



[www.hy-lok.com](http://www.hy-lok.com)

Catalog No. H-250CF  
Mar. 2011

# Clean Fittings

for Weld & ZCR Metal Gasket Face Seal



- 1/4 to 1 inch and 6 to 18mm size
- 316, 316L, 316L VOD and 316L VIM VAR Stainless steel material
- Weld Fitting for manual or Automatic welding equipment



**HY-LOK CORPORATION**

©1998-2004, 2011 HY-LOK CORPORATION All rights reserved

Technical Data

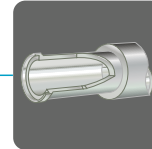
Page 3



Tube Weld Fittings

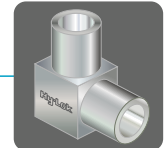
Feature

Page 4



Mini Tube Butt Weld Fittings

Page 5, 6



Tube Butt Weld Fittings

Page 7, 8



Automatic Tube Butt Weld Fittings

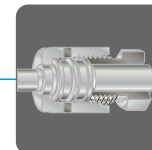
Page 9, 10



Metal Gasket Face Seal Fittings

Feature

Page 11



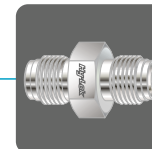
Glands

Page 12, 13, 14, 15



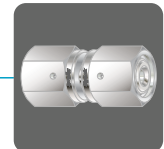
Union, Elbow, Tee, Connectors

Page 16, 17, 18, 19, 20



Swivel Union, Elbow, Tee, Connectors

Page 20, 21



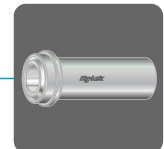
Nut, Cap, Plug & Gasket

Page 22, 23



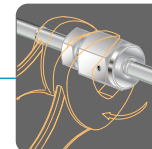
High-Flow Connections

Page 24, 25



Assembly Instruction

Page 26



Ordering Information

Page 27



## Pressure Ratings

The HY-LOK clean weld fittings and metal gasket face seal fittings are manufactured from material in accordance with material table, and calculated in accordance with ASME code for Pressure Piping B 31.3, Process Piping for allowable stress value of 20,000 psi (equivalent ASTM A269-tubing) wall thickness.

Pressure ratings for fittings are also determined by temperature applied to the fittings.

Allowable working pressure at temperatures greater than 100°F (37°C) may be obtained by multiplying factors shown in Table 1

To determine pressure ratings in accordance with ASME B31.1, Power Piping, multiply working pressure by 0.94

**Table 1. Derating Factors**

Temperature °F (°C)	Factor	
	316 Stainless Steel	316L Stainless Steel
-20 to 100 (-28 to 37)	1.00	0.84
200 (93)	0.86	0.71
300 (148)	0.78	0.63
400 (204)	0.71	0.57
600 (315)	0.66	0.53
500 (260)	0.63	0.5
650 (343)	0.62	0.49
750 (398)	0.60	0.48
700 (371)	0.60	0.47
850 (454)	0.59	0.46
800 (426)	0.58	0.45
900 (482)	0.57	-
950 (510)	0.57	-
1000 (537)	0.56	-

## Temperature Rating

Type	Material	Temperature, °F (°C)
Fittings	316L Stainless Steel	1000 (537)
	316L Stainless Steel	
	Single Vacuum Melt 316L Stainless Steel	
	Double Vacuum Melt 316L Stainless Steel	
Gaskets	316L Stainless Steel	1000 (537)
	Nickel	600 (315)
	Copper	400 (204)

## Material

Material	Designator	Specification	
		Bar Stock	Forging
316 Stainless Steel	S316	ASME SA479 ASTM A479 ASTM A276	ASME SA182 ASTM A182
316L Stainless Steel	316L		
Single Vacuum Melt 316L Stainless Steel	SM6L		
Double Vacuum Melt 316L Stainless Steel	VV6L		

## Surface Finishes

Grade	Designator	Roughness Average Ra	EP	Material	Packing Standard Class 10
B.A.	B	0.25 μm (10 μin)	N/A	S316, 316L or SM6L	Double
High	H	0.13 μm (5 μin)	Yes	SM6L or VV6L	Double
Super	S	0.1 μm (4 μin)	Yes	VV6L	Triple

## Cleaning

Passivation is done in a Nitric environment.

Precision cleaning is done by Ultra-sonic cleansing with resistivity over 18MΩ D.I. water after finishing the passivation.

## Packing & Handling

HY-LOK clean fittings are double packed in anti-static polyethylene bags pressurized with high purity nitrogen gas.

Care should be used to maintain cleanliness.

Packing done in a clean room of Class 10 needs additional packing.

- A. To maintain and transport in standard-pack condition.
- B. Remove particles from outer package, open the cardboard or outer package before carrying into clean room.
- C. To move in double pack condition in clean room, take off the 1<sup>st</sup> package when used.
- D. Remove the 2<sup>nd</sup> package just before welding.

### Mini Tube Butt Weld Fittings

- is suitable for the miniature tubing system.
- is available to install the parts closetogether.
- has the equivalent flow capacity with bigger sized weld fitting.

Radius junction means smooth flow transitions and elimination of pockets and entrapment zones.



Typical surface finish is average Ra 0.25 μm (Ra 10 μin)

Square, sharp, burr-free tube weld end.

Laser etch Marking Heat Code Traceability  
 HY-LOK Clean fittings are marked with Manufacturer, Part No., Material, Surface Finish, Heat Code No. designation.



### TBW (Tube Butt Weld) and ATW (Automatic Tube Butt Weld) Fittings

- HY-LOK Clean fittings are applicable for two welding shapes. TBW (Tube Butt Weld) and ATW (Automatic Tube Butt Weld)
- TBW is machined for optimal Butt Welding by Automatic TIG welder.

Tube ends are machined with a square face and corners to enhance alignment and maintain tube wall uniformity.

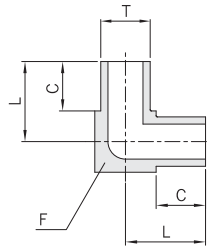


Typical surface finish is average Ra 0.25 μm (Ra 10 μin)



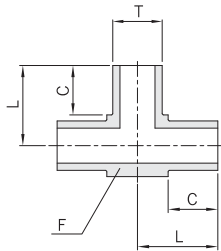
Precisely finished diameter matches tube diameter.

## Mini Elbow H-MLA



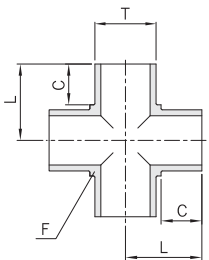
Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Cube	Working Pressure	
			mm	in.	mm	in.		in.	psig
H-MLA- 4	1/4	0,035 in.	10.4	0.41	6.35	0.25	5/16	5100	351
H-MLA- 6	3/8		11.9	0.47			7/16	3300	227
H-MLA- 8	1/2	0,049 in.	13.5	0.53			9/16	3700	254
H-MLA- 6M	6mm	1.0 mm	10.4	0.41			5/16	6095	420
H-MLA- 8M	8mm		11.9	0.47			7/16	4499	310
H-MLA-10M	10mm		13.5	0.53				3483	240
H-MLA-12M	12mm				9/16	2902	200		

## Mini Tee H-MTA



Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Cube	Working Pressure	
			mm	in.	mm	in.		in.	psig
H-MTA- 4	1/4	0,035 in.	10.4	0.41	6.35	0.25	5/16	5100	351
H-MTA- 6	3/8		11.9	0.47			7/16	3300	227
H-MTA- 8	1/2	0,049 in.	13.5	0.53			9/16	3700	254
H-MTA- 6M	6mm	1.0 mm	10.4	0.41			5/16	6095	420
H-MTA- 8M	8mm		11.9	0.47			7/16	4499	310
H-MTA-10M	10mm		13.5	0.53				3483	240
H-MTA-12M	12mm				9/16	2902	200		

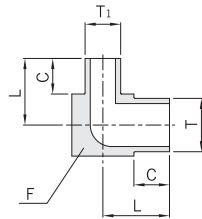
## Mini Cross H-MXA



Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Cube	Working Pressure	
			mm	in.	mm	in.		in.	psig
H-MXA- 4	1/4	0,035 in.	10.4	0.41	6.35	0.25	5/16	5100	351
H-MXA- 6	3/8		11.9	0.47			7/16	3300	227
H-MXA- 8	1/2	0,049 in.	13.5	0.53			9/16	3700	254
H-MXA- 6M	6mm	1.0 mm	10.4	0.41			5/16	6095	420
H-MXA- 8M	8mm		11.9	0.47			7/16	4499	310
H-MXA-10M	10mm		13.5	0.53				3483	240
H-MXA-12M	12mm				9/16	2902	200		

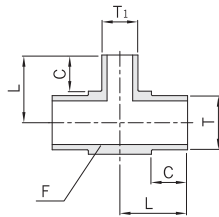
Dimensions are reference only, subject to change.

