

H200

MEDIUM & HIGH PRESSURE VALVES AND FITTINGS



ABAC SRL

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Reliable solutions for high requirement applications

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The technology required for high pressure applications of more than 10.000 PSI demands strict specifications of quality and reliability of materials, design and processes. This catalogue showcases the ABAC products suitable for such applications. In it, the user will find technical information and codification that corresponds to the wide variety of products **ABAC** offers to the market.

ABAC complements this offer with MAXIMATOR GmbH products, leading brand in high pressure technology. Therefore a complete line of hydropneumatic pumps, pressure amplifiers and other accessories for pressures up to 150.000 PSI is available. Products designed for demanding applications in the fields of mechanical engineering, automotive industry, Chemical engineering, petrochemical and chemical industry, energy, oil & gas.

Caution: All technical data contained in this publication is valid at the time of its release, and **ABAC** reserves the right to modify them at any time without notice. This data offers options on products and/or systems to give more information to trained users with technical expertise. Due to the different operative conditions and applications of these products, it will be the designer's and/or user's responsibility to choose the appropriate model for its specific use, as well as to ensure correct mounting, operation and maintenance process.

General Information

Introduction

For pressures above 10,000 psi / 700 bar it is necessary to employ suitable connections for such demand. For pressures up to 15,000 psi / 1,000 bar specially prepared NPT conical thread connections are sufficient. For higher pressures, employment of Cone & Thread connections is recommend.

Connection thread characteristics for medium and high pressure

Pressure Ranges

Range	Max. P psi	Sealing
Medium Pressure	15.000	Conical NPT
	22.500	MU Cone & Thread System
High Pressure	65.000	AU Cone & Thread System

Connection Threads

Type	Standard	Sealing
Conical NPT	ANSI B 1.20.1	Thread flank
Cylindrical AU	N/A	Male cone over female cone (see below "thread-and-cone")

Cone-and-Thread System

In this system, a male cone of small diameter presses against a female cone with a slight difference in angle. This forms a thin contact line that ensures a bubble-tight seal with a relatively small force. **ABAC** manufactures two types of Cone & Thread connections. For pressures up to 22.500 psi / 1550 bar the system is named MU and for pressures up to 30.000 psi / 2068 bar, it is designated AU.

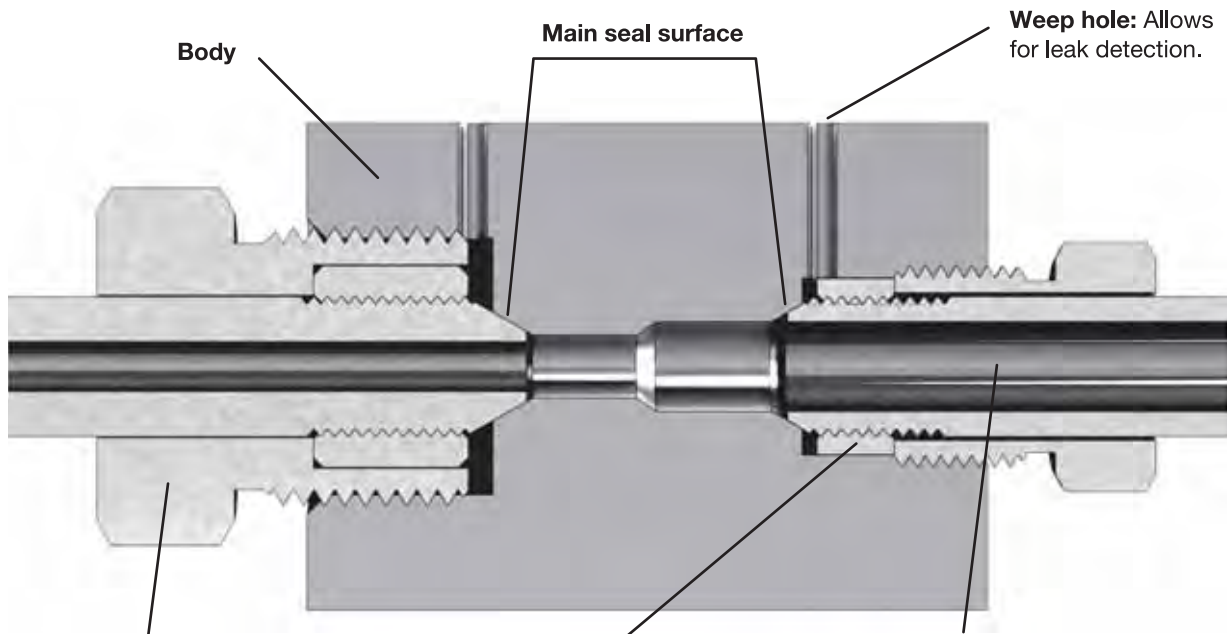
Cone-and-Thread connections compatibility

ABAC's Cone & Thread connections, both MU and AU, can be assembled with medium pressure MP and high pressure HP Cone & Thread connections from other manufacturers that share the same geometry and dimensions, and are particularly compatible with Parker Autoclave Engineers®, Maximator®, HiP® and similar.

Consult with our Engineering Department for models and compatibilities.

High Pressure AU

Medium Pressure MU



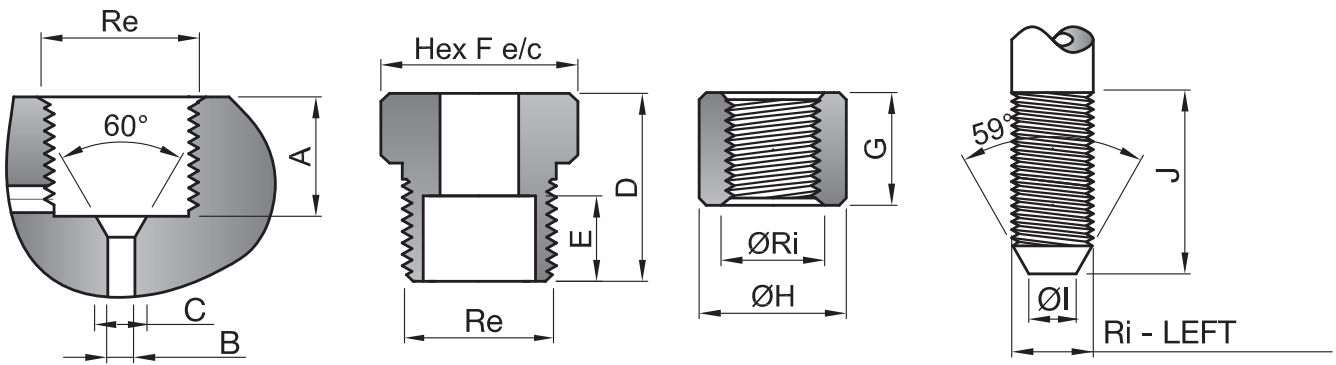
Gland: exerts the necessary force over the collar to achieve sealing between body and tube.

Collar: threaded over the tube with left-hand thread to avoid accidental disassemble.

Tube: thick wall tubes suitable for high pressures must be used (See page 11).

For pressures greater than 30.000 psi, please consult the **ABAC** Engineering Department.

