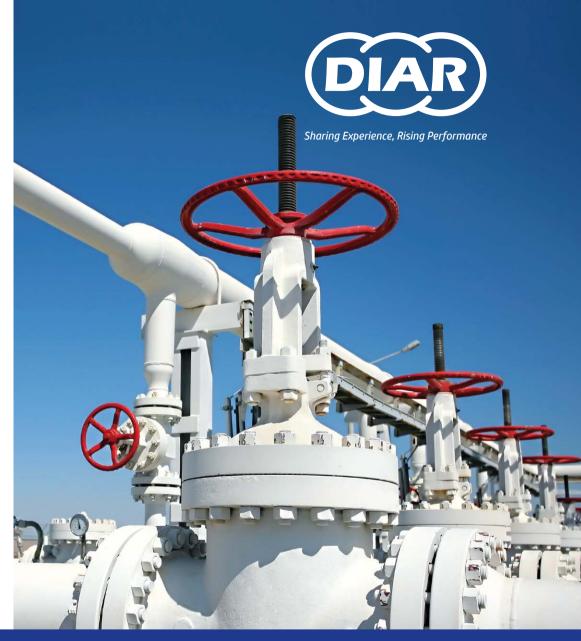


P.S DIAR SHARGH

Manufacturer & Supplier of Valve Fittings and Lubrication Equipment Manufacturer & Supplier of Valve and Equipment's

Our Production Specification:

- Designed in accordance with API, ASME, ASTM.
- Designed for use in high pressure and sour service.
- Suitable for attach to high-pressure equipment's (Oil & Gas Ind.).
- Pressure test in accordance with internal procedures, API and ASME Std.
- Warranty: 18 month.
- Science and Technology industrial park, Mashhad, IRAN
- \$\$\$ +98-51-35425596-7
- +98-51-35425598
- www.diarshargh.com / www.psdsindustries.com
- ≥ info@diarshargh.com / info@psdsindustries.com



Valve Sealing and Componnents



Who we are:

The PS DIAR SHARGH has been known as an engineering and technical company, our Technical services are domestic and all the sales and technically network guide via headquarter, our network teams with different branches for seals and technically services have been expanded in territory. Outsourcing method is the way for better serviced for customers that we are experienced on it and now more than 50 Small certified workshops are in our teamwork to serving different technical and engineering and consulting services. Our network teams 7 days on week to serve the better services for customers.

Why choose us:

We are able to cover a wide range of customer's requirements and simplify your purchase as well as reduce and optimize your costs significantly in several areas with a vast number of well-known manufacturers and suppliers. Profit from the advantages resulting from cost-effective purchases and simplified, worldwide logistics- whether abroad or locally. We attain the best prices for our valuable customers organize shipping and settle bills as agreed upon in our offers.

Moreover, reverse engineering capabilities for obsoleted and customized parts has abled us to keep the customer satisfaction.

Engineering:

Technical & Engineering: Our technical and engineering support staff are available to assist customers through every stage of the product life-cycle; from design, production and development through qualification and production into service.

We provide full-service engineering, construction, operations and maintenance support to clients in the Oil, Gas, Petrochemical and Power sectors. The support package we offer for our clients allows our customers to focus on their core competencies, enabling them to maximize their efficiency.

What we offer:

Whether our clients are involved in Oil Production, Petrochemical processing or Gas treatment, we can help them to source their requested items at the best prices and with the shortest delivery times. We are committed to source and deliver items at the most competitive prices and the shortest possible time, as we want repeated business. A number of our staff have been involved in the Oil & Gas sector for over 20 years, and have an extensive background in dealing with the vast range of items used in this industry. Our global experience gives us the advantage to offer our expertise in all continents around the globe, including, Asia and Middle East.

Please explore our wide ranging product and services portfolio and contact our teams to discuss any of your requirements.

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Valve Sealing and Componnents

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2

(DIAR) 3

Products



Standard seat design

Design: this seat is designed following standard ball valve body dimensions. This design covers applications under normal conditions as well as more difficult ones, like high temperature and aggressive environments. Sizes range from 1/2" to 60". you can order a custom design; we only ask that you adhere to our standard raw material sizes.

Application: these seats are used in side entry trunnion and floating valves produced in 2 or 3 pieces. Size: NPS3/4"~30" (DN20~750) Pressure Rating: Class 150~2500(PN16~420) Basic Material: ASTM A105 (N), A350 LF2, A182 F304 (L), A182 F316 (L), A182 F6A, A182 F51, A182 F53, A564 630(17-4PH), Monel, Alloy etc. Casting, and fully forging to optimizing the properties are available. Coatings: ENP, Chrome Plating, Tungsten Carbide, Chrome Carbide, Stellite, Inconel. Seat products can be customized according to the drawing from customers.



Top-entry seat design

Design: this is usually a longer seat in 1 or 2 pieces. It can be supplied with soft inserts like nylons or PEEK, or with special coatings for specify capplications. Usually, these seats are produced with a screw fitting for easy assembly and to provide space for ball movement. Materials can be standard or exotic for best resistance in service.

Application: the main feature of the top entry valve is permitting on-line-service and the replacement of the seats and the ball without opening the line. These seats find applications at all pressures.



Cryogenic design

Design: the main feature of the design is to permit the sealing at -196°C. We have developed a special procedure to obtain the best material performance. Our engineering department develops the critical sizes and finishing for the seats and balls as these are very important for good valve seal. The most widely used combination of materials is F316+PTFE+Lip seal. We guarantee correct assembly of the components. We have successfully tested a new material called V10, suitable for applications at -260°C.

