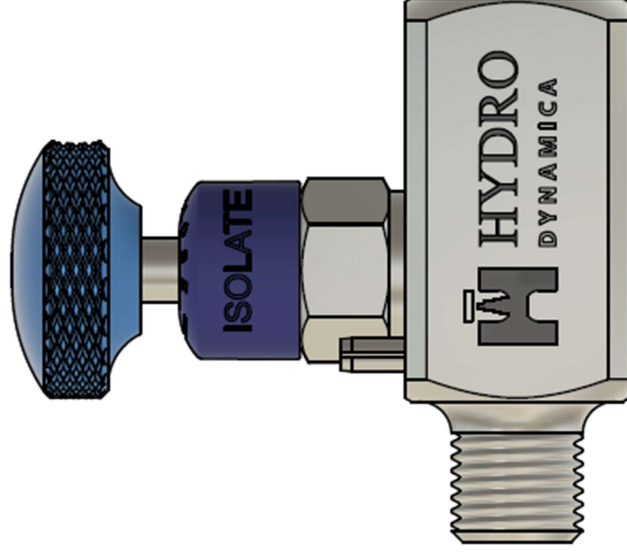
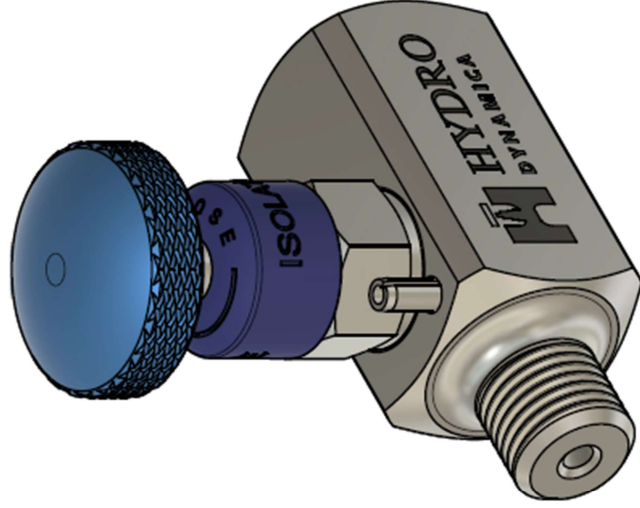
ASME B31.1 Power Piping
ASME B31.3 Process Piping
ASME B16.34 Valves, Flanges, Threaded and
Welding Ends
ASME B16.5 Pipe Flanges and Flanged Fittings
ANSI B1.20 Pipe Threads, General Purpose (Inch)
ASME B16.11 Forged Fittings, Socket Welding and
Threaded
NACE MR0175 Standard for Metals in Sour Oil Field
Environments

Valve Validation Specifications

API 598 Valve Inspection and Testing
ASME Sec. VIII Construction of Pressure Vessels
MSS-SP99 Instrument Valves
MSS-SP105 Instrument Valves for Code Applications
MSS-SP25 Standard Marking Systems for Valves
Fittings, and Flange Unions
NACE MR0175 for all 316SS and A105 CS Wetted Components

Certifications

Manufactured to:
ISO 9001 - 2015 QMS
CSA B51 BOILER PRESSURE VESSEL and PIPING CODE
SAFETY CODES ACT
ABSA ALBERTA BOILERS SAFETY ASSOCIATION for
C & H Class Fittings (Pending)
ABSA DESIGN Registration CRN# (Pending)



Interpret drawing in accordance with ASME Y14.1-2003 ANSI Y14.1M-2003	Tolerances unless otherwise specified			
Units	XX	XX	XX	XXX
Dimensions in Inches	± 0.1	± 0.02	± 0.005	± 0.005
Dimensions in Millimeters	± 0.5	± 0.13	± 0.05	± 0.13
Surface Finish	Third Angle Projection			