GENERAL DIMENSIONS for the cone & thread system components



Connection size	Dimensions											
	Re (UN)	A	ØB	ØC	D	E	F	G	ØH	ØI	J	Ri (UN)
Medium Pressure MU – 22,500 psi (1)												
1/4"	7/16"-20	12.7	3.2	4.8	17.4	-	12.7	5.5	9.5	3.7	6.3	1/4"-28
3/8"	9/16"-18	15.8	5.5	8.0	20.6	-	15.8	6.3	12.0	6.4	9.5	3/8"-24
9/16"	13/16"-16	19.1	8.0	12.7	27.0	-	22.2	8.0	18.3	10.3	14.3	9/16"-18
3/4"	3/4" NPS	20.6	13.0	15.8	28.5	-	28.5	9.5	23.8	14.3	19.0	3/4"-16
High Pressure AU – 30,000 psi (2)												
1/4"	9/16"-18	11.1	2.5	4.8	20.6	9.5	15.8	9.5	9.5	3.7	14.3	1/4"-28
3/8"	3/4"-16	15.8	4.0	8.0	23.8	13.5	20.6	13.5	12.7	5.5	19.1	3/8"-24
9/16"	1 1/8"-12	19.1	6.4	11.1	35.0	15.8	31.7	15.8	20.6	8.3	23.8	9/16"-18

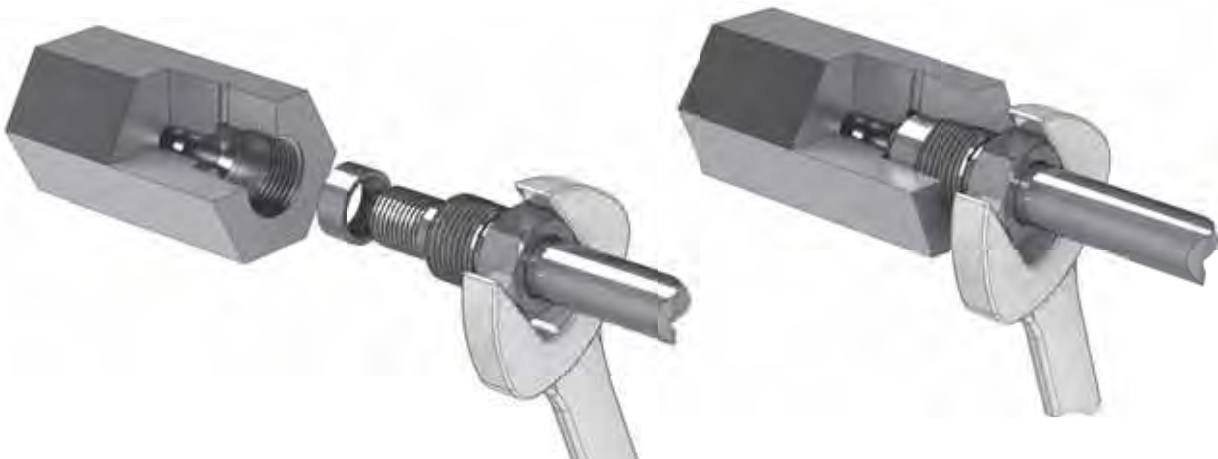
(1) Compatible with Autoclave XS250C to SFC750Cx20, Maximator 4M to 12M, Hip LF4-LF2

(2) Compatible with Autoclave F250C to F562C, Maximator 4H to 3H, Hip HF4-HF9

INSTALLATION INSTRUCTION

- 1- Lubricate all male and conical ends of the tube or accessory.
- 2- Slide the gland over the tube and screw the collar on it.
Note it is a left-hand thread.
- 3- At least 1 to 2 full thread fillets must be left exposed.
- 4- Insert the assembly into the body.
- 5- Make sure the conical end of the tube settles firmly on the body.
Thread the gland until finger-tight.
- 6- Adjust the collar with the proper wrench while firmly holding the body, using the torque shown on the table.

Accessory Size	Required torque [Nm]	
	Medium Pressure MU	High Pressure AU
1/4"	30	35
3/8"	40	70
9/16"	75	150
3/4"	125	-



Connections, tubings and accesories

ABAC high and medium pressure connections and accessories are designed for pressures from 15.000 to 30.000 PSI. They are provided with conical NPT connections or cone-and-thread AU connection, depending on the pressure range.

When using NPT connections, it is essential to employ PTFE tapes of 100 microns, or any other thread-sealant fit for aforementioned maximum pressures.



Materials

Stainless steel AISI 316 s/ ASTM A276 / ASTM A182

Maximum pressure ratings

Type	Range	Maximum Pressure (psi)
NPT Connection	Medium Pressure	15.000
Cylindrical MU	Medium Pressure	22.500
Cylindrical AU	High Pressure	30.000 (1) (2)

(1) Available for higher pressures. Consult with our technical department.

(2) If the accessorie has an NPT connection, the maximum tolerable pressure is reduce to 15.000 psi (1.034 bar)

All AU accessories are provided complete with collar and gland, and have a weep hole to detect leaks.

Ordering information

ABAC designation system allows for easy identification of the accessories type, connections measurements and materials.

NPT Connections

CURA 4-2 316

Type
(e.g. Reduction coupling)

Connections
In eights of an inch (e.g. 1/2 x 1/4)

Material
Stainless steel AISI 316 ASTM A276

Cone & Thread Connections

BUR M 5-2 316

Type
(e.g.Reduction coupling)

Range
M: 22,500 psi
H: 30,000 psi

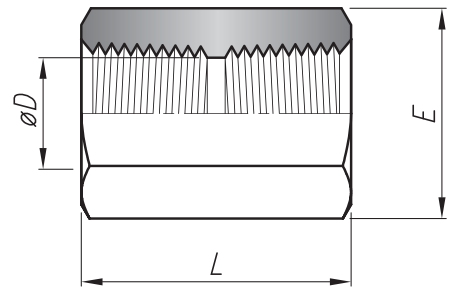
Connections
2 1/4"
3 3/8"
5 9/16"
6 3/4"
8 1"

Material
Stainless Steel AISI 316 ASTM A276

MEDIUM PRESSURE NPT CONICAL THREAD 1.034 bar/15.000 psi

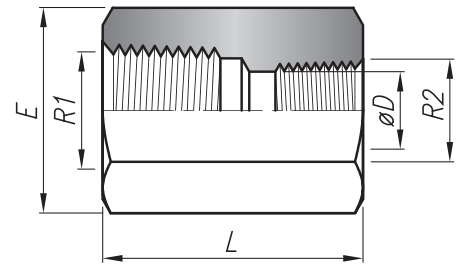
CUPA Coupling

Model	NPT thread	MEASURES (mm)		
		L	E	ØD
CUPA-2	1/4"	30	25.4	10.6
CUPA-3	3/8"	35	34.9	14.0
CUPA-4	1/2"	44	38.1	17.35



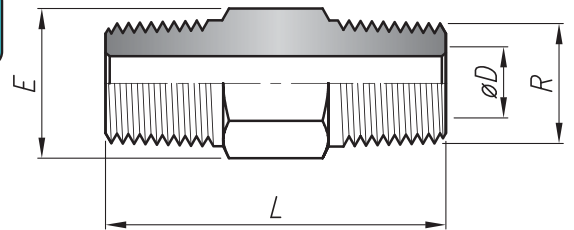
CURA NPT Reducing Coupling

Model	NPT thread		MEASURES (mm)		
	R1	R2	L	E	ØD
CURA-4-2	1/2"	1/4"	37	38.1	10.6



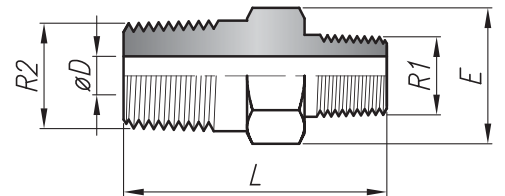
ENTA NPT Hex Nipple

Model	NPT thread	MEASURES (mm)		
		L	E	ØD
ENTA-2	1/4"	40	14.3	5
ENTA-4	1/2"	50	22.2	8