Application: this particular design is used for cryogenic service in gas applications in plants or ships carrying LNG.





Metal-to-metal design

Design: metal to metal means when you have a direct contact between the seat and the ball on the primary sealing area. For the secondary sealing you can choose an o-ring, lip seal or graphite depending on the application. The coating is usually made with Tungsten Carbides or Chrome Carbides and is sprayed over the surface of the seats or ball using the HVOF procedure. We can provide various designs to give you the best performance for your specifi c needs.

Application: This type of seat is used for high pressure and dirty services, when the plastic inserts could be easily damaged. The maximum service temperature is about 400°C depending on the base material grade.

Special metal-to-metal seat design

Design: Special metal to metal means when you have a direct contact between the seat and the ball on the primary sealing area. For the secondary sealing you can choose an O-ring, lip seal or graphite depending on the application. The coating is usually made with Tungsten Carbides or Chrome Carbides and is sprayed over the surface of the seats or ball using the HVOF/ Stellite Welding procedure. We can provide various designs to give you the best performance for your specific needs.

Application: This Type of seat is used for ball valves for the Oil, Gas, Petrochemical and Energy sector. High pressure and dirty services. In summary the Ball Valves include Top Entry -Split Body-Pig ball and 3 way designs. maximum service temperature is about 400°C depending on the base material grade.

V-ring seat design

Design: this design features the use of a 98sh elastomer insert to provide an excellent seal on the ball or gate. The main application is low pressure and gas but recently we introduced improvements that permit its use in high-pressure service. We can provide all the information necessary so that you can choose the right compound for the chemical compatibility you require.



4



Products

Balls

We supply the balls for valves. You can receive a complete balland-seats kit with any finish you need, like ENP, Tungsten Carbide, or Stellite. Balls can be made to your design or to our standard drawings. Focus on your core business. Let us take care of the rest. Metal to Metal Ball and Seat, Floating Ball, Trunnion Ball

Pressure range: Class 150LB-2500LB Nominal Size: ³/₄" – 32" Base material: ASTM A105(N), A350 LF2, A182 F304(L), A182 F316(L), A182 F6A, A182 F51, A182 F53, A564 630(17-4PH), Monel, Alloy etc., Casting, and fully forging to optimizing the properties are available. **Coating:** Thermal Spray and Cold Spray: Ni60, Tungsten Carbide, Chrome Carbide, Stellite 6# 12# 20#, Inconel, ENP, HCR Base on customer requirement balls can be produces Acc. NACE MR-0175. Balls can be customized according to the drawing from customers



Bodies and closures

We machine bodies and closures for 2 & 3 pcs valves to complete the range of products we supply to this industry. Our product range is from 8" to 36" in order to provide you with a truly complete "kit" of machined components.



Stem

You can receive a complete stem and-seal kit with any finish you need. Coating ENP, Tungsten Carbide or Stellite (HVOF), MoS2, Carbonotrizing (QPQ), Tenifer, Arcor.

Stems can be customized according to the drawing from customers Basic Material: ASTM A105 (N), A350 LF2, A182 F304 (L), A182 F316 (L), A182 F6A, A182 F51, A182 F53, A564 630(17-4PH), Monel. Allov etc.

Casting, and fully forging to optimizing the properties are available.



Ring-joint

We can provide you with all the ring-joints for your valve ends. These gaskets are produced according to international standards or to your specific size. Materials range from Soft Iron to Inconel, with the proper hardness for correct sealing.



Graphite

Graphite is used for fire safe and heavy-duty sealing.

Graphite products can be simply fire-safe or spiral-wounds for use in the seats and the body for static or dynamic sealing. These are special sealing components for low-emission stem packing according to the most stringent international regulations.

Materials vary from varying-density pressed graphite to braided rings with other compounds. We provide the support to give you the best solution for your valve in compliance with standards for low-emissions.



o-rings

We supply o-rings, as well as all other valve seal components, that can satisfy the most severe conditions in terms of temperature, pressure and chemical compatibility.



6

Procurement capabilities

Bellows & Seal

Bellows protected in extended body against direct impingement from product flow.

Bellows comes in various Size and material. Stainless steel, Haste Alloy C-276, Inconel Series (625, 718, and 925, X 750), Titanium, and Copper and...

Metal joining & forming with vacuum furnaces, and hydraulic presses.
Precision welding including methods such as TIG, laser, and electron-beam.

 Metal finish & metallurgy, with automated cleaning lines featuring advanced cleaning, passivation and etching capabilities
 Functional testing, including extreme environmental chambers, spring, tensile, and acceptance testing. Performance validation for all parameters.

Bellows can be customized according to the drawing from customers.

Rupture Disk

Rupture Disk can be used for any where the need safety controlling ,Oilfield Pressure Relief applications, safety performance, Separator process vessels, gas-generating, deep hole drilling and

Reliable pressure activation and pressure relief devices for the oil and gas industry for drilling, completion and production phases. Hydraulic tubing drain, energetic devices, pressure activation devices.



Pipeline Inspection Gauge (PIG)

A pipeline inspection gauge, commonly referred to as a 'PIG, is a device used to clean and/or inspect a pipeline. Supply and delivery of different type of "PIG" are available as below.