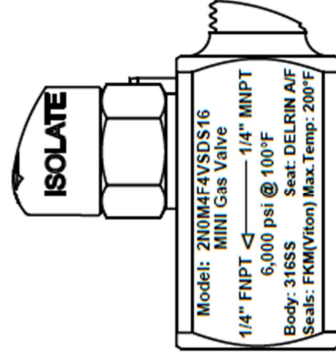
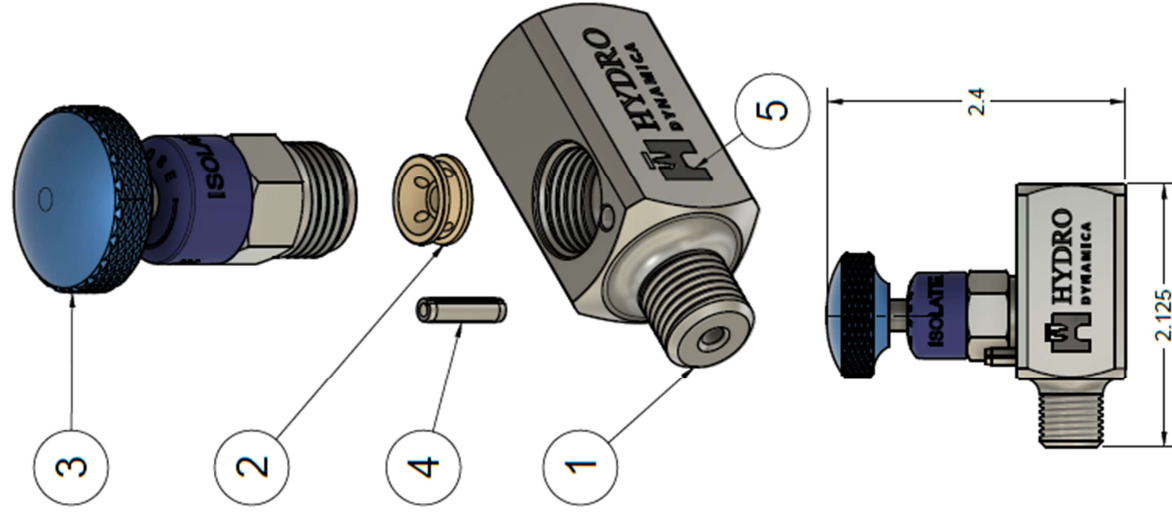
APPR'D. by:
CHK'D by:
DRAWN by: Edward Stamler 2019-09-30

HYDRODYNAMICA VALVE MANUFACTURING CORPORATION			
TITLE: 2NOM4F4VSDS16			
MINI GAS VALVE, 1/4" MNPT x 1/4" FNPT, 0.125" Bore, Delrin Soft Seat, FKM V1238-95D O-Ring, PTFE Backup, Rd. Blue Aluminum Handle, 316SS, 6000 psi			
PROJECT: MINI Gas Valve	DWG NO: 2NOM4F4VSDS16	REV: 000	
SIZE: B	CODE: 1:1	WEIGHT: 2/2	