Mini Reducing Elbow  
**H-MLA**



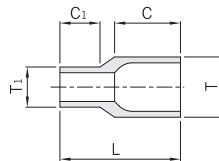
Part No.	T Tube O.D.	Wall Thickness	T <sub>1</sub> Tube O.D.	Wall Thickness	L		C		F Body Cube		Working Pressure			
					mm	in.	mm	in.	in.	psig	bar			
H-MLA 6-4	3/8	0.035 in.	1/4	0.035 in.	11.9	0.47	6.35	0.25	7/16	3300	227			
H-MLA 8-4	1/2	0.049 in.			13.5	0.53								
H-MLA 8-6					3/8					9/16	3700	254		
H-MLA 8M-6M	8mm	1.0 mm	6mm	1.0 mm	11.9	0.47	6.35	0.25	7/16	4499	310			
H-MLA10M-6M	10mm				13.5	0.53						9/16	2902	200
H-MLA12M-6M	12mm													
H-MLA12M-8M			8mm											

Mini Reducing Tee  
**H-MTA**



Part No.	T Tube O.D.	Wall Thickness	T <sub>1</sub> Tube O.D.	Wall Thickness	L		C		F Body Cube		Working Pressure			
					mm	in.	mm	in.	in.	psig	bar			
H-MTA 6-4	3/8	0.035 in.	1/4	0.035 in.	11.9	0.47	6.35	0.25	7/16	3300	227			
H-MTA 8-4	1/2	0.049 in.			13.5	0.53								
H-MTA 8-6					3/8					9/16	3300	227		
H-MTA 8M-6M	8mm	1.0 mm	6mm	1.0 mm	11.9	0.47	6.35	0.25	7/16	4499	310			
H-MTA10M-6M	10mm				13.5	0.53						9/16	2902	200
H-MTA12M-6M	12mm													
H-MTA12M-8M			8mm											

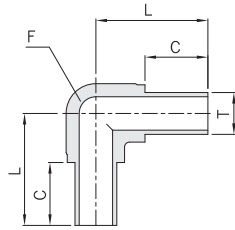
Mini Reducing Coupling  
**H-MCA**



Part No.	T Tube O.D.	Wall Thickness	T <sub>1</sub> Tube O.D.	Wall Thickness	L		C		C <sub>1</sub>		Working Pressure		
					mm	in.	mm	in.	mm	in.	psig	bar	
H-MCA 6-4	3/8	0.035 in.	1/4	0.035 in.	19.05	0.75	10.41	0.41	6.35	0.25	3300	227	
H-MCA 8-4	1/2	0.049 in.									3700	254	
H-MCA 8-6					3/8							3300	227
H-MCA 8M- 6M	8mm	1.0 mm	6mm	1.0 mm	19.05	0.75	10.41	0.41	6.35	0.25	4499	310	
H-MCA10M- 8M	10mm										8mm	3483	240
H-MCA12M- 8M	12mm										10mm	2902	200
H-MCA12M-10M													

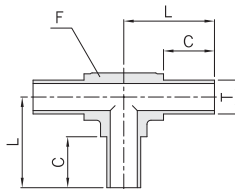
Dimensions are reference only, subject to change.

Long Elbow  
**H-ML**



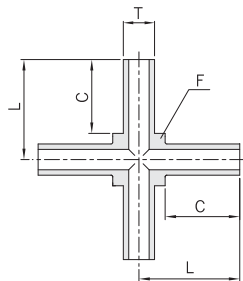
Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Flat in.	Working Pressure	
			mm	in.	mm	in.		psig	bar
H-ML- 4	1/4	0.035 in.	31.2	1.23	19.05	0.75	7/16	5100	351
H-ML- 6	3/8		30.5	1.20				3300	227
H-ML- 8	1/2	0.049 in.	34.0	1.34			11/16	3700	254
H-ML-12	3/4		37.1	1.46			15/16	2400	165
H-ML-16	1	0.065 in.	47.0	1.85	24.40	0.94	1 1/4	2400	165
H-ML- 6M	6mm	1.0 mm	31.2	1.23	19.05	0.75	7/16	6095	420
H-ML- 8M	8mm		34.0	1.34				4499	310
H-ML-10M	10mm		11/16	34.0			1.34	3483	240
H-ML-12M	12mm							2902	200
H-ML-18M	18mm		15/16	37.6			1.48	2902	200

Long Tee  
**H-MT**



Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Flat in.	Working Pressure	
			mm	in.	mm	in.		psig	bar
H-MT- 4	1/4	0.035 in.	31.2	1.23	19.05	0.75	7/16	5100	351
H-MT- 6	3/8		30.5	1.20				3300	227
H-MT- 8	1/2	0.049 in.	34.0	1.34			11/16	3700	254
H-MT-12	3/4		37.1	1.46			15/16	2400	165
H-MT-16	1	0.065 in.	47.0	1.85	24.40	0.96	1 1/4	2400	165
H-MT- 6M	6mm	1.0 mm	31.2	1.23	19.05	0.75	7/16	6095	420
H-MT- 8M	8mm		34.0	1.34				4499	310
H-MT-10M	10mm		11/16	34.0			1.34	3483	240
H-MT-12M	12mm							2902	200
H-MT-18M	18mm		15/16	37.6			1.48	2902	200

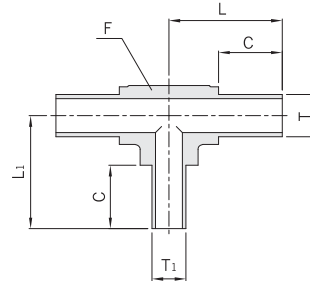
Long Cross  
**H-MX**



Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Flat in.	Working Pressure	
			mm	in.	mm	in.		psig	bar
H-MX- 4	1/4	0.035 in.	31.2	1.23	19.05	0.75	7/16	5100	351
H-MX- 6	3/8		30.5	1.20				3300	227
H-MX- 8	1/2	0.049 in.	34.0	1.34			11/16	3700	254
H-MX- 6M	6mm		11/16	31.2			1.23	6095	420
H-MX- 8M	8mm	4499			310				
H-MX-10M	10mm	5/8	34.0	1.34	3483	240			
H-MX-12M	12mm				2902	200			

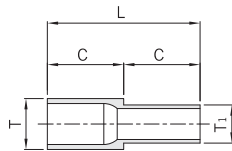
Dimensions are reference only, subject to change.

Long Reducing Tee  
**H-MT**



Part No.	T Tube O.D.	Wall Thickness	T <sub>1</sub> Tube O.D.	Wall Thickness	L		L <sub>1</sub>		C		F Body Flat	Working Pressure			
					mm	in.	mm	in.	mm	in.		in.	psig	bar	
H-MT 6-4	3/8	0.035 in.	1/4	0.035 in.	30.5	1.20	31.2	1.23	19.05	0.75	7/16	3300	227		
H-MT 8-4	1/2	0.049 in.			34.0	1.34	34.0	1.34				11/16	3700	254	
H-MT 8-6			3/8		34.3	1.35	15/16	2400			165				
H-MT12-6	1/4				37.1	1.46		37.6			1.48	7/16	4499	310	
H-MT12-4			8mm		1.0 mm	6mm	1.0 mm	31.3			1.23	31.3	1.23	11/16	3483
H-MT 8M-6M	10mm							8mm			34.0	1.34	34.0		1.34
H-MT10M-6M			12mm	6mm		8mm			8mm	12mm	1.5 mm	1.5 mm			
H-MT10M-8M															
H-MT12M-6M															
H-MT12M-8M															

Reducing Union  
**H-MU**

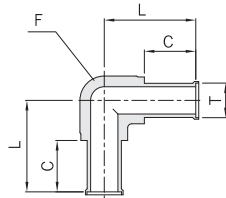


Part No.	T Tube O.D.	Wall Thickness	T <sub>1</sub> Tube O.D.	Wall Thickness	L		C		Working Pressure	
					mm	in.	mm	in.	psig	bar
H-MU 6- 4	3/8	0.035 in.	1/4	0.035 in.	38.1	1.50	19.05	0.75	3300	227
H-MU 8- 4	1/2	0.049 in.							3700	254
H-MU 8- 6			3/8						3300	227
H-MU12- 8	3/4								1/2	2400
H-MU16- 8			1							
H-MU16-12	10mm								1.0 mm	6mm
H-MU10M- 6M			8mm	6mm	10mm					
H-MU10M- 8M	12mm	8mm				12mm				
H-MU12M- 6M			18mm	1.5 mm	6mm		1.5 mm			
H-MU12M- 8M										
H-MU12M-10M										
H-MU18M- 6M										
H-MU18M-12M										

Dimensions are reference only, subject to change.

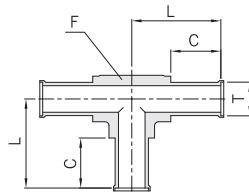


Long Elbow with Shoulder  
**H-ML-A**



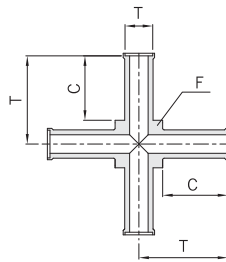
Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Flat	Working Pressure	
			mm	in.	mm	in.		in.	psig
H-ML- 4A	1/4	0.035 in.	31.2	1.23	19.05	0.75	7/16	5100	351
H-ML- 6A	3/8		30.5	1.20				3300	227
H-ML- 8A	1/2	0.049 in.	34.0	1.34			11/16	3700	254
H-ML-12A	3/4		37.1	1.46			15/16	2400	165
H-ML-16A	1	0.065 in.	47.0	1.85	24.40	0.94	1 1/4		
H-ML- 6MA	6mm	1.0 mm	31.2	1.23	19.05	0.75	7/16	6095	420
H-ML- 8MA	8mm		34.0	1.34				4499	310
H-ML-10MA	10mm		11/16					3483	240
H-ML-12MA	12mm			2902			200		
H-ML-18MA	18mm			15/16					

Long Tee with Shoulder  
**H-MT-A**



Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Flat	Working Pressure	
			mm	in.	mm	in.		in.	psig
H-MT- 4A	1/4	0.035 in.	31.2	1.23	19.05	0.75	7/16	5100	351
H-MT- 6A	3/8		30.5	1.20				3300	227
H-MT- 8A	1/2	0.049 in.	34.0	1.34			11/16	3700	254
H-MT-12A	3/4		37.1	1.46			15/16	2400	165
H-MT-16A	1	0.065 in.	47.0	1.85	24.40	0.94	1 1/4		
H-MT- 6MA	6mm	1.0 mm	31.2	1.23	19.05	0.75	7/16	6095	420
H-MT- 8MA	8mm		34.0	1.34				4499	310
H-MT-10MA	10mm		11/16					3483	240
H-MT-12MA	12mm			2902			200		
H-MT-18MA	18mm			15/16					

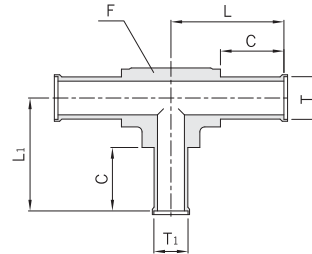
Long Cross with Shoulder  
**H-MX-A**



Part No.	T Tube O.D.	Wall Thickness	L		C		F Body Flat	Working Pressure	
			mm	in.	mm	in.		in.	psig
H-MX- 4A	1/4	0.035 in.	31.2	1.23	19.05	0.75	7/16	5100	351
H-MX- 6A	3/8		30.5	1.20				3300	227
H-MX- 8A	1/2	0.049 in.	34.0	1.34			11/16	3700	254
H-MX- 6MA	6mm		1.0 mm	31.2			1.23	7/16	6095
H-MX- 8MA	8mm	34.0		1.34	4499	310			
H-MX-10MA	10mm	5/8				3483	240		
H-MX-12MA	12mm			2902	200				

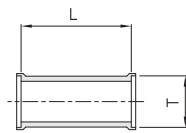
Dimensions are reference only, subject to change.