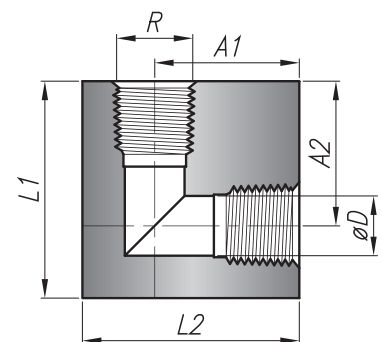
ENRA NPT Hex Reducing Nipple

Model	NPT thread		MEASURES (mm)		
	R1	R2	L	E	ØD
ENRA-4-2	1/2"	1/4"	43	22.2	5



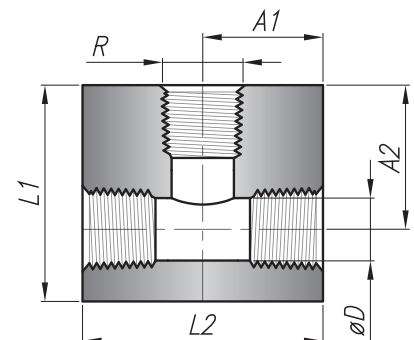
CHHA NPT Female Elbow

Model	NPT thread	MEASURES (mm)					
		L1	L2	Esp.	ØD	A1	A2
CHHA-2	1/4"	38.1	38.1	25.4	10.6	25.4	25.4
CHHA-4	1/2"	57.1	57.1	38.1	17.35	38.1	38.1



THHA NPT Female Tee

Model	NPT thread	MEASURES (mm)					
		L1	L2	Esp.	ØD	A1	A2
THHA-2	1/4"	50.8	50.8	25.4	10.6	25.4	25.4
THHA-4	1/2"	57.1	63.5	38.1	17.35	31.75	38.1

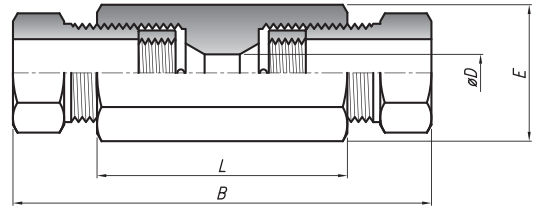


Dimensions for reference only, subject to changes. See pag 4 for ordering information

MEDIUM PRESSURE MU CYLINDRICAL THREAD 22.500 psi

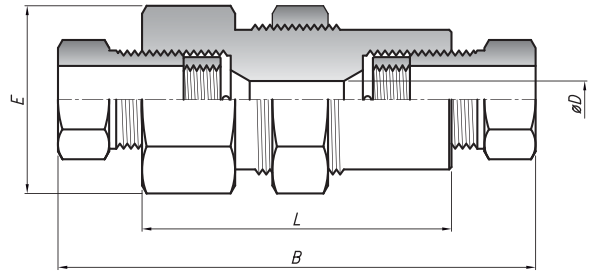
CUPM MU Coupling

Model	Connection MU H	MEASURES (mm)			
		L	E	ØD	B
CUPM-2	1/4"	38	19	3	62
CUPM-3	3/8"	44	22	5	72
CUPM-5	9/16"	54	25.4	8	90
CUPM-6	3/4"	63.5	38.1	11	101



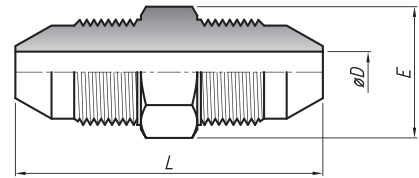
CPPM MU Coupling

Model	Connection MU H	MEASURES (mm)			
		L	E	ØD	B
CPPM-2	1/4"	50.8	25.4	3	74.8
CPPM-3	3/8"	50.8	25.4	5	74.8
CPPM-5	9/16"	66.5	34.9	8	102
CPPM-6	3/4"	66.5	44.4	11	104



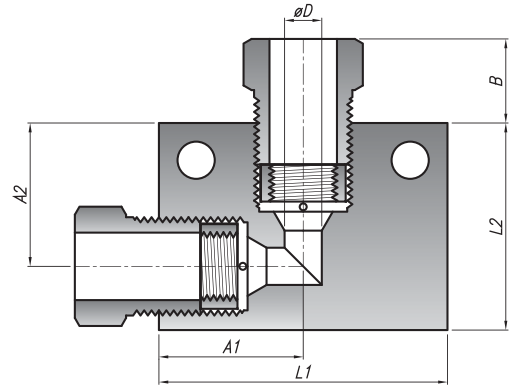
ENTM MU Hex Nipple

Model	Connection MU M	MEASURES (mm)		
		L	E	ØD
ENTM-2	1/4"	45	12.7	3
ENTM-3	3/8"	55	15.8	5
ENTM-5	9/16"	65	22.2	8
ENTM-6	3/4"	75	28.5	11



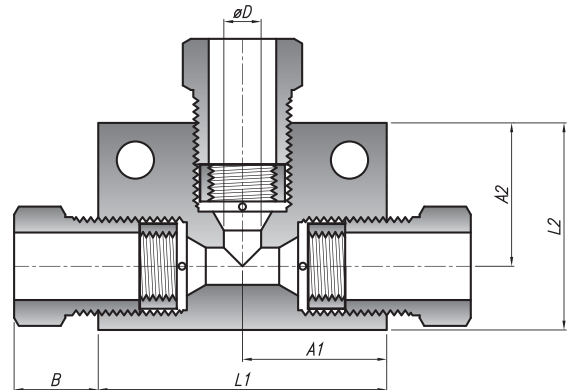
CHHM MU Elbow

Model	Connection MU H	MEASURES (mm)						
		L1	L2	Esp.	ØD	A1	A2	B
CHHM-2	1/4"	38.1	28.6	15.9	3	19.1	19.1	12
CHHM-3	3/8"	50.8	35.1	19	5	25.4	25.4	14
CHHM-5	9/16"	62	44.5	25.4	8	30.8	31	18
CHHM-6	3/4"	76.2	57.2	34.9	11	38.1	38.1	19



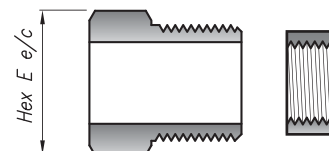
THHM MU Tee

Model	Connection MU H	MEASURES (mm)						
		L1	L2	Esp.	ØD	A1	A2	B
THHM-2	1/4"	38.1	28.6	15.9	3	19.1	19.1	12
THHM-3	3/8"	50.8	35.1	19	5	25.4	25.4	14
THHM-5	9/16"	62	44.5	25.4	8	30.8	31	18
THHM-6	3/4"	76.2	57.2	34.9	11	38.1	38.1	19



CPCM MU Collar + Gland

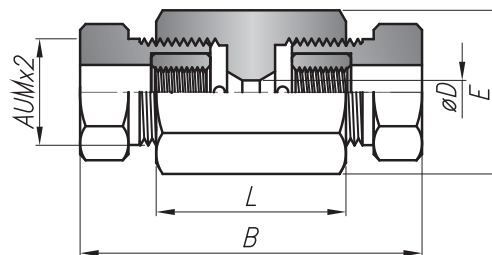
Model	Connection MU	E
CPCM-2	1/4"	12.7
CPCM-3	3/8"	15.8
CPCM-5	9/16"	22.2
CPCM-6	3/4"	28.5