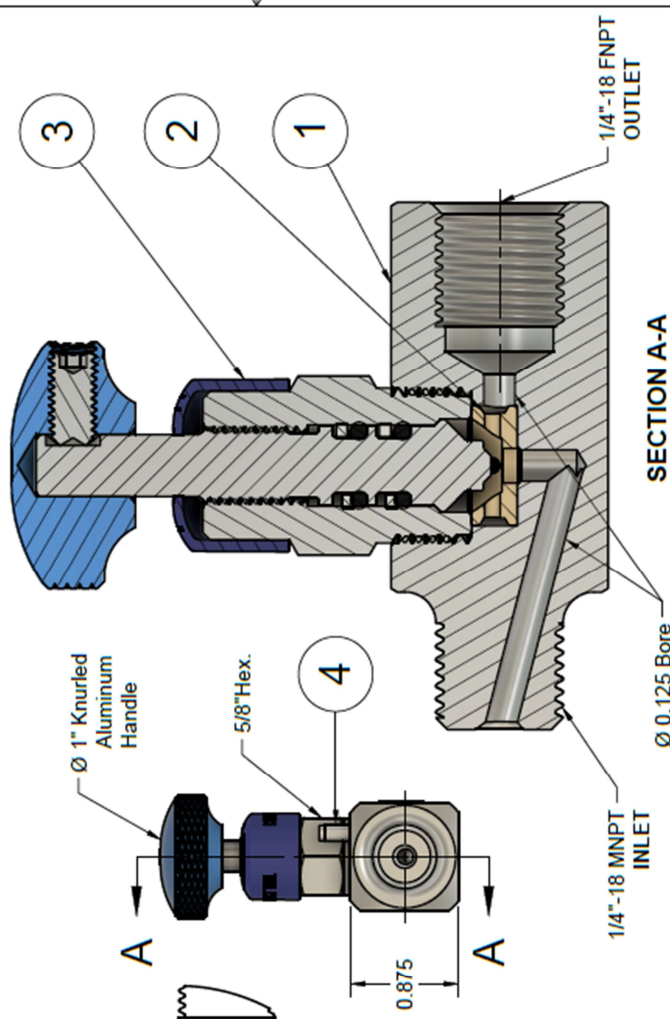
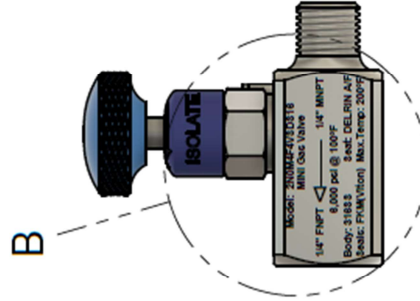
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V

PARTS LIST				
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL
1	1	BDY2NOM4F4S16	MINI GAS VALVE BODY, 1/4" MNPT X 1/4" FNPT, 0.125" BORE, SOFT SEAT, 316SS, 6000 PSI	STAINLESS STEEL 316/316L SS
2	1	SEAT2BD	SOFT SEAT, 0.125" BORE, MINI GAS, DELRIN A/F	DELRIN A/F
3	1	BA2VSDS16	BONNET ASSEMBLY, MINI GAS VALVE, 0.125" BORE, DELRIN SOFT SEAT, FKM V1238-95D O-RINGS, ROND BLUE HANDLE, 316SS, 6000 PSI	
4	1	LPIN125X500S18	LOCK PIN, SPLIT, 0.125" DIA. X 0.500" LG, 18-8 SS	
5	1	HYDRODYNAMICA	HYDRODYNAMICA LOGO - LASER MARKING	