Long Reducing Tee with Shoulder  
**H-MT-A**



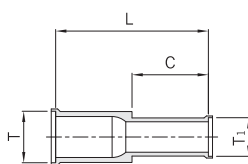
Part No.	T Tube O.D.	Wall Thickness	T <sub>1</sub> Tube O.D.	Wall Thickness	L		L <sub>1</sub>		C		F Body Flat	Working Pressure	
					mm	in.	mm	in.	mm	in.		in.	psig
H-MT 6- 4A	3/8	0.035 in.	1/4	0.035 in.	30.5	1.20	31.2	1.23	19.05	0.75	7/16	3300	227
H-MT 8- 4A	1/2	0.049 in.			34.0	1.34	34.5	1.36				37.1	1.46
H-MT 8- 6A			3/4	0.049 in.	3/8	0.049 in.	34.0	1.34	37.1	1.46	15/16	2400	165
H-MT12- 6A	1/2	37.1			1.46		37.1	1.46	11/16	2400	165		
H-MT12- 8A	3/4	0.049 in.	1/2	0.049 in.	34.0	1.34	34.0	1.34	11/16	200	227		
H-MT12M-6MA	12mm	1.0 mm	6mm	1.0 mm	34.0	1.34	34.0	1.34	11/16	200	227		

Union with Shoulder  
**H-MU-A**



Part No.	T Tube O.D.	Wall Thickness	L		Working Pressure	
			mm	in.	psig	bar
H-MU- 4A	1/4	0.035 in.	24.4	0.96	5100	351
H-MU- 6A	3/8		23.8	0.94	3300	227
H-MU- 8A	1/2	0.049 in.	23.4	0.92	3700	254
H-MU-12A	3/4				2400	165
H-MU-16A	1	0.065 in.	29.8	1.17	6095	420
H-MU- 6MA	6mm	1.0 mm	30.8	1.21		
H-MU- 8MA	8mm		30.2	1.19	3483	240
H-MU-10MA	10mm		29.8	1.17	2902	200
H-MU-12MA	12mm					
H-MU-18MA	18mm	1.5 mm	29.8	1.17	2902	200

Reducing Union with Shoulder  
**H-MU-A**



Part No.	T Tube O.D.	Wall Thickness	T <sub>1</sub> Tube O.D.	Wall Thickness	L		C		Working Pressure			
					mm	in.	mm	in.	psig	bar		
H-MU 6-4A	3/8	0.035 in.	1/4	0.035 in.	38.8	1.53	18.6	0.73	3300	227		
H-MU 8-4A	1/2	0.049 in.			38.6	1.52			3700	254		
H-MU 8-6A			3/8	38.3	1.51	18.3	0.72	3300	227			
H-MU 8M-6MA	8mm	1.0 mm	6mm	1.0 mm	38.6	1.52	18.6	0.73	4499	310		
H-MU12M-6MA	12mm		8mm						18.3	0.72	2902	200
H-MU12M-8MA			8mm								18.3	0.72

Dimensions are reference only, subject to change.

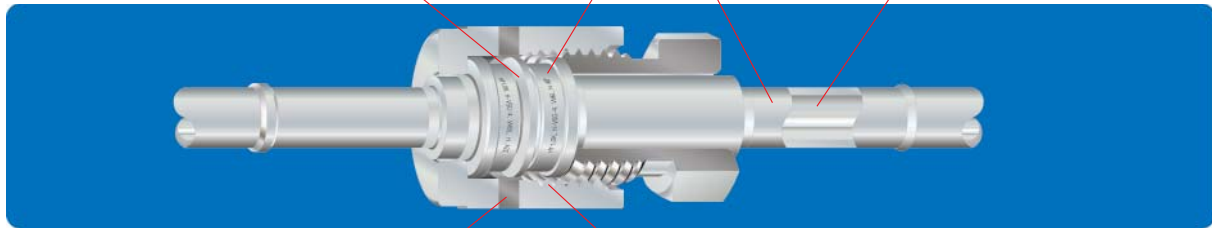
## Feature

- Provides ultra-high purity Metal to metal seal for vacuum and positive pressure applications.
- Sealing is accomplished by compressing the gasket between the two beads during assembly of the male nut or body and female nut.

Gasket options include - silver plated stainless steel 316L, Nickel plated, unplated nickel or special request.

Roll stamped or Laser etch Marking & Heat Code Traceability  
HY-LOK Clean fittings are marked with Manufacturer, Part No., Material, Surface finish, Heat Code No. designation.

Typical surface finish is average Ra 0.25  $\mu$ m (Ra 10  $\mu$ in)



QA leak test port also allows visual inspection of sealing gasket prior to assembly.

The internal surface finish of the female nut is silver plated to ensure consistent, low make up torque.

## Typical Assembly



## Plating

- Female Nut-The internal surface of the nut is silver plated to avoid galling and reduce the pull up torque.
- Gasket options include-Silver plated stainless steel 316L, Nickel plated, unplated nickel or special request.

## Testing

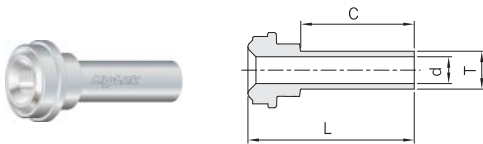
- ZCR Fittings have been helium leak tested to a rate of 1 X 10<sup>-10</sup> atm/cc/sec with unplated, silver plated and copper gasket.
- Optional tests are available upon request.



## Clean Fittings

### Short Tube Butt Weld Gland

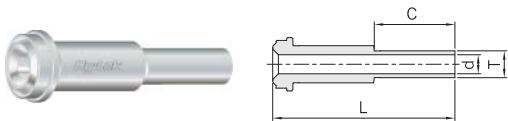
## H-ZSG



Part No.	ZCR Size	T Tube O.D.	Nominal Wall Thickness	d		L		C		Working Pressure psig (bar)		
				mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZSG - 2	1/8	1/8	0.028 in.	1.50	0.06	27.4	1.08	19.05	0.75	8500 (585) 6800 (468)		
H-ZSG - 4	1/4	1/4	0.035 in.	4.55	0.18	27.9	1.10			5100 (351)		
H-ZSG8- 4				3500 (241)	4300 (296)	2800 (192)						
H-ZSG - 6	1/2	3/8		7.67	0.30	28.4	1.12			3300 (227) 2600 (179)		
H-ZSG - 8		1/2	0.049 in.	10.14	0.40					3500 (241) 2800 (192)		
H-ZSG - 6M	1/4	6mm	1.0 mm	4.06	0.16	29.5	1.16			6800 (468) 5400 (372)		
H-ZSG - 8M		8mm		6.12	0.24					4900 (337)		
H-ZSG -10M	1/2	10mm		8.12	0.32	3500 (241) 2800 (192)						
H-ZSG -12M		12mm		9.96	0.39	3100 (213) 2400 (165)						
H-ZSG -18M		3/4	18mm	1.5 mm	15.00	0.59	31.0			1.22	3000 (206)	

### Long Tube Butt Weld Gland

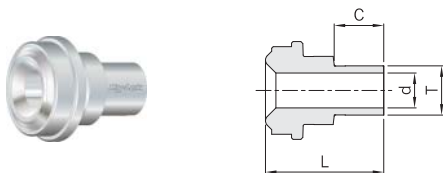
## H-ZLG



Part No.	ZCR Size	T Tube O.D.	Nominal Wall Thickness	d		L		C		Working Pressure psig (bar)		
				mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZLG - 2	1/8	1/8	0.028 in.	1.50	0.06	36.1	1.42	19.05	0.75	8500 (585) 6800 (468)		
H-ZLG - 4	1/4	1/4	0.035 in.	4.55	0.18	43.2	1.70			5100 (351)		
H-ZLG8- 4				3500 (241)	4300 (296)	2800 (192)						
H-ZLG - 6	1/2	3/8		7.67	0.30	45.5	1.79			3300 (227) 2600 (179)		
H-ZLG - 8		1/2	0.049 in.	10.14	0.40					3500 (241) 2800 (192)		
H-ZLG -12	3/4	3/4	0.065 in.	16.50	0.65	51.6	2.03			2400 (165) 1900 (130)		
H-ZLG -12T065					15.75	0.62						
H-ZLG -16	1	1		22.10	0.87	58.9	2.32			6800 (468) 5400 (372)		
H-ZLG - 6M	1/4	6mm	1.0 mm	4.06	0.16	43.2	1.70			4900 (337)		
H-ZLG - 8M		8mm		6.12	0.24							
H-ZLG -10M	1/2	10mm		8.12	0.32	45.5	1.79			3500 (241) 2800 (192)		
H-ZLG -12M		12mm		9.96	0.39	3100 (213) 2400 (165)						
H-ZLG -18M		18mm	1.5 mm	15.00	0.59	51.6	2.03	3000 (206)				