HIGH PRESSURE AU CYLINDRICAL THREAD 30.000 psi

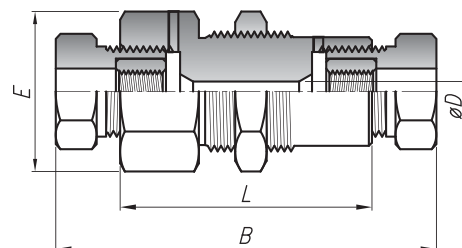
CUPH AU Coupling

Model	Connection AU H	MEASURES (mm)			
		L	E	ØD	B
CUPH-2	1/4"	32	22.2	2.5	59
CUPH-3	3/8"	44	27	3.2	67
CUPH-5	9/16"	51	38.1	6.35	92



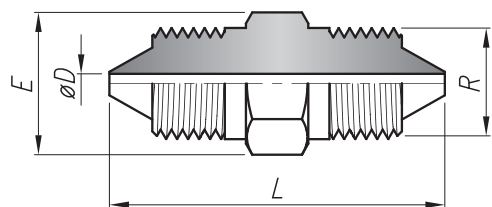
CPPH AU Bulkhead coupling

Model	Connection AU H	MEASURES (mm)			
		L	E	ØD	B
CPPH-2	1/4"	48	22.2	2.50	75
CPPH-3	3/8"	55	34.9	4.75	78
CPPH-5	9/16"	55	38.1	6.35	96



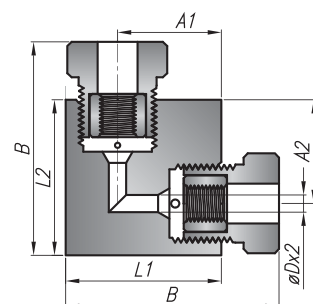
ENTH AU Hex Nipple

Model	Connection AU M	MEASURES (mm)		
		L	E	ØD
ENTH-2	1/4"	43	15.8	2.5
ENTH-3	3/8"	55.7	20.6	3.2
ENTH-5	9/16"	83.1	31.7	6.35



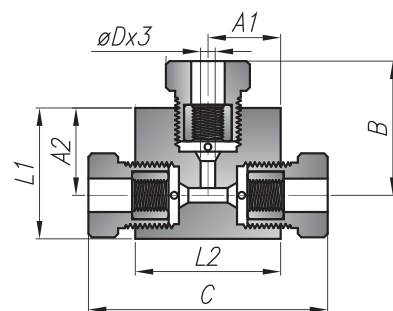
CHHH AU Elbow

Model	Connection AU H	MEASURES (mm)						
		L1	L2	Esp.	ØD	A1	A2	B
CHHH-2	1/4"	31.7	31.7	22.2	2.5	19.0	19.0	45
CHHH-3	3/8"	50.8	50.8	30	3.2	31.7	31.7	62
CHHH-5	9/16"	57.1	57.1	38.1	6.35	38.1	38.1	77.5



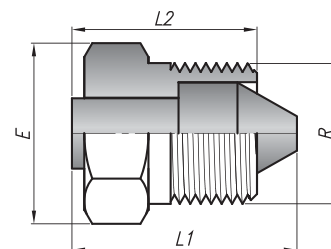
THHH Tee AU

Model	Connection AU H	MEASURES (mm)							
		B	L1	L2	Esp.	ØD	A1	A2	A2
THHH-2	1/4"	32.5	31.7	31.7	22	2.5	15.8	19	58.7
THHH-3	3/8"	43	50.8	50.8	30	3.2	25.4	31.7	73.5
THHH-5	9/16"	59	57.1	63.5	38.1	6.35	31.7	38.1	104.5



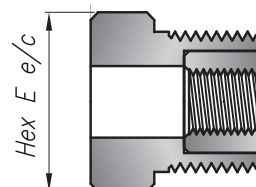
TAPH AU Plug

Model	Connection AU M	MEASURES (mm)		
		L1	L2	E
TAPH-2	1/4"	28.6	20.6	15.8
TAPH-3	3/8"	33.3	27.7	20.6
TAPH-5	9/16"	45.6	35	31.7



CPCH AU Collar + Gland

Model	Connection AU	E
CPCH-2	1/4"	15.8
CPCH-3	3/8"	20.6
CPCH-5	9/16"	31.7



MEDIUM AND HIGH PRESSURE – THREAD ADAPTERS

ABAC provides a wide variety of reducing and thread adapters to simplify assemblies. Cylindrical thread connections are provided complete with collar and gland.

When multiple items are selected, the pressure rating will be equal to the rating of the component with the lowest value.

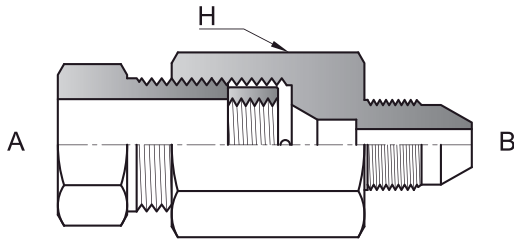
4 Types of connections are available:

- Male and Female NPT
- Cone & Thread Medium Pressure MU
Male and Female – Max. P. 22,500 psi.
- Con & Thread High Pressure AU
Male and Female – Max. P. 30,000 psi
- M Type – For hoses
Max. P. 30,000 psi.

REDUCING ACCESORIES

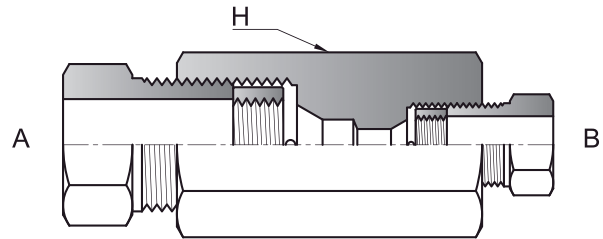
ADRM MU Reducing Adapter

Model	MU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADRM-5-2	9/16" MU	1/4" MU	22.500	3.2	25.4
ADRM-5-3	9/16" MU	3/8" MU	22.500	5.5	25.4
ADRM-6-5	3/4" MU	9/16" MU	22.500	9.2	34.5



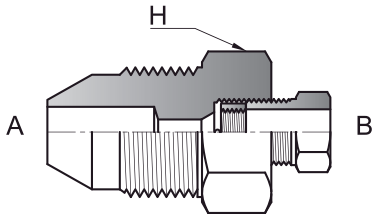
CURM MU Reducing Coupling

Model	MU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
CURM-5-2	9/16" MU	1/4" MU	22.500	3.2	25.4
CURM-5-3	9/16" MU	3/8" MU	22.500	5.5	25.4
CURM-6-5	3/4" MU	9/16" MU	22.500	9.2	34.5



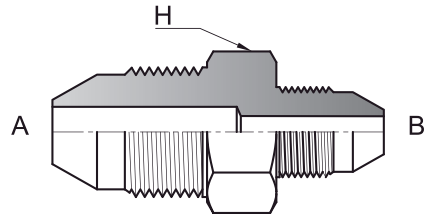
BURM MU Reducing Bushing

Model	MU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
BURM-5-2	9/16" MU	1/4" MU	22.500	5	19
BURM-5-3	9/16" MU	3/8" MU	22.500	5	22
BURM-6-5	3/4" MU	9/16" MU	22.500	5	25