- Utility pigs: mandrel pigs, foam pigs, solid cast pigs and spherical pigs.
 Inspection pigs: 'in-line inspection pigs', 'smart pigs"
 Magnetic flux leakage (MFL) sends magnetic flux into the pipe
- Magnetic flux leakage (MFL) sends magnetic flux into the pipe walls for leak, corrosion and flaw detection

- Ultrasonic (UT) – measure ultrasonic sound wave echoes to determine pipe wall thickness

• **Specialty pigs:** one example of a specialty pig is a plug, used to block off a line so that maintenance can be performed

• Gel pigs: gelled liquids that can be used alone or in conjunction with other types of pigs for various procedures including debris removal, hydrostatic testing, product separation, dewatering, condensate removal, removing a stuck pig and more.



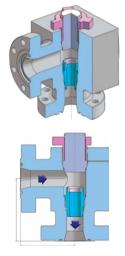


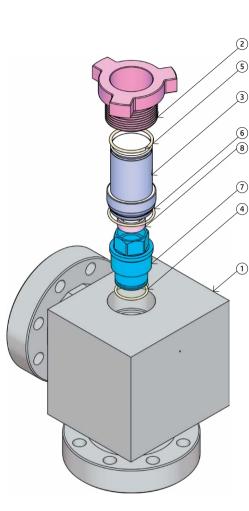


Positive Production Choke valve & Bean

Choke valve selection is often based on early life production process data and capital expenditure (valve price). However, choke valves are critical elements in production facilities.

Malfunction or failure of a choke valve can seriously affect safety. the environment and production rates. Valve selection should be based on sound technical and economic arguments and longterm perspectives.





Description	Mat.	Replace Material Service.
body choke valve	ASTM A182 F6NM (UNS 41500) Forged API 6A-PSL3	Acc. API 6A
Bonnet	AISI 4130	Acc. API 6A
Blanking plug	ASTM A182 (Grade 410)	Acc. API 6A
0-ring	Viton	Acc. API 6A
Key ring	Spring Wire	Acc. API 6A
0-Ring 2	Viton	Acc. API 6A
Bean.	ASTM A182 (Grade 410)+TC	Acc. API 6A
Inner Ring	Tungsten Carbide	Acc. API 6A
Design Pressure	API 2K,3K,5K,10 PSI	Acc. API 6A
Orifice	2",3"	Acc. API 6A
Nominal Connection	ANSI 150,300,600,900,1500,2500 API 6B (200,3000,5000,10000	Acc. API 6A
Application	Liquid, gas, Multi phase	NANCE MR0175

Positive Chokes & Beans

Positive Chokes accommodate fixed orifice dimensions. All PSDS Adjustable Chokes can be converted into Positive Chokes by replacing the bonnet assembly with an appropriate blanking plug assembly and choke bean.

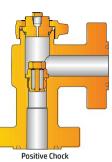
CHOKE BEANS:

• PSDS choke beans are suitably hardened to maintain accuracy level for longer period.

• Tungsten Carbide lined choke Beans are available for high pressure drop and severe application.

BEAN WRENCH:

PSDS Bean Wrench come with hexagonal socket box for Bean Adapter and Bean separately. The Adjustable choke seat and Bean Adapter are accommodated in same wrench for a particular size.





Choke Bean (B Type)



Choke Bean (H Type)

POSITIVE CHOKE VALVE

- 1. Manufactured and tested in accordance with API 6A.
- 2. Carbide alloy is embedded into valve seat.

3. Tungsten carbide and ceramic choke bean are all available 4. Choke bean size: from 2/64 inch to 128/64 inch, increment with 2/64 inch or 4/64 inch.

5. Composite rubber-plastic stem lip packing reduces operating torque. 6- All the parts are compatible and accordance NACE MR-0175

• Pressure rating ranging from 2000, 3000, 5000, 10000, psi and ANSI classes up to 3500#.

- Stainless steel- hardened
- Stellite lined for bigger flow passage from 64/64" onwards
- Ceramic lined
- Solid Nickel alloy bean for High H2S Service
- Tungsten carbide lined having AISI 410 / 718 / 31803 steel carrier.
- 1. Choke bean size: 4/64" ~ 192/64" increment with 1/64".
- 2. Both ceramic liner and tungsten carbide liner are all available.
- 3. Medium: oil and gas water, sand.
- . Customizable size.



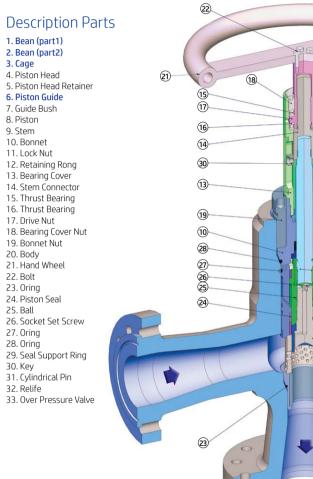
Body







Adjustable production Choke valve



(20)

(12)

-(31)

11

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-33)

8

1

6

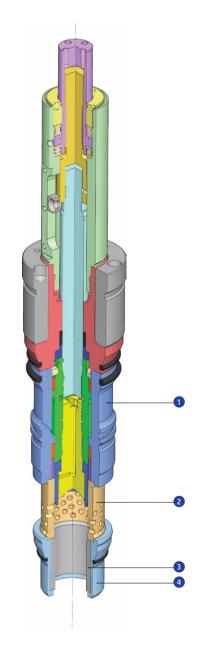
(5)

(4)

32

Design Details

- Reliability through controlled erosion.
- Low noise through low pressure recovery.
- Complete piston guidance.
- Pressure balancing.
- Safety and weight reduction thought one-piece body.
- Complete range of size and rating.
- Design Acc. API 6A.
- Material: TC, Inconel, PH material, and ...
- Customized material available base on application.