### Mini Short Tube Butt Weld Gland

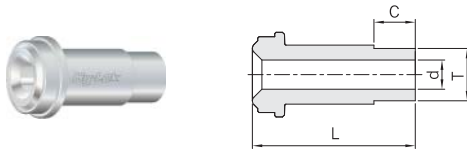
## H-ZMSG



Part No.	ZCR Size	T Tube O.D.	Nominal Wall Thickness	d		L		C		Working Pressure psig (bar)		
				mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZMSG- 4	1/4	1/4	0.035 in.	4.55	0.18	15.2	0.60	6.35	0.25	5100 (351)		
H-ZMSG- 6	3/8	3/8		7.67	0.30	15.8	0.62			3300 (227) 2600 (179)		
H-ZMSG- 8	1/2	1/2	0.049 in.	10.14	0.40					3500 (241) 2800 (192)		
H-ZMSG- 6M	1/4	6mm	1.0 mm	4.06	0.16	15.2	0.60			6800 (468) 5400 (372)		
H-ZMSG- 8M		8mm		6.12	0.24	4900 (337)						
H-ZMSG-10M	1/2	10mm		8.12	0.32	15.8	0.62			3500 (241) 2800 (192)		
H-ZMSG-12M		12mm		9.96	0.39	3100 (213) 2400 (165)						

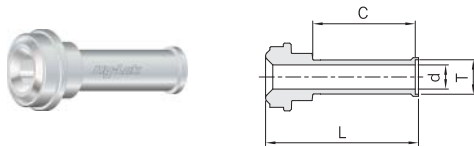
Dimensions are reference only, subject to change.

## Mini Long Tube Weld Gland H-ZMLG



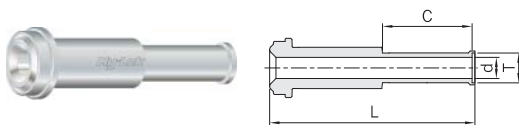
Part No.	ZCR Size	T Tube O.D.	Nominal Wall Thickness	d		L		C		Working Pressure psig (bar)		
				mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZMLG- 4	1/4	1/4	0.035 in.	4.55	0.18	30.5	1.20	6.35	0.25	5100 (351)		
H-ZMLG- 6	1/2	3/8		7.67	0.30	32.8	1.29			3300 (227)	2600 (179)	
H-ZMLG- 8		1/2	0.049 in.	10.14	0.40					3500 (241)	2800 (192)	
H-ZMLG- 6M	1/4	6mm	1.0 mm	4.06	0.16	31.0	1.22			6800 (468)	5400 (372)	
H-ZMLG- 8M		8mm		6.12	0.24	31.2	1.23			4900 (337)		
H-ZMLG-10M	1/2	10mm		8.12	0.32	32.8	1.29			3500 (241)	2800 (192)	
H-ZMLG-12M		12mm		9.96	0.39	33.8	1.33			3100 (213)	2400 (165)	

## Short Tube Weld Gland with Shoulder H-ZSG-A



Part No.	ZCR Size	T Tube O.D.	Nominal Wall Thickness	d		L		C		Working Pressure psig (bar)		
				mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZSG- 4A	1/4	1/4	0.035 in.	4.55	0.18	28.4	1.12	19.05	0.75	5100 (351)		
H-ZSG- 6A	1/2	3/8		7.67	0.30	29.2	1.15			3300 (227)	2600 (179)	
H-ZSG- 8A		1/2	0.049 in.	10.14	0.40	29.5	1.16			3500 (241)	2800 (192)	
H-ZSG- 6MA	1/4	6mm	1.0 mm	4.06	0.16	30.0	1.18			6800 (468)	5400 (372)	
H-ZSG- 8MA		8mm		6.12	0.24	30.2	1.19			4900 (337)		
H-ZSG-10MA	1/2	10mm		8.12	0.32	31.0	1.22			3500 (241)	2800 (192)	
H-ZSG-12MA		12mm		9.96	0.39	30.5	1.20			3100 (213)	2400 (165)	

## Long Tube Weld Gland with Shoulder H-ZLG-A



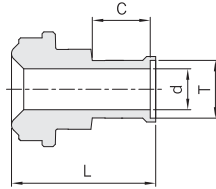
Part No.	ZCR Size	T Tube O.D.	Nominal Wall Thickness	d		L		C		Working Pressure psig (bar)			
				mm	in.	mm	in.	mm	in.	NI	SS	CU	
H-ZLG - 4A	1/4	1/4	0.035 in.	4.55	0.18	43.7	1.72	19.05	0.75	5100 (351)			
H-ZLG8- 4A	1/2					46.2	1.82			3500 (241)	2800 (192)		
H-ZLG - 6A		3/8	7.67	0.30			3300 (227)			2600 (179)			
H-ZLG - 8A	1/2	0.049 in.	10.14	0.40	46.5	1.83	3500 (241)			2800 (192)			
H-ZLG -12A	3/4	3/4	16.50	0.65	52.6	2.07	2400 (165)			1900 (130)			
H-ZLG -16A	1	1	0.065 in.	22.10	0.87	65.3	2.57			24.40	0.87	6800 (468)	5400 (372)
H-ZLG - 6MA	1/4	6mm	1.0 mm	4.06	0.16	43.7	1.72			19.05	0.75	4900 (337)	
H-ZLG - 8MA		8mm		6.12	0.24	43.9	1.73						
H-ZLG -10MA	1/2	10mm		8.12	0.32	46.5	1.83	3500 (241)	2800 (192)				
H-ZLG -12MA		12mm		9.96	0.39			3100 (213)	2400 (165)				
H-ZLG -18MA	3/4	18mm		1.5 mm	15.00	0.59	52.6	2.07	3000 (206)				

Dimensions are reference only, subject to change.

## Clean Fittings

### Mini Short Tube Weld Gland with Shoulder

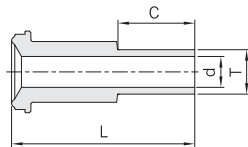
## H-ZMSG-A



Part No.	ZCR Size	T Tube O.D.	Nominal Wall Thickness	d		L		C		Working Pressure psig (bar)		
				mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZMSG- 4A	1/4	1/4	0.035 in.	4.55	0.18	15.7	0.62	6.35	0.25	5100 (351)		
H-ZMSG- 6A	3/8	3/8		7.67	0.30	16.6	0.65			3300 (227)	2600 (179)	
H-ZMSG- 8A	1/2	1/2	0.049 in.	10.14	0.40	16.8	0.66			3500 (241)	2800 (192)	
H-ZMSG- 6MA	1/4	6mm	1.0 mm	4.06	0.16	15.7	0.62			6800 (468)	5400 (372)	
H-ZMSG- 8MA		8mm		6.12	0.24	16.6	0.65			4900 (337)		
H-ZMSG-10MA	1/2	10mm		8.12	0.32					3500 (241)	2800 (192)	
H-ZMSG-12MA		12mm		9.96	0.39	16.8	0.66			3100 (213)	2400 (165)	

### Male Weld Gland

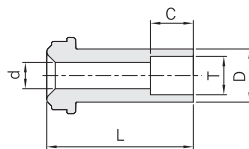
## H-ZGM



Part No.	ZCR Size	T Tube O.D.	d		L		C		Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZGM - 2	1/8	1/8	1.50	0.06	17.8	0.70	7.1	0.28	9000 (620)	11200 (771)	7200 (496)
H-ZGM4- 2	1/4				33.3	1.31			8000 (551)	10000 (689)	6400 (440)
H-ZGM - 4	1/4	1/4	3.00	0.12			10.4	0.41	3500 (241)	4300 (296)	2800 (192)
H-ZGM8- 4											
H-ZGM - 6	1/2	3/8	7.10	0.28	38.1	1.50					
H-ZGM - 8	1/2	1/2	10.14	0.40			12.7	0.50		3500 (241)	
H-ZGM -12	3/4	3/4	13.50	0.53	50.8	2.00	15.7	0.62	3000 (206)	3700 (254)	2400 (165)
H-ZGM -16	1	1	19.10	0.75	56.4	2.22	20.6	0.81	2400 (165)	3000 (206)	1900 (130)

### Socket Weld Gland

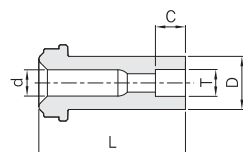
## H-ZGS



Part No.	ZCR Size	T Tube Socket	d		D		L		C		Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZGS- 2S	1/8	1/8	2.30	0.09	5.1	0.20	17.8	0.70	2.5	0.10	7100 (489)		
H-ZGS- 4S	1/4	1/4	4.55	0.18	8.9	0.35	33.3	1.31	7.1	0.28	5500 (378)		
H-ZGS- 6S	1/2	3/8	7.67	0.30	15.2	0.60	38.1	1.50	7.9	0.31	3500 (241)	4300 (291)	2800 (192)
H-ZGS- 8S		1/2	10.14	0.40					9.7	0.38	3000 (206)	2400 (165)	
H-ZGS-12S	3/4	3/4	13.50	0.53	22.4	0.88	50.8	2.00	11.2	0.44	2800 (192)	2200 (151)	
H-ZGS-16S	1	1	19.10	0.75	30.2	1.19	56.4	2.22	15.7	0.62	2400 (165)	3000 (306)	1900 (130)

### Reducing Socket Weld Gland

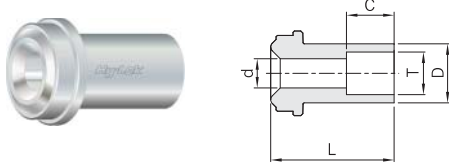
## H-ZGS



Part No.	ZCR Size	T Tube Socket	d		D		L		C		Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZGS4-2S	1/4	1/8	2.30	0.09	8.9	0.35	33.3	1.31	2.5	0.10	8000 (551)		
H-ZGS8-4S	1/2	1/4	4.55	0.18	15.2	0.60	38.1	1.50	7.1	0.28	3500 (241)		

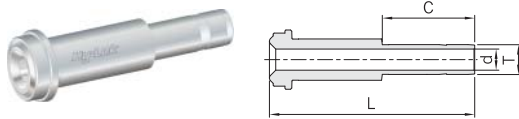
Dimensions are reference only, subject to change.