DETAIL B



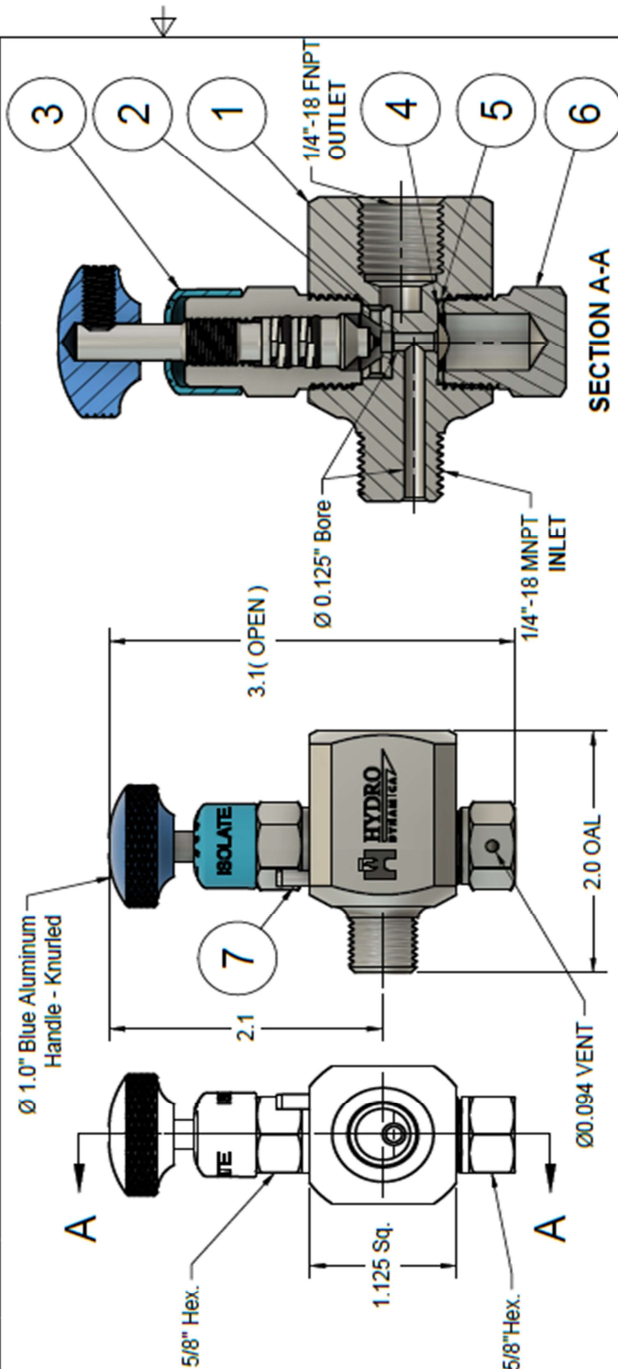
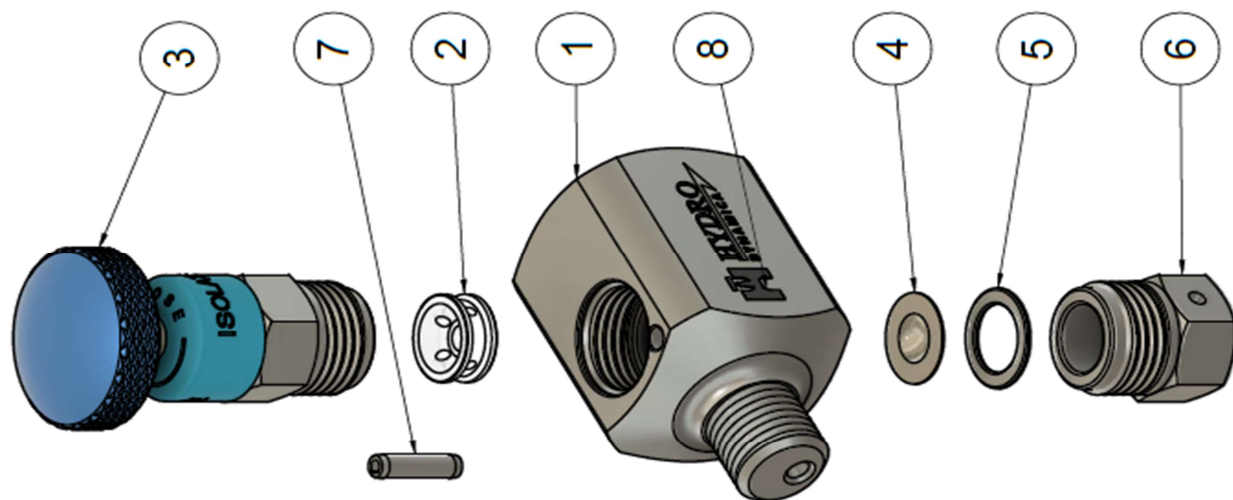
Interpret drawing in accordance with:		Tolerances unless otherwise specified:	
Units	XX	XX	XX
Inch	± 0.1	± 0.02	± 0.005
mm	± 0.1	± 0.02	± 0.005
Angular	± 2°	± 0.13	Surface Finish
Third Angle Projection			
APPROD. by:		DWG NO:	
CHKD. by:		REV	
DRAWN by: Edward Stamler		2019-09-30	
PROJECT: MINI Gas Valve		SCALE: 2:1	
SIZE CODE B		WEIGHT	
SHEET: 1/1		2NOM4F4VSDS16	