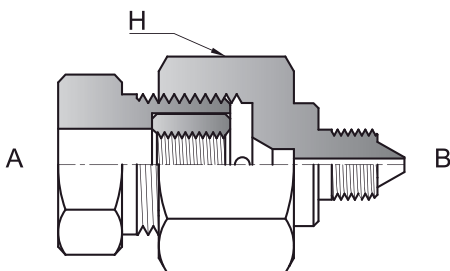
ENRM MU Reducing Hex Nipple

Model	MU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ENRM-5-2	9/16" MU	1/4" MU	22.500	3.2	22.2
ENRM-5-3	9/16" MU	3/8" MU	22.500	5.5	22.2
ENRM-6-5	3/4" MU	9/16" MU	22.500	9.2	22.2



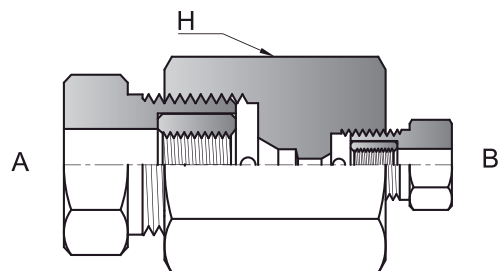
ADRH AU Reducing Adapter

Model	AU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADRH-3-2	3/8" AU	1/4" AU	30.000	2.5	27
ADRH-5-2	9/16" AU	1/4" AU	30.000	2.5	38.1
ADRH-5-3	9/16" AU	3/8" AU	30.000	3.2	38.1



CURH AU Reducing Adapter

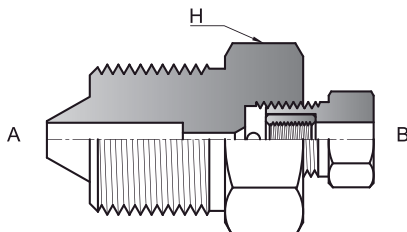
Model	AU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
CURH-3-2	3/8" AU	1/4" AU	30.000	2.5	27
CURH-5-2	9/16" AU	1/4" AU	30.000	2.5	38.1
CURH-5-3	9/16" AU	3/8" AU	30.000	3.2	38.1



MEDIUM AND HIGH PRESSURE – THREAD ADAPTERS (cont.)

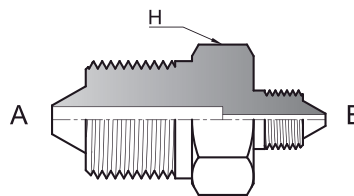
BURH AU Reducing Bushing

Model	AU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
BURH-3-2	3/8" AU	1/4" AU	30,000	2.5	20.6
BURH-5-2	9/16" AU	1/4" AU	30,000	2.5	31.7
BURH-5-3	9/16" AU	3/8" AU	30,000	3.2	31.7



ENRH AU Reducing Adapter

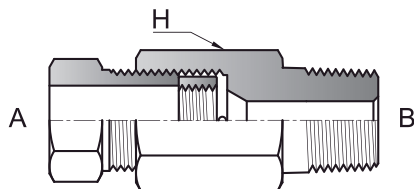
Model	AU Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ENRH-3-2	3/8" AU	1/4" AU	30,000	2.5	20.6
ENRH-5-2	9/16" AU	1/4" AU	30,000	2.5	31.7
ENRH-5-3	9/16" AU	3/8" AU	30,000	3.2	31.7



MU to NPT adapters

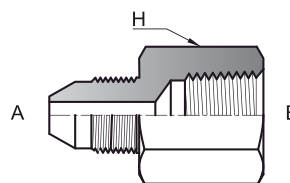
ADMA MU-F to NPT-M Adapter

Model	Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADMA-3-2	3/8" MU	1/4" NPT	15,000	5.5	22
ADMA-5-4	9/16" MU	1/2" NPT	15,000	8	25.4
ADMA-6-4	3/4" MU	1/2" NPT	15,000	10	38.1



ADAM MU-M to NPT-F Adapter

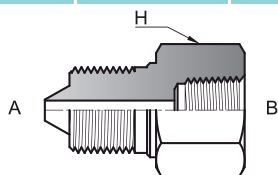
Model	Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADAM-3-2	3/8" MU	1/4" NPT	15,000	5	19.05
ADAM-5-4	9/16" MU	1/2" NPT	15,000	8	27.0
ADAM-6-4	3/4" MU	1/2" NPT	15,000	11	28.5



AU to NPT adapters

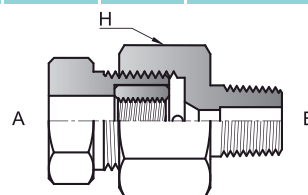
ADAH AU-M to NPT-F Adapter

Model	Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADAH-2-2	1/4" AU	1/4" NPT	15,000	2.5	25.4
ADAH-2-4	1/4" AU	1/2" NPT	15,000	2.5	38.1
ADAH-3-2	3/8" AU	1/4" NPT	15,000	3.2	25.4
ADAH-3-4	3/8" AU	1/2" NPT	15,000	3.2	38.1
ADAH-5-2	9/16" AU	1/4" NPT	15,000	6.3	31.7
ADAH-5-4	9/16" AU	1/2" NPT	15,000	6.3	38.1



ADHA AU-F to NPT-M Adapter

Model	Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADHA-2-2	1/4" AU	1/4" NPT	15,000	2.5	25.4
ADHA-2-4	1/4" AU	1/2" NPT	15,000	2.5	38.1
ADHA-3-2	3/8" AU	1/4" NPT	15,000	3.2	25.4
ADHA-3-4	3/8" AU	1/2" NPT	15,000	3.2	38.1
ADHA-5-2	9/16" AU	1/4" NPT	15,000	6.3	31.7
ADHA-5-4	9/16" AU	1/2" NPT	15,000	6.3	38.1

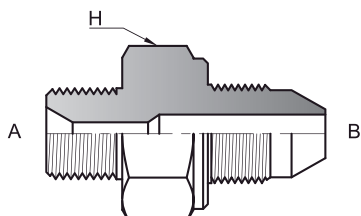


Type "M" to MU and AU adapters

"M" Type connections are predominant in high pressures hoses with rotary nut, and are identified by the nut UN in inches and by its pitch (TPI). Most common dimensions are UN9/16"x18", UN3/4"x16", UN1 1"x12, among other.

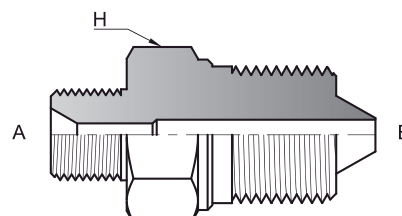
ADTM Type M to MU-M Adapter

Model	Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADTM-5-2	9/16"x18	1/4" MU	22,500	2.5	19.05
ADTM-6-3	3/4"x16	3/8" MU	22,500	4.75	22.2
ADTM-8-5	1"x12	9/16" MU	22,500	4.5	31.75



ADTH Type M to AU-M Adapter

Model	Connections		Max. Pressure (psi)	Orifice (mm.)	Hex
	A	B			
ADTH-5-2	9/16"x18	1/4" AU	30,000	2.5	22.2
ADTH-6-3	3/4"x16	3/8" AU	30,000	4.75	22.2
ADTH-8-5	1"x12	9/16" AU	30,000	4.5	31.75



Medium and High Pressure Tubing and Nipples

ABAC provides cold drawn thick wall tubing for pressures up to 65,000 PSI (4500 bar).

These pipes are manufactured under strict specifications and controls, and are fit to be employed in cone & thread systems of various manufacturers.