Short Socket Weld Gland  
**H-ZGS**



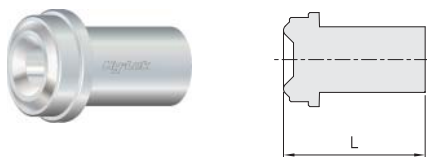
Part No.	ZCR Size	T Tube Socket	d		D		L		C		Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZGS-4SL12.7	1/4	1/4	4.55	0.18	8.9	0.35	12.7	0.50	7.1	0.28	5500 (378)		
H-ZGS-4SL19.1							19.1	0.75					

Tube Adapter Gland  
**H-ZGT**



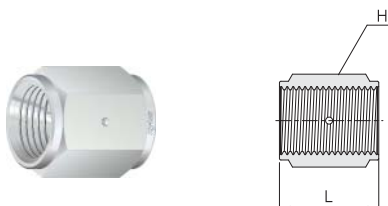
Part No.	ZCR Size	T Tube Socket	d		L		C		Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZGT-4	1/4	1/4	4.30	0.17	41.0	1.62	16.2	0.64	8000 (511)	10000 (689)	6400 (440)
H-ZGT-6	1/2	3/8	6.80	0.27	46.0	1.81	17.8	0.70	3500 (241)	4300 (296)	2800 (192)
H-ZGT-8		1/2	9.40	0.37	49.3	1.94	24.4	0.96			

Blind Gland  
**H-ZBG**



Part No.	ZCR Size	L	
		mm	in.
H-ZBG- 2	1/8	17.8	0.70
H-ZBG- 4	1/4	33.3	1.31
H-ZBG- 8	1/2	38.1	1.50
H-ZBG-12	3/4	50.8	2.00
H-ZBG-16	1	56.4	2.22

Coupling  
**H-ZC**

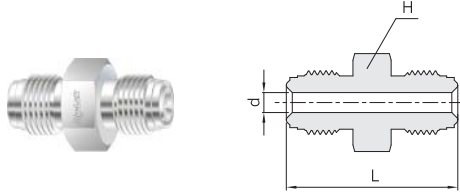


Part No.	ZCR Size	L		H
		mm	in.	in.
H-ZC- 2	1/8	16.8	0.66	7/16
H-ZC- 4	1/4	30.2	1.19	3/4
H-ZC- 8	1/2	33.3	1.31	1 1/16
H-ZC-12	3/4	42.7	1.68	1 1/2
H-ZC-16	1	51.8	2.04	1 3/4

Dimensions are reference only, subject to change.

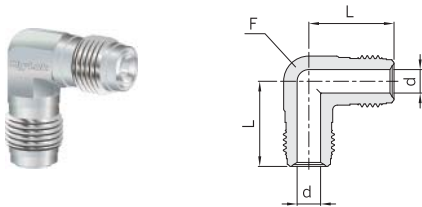
## Clean Fittings

### Double Male Union H-ZUA



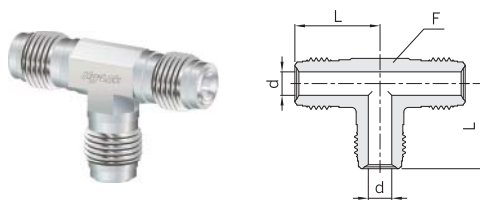
Part No.	ZCR Size	d		L		H	Working Pressure psig (bar)		
		mm	in.	mm	in.		NI	SS	CU
H-ZUA- 2	1/8	2.30	0.09	28.7	1.13	3/8	9000 (620)	11200 (771)	7200 (496)
H-ZUA- 4	1/4	4.55	0.18	39.4	1.55	5/8	8000 (551)	10000 (689)	6400 (440)
H-ZUA- 8	1/2	10.14	0.40	46.7	1.84	15/16	3500 (241)	4300 (296)	2800 (192)
H-ZUA-12	3/4	15.70	0.62	62.0	2.44	1 5/16	3000 (206)	3700 (254)	2400 (165)
H-ZUA-16	1	22.10	0.87	65.8	2.59	1 5/8	2400 (165)	3000 (206)	1900 (130)

### Union Elbow H-ZLA



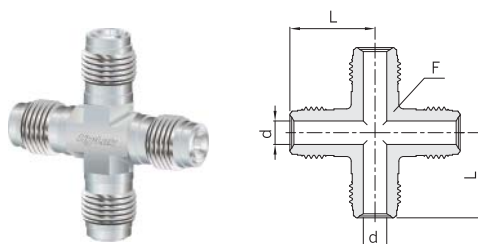
Part No.	ZCR Size	d		L		F Body Flat	Working Pressure psig (bar)		
		mm	in.	mm	in.		in.	NI	SS
H-ZLA- 2	1/8	2.30	0.09	22.6	0.89	7/16	9000 (620)	11200 (771)	7200 (496)
H-ZLA- 4	1/4	4.55	0.18	27.2	1.07	1/2	8000 (551)	10000 (689)	6400 (440)
H-ZLA- 8	1/2	10.14	0.40	36.8	1.45	13/16	3500 (241)	4300 (296)	2800 (192)
H-ZLA-12	3/4	15.70	0.62	48.8	1.92	1 1/4	3000 (206)	3700 (254)	2400 (165)
H-ZLA-16	1	22.10	0.87	50.8	2.00	1 11/16	2400 (165)	3000 (206)	1900 (130)

### Union Tee H-ZTA



Part No.	ZCR Size	d		L		F Body Flat	Working Pressure psig (bar)		
		mm	in.	mm	in.		in.	NI	SS
H-ZTA- 2	1/8	2.30	0.09	22.6	0.89	7/16	9000 (620)	11200 (771)	7200 (496)
H-ZTA- 4	1/4	4.55	0.18	27.2	1.07	1/2	8000 (551)	10000 (689)	6400 (440)
H-ZTA- 8	1/2	10.14	0.40	36.8	1.45	13/16	3500 (241)	4300 (296)	2800 (192)
H-ZTA-12	3/4	15.70	0.62	48.8	1.92	1 1/4	3000 (206)	3700 (254)	2400 (165)
H-ZTA-16	1	22.10	0.87	50.8	2.00	1 11/16	2400 (165)	3000 (206)	1900 (130)

### Union Cross H-ZXA

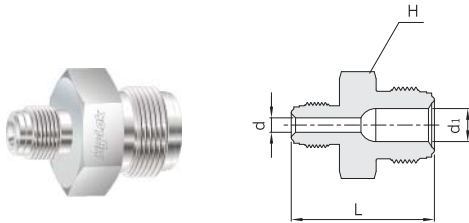


Part No.	ZCR Size	d		L		F Body Flat	Working Pressure psig (bar)		
		mm	in.	mm	in.		in.	NI	SS
H-ZXA- 2	1/8	2.30	0.09	22.6	0.89	7/16	9000 (620)	11200 (771)	7200 (496)
H-ZXA- 4	1/4	4.55	0.18	27.2	1.07	1/2	8000 (551)	10000 (689)	6400 (440)
H-ZXA- 8	1/2	10.14	0.40	36.8	1.45	13/16	3500 (241)	4300 (296)	2800 (192)
H-ZXA-12	3/4	15.70	0.62	48.8	1.92	1 1/4	3000 (206)	3700 (254)	2400 (165)
H-ZXA-16	1	22.10	0.87	50.8	2.00	1 11/16	2400 (165)	3000 (206)	1900 (130)

Dimensions are reference only, subject to change.



## Double Male Reducing Union H-ZUR



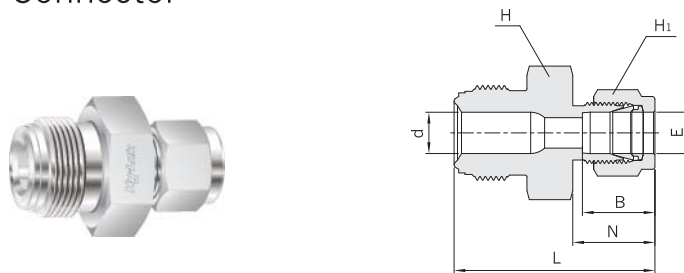
Part No.	ZCR Size		d		d <sub>1</sub>		L		H	Working Pressure psig (bar)		
	mm	in.	mm	in.	mm	in.	mm	in.	in.	NI	SS	CU
H-ZUR4-2	1/4	1/8	4.55	0.18	2.30	0.09	34.8	1.37	5/8	8000 (551)	10000 (689)	6400 (440)
H-ZUR8-4	1/2	1/4	10.14	0.40	4.55	0.18	43.4	1.71	15/16	3500 (241)	4300 (296)	2800 (192)

## Bulkhead Union H-ZBHU



Part No.	ZCR Size	d		L		N		H	H <sub>1</sub>	Panel Hole size		Max. Panel Thickness		Working Pressure psig (bar)		
		mm	in.	mm	in.	mm	in.			mm	inch	mm	inch	NI	SS	CU
H-ZBHU-4	1/4	4.55	0.18	56.6	2.23	33.0	1.30	3/4	3/4	14.5	0.57	11.10	0.44	8000 (551)	10000 (689)	6400 (440)
H-ZBHU-4L46				46.2	1.82	25.1	0.99					3.30	0.13			
H-ZBHU-8	1/2	10.14	0.40	65.3	2.57	37.6	1.48	1 1/16	1 1/16	22.5	0.89	12.70	0.50	3500 (241)	4300 (296)	2800 (192)
H-ZBHU-8L54				54.4	2.14	28.2	1.11					3.30	0.13			