HYDRODYNAMICA VALVE MANUFACTURING CORPORATION		TITLE: 2NOM4F4VSDS16	
MINI GAS VALVE, 1/4" MNPT x 1/4" FNPT, 0.125" Bore, Delrin Soft Seat, FKM V1238-95D O-Ring, PTFE Backup, Rd. Blue Aluminum Handle, 316SS, 6000 psi		PROJECT: MINI Gas Valve	
DWG NO:		REV	
2019-09-30		000	

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PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL
1	1	BDY2NR0M4F4S16	VALVE BODY, MINI GAS RUPTURE DISC, 1/4" MNPT X 1/4" FNPT, 0.125" BORE, SOFT SEAT, 316 SS, 6000 PSI	316/316L SS, STAINLESS STEEL ASTM 316/316L
2	1	SEAT2BK	SOFT SEAT, 0.125" BORE, MINI GAS, PCTFE - KEL-F	PCTFE - KEL-F@
3	1	BA2VSKS16B	BONNET ASSEMBLY, MINI GAS VALVE, 0.125" BORE, KEL-K SOFT SEAT, FKM V1238-95D O-RINGS, ROUND BLUE HANDLE, 316SS, 6000 PSI	
4	1	RBD1800N06	RUPTURE BURST DISC, 0.500" OD X 0.27" ID X .01" THK, INCONEL 625, AS PER SUPPLIER	INCONEL 625
5	1	RDGUIDE2BGS74	RUPTURE DISC GUIDE RING, 0.500" OD X 0.375" ID, X 0.30" THICK, 17-4 PH SS	STAINLESS STEEL 17-4 PH
6	1	RDP2BGS16	RUPTURE DISC PLUG AND RETAINER, MINI GAS VALVE, 0.125" BORE, 316SS,	326/316L SS, STAINLESS STEEL ASTM 316/316L SS
7	1	LPIN125X500S18	LOCK PIN, SPLIT, 0.125" DIA. X 0.500" LG, 18-8 SS	
8	1	HYDRODYNAMICA	HYDRODYNAMICA LOGO 3 - LASER MARKING	STAINLESS STEEL



HYDRODYNAMICA VALVE MANUFACTURING CORPORATION			
Interpret drawing in accordance with ASME Y14.5M-2009	Units	X.X	X.XXX
Decimal in.	Inch	± 0.1	± 0.02
Decimal mm	mm	± 0.5	± 0.13
Angular	°	± 2°	Surface Finish
Third Angle Projection			
APPROD. by:	CHKD. by:	DRAWN by: Edward Stammer	2020-11-19
PROJECT: MINI Gas Valve 0.125\" Bore	DWG NO: 2NR0M4F4VSKS16	SCALE: 1:2	WEIGHT
REV 000			SHEET: 1/2