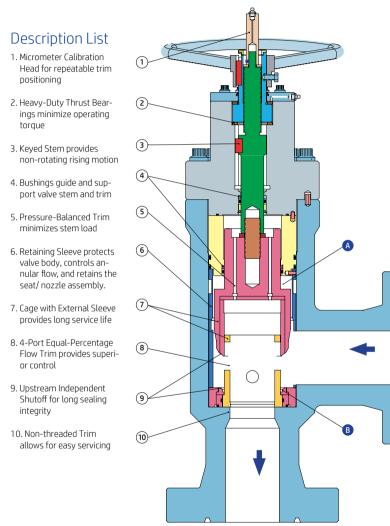


3. Bean (part1) 4. Bean (part2)

2. Cage

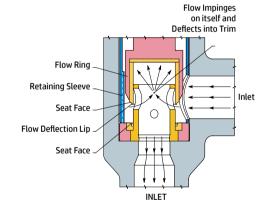


Adjustable production Choke valve



Optiones in Detail

- This Production Choke features several unique characteristics that minimize wear and maximize durability.
- The cage with external sleeve trim design creates impinging flow in the cage center, thus dissipating the fluid Energy onto itself.
- The external sleeve also diverts the flow upward into the flow trim (away from the outlet), containing.
- Turbulence and wear within the flow trim. The valve body outlet is isolated from wear because turbulence is Dissipated before flow enters the outlet, thus eliminating the typical problems of wear in the valve outlet.
- High reliblity
- Another feature is the retaining sleeve which isolates the body bore from the incoming flow thus eliminating body wear.
- Material TC, 17-4PH, low alloy sleel.
- Customised material are avalible base on application.
- Design Acc. API 6A.











Piping Accessories API 6A PSL 1, 2, 3 & 3G

PSDS can supply a variety of pipe and flow line accessories. We offer a full range of sizes, pressure classes and materials to suit most service applications. Integral, welded or threaded, PSDS has the capa-bility to manufacture from a variety of in-stock materials.

- Adaptors—Double Studded & Flanged Studded
- Integral—Pup Joints, Tees, and 90° Ells
- Flanges—Weld Necks, Blinds, & Swivel
- Adaptor Spools & Crossovers
- API Blocks—Tees & 90° Ells
- Instrument Flanges
- Blast Joints
- Crosses
- Spools



Choke Trim Accessories

- Beans
- WC Nozzle
- WC cage
- FLowcollar (Flow Trim)
- Bean Wrench

Choke Trim Production



Standard 4-Port Trim



LabFlo Trim



Well Clean-up Trim





Multi-Stage & Multi-Stage

High Pressure Trims

Multi-Port Trim



Valve Std.

(ASME) American Society of Mechanical Engineers

B16.5 Flange Dimensions

- B16.10 Face to Face and End to End Dimensions of Ferrous Valves
- B16.11 Forged Fittings
- B16.25 Butt Weld Ends
- B16.34 Steel Valves Flanged and Butt Welding Ends
- B16.47 Large Diameter Flanges
- B31.3 Refinery Piping
- B31.4 Liquid Petroleum Transportation Piping Systems
- B31.8 Gas Transmission and Distribution Piping Systems
- 70-2 Pressure Test Leak Test
- B46.1 Surface Texture
- ASME B & PV VIII-1 UB Fired Pressure Vessels
- ASME B & PV1 Power Boilers
- ASME N & PV IX Welding
- ASME TDP-1 Recommended Practice-Fossel Fuel Plants

(ISO) International Organization for Standardization

• ISO 5211 Standard Mounting Bracket Design

(API) American Petroleum Institute

- 6D Specification for Pipeline Valves
- 598 Valve Inspection and Test
- 607 Fire Test for Soft Seated Quarter Turn Valves
- RP6F Fire Test for Valves
- 6A Specifications for Wellhead Equipment
- 608 Metal Ball Valves

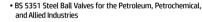
(MSS) Manufacturers Standardization Society

- MSS-SP-6 Flange Finishes
- MSS-SP-25 Nameplate. "Standard Marking System for Valves, Fittings, flanges, and Unions"
- MSS-SP-45 Bypass and Drain Connections
- MSS-SP-53 Magnetic Particle Inspection
- MSS-SP-54 Radiograph Inspection
- MSS-SP-55 Visual Inspection
- MSS-SP-61 Valve Inspection and Pressure Testing
- MSS-SP-65 Lens Gaskets
- MSS-SP-72 Ball Valves
- MSS-SP-82 Valve Pressure Testing
- MSS-SP-84 Steel Valves
- MSS-SP-93 Liquid Penetrant Inspection
- MSS-SP-94 Ultrasonic Inspection

(NACE) National Association of Corrosion Engineers

• MR-01-75 Sulfide Stress Cracking Resistant Metallic Materials for Oilfied Equipment