The standard material is AISI 316. Other materials may be provided by special request.

Maximum length provided is 3 mts.



Código	Suitable for	Diameter (mm)		Working pressure (psi)				
		OD	ID	-148 to 100°F	200°F	400°F	600°F	800°F
281 21TU4M-316	1/4" MU	6.35	2.77	22.500	18.900	17.400	16.000	15.100
281 65TU4H-316	1/4" AU	6.35	2.11	65.000	58.500	54.000	49.400	46.800
281 21TU6M-316	3/8" MU	9.52	5.17	22.500	18.900	17.400	16.000	15.100
281 65TU6H-316	3/8" AU	9.52	3.18	65.000	58.500	54.000	49.400	46.800
281 1STU9M-316	9/16" MU	14.3	9.12	15.200	13.700	12.600	11.500	10.900
281 2STU9M-316	9/16" MU	14.3	7.93	22.500	18.900	17.400	16.000	15.100
281 65TU9H-316	9/16" AU	14.3	4.77	65.000	58.500	54.000	49.400	46.800
281 1STU12M-316	3/4" MU	19.05	13.11	15.200	13.700	12.600	11.500	10.900
281 2STU12M-316	3/4" MU	19.05	11.13	22.500	18.900	17.400	16.000	15.100

Medium and High Pressure Nipples

ABAC offers nipples with cone & thread ends in a wide variety of lengths and sizes of standard tubes. They are provided in AISI 316 stainless steel. They can also be supplied in special dimensions. Please refer to our sales department.

NOTE: Gland are collar are not included.



Installation Tools

ABAC provides the necessary tools for threading and coning high pressures tubing of diameter 1/4", 3/8" and 9/16".

These tools are ideal for field work since they do not require external power.

Coning tools:

Provided complete with blades, collet and tools. The blades and tool feed nut allow the user to control the cutting feed rate to achieve the perfect cone, vibration free, which ensures a leak-tight closure at admissible pressures.

The blades and collet can be changed for other sizes, while using the same base tool.

Threading Tools:

Comes complete with the threading die and bushing. The thread is a left hand type. The thread die and bushing can be changed for other sizes.



VAP-VMP-VHP Medium and high Pressure Needle Valves

Needle valves specially designed to endure the harshest pressure conditions. Metal to metal seal with hardened tip for extended lifespan.

Characteristics

- Non rotating stem tip of hardened 17-4 PH reduces operating torque and prevents stem/seat galling
- The tip is mounted on a hardened sphere to minimize sealing torque and wear.
- PTFE encapsulated packing located underneath the stem thread, adjustable from the outside and unscrew safe.
- NPT, MU and AU connections (includes collar and gland)
- Angled, straight or double input configuration.
- Panel mount ready.
- Working pressures up to 15,000, 22,500 or 30,000 PSI (1,034, 1,550 and 2,068 bar)

Technical Specifications

STANDARD MATERIALS

Part	Specification
Body	AISI 316
Tip	17-4 PH
Stem and bonnet	AISI 316 & Manganese Brass
Packing gland	Brass
Packing	Peek + PTFE
Handle	Anodized Al 6061

TEMPERATURE AND PRESSURE RATINGS

Packing	Service Pressure @ 70°F			Maximum Temperature
	VAP	VMP	VAP	
PTFE (std)				500°F
Flexible Graphite	15.000 psi	22.500 psi	30.000 psi	930°F
Fluoroelastomer				400°F

Ordering Information

VAP 50 - I - T

Model

VAP: 15000 psi
VMP: 22.500 psi
VHP: 30.000 psi

Connections

(see dimensions table)

Angled configuration option

A: Angle
D: Double input
S: Double output

Packing

T: PTFE
G: Grafoil
V: Fluoroelastomer

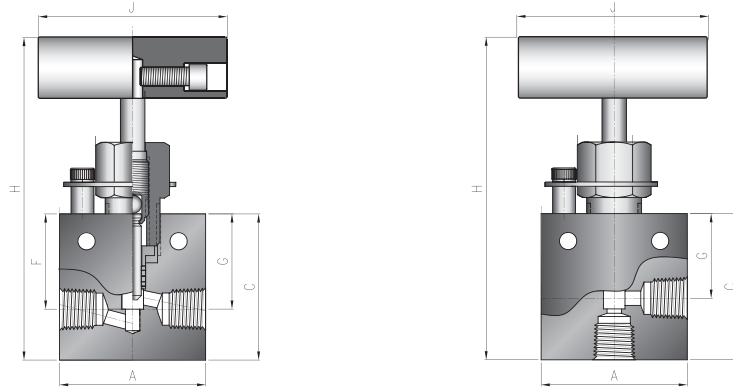
Material

I: Stainless Steel



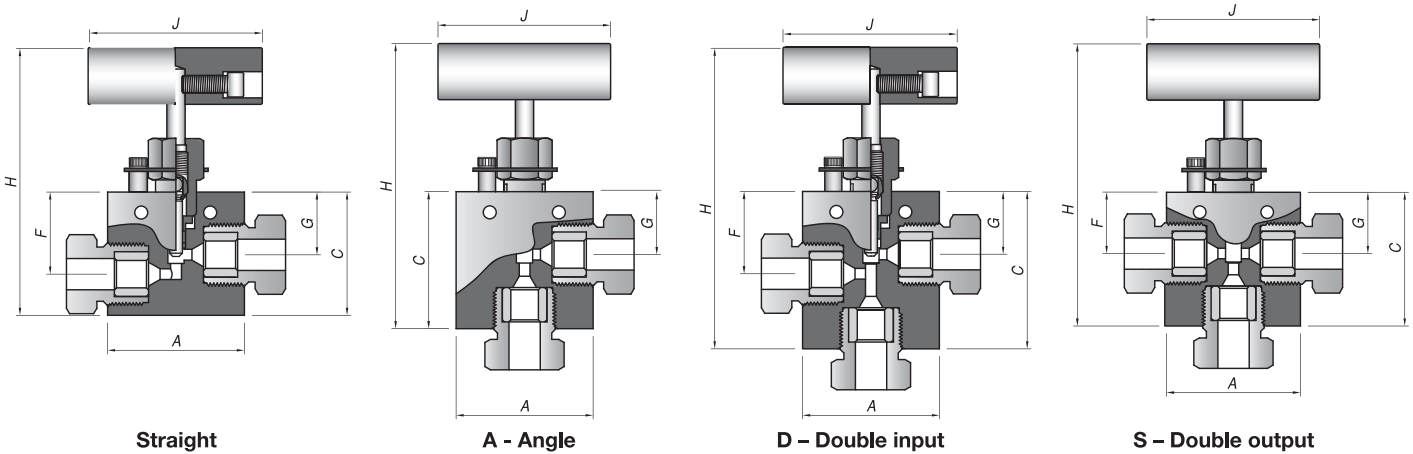
Dimensions and assembly characteristics

VAP Model
15,000 PSI (1,034 bar)



Connections	Model	Orifice mm.	Measures [mm]						
			A	C	F	G	H Open	J	Width
1/4" NPT H	VAP25 IT	5	50.8	50.8	33,1	33.1	108.0	80	31,7
1/2" NPT H	VAP50 IT	8	76.2	63.5	44,4	44.4	128.0	100	38,1
1/4" NPT H	VAP25 A IT	5	50.8	50.8	-	29.4	108.0	80	31,7
1/2" NPT H	VAP50 A IT	8	63.5	76.2	-	37.4	134.0	100	38,1