## Hy-Lok Tube Fitting Connector H-ZHC



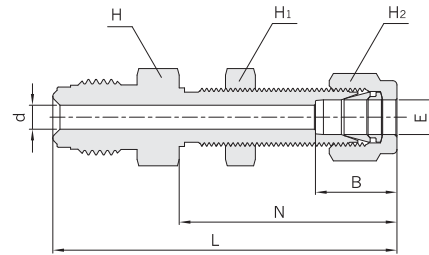
Part No.	ZCR Size	E Tube O.D.	d		L		B		N		H	H <sub>1</sub>	Working Pressure* psig (bar)		
			mm	in.	mm	in.	mm	in.	mm	in.			in.	in.	NI
H-ZHC4-2	1/4	1/8	4.55	0.18	38.6	1.52	12.7	0.50	15.2	0.60	5/8	7/16	8000 (551)	10000 (689)	6400 (440)
H-ZHC4-4		1/4			41.1	1.62	15.2	0.60	17.8	0.70		9/16			
H-ZHC4-6		3/8			43.0	1.70	16.8	0.66	19.3	0.76		11/16			
H-ZHC8-6	1/2	10.14	0.40	46.7	1.84	22.9	0.90	21.8	0.86	15/16	11/16	3500 (241)	4300 (296)	2800 (192)	
H-ZHC8-8				1/2	49.5										1.95

**Note :** B,N,L are finger - tight dimensions.

Dimensions are reference only, subject to change.

## Clean Fittings

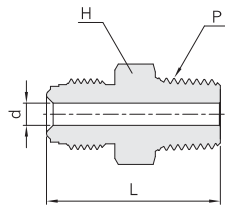
### Hy-Lok Tube Fitting Bulkhead Connector H-ZBHC



Part No.	ZCR Size	E Tube O.D.	d		L		B		N		H	H <sub>1</sub>	H <sub>2</sub>	Panel Hole size		Max. Panel Thickness				
			mm	in.	mm	in.	mm	in.	mm	in.				mm	in.	mm	in.			
H-ZBHC4-4	1/4	1/4	4.55	0.18	57.2	2.25	15.2	0.60	33.5	1.32	5/8	5/8	9/16	11.9	15/32	10.2	0.40	8000 (551)	10000 (689)	6400 (440)
H-ZBHC4-4L48					47.8	1.88			26.7	1.05						3.3	0.13			
H-ZBHC8-6	1/2	3/8	7.10	0.28	64.5	2.54	16.8	0.66	36.8	1.45	15/16	3/4	11/16	15.1	19/32	11.1	0.44	3500 (241)	4300 (296)	2800 (192)
H-ZBHC8-8																				

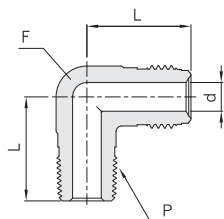
**Note :** B,N,L are finger - tight dimensions.

### Male NPT Connector H-ZMC



Part No.	ZCR Size	d		L		H	P NPT	Working Pressure psig (bar)		
		mm	in.	mm	in.			NI	SS	CU
H-ZMC 2- 1N	1/8	2.30	0.09	27.2	1.07	3/8	1/16	9000 (620)		7200 (496)
H-ZMC 2- 2N							7/16			
H-ZMC 4- 2N	1/4	4.55	0.18	33.3	1.31	5/8	1/8	8000 (551)	10000 (689)	6400 (440)
H-ZMC 4- 4N				37.8	1.49					
H-ZMC 8- 6N	1/2	9.65	0.38	41.9	1.65	15/16	3/8	3500 (241)	4300 (296)	2800 (192)
H-ZMC 8- 8N							10.14			
H-ZMC12-12N	3/4	15.70	0.62	55.6	2.19	1 5/8	3/4	3000 (206)	3700 (254)	2400 (165)
H-ZMC16-16N	1	22.10	0.87	62.7	2.47		1	2400 (165)	3000 (206)	1900 (130)

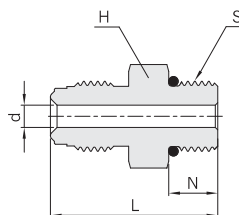
### Male NPT Elbow H-ZLMA



Part No.	ZCR Size	d		L		L <sub>1</sub>		P NPT	F	Working Pressure psig (bar)		
		mm	in.	mm	in.	mm	in.			Flat	NI	SS
H-ZLMA4-2N	1/4	4.55	0.18	27.2	1.07	22.1	0.87	1/8	1/2	8000 (551)	10000 (689)	6400 (440)
H-ZLMA4-4N						26.7	1.05					
H-ZLMA8-6N	1/2	10.14	0.40	36.8	1.45	32.0	1.26	3/8	13/16	3500 (241)	4300 (296)	2800 (192)
H-ZLMA8-8N						36.8	1.45					

Dimensions are reference only, subject to change.

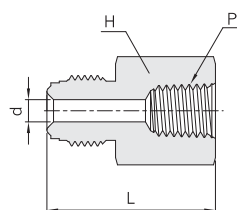
Straight thread O-Ring Seal Male Connector  
**H-ZSC**



Part No.	ZCR Size	d		L		N		H	S Straight Thread	O-Ring Uniform Size	Working Pressure psig (bar)		
		mm	in.	mm	in.	mm	in.				in.	NI	SS
H-ZSC4- 6U	1/4	4.55	0.18	33.8	1.33	9.9	0.39	3/4	9/16-18	-906	4500 (310)		
H-ZSC8- 6U	1/2	10.14	0.40	37.6	1.48			1			7/8-14	-910	3500 (241)
H-ZSC8-10U							42.2	1.66					

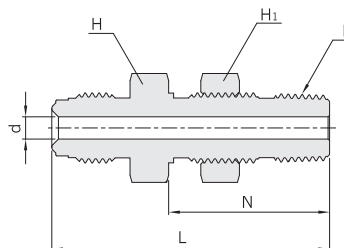
**Note :** Standard O-Ring is viton other materials are available upon request.

Female NPT Connector  
**H-ZFC**



Part No.	ZCR Size	d		L		H	P NPT	Working Pressure psig (bar)		
		mm	in.	mm	in.			in.	NI	SS
H-ZFC 2- 1N	1/8	2.30	0.09	27.9	1.10	7/16	1/16	6700 (461)		
H-ZFC 2- 2N				30.2	1.19	9/16		6500 (447)		
H-ZFC 4- 2N	1/4	4.55	0.18	35.8	1.41	5/8	1/4	8000 (551)	6400 (440)	
H-ZFC 4- 4N				39.1	1.54	3/4		6600 (454)	5200 (358)	
H-ZFC 8- 6N	1/2	10.14	0.40	44.7	1.76	15/16	3/8	3500 (241)	4300 (296)	2800 (192)
H-ZFC 8- 8N				50.5	1.99	1 1/16	1/2			
H-ZFC12-12N	3/4	15.70	0.62	59.9	2.36	1 5/16	3/4	3000 (206)	3700 (254)	2400 (165)
H-ZFC16-16N	1	22.10	0.87	63.8	2.51	1 5/8	1	2400 (165)	3000 (206)	1900 (130)

Bulkhead Male Connector  
**H-ZBMC**

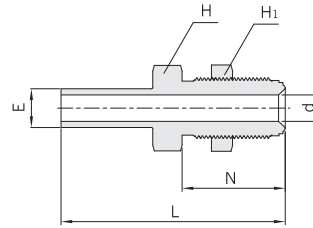


Part No.	ZCR Size	d		L		N		H	H1	P NPT	Panel Hole size		Max. Panel Thickness	Working Pressure psig (bar)			
		mm	in.	mm	in.	mm	in.				mm	in.		NI	SS	CU	
H-ZBMC4-4N	1/4	4.55	0.18	56.1	2.21	31.5	1.24	13/16	13/16	1/4	16.7	0.66	9.6	0.38	8000 (551)	6400 (440)	
H-ZBMC8-4N	1/2	10.14	0.40	59.4	2.34			15/16			3500 (241)	4370 (301)	2800 (192)				

Dimensions are reference only, subject to change.