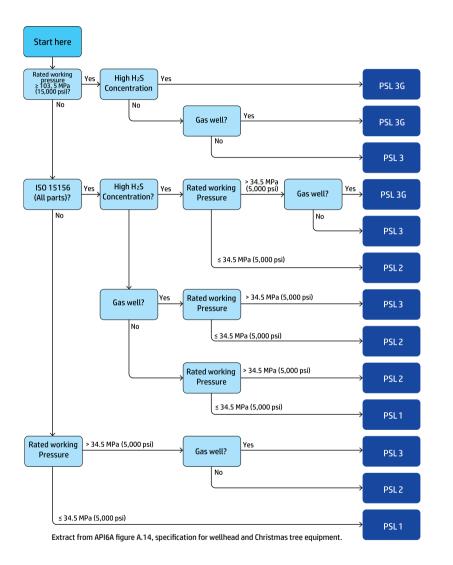
(BS) British Standard







FLOW CHART-MINIMUM PSL FOR PRIMARY PARTS



API6A Material Service Categorized & Rating Levels

OVERVIEW STANDARDS

PSDS standards comply with technical specification API-6A. The description for PSDS equipment consists of a general description, working pressure, temperature rating material class rating, product specification level (PSL) and performance requirement (PR). These ratings are defined in the following API-6A tables.

RECOMMENDED MINIMUM PSL FOR PRIMARY PARTS:

NACE	No	Yes	Yes	Yes	No	Yes
High H2S Concentrate	No	No	Yes	No	No	Yes
Close Proximity	No	No	No	Yes	Yes	Yes
Rated Working Pressure, PSI						
PSL		PSL	PSL	PSL	PSL	PSL
5,000	1	1	2	2	1	3
10,000	2	2	3	3	3	4
15,000 and up	3	3	4	4	4	4

API MATERIAL REQUIREMENTS:

MATERIAL CLASS	MINIMUM MATERIAL REQUIREMENTS						
MAI ERIAL CLASS	BODY, BONNET & FLANGE	PRESSURE CONTROLLING PARTS					
AA - General Service	Carbon or low alloy steel	Carbon or low alloy steel					
BB - General Service	Carbon or low alloy steel	Stainless Steel					
CC - General Service	Stainless Steel	Stainless Steel					
DD - Sour Service ^a	Carbon or low alloy steel ^b	Carbon or low alloy steel ^b					
EE - Sour Service ^a	Carbon or low alloy steel ^b	Stainless Steel ^b					
FF - Sour Service ^a	Stainless Steel ^b	Stainless Steel ^b					
HH - Sour Service ^a							

API TEMPERATURE RATINGS

TEMPERATURE CLASSIFICATION			OPERATIN	NG RANGE		
TEMPERATURE CLASSIFICATION	MIN.	F°	MAX.	MIN.	C°	MAX.
KLNP	-75 -50 -50 -20	to	180 180 140 180	-60 -46 -46 -29	to	82 82 60 82
R*			Room Ten	nperature*		
STUV	0 0 0 35	to	140 180 250 250	-18 -18 -18 2	to	60 82 121 121
Х*	K* 0 ti		350	-18	to	177
Υ*	0	to	650	-18	to	343

* No longer referenced in API6A/ISO 10423-2013



API PRESSURE/TEMPERATURE RATINGS (Y)*

		TEMPERATURE IN °F								
	MIN.	F°	MAX.	MIN.	C°	MAX.	550	600	650	
	2000	1955	1905	1860	1810	1735	1635	1540	1430	
Rated Working Pressure PSI	3000	2930	2860	2785	2715	2605	245	2310	2145	
Flessule FSI	5000	4880	4765	4645	4525	4340	4090	3850	3575	

PSL (PRODUCT SPECIFICATION LEVEL) MATERIAL REQUIREMENTS PSL Material Control is found in API Specification 6A, Specification for Wellhead and Christmas Tree Equipment Section 400

PSL (PRODUCT SPECIFICATION LEVEL) QUALITY CONTROL PSL Material Control is found in API Specification 6A, Specification for Wellhead and Christmas Tree Equipment Section 400

PSL (PRODUCT SPECIFICATION LEVEL) QUALITY CONTROL

There are two Performance Requirement Levels, PR1 and PR2. The latter represents more rigorous performance requirements. See API Specification 6A, Section 300 and Section 900. Section 905 covers valves (905.3 - Flow Line Valves, 9.5.5 - Actuated Valves)

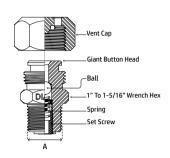
Valve Trim Chart for API6A Gate & Choke Valves API 6A TEMPERATURE CLASS P: SERVICE -20°F TO 180°F (-29°C TO 82°C)