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2N0 - Mini GAS Valves

Model Numbering System

ORIFICE SIZE	BODY STYLE	INLET (PROCESS) Connection Code TYPE	INLET (PROCESS) Connection Code SIZE	OUTLET (INSTRUMENT) Connection Code TYPE	OUTLET (INSTRUMENT) Connection Code SIZE	PACKING TYPE	STEM TYPE	SEAT TYPE	VALVE MATERIAL Code	OPTIONAL Code (TBD)
2 for (2/16") =(1/8")	N0 Mini Gas Valve Body	M for Male NPT Pipe THRD	4 = (4/16")=1/4"	M for Male NPT Pipe THRD	4 = (4/16")=1/4"	V O'Ring (Viton™) FKM™ V1238-95D	S Rotating Stem with Stem O'Ring Seals	D Soft Seat - Delrin™	S16 for ASTM A182 Gr. F316/316L A479 Gr.316/316L SS STANDARD	LB Large Round BLUE Handle
	NR0 Mini Gas Rupture Disc Valve Body	F for Female NPT Pipe Thread		F for Female NPT Pipe Thread		A O'Ring (Aflas™)		P Soft Seat - Peek™ (Arlon™)	C18 * for A108 CS (C12L14/C1018) STANDARD NON-Code	LR Large Round RED Handle
						R O'Ring (Kelrez™)		K Soft Seat - Kel-F™	OPTIONAL Check Factory	RC Small Round Handle Carbon Steel
									C15 for ASTM A105 for Code Applications	RS Small Round Handle Stainless Steel
									S17 for ASTM A182 Gr. F317/317L A479 Gr.317/317L SS	TC 'T' Handle Carbon Steel
									S21 for ASTM A182 Gr. F321 A479 Gr.321 SS	TS 'T' Handle Stainless Steel
									S22 for ASTM A276 Gr. S32205 Duplex 2205	
									S25 for ASTM A276 Gr. S32760 Super Duplex 2507	SN SilcoNERT® Coating
									S47 for ASTM A182 Gr. F347 A479 Gr.347 SS	
									N02 for ASTM B574 Gr. N10276 - Hastelloy C276	TG SS Tag
									N04 for ASTM B164 Gr. N004400 -	
									N05 for ASTM B164 Gr. N005500 - Monel 500	
									N06 for ASTM B446 Gr. N06625 - Inconel 625	
									N08 for ASTM B425 Gr. N08825 - Incoly 825	
									N20 for ASTM B473 Gr. N08020 - Alloy 20	

Examples:

Description:	Mini Gas Valve, 1/4" MNPT x 1/4"FNPT, 0.125"Bore, Delrin™ Soft Seat, FKM™ V1238-95D O'Ring Packed, PTFE Backup Rings on stem c/w: Flat Tip, 316SS, 6000 psi
Model No:	2 N0 M4 F4 VSD S16
Description:	Mini Gas Valve, 1/4" FNPT x 1/4"FNPT, 0.125"Bore, Peek™ Soft Seat, AFLAS™ O'Ring Packed, PTFE Backup Rings on Stem c/w: Flat Tip, Large BLUE Handle, 316SS, 6000 psi
Model No:	2 N0 F4 F4 ASP S16 LB
Description:	Mini Gas Valve, 1/4"MNPT x 1/4"MNPT, 0.125"Bore, Kel-F™ Soft Seat, Kelrez™ O'Ring Packed, PTFE Backup Rings on Stem c/w: Flat Tip, 'T' Handle, A108 CS , 6000 psi
Model No:	2 N0 M4 M4 RSK C18 TC
Description:	Mini Gas Rupture Disc Valve, 1/4"MNPT x 1/4"FNPT, 0.125"Bore, Kel-F™ Soft Seat, FKM V1238-95D O'Ring Packed, PTFE Backup Rings on Stem c/w: Flat Tip, Round BLUE Aluminum Handle, 316SS, 1800 psi Burst Pressure,
Model No:	2 NR0 M4 F4 VSK S16

NOTES: * For Code Applications must Select A105 CS Material Code in lieu of A108 CS

SEAL & SEAT Material Temperature Ratings

CODE	DESCRIPTION	MIN. TEMPERATURE	MAX. TEMPERATURE
A	Aflas™	15°F (-10°C)	400°F (204°C)
V	Viton™	-20°F (-29°C)	400°F (204°C)
	FKM™	-15°F (-26°C)	400°F (204°C)
D	Delrin™	-40°F (-40°C)	200°F (93°C)
K	Kel-F™	-100°F (-73°C)	200°F (93°C)
P	Peek™	-40°F (-40°C)	400°F (204°C)