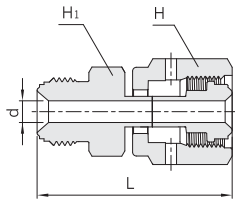
## Clean Fittings

### Tube Butt Weld Bulkhead Connector H-ZBT



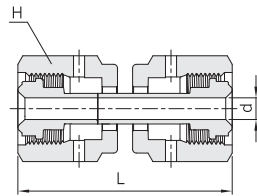
Part No.	ZCR Size	E Tube O.D.	d		L		N		H	H <sub>1</sub>	Panel Hole size		Max. Panel Thickness		Working Pressure (psig)
			mm	in.	mm	in.	mm	in.			mm	in.	mm	in.	
H-ZBT4-4	1/4	1/4	4.55	0.18	59.9	2.36	33.0	1.30	3/4	3/4	14.5	0.57	11.1	0.44	5100 (351)
H-ZBT4-4L50					49.5	1.95	25.1	0.99					3.30	0.13	

### Swivel Male/Female Union H-ZSMU



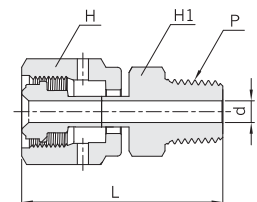
Part No.	ZCR Size	d		L		H	H <sub>1</sub>	Working Pressure psig (bar)		
		mm	in.	mm	in.			in.	in.	NI
H-ZSMU-4	1/4	4.55	0.18	42.9	1.69	3/4	5/8	80000 (551)	10000 (689)	6400 (440)

### Swivel Female Union H-ZSUA



Part No.	ZCR Size	d		L		H	Working Pressure psig (bar)			
		mm	in.	mm	in.		in.	in.	NI	SS
H-ZSUA-4	1/4	4.55	0.18	43.4	1.71	3/4		8000 (551)	10000 (689)	6400 (440)
H-ZSUA-8	1/2	10.14	0.40	46.7	1.84	1 1/16		3500 (241)	4300 (296)	2800 (192)

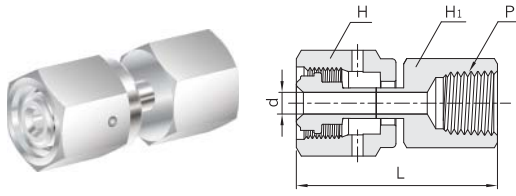
### Swivel Male NPT Connector H-ZSMC



Part No.	ZCR Size	d		L		H	H <sub>1</sub>	P NPT	Working Pressure psig (bar)		
		mm	in.	mm	in.				in.	in.	NI
H-ZSMC4-2N	1/4	4.55	0.18	40.1	1.58	3/4	7/16	1/8	8000 (551)		6400 (440)
H-ZSMC4-4N				45.5	1.79						
H-ZSMC8-6N	1/2	10.14	0.40	48.0	1.89	1 1/16	11/16	3/8	3500 (241)	4300 (296)	2800 (192)
H-ZSMC8-8N				53.1	2.09						

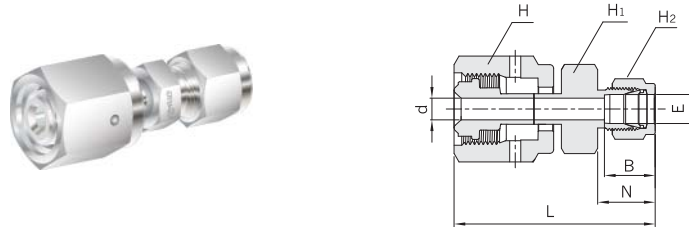
Dimensions are reference only, subject to change.

Swivel Female NPT Connector  
**H-ZSFC**



Part No.	ZCR Size	d		L		H	H <sub>1</sub>	P	Working Pressure psig (bar)		
		mm	in.	mm	in.	in.	in.	NPT	NI	SS	CU
H-ZSFC4-4N	1/4	4.55	0.18	45.0	1.77	3/4	3/4	1/4	6600 (454)		5200 (358)
H-ZSFC8-6N	3/8	10.14	0.40	49.5	1.95	1 1/16	7/8	3/8	3500 (241)	4300 (296)	2800 (192)
H-ZSFC8-8N	1/2			55.4	2.18						

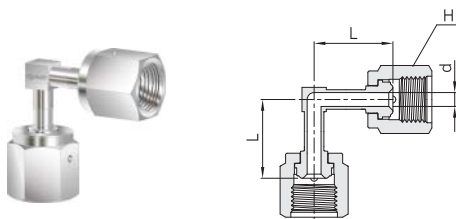
Swivel Hy-Lok Tube Fitting Connector  
**H-ZSMH**



Part No.	Tube O.D.	E Tube O.D.	d		L		B		N		H	H <sub>1</sub>	H <sub>2</sub>	*		
			mm	in.	mm	in.	mm	in.	mm	in.	in.	in.	in.	NI	SS	CU
H-ZSMH4-4	1/4	1/4	4.55	0.18	49.3	1.94	15.2	0.60	17.8	0.70	3/4	1/2	9/16	8000 (551)	10000 (689)	6400 (440)
H-ZSMH4-6		3/8			50.0	1.97	16.8	0.66	19.3	0.76		5/8	11/16	6500 (447)	5200 (358)	
H-ZSMH8-8	1/2	1/2	10.14	0.40	56.6	2.23	22.9	0.90	21.8	0.86	1 1/16	13/16	7/8	3500 (241)	4300 (296)	2800 (192)

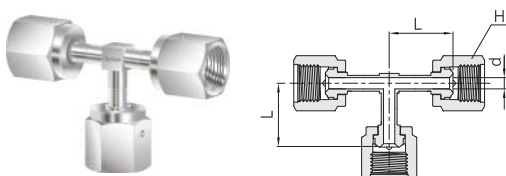
Note : B,N,L are finger - tight dimensions.

Swivel Elbow  
**H-ZSLA**



Part No.	ZCR Size	d		L		H	Working Pressure psig (bar)		
		mm	in.	mm	in.	in.	NI	SS	CU
H-ZSLA-4	1/4	4.55	0.18	25.4	1.00	3/4	5100 (351)		

Swivel Tee  
**H-ZSTA**

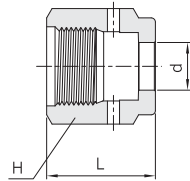


Part No.	ZCR Size	d		L		H	Working Pressure psig (bar)		
		mm	in.	mm	in.	in.	NI	SS	CU
H-ZSTA-4	1/4	4.55	0.18	25.4	1.00	3/4	5100 (351)		

Dimensions are reference only, subject to change.

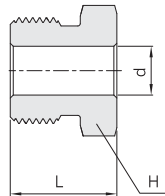
## Clean Fittings

### Female Nut H-ZFN



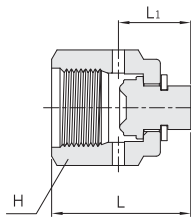
Part No.	ZCR Size	d		L		H
		mm	in.	mm	in.	in.
H-ZFN- 2	1/8	5.30	0.21	13.5	0.53	7/16
H-ZFN- 4	1/4	9.15	0.36	20.6	0.81	3/4
H-ZFN- 8	1/2	15.50	0.61	22.4	0.88	1 1/16
H-ZFN-12	3/4	22.60	0.89	28.4	1.12	1 1/2
H-ZFN-16	1	30.50	1.20	34.0	1.34	1 3/4

### Male Nut H-ZMN



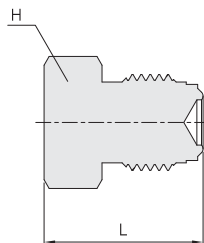
Part No.	ZCR Size	d		L		H
		mm	in.	mm	in.	in.
H-ZMN- 2	1/8	5.30	0.21	12.7	0.50	3/8
H-ZMN- 4	1/4	9.15	0.36	18.0	0.71	5/8
H-ZMN- 8	1/2	15.50	0.61	20.6	0.81	15/16
H-ZMN-12	3/4	22.60	0.89	25.4	1.00	1 5/16
H-ZMN-16	1	30.50	1.20	30.2	1.19	1 5/8

### Cap H-ZCP



Part No.	ZCR Size	L		L <sub>1</sub>		H
		mm	in.	mm	in.	in.
H-ZCP- 2	1/8	16.0	0.63	7.6	0.30	7/16
H-ZCP- 4	1/4	23.9	0.94	11.3	0.44	3/4
H-ZCP- 8	1/2	25.6	1.01	11.4	0.45	1 1/16
H-ZCP-12	3/4	32.8	1.29	13.7	0.54	1 1/2
H-ZCP-16	1	39.1	1.54	16.0	0.63	1 3/4

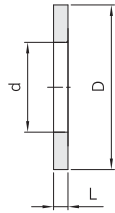
### Plug H-ZP



Part No.	ZCR Size	L		H
		mm	in.	in.
H-ZP- 2	1/8	17.3	0.68	3/8
H-ZP- 4	1/4	23.4	0.92	5/8
H-ZP- 8	1/2	27.4	1.08	15/16
H-ZP-12	3/4	36.3	1.43	1 5/16
H-ZP-16	1	38.6	1.52	1 5/8

Dimensions are reference only, subject to change.

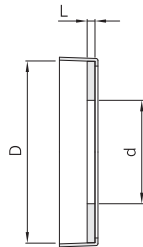
## Gasket H-ZGSK



Part No.	ZCR Size	d		D		L	
		mm	in.	mm	in.	mm	in.
H-ZGSK- 2	1/8	2.3	0.09	6.6	0.26	0.5	0.02
H-ZGSK- 4	1/4	5.6	0.22	12.5	0.49	0.8	0.03
H-ZGSK- 8	1/2	11.2	0.44	19.8	0.78		
H-ZGSK-12	3/4	16.8	0.66	29.0	1.14		
H-ZGSK-16	1	22.6	0.89	35.6	1.40		

**Note :** Cannot be used in a gasket retainer assembly.

## Gasket Retainer H-ZGRT



Part No.	ZCR Size	d		D		L	
		mm	in.	mm	in.	mm	in.
H-ZGRT- 4	1/4	5.6	0.22	11.9	0.47	0.8	0.03
H-ZGRT- 8	1/2	11.2	0.44	19.2	0.76		
H-ZGRT-12	3/4	16.8	0.66	28.5	1.12		
H-ZGRT-16	1	22.6	0.89	35.1	1.38		

## Ordering Information for Gasket & Gasket Retainer Assembly

**H**  
HY-LOK Clean

**ZGSK**  
**Product Pattern Designator**  
• ZGSK - Gasket  
• ZGRT - Gasket Retainer Assembly

**8**  
**Gasket Plating Option\***  
• Nil - unplated (standard)  
• SP - with silver plated

**BL**  
**Blind Gasket Option\***  
• Nil - Standard  
• BL - Blind gasket

**316L**  
**Gasket Material Designator**  
• 316L - 316L stainless steel  
• NI - Nickel  
• CU - Copper

**Note**

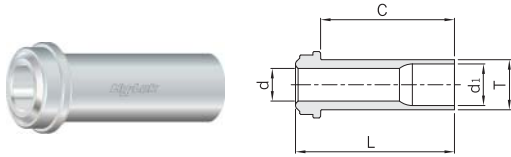
1. Retainer Material for 316L Stainless Steel, Nickel and Copper gasket Retainer Assemblies are 316L Stainless Steel.
2. '\*' No designator is required for standard gasket e.g. H-ZGSK-8 - 316L
3. For application of Blind Gaskets exceed not a differential pressure rating of 100 psi(6.8 bar)