		API	PRESSURE		MA	TERIALS	-	
SERVICE	TRIM	MATERIAL CLASS	rating PSI	BODY & BONNET	BONNET SEAL	GATE* & SEGMENT	SEAT	STEM
General Oilfield Gas, Oil	T21	AA	2,000 3,000 5,000	Carbon or Low Allow Steel	CS	4130 w/QPQ	4130 w/TFE ²	4130 w/MDC⁵
General Moderately Corrosive CO ²	T22	BB	2,000 3,000 5,000	Carbon or Low Allow Steel	SS	410	410	17-4PH w/MDC⁵
General Moderately Corrosive CO ²	T23	СС	2,000 3,000 5,000	API 60K CA6NM Stainless Steel	SS	410	410 w/TFE ²	17-4PH w/MDC⁵
Sour (H2S) Service NACE⁴ MR01-75	T24	DD	2,000 3,000 5,000	API 60K Alloy Steel	SS	4130 or 17-4PH Nitrided	4130 w/TFE ²	17-4PH w/MDC⁵
Sour (H2S) Service NACE⁴ MR01-75	S24	EE	2,000 3,000 5,000	API 60K Alloy Steel	SS	4130 or 17-4PH Nitrided	410 w/TFE ²	17-4PH w/MDC⁵
Corrosive (CO ²) & Sour (H ₂ S) NACE ⁴ MR01-75	T26	FF	2,000 3,000 5,000	API 60K CA6NM Stainless Steel	SS	17-4PH	17-4PH w/TFE ²	17-4PH w/MDC⁵
Waterflood	T27	EE	2,000 3,000 5,000	API 60K Alloy Steel w/Plastic Coat	SS	17-4PH	17-4PH w/TFE ²	17-4PH w/MDC⁵
API 6	А ТЕМР	ERATURE CL	ASS L: SERV	ICE -50ºF TO 180	₽F (-46ºC ⁻	TO 82ºC)		
General Oilfield Gas, Oil	T36	AA	2,000 3,000 5,000	API 60K Alloy Steel	CS	4130	4130 w/TFE ²	17-4PH w/MDC⁵
Sour (H²S) Service NACE⁴ MR01-75	T37	DD	2,000 3,000 5,000	API 60K Alloy Steel	SS	4130	4130 w/TFE ²	17-4PH w/MDC⁵
Sour (H2S) Service NACE⁴ MR01-75	S37	EE	2,000 3,000 5,000	API 60K Alloy Steel	SS	17-4PH	4130 w/TFE ²	17-4PH w/MDC⁵



Valve Lubrication Fittings

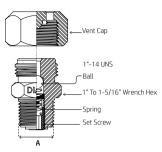
Sealant Injection Fitting With Vented Cap DFA Series



ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFA110
1	1 1/4" NPT	13.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFA111
		13.7	S.S	N/A	S.S	S.S	DFA112
			S.S	N/A	INCONEL	K-MONEL	DFA113
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFA120
2	3/8" NPT	17.15	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFA121
2	5/0 NPT	17.15	S.S	N/A	S.S	S.S	DFA122
			S.S	N/A	INCONEL	K-MONEL	DFA123
		21.3	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFA130
3	1/2" NPT		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFA131
2	1/2 NP1		S.S	N/A	S.S	S.S	DFA132
			S.S	N/A	INCONEL	K-MONEL	DFA133
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFA140
4	3/4" NPT	26.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFA141
4	3/4 NPT	20.7	S.S	N/A	S.S	S.S	DFA142
			S.S	N/A	INCONEL	K-MONEL	DFA143
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFA150
5	5 1" NPT	33.4	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFA151
	I NFI	55.4	S.S	N/A	S.S	S.S	DFA152
			S.S	N/A	INCONEL	K-MONEL	DFA153

* Suitable For High Pressure Services. ** All Kind of C.S. and S.S. Are Availabale By Special Request.

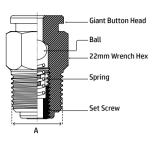
Sealant Injection Fitting With Vented Cap DFB Series



ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFB110
		12.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFB111
1	1/4" NPT	13.7	S.S	N/A	S.S	S.S	DFB112
			S.S	N/A	INCONEL	K-MONEL	DFB113
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFB120
		17.15	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFB121
2	2 3/8" NPT	17.15	S.S	N/A	S.S	S.S	DFB122
			S.S	N/A	INCONEL	K-MONEL	DFB123
		'NPT 21.3	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFB130
			C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFB131
3	1/2" NPT		S.S	N/A	S.S	S.S	DFB132
			S.S	N/A	INCONEL	K-MONEL	DFB133
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFB140
		26.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFB141
4	3/4" NPT	26.7	S.S	N/A	S.S	S.S	DFB142
			S.S	N/A	INCONEL	K-MONEL	DFB143
		1" NPT 33.4	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFB150
5	1" NDT		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFB151
,			S.S	N/A	S.S	S.S	DFB152
			S.S	N/A	INCONEL	K-MONEL	DFB153

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Sealant Injection Fitting Without Vented Cap

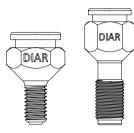


ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFC110
1	1/8" NPT	10.3	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFC111
	1/0 11/1	10.5	S.S	N/A	S.S	S.S	DFC112
			S.S	N/A	INCONEL	K-MONEL	DFC113
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFC120
	2 1/4" NPT	13.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFC121
2			S.S	N/A	S.S	S.S	DFC122
			S.S	N/A	INCONEL	K-MONEL	DFC123
		T 17.15	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFC130
3	3/8" NPT		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFC131
3	3/8 NPT	17.15	S.S	N/A	S.S	S.S	DFC132
			S.S	N/A	INCONEL	K-MONEL	DFC133
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFC140
	4 1/2" NPT	21.3	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFC141
4			S.S	N/A	S.S	S.S	DFC142
			S.S	N/A	INCONEL	K-MONEL	DFC143