MODELOS VMP-VHP
1.550 bar (22.500 PSI) y 2.068 bar (30.000 PSI)



Tube exterior diameter	Model	Orifice mm.	Connection	máx. pressure (psi)	Measures [mm]							
					UN Thread	A	C	F	G	H Open	J	Width
1/4"	VHP 4H IT	2.5	1/4"AU (1)	30.000	9/16"x18 (1)	50.8	50.8	38.1	28.5	100	80	31.7
9/16"	VMP 9M IT	8	9/16"MU (3)	22.500	13/16"x16 (3)	63.5	73.2	50.0	38.0	144	100	32.0
9/16"	VHP 9H IT	5	9/16"AU (2)	30.000	1 1/8"x12 (2)	63.5	57.0	38.1	29.1	114	80	38.1
1/4"	VHP 4H A IT	2.5	1/4"AU (1)	30.000	9/16"x18 (1)	50.8	50.8	-	28.5	100	80	31.7
9/16"	VMP 9M A IT	8	9/16"MU (3)	22.500	13/16"x16 (3)	63.5	87.0	-	38.0	158	100	32.0
9/16"	VHP 9H A IT	5	9/16"AU (2)	30.000	1 1/8"x12 (2)	63.5	63.5	-	29.1	120	80	38.1
1/4"	VHP 4H D IT	2.5	1/4"AU (1)	30.000	9/16"x18 (1)	50.8	63.5	38.1	28.5	117	80	32.0
9/16"	VMP 9M D IT	8	9/16"MU (3)	22.500	13/16"x16 (3)	63.5	87.0	50.0	38.0	158	100	32.0
9/16"	VHP 9H D IT	5	9/16"AU (2)	30.000	1 1/8"x12 (2)	63.5	72.9	38.1	29.1	130	80	38.1
1/4"	VHP 4H S IT	2.5	1/4"AU (1)	30.000	9/16"x18 (1)	50.8	50.8	28.5	28.5	100	80	31.7
9/16"	VMP 9M S IT	8	9/16"MU (3)	22.500	13/16"x16 (3)	63.5	87.0	38.0	38.0	158	100	32.0
9/16"	VHP 9H S IT	5	9/16"AU (2)	30.000	1 1/8"x12 (2)	63.5	63.5	29.1	29.1	120	80	38.1

(1) Compatible with AUTOCLAVE type F250C connection
 (2) Compatible with AUTOCLAVE type F562C connection
 (3) Compatible with AUTOCLAVE SF682CX

VIA5 - VIM5 - VIH5 Medium and high pressure multiple valves

Block and bleed integral valves designed for the appropriate mounting of manometers and pressure transmitters.

Three distinct versions: NPT for 15,000 psi, Cone & Thread medium pressure for 22,500 psi and high pressure for 30,000 psi.

Characteristics:

- “Dry thread” bonnets keep the thread and stem isolated from the fluid.
- Non-rotating tip, hardened for bubble-tight sealing and longer lifespan.
- Bonnet unscrew safety.
- Completely made in Stainless Steel.
- NPT, MU and AU connections (includes collar and gland)
- Multiple threaded outputs (only available in the VIA5 model)
- Mounting holes.



Technical Specifications

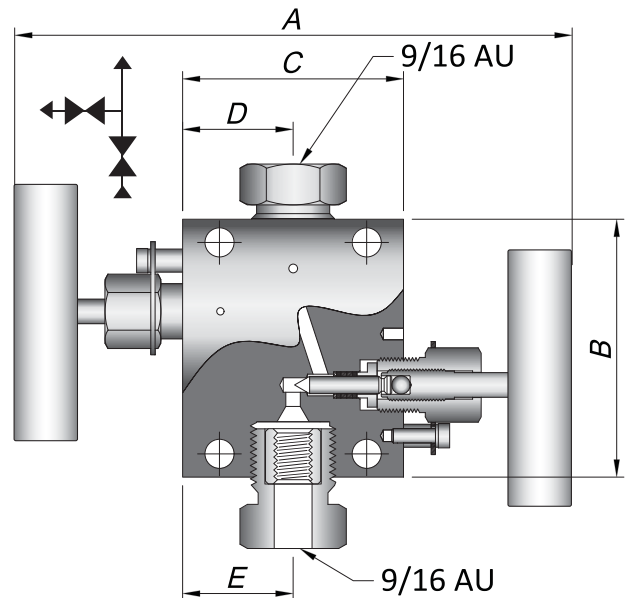
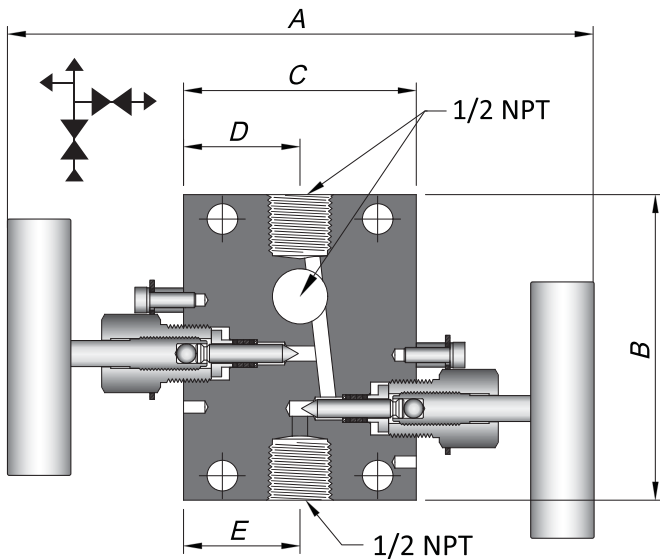
STANDARD MATERIALS

Part	Specification
Body	AISI 316
Tip	17-4 PH
Stem	AISI 316
Packing Gland	Manganese Brass
Packing	Peek + PTFE (std)
Handle	Anodized Al 6061

TEMPERATURE AND PRESSURE RATINGS

Model	Service Pressure @ 21°C	Maximum Temperature
VIA5 (NPT)	15.000 psi	500°F
VIM5 (MU)	22.500 psi	500°F
VIH5 (AU)	30.000 psi	500°F

Mounting Dimensions



Connections		Model	Max. Service Pressure [psi]	Orifice mm.	Dimensions (mm)					
Input/Output	Bleed				A _{Open}	B	C	D	E	Width
1/2" NPT H	1/4" NPT	VIA5 50 IT	15.000	5	195	100	76.2	38.1	38.1	38.1
9/16" MU	1/4" NPT	VIM5 9M IT	22.500	8	195	88.9	76.2	38.1	38.1	32
9/16" AU	1/4" NPT	VIH5 9H IT	30.000	5	195	100	76.2	38.1	38.1	38.1

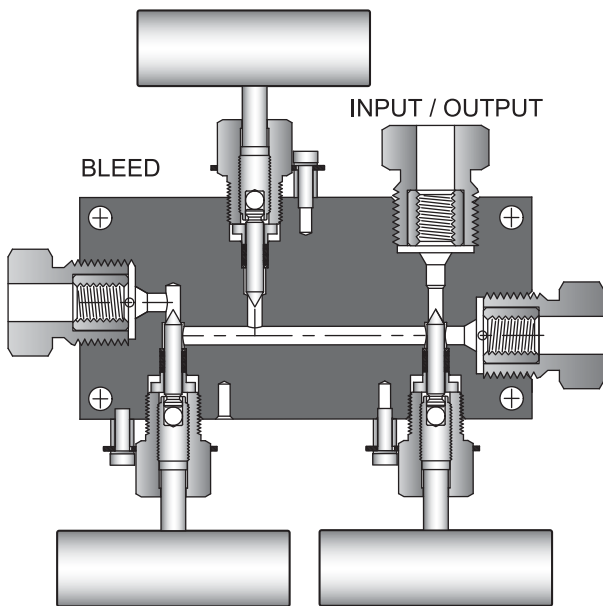
VIM5D/VIH5D Double block & bleed valve

The **double block & bleed valve** is suited with 2 shut-offs, a bleed port and an additional instrument output between shutoffs. Metal to metal sealing with hardened tip for extended lifespan.