Designator	ZCR Size
2	1/8
4	1/4
8	1/2
12	3/4
16	1

## Clean Fittings

### High Flow Tube Butt Weld Gland

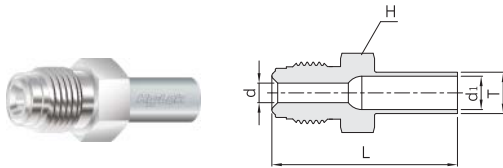
## H-ZHG



Part No.	ZCR Size	T Tube O.D	d		d <sub>1</sub>		L		Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	NI	SS	CU
H-ZHG-6L15.2	1/4	3/8	6.35	0.25	7.9	0.31	15.2	0.60	3300 (227)		
H-ZHG-6L30.2							30.2	1.19			
H-ZHG-6L33.3							33.3	1.31			

### High Flow Tube Butt Weld Reducer

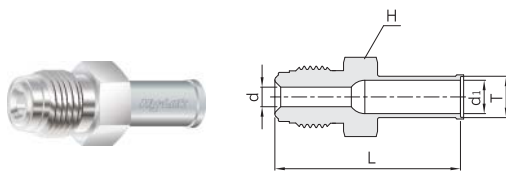
## H-ZR



Part No.	ZCR Size	T Tube O.D	d		d <sub>1</sub>		L		H	Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	in.	NI	SS	CU
H-ZR4-6	1/4	3/8	6.35	0.25	7.9	0.31	42.7	1.68	5/8	3300 (227)		

### High Flow Tube Weld Reducer with Shoulder

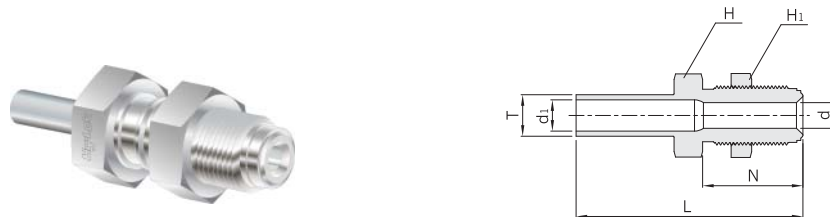
## H-ZR-A



Part No.	ZCR Size	T Tube O.D	d		d <sub>1</sub>		L		H	Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	in.	NI	SS	CU
H-ZR4-6A	1/4	3/8	6.35	0.25	7.9	0.31	43.4	1.71	5/8	3300 (227)		

### High Flow Tube Butt Weld Bulkhead Connector

## H-ZHBT

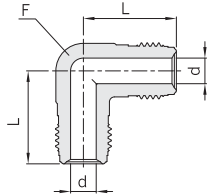


Part No.	ZCR Size	E Tube O.D.	d		d <sub>1</sub>		L		N		H	H <sub>1</sub>	Panel Hole size		Max. Panel Thickness		Working Pressure psig (bar)		
			mm	in.	mm	in.	mm	in.	mm	in.	in.	in.	mm	in.	mm	in.	NI	SS	CU
H-ZBT4-4 H-ZHBT4-6 H-ZBT4-4L50	1/4	3/8	6.35	0.25	7.9	0.31	59.9	2.36	33.0	1.30	3/4	3/4	14.5	0.57	11.1	0.44	3300 (227)		

Dimensions are reference only, subject to change.

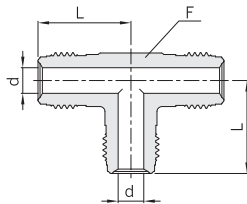


High Flow Union Elbow  
**H-ZHLA**



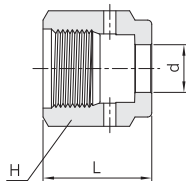
Part No.	ZCR Size	d		L		F Body Flat	Working Pressure psig (bar)		
		mm	in.	mm	in.		NI	SS	CU
H-ZHLA-4	1/4	6.35	0.25	27.2	1.07	1/2	8000 (551)	10000 (689)	6400 (440)

High Flow Union Tee  
**H-ZHTA**



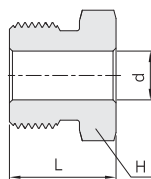
Part No.	ZCR Size	d		L		F Body Flat	Working Pressure psig (bar)		
		mm	in.	mm	in.		NI	SS	CU
H-ZHTA-4	1/4	6.35	0.25	27.2	1.07	1/2	8000 (551)	10000 (689)	6400 (440)

High Flow Female Nut  
**H-ZHFN**



Part No.	ZCR Size	d		L		H
		mm	in.	mm	in.	in.
H-ZHFN-4	1 / 4	9.9	0.39	20.6	0.81	3/4

High Flow Male Nut  
**H-ZHMN**



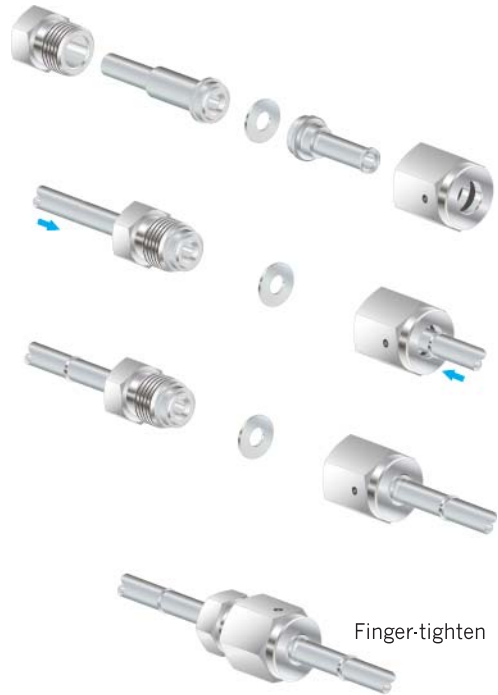
Part No.	ZCR Size	d		L		H
		mm	in.	mm	in.	in.
H-ZHMN-4	1 / 4	9.9	0.39	18.0	0.71	5/8

Dimensions are reference only, subject to change.

# Clean Fittings

## Assembly Instruction

- Step 1. Prior to tightening fittings, make sure beads and gaskets are free of scratches and dirt.
- Step 2. Insert non-retained gasket into the female nut. The gasket is self aligning. Use caution not to damage sealing surfaces while inserting gasket into female nut.
- Step 3. Finger tighten male and female nuts assuring that all components have made proper contact and are in position for final tightening with wrenches. Inspection port in female nut allows for easy visual inspection.
- Step 4. Make a reference mark on both the female nut and male nut or body hex.
- Step 5. Hold the male nut or male body with the appropriate back up wrench and tighten the female nut  $1/8 \sim 1/4$  ( $1/8$  for 316L and Ni gasket,  $1/4$  for copper gasket) turn past finger tight.

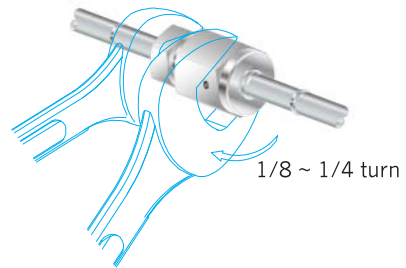


### Caution

Do not rotate fixed thread components against the gasket. Hold the fixed thread component and tighten the corresponding rotating female or male nut  $1/8 \sim 1/4$  turn past finger tight.

## Care for Installation

- 1. Do not attempt to reuse gaskets, use new gasket for remake installations.
- 2. Protect bead end of ZCR during welding, shipping or storage by using the appropriate cap or plug.
- 3. ZCR Fittings will not compensate for tube misalignment.
- 4. Protect internal silver plating on threads of female nuts during polishing, brazing, operations or additional cleaning. These operations could remove the silver plating and cause thread galling.



## Ordering Information



- 1. Clean Fitting : Designator "H"
- 2. Name of Fitting : See Title Name of product.
- 3. Tube O.D. : See Tube O.D. or ZCR Size Designator.
- 4. Reduced Ends : See Tube O.D. or ZCR Size Designator in case of Reducing or other connection.
- 5. Type of Weld : See Weld Designator
- 6. Surface Grade : See Surface Finish Designator.
- 7. Material : See Material Designator.

Tube O.D. Designator					
Size (Inch)	1/4	3/8	1/2	3/4	1
Identifier	4	6	8	12	16
Size (Metric)	6mm	8mm	10mm	12mm	18mm
Identifier	4M	6M	8M	12M	16M

Weld Designator	
Type of Weld	Identifier
Butt Weld (Without Shoulder)	Standard
Automatic Weld (With Shoulder)	A
Socket Weld	S
Male Weld	M

ZCR Size Designator					
Size (Inch)	1/8	1/4	1/2	3/4	1
Identifier	2	4	8	12	16

Surface Finish Designator			
Grade	B,A Grade	High Grade	Super Grade
Identifier	B	H	S

Note : Surface Finishes Information see page 3.

Material Designator	
Identifier	Material
S316	316 Stainless Steel
316L	316L Stainless Steel
SM6L	Single Vacuum Melt 316L Stainless Steel
VV6L	Double Vacuum Melt 316L Stainless Steel

### SAFETY in FITTING SELECTION

For proper, safe, trouble-free installation, operation and maintenance of fluid systems, material compatibility, pressure/temperature ratings, and application details must be considered in the selection of fittings. Improper selection or use of products described in this catalog can cause personal injury or property losses. It is the responsibility of system designer and user to select and use the products for their specific applications.



Distributed by :