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Giant Button Head Fitting



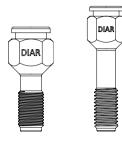
ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.	
1	M10u1	10	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG110	
1	M10x1	10	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG111	
2	M10x1.5	10	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG120	
2		10	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG121	
3	N12-1 5	M12x1.5	12	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG130
2	M12X1.5	12	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG131	
4	M14x1.5	14	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG140	
4	M14X1.5	14	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG141	
	M14x2	14	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG150	
5	M14X2		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG151	
c	M1 41	14	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG160	
6	M14x1	14	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG161	
7	M1Cu2	16	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG170	
'	M16x2	16	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG171	
	M10-1 5	10	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG180	
8	M18x1.5	18	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG181	
	M20-1 5	20	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG190	
9	M20x1.5	20	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG191	
10	Macul F	26	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG200	
10	M26x1.5	26	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG201	
11	1/4"-18NPSM	12.2	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG210	
11 1/4 - 18NPSM	IPSM 13.3	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG211		

Giant Button Head Fittings



ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.
12	1/4"-18NPSL	10.7	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG220
12	1/4 -18NPSL	13.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG221
13	3/8"-18NPSM	16.8	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG230
13	3/8 -180420	10.8	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG231
14	1/2"-14NPSM	20.8	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG240
14	1/2 -14NPSM	20.8	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG241
15	3/4"-14NPSM	26.2	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG250
15	5/4 - 14MP3M	20.2	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG251
16	3/8"-16UNC	9.5	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG260
16	(Short)		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG261
17	3/8"-16UNC	9.5	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG270
17	(Long)		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG271
18	7/16"-14UNC	11.1	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG280
18	7/16 -140NC	11.1	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG281
19	1/2"-13UNC	12.7	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG290
19	1/2 -13UNC	12.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG291
20	5/8"-11UNC	15.8	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG300
20	5/0 - I I UNC	15.0	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG301
21	2/47 10005	19	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG310
21	3/4"-10UNC 1	19	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG311
22	7/8"-9UNC		C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG320
~~	7/0 -3UNC	22.1	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG321

Giant Button Head Fittings

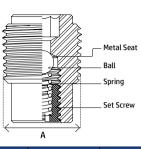


ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.
	1/27 20 1115	12.6	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG330
23	1/2"-20 UNF	12.6	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG331
24	5/07 10 UNE	15.75	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG340
24	5/8"-18 UNF	15.75	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG341
25	0/167 10 1015	14.75	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG350
25	9/16"-18 UNF	14.25	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG351
26	9/16"-16UN	14.25	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG360
20	9/16 -1601	14.25	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG361
27	C1/A	13.15	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG370
21	G1/4	13.15	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG371
28	G3/8	16.6	C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFG380
28	8/20	10.0	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFG381

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Internal Check Valve

Metal Seat



ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.	
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM110	
1	1/4" NPT	13.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM111	
'	1/4 11/1		S.S	N/A	S.S	S.S	DFIM112	
			S.S	N/A	INCONEL	K-MONEL	DFIM113	
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM120	
2	3/8" NPT	17.15	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM121	
2	3/8 NPT	17.15	S.S	N/A	S.S	S.S	DFIM122	
			S.S	N/A	INCONEL	K-MONEL	DFIM123	
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM130	
3	1/2" NPT	21.3	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM131	
3	1/2 NP1	21.3	S.S	N/A	S.S	S.S	DFIM132	
			S.S	N/A	INCONEL	K-MONEL	DFIM133	
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM140	
4	M1 41 F	14	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM141	
4	M14x1.5	1114X1.5	14	S.S	N/A	S.S	S.S	DFIM142
			S.S	N/A	INCONEL	K-MONEL	DFIM143	
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM150	
5	M16x2	16	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM151	
5	MIDXZ		S.S	N/A	S.S	S.S	DFIM152	
			S.S	N/A	INCONEL	K-MONEL	DFIM153	

Internal Check Valve

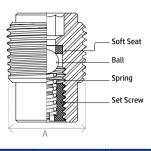
Metal Seat

ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.		
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM160		
6	M10.1 5		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM161		
6	6 M18x1.5	18	S.S	N/A	S.S	S.S	DFIM162		
			S.S	N/A	INCONEL	K-MONEL	DFIM163		
				C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM170	
7	M20x1.5		C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM171		
· /	M20X1.5	M20X1.5	20	S.S	N/A	S.S	S.S	DFIM172	
			S.S	N/A	INCONEL	K-MONEL	DFIM173		
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIM180		
	M26x1.5	M26x1.5	NDC-4 F	26	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIM181
8			26	S.S	N/A	S.S	S.S	DFIM182	
			S.S	N/A	INCONEL	K-MONEL	DFIM183		

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Internal Check Valve

Soft Seat



ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS110
1	1/4" NPT	13.7	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS111
'	1/4 NP1	13.7	S.S	N/A	S.S	S.S	DFIS112
			S.S	N/A	INCONEL	K-MONEL	DFIS113
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS120
2	3/8" NPT	17.15	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS121
	5/6 NPT	17.15	S.S	N/A	S.S	S.S	DFIS122
			S.S	N/A	INCONEL	K-MONEL	DFIS123
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS130
	1 / 2" NDT	NPT 21.3	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS131
3	1/2" NPT		S.S	N/A	S.S	S.S	DFIS132
			S.S	N/A	INCONEL	K-MONEL	DFIS133
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS140
4	M14x1.5	1.4	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS141
4	H14X1.5	14	S.S	N/A	S.S	S.S	DFIS142
			S.S	N/A	INCONEL	K-MONEL	DFIS143
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS150
5	M16x2	16	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS151
5	M16X2	16	S.S	N/A	S.S	S.S	DFIS152
			S.S	N/A	INCONEL	K-MONEL	DFIS153

Internal Check Valve

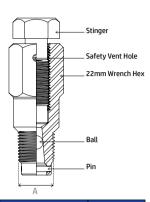
Soft Seat

ITEM	THREAD	A (mm)	MATERIAL	COATING	SPRING	BALL	PART NO.		
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS160		
_	M10-1 5	10	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS161		
6	M18x1.5	18	S.S	N/A	S.S	S.S	DFIS162		
			S.S	N/A	INCONEL	K-MONEL	DFIS163		
				C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS170	
7	M20x1.5	20	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS171		
'	142071.5	20	S.S	N/A	S.S	S.S	DFIS172		
			S.S	N/A	INCONEL	K-MONEL	DFIS173		
			C.S	GALVANIZE	EN10270-1	CHROME STEEL	DFIS180		
		Macul F	M26x1.5	26	C.S	ZINC NICKEL	EN10270-1	CHROME STEEL	DFIS181
8	1120X1.5	26	S.S	N/A	S.S	S.S	DFIS182		
			S.S	N/A	INCONEL	K-MONEL	DFIS183		

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DIAR 29

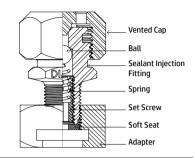
Packing Injector



ITEM	THREAD	A (mm)	MATERIAL	COATING	BALL	PART NO.
			C.S	GALVANIZE	CHROME STEEL	DFP110
	1 / 4" NDT	12.7	C.S	ZINC NICKEL	CHROME STEEL	DFP111
1	1/4" NPT	13.7	S.S	N/A	S.S	DFP112
			S.S	N/A	K-MONEL	DFP113
			C.S	GALVANIZE	CHROME STEEL	DFP120
2	3/8" NPT	17 15	C.S	ZINC NICKEL	CHROME STEEL	DFP121
	3/8 11	17.15	S.S	N/A	S.S	DFP122
			S.S	N/A	K-MONEL	DFP123
			C.S	GALVANIZE	CHROME STEEL	DFP130
	1 /2" NDT	- 1-2	C.S	ZINC NICKEL	CHROME STEEL	DFP131
3	1/2" NPT	21.3	S.S	N/A	S.S	DFP132
			S.S	N/A	K-MONEL	DFP133

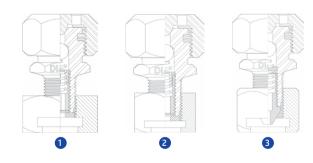
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Leak-Lock Fittings

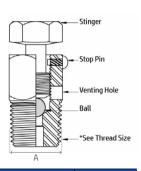


ITEM	DESCRIPTION	MATERIAL	COATING	PART NO.
		S.S	N/A	DFL110
1	LEAK-LOCK 1 Giant Button Head	C.S	GALVANIZE	DFL111
		C.S	ZINC NICKEL	DFL112
		S.S	N/A	DFL120
2	LEAK-LOCK 2 Small Button Head	C.S	GALVANIZE	DFL121
		C.S	ZINC NICKEL	DFL122
		S.S	N/A	DFL130
3	LEAK-LOCK 3 Metal Seat	C.S	GALVANIZE	DFL131
		C.S	ZINC NICKEL	DFL132

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Body Vent

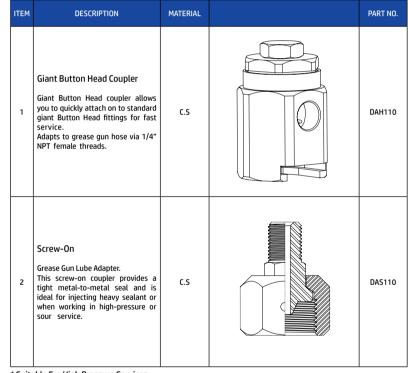


ITEM	THREAD	A (mm)	MATERIAL	COATING	BALL	PART NO.
			C.S	GALVANIZE	CHROME STEEL	DFV110
1	1/4" NPT	13.7	C.S	ZINC NICKEL	CHROME STEEL	DFV111
			S.S	N/A	ss	DFV112
			C.S	GALVANIZE	CHROME STEEL	DFV120
2	3/8" NPT	17.15	C.S	ZINC NICKEL	CHROME STEEL	DFV121
			S.S	N/A	SS	DFV122
			C.S	GALVANIZE	CHROME STEEL	DFV130
3	1/2" NPT	21.3	C.S	ZINC NICKEL	CHROME STEEL	DFV131
			S.S	N/A	SS	DFV132
			C.S	GALVANIZE	CHROME STEEL	DFV140
4	4/3" NPT	26.7	C.S	ZINC NICKEL	CHROME STEEL	DFV141
			S.S	N/A	SS	DFV142
			C.S	GALVANIZE	CHROME STEEL	DFV150
5	1" NPT	33.4	C.S	ZINC NICKEL	CHROME STEEL	DFV151
			S.S	N/A	SS	DFV152

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Accessories & Adapters



* Suitable For High Pressure Services. ** All Kind of C.S. and S.S. Are Availabale By Special Request. **DIAR** 33

Products Portfolio



Other Capabilities We can supply other related products such as :

Grease Nipples :



High Pressure Sealant Injection Pumps :



Valve Lubricant, Sealant and Cleaner :



DIAR Notes:

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