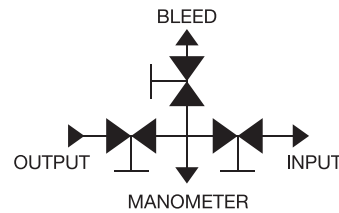
It is specially designed for lubrication systems of in service valves. The additional output serves as a manometer port to control the lubricant pressure.



Model	Connections		Max. Service Pressure [psi]	Orifice [mm]
	Input /Output	Bleed		
VIM5D 9M-IT	9/16" MU	1/4" AU	22.500	8
VIH5D 9H-IT	9/16" AU	1/4" AU	30.000	5



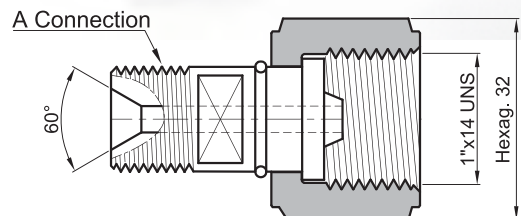
MANOMETER



AE Grease Adapter

The **Grease Adapter** allows to easily connect a giant button head greaser (as the ECBT50 or the ECBTH) with a hose or accessory with different medium or high pressure connections. It is manufactured in Stainless Steel and is suitable for pressures up to 22,500 psi.

Model	Conexiones		Max. Service Pressure [psi]	Orifice [mm]
	Side A	Nut side		
AE-2N-316	1/4" NPT M	1"x14 UNS	15.000	4.75
AE-T5-316	Tipo M 9/16"x18 UN		22.500	
AE-T6-316	Tipo M 3/4"x16 UN		22.500	
AE-5MU-316	9/16" MU M		22.500	
AE-5AU-316	9/16" AU M		22.500	



VRA-VRM-VRH Medium and High Pressure Check Valves

Check valve with poppet shut off and spring return, properly seized for pressures up to 30,000 psi (2,068 bar)

Characteristics:

- Properly guided poppet to avoid chattering.
- Elastomer sealing ensures leak-free tightness even at low pressures.
- Robust spring reduces risk of fatigue induced rupture.
- Completely made in Stainless Steel.
- Good performance with alternative fluids.
- NPT and AU connections (includes collar and gland).



Technical Specifications

TEMPERATURE AND PRESSURE RATINGS

Model	Connections	Maximum service pressure @21°C	Service temperature	Cracking pressure
VRA	NPT	15.000 psi	10°F to 400°F	≤ 10 psi (fixed)
VRM	MU	22.500 psi		
VRH	MU	30.000 psi		

STANDARD MATERIALS

Body	Poppet	O' ring seal	Spring
AISI 316	AISI 316	Fluoroelastomer	AISI 302

Ordering Information

VRA 25 I

Model

VRA (NPT)

VRM (MU)

VRH (AU)

Connections

25: 1/4" NPT H

50: 1/2" NPT H

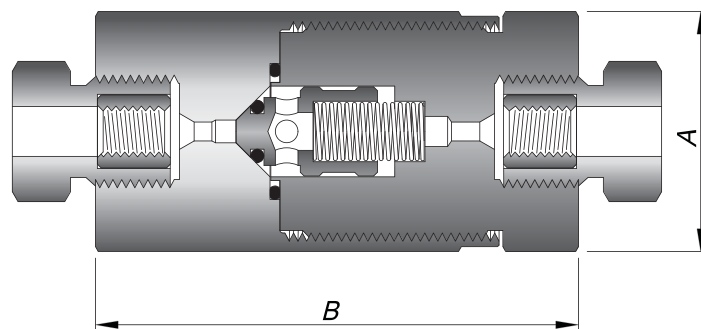
4H: 1/4" AU

9M: 9/16" MU

9H: 9/16" AU

Material

I: Stainless Steel



Mounting Dimensions

Connections	Model	Orificio mm.	Thread	CV Coefficient	Dimensions [mm]	
					A (Hexagon)	B
1/4" NPT H	VRA 25 I	4	1/4" NPT	0.33	27.0	64
1/2" NPT H	VRA 50 I	9	1/2" NPT	1.90	38.1	90
1/4" AU	VRH 4H I	3	9/16 x 18 ⁽¹⁾	0.10	31.7	64
9/16" MU	VRM 9M I	9	13/16"x16	1.8	31.7	90
9/16" AU	VRH 9H I	4	1 1/8 x 12 ⁽²⁾	0.45	38.1	87

(1) Compatible with AUTOCLAVE F250C type connection.

(2) Compatible with AUTOCLAVE F562C type connection.

VAAH Angle Relief Valves

Relief valve with adjustable cracking pressure setpoint, properly sized for pressures up to 20.000 psi. Available in 2 pressure ranges. Replaceable metal to plastic seal.

Characteristics

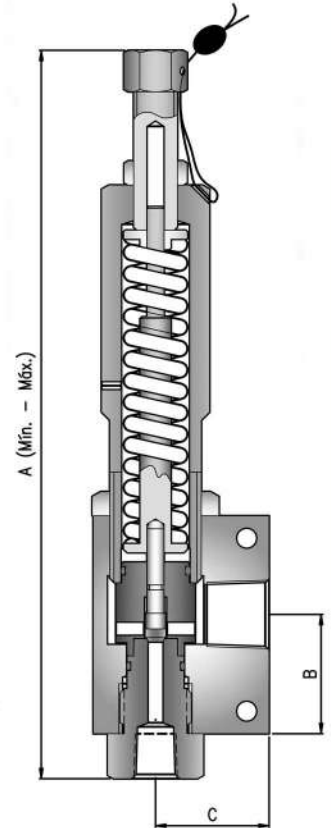
- External setpoint adjustment. No dismount needed.
- Spring completely isolated from the fluid.
- Completely made in Stainless Steel. Replaceable seat.
- NPT and AU connections (includes collar and gland)
- Relief connection of 1/2" NPT
- 100% factory tested and calibrated.
- Not suitable for operating with pressure present at the output.

Technical Specifications

Accuracy	±10% setpoint
Reseal pressure	≥70% setpoint
Service temperature	14°F to 400°F

Pressure ratings

Model	Maximun Service Pressure @ 70°F
VAAH 25 15 I 1/4" NPT	15.000 psi
VAAH 4H 15 I 1/4" AU	15.000 psi
VAAH 4H 20 I 1/4" AU	20.000 psi



Standard materials

Body	Seat	Tip	Regulation cap	O' ring seal	Spring
AISI 316	AISI 316	Peek	AISI 316	Fluorocarbon	AISI 302

How to order



General Dimensions

Connections		Model	Orifice mm.	Input Thread	Dimensions (mm.)			Setpoint range (PSI)
INPUT	OUTPUT				A (Min / Máx)	B	C	
1/4" NPTH	1/2" NPTH	VAAH 25 15 I	3,75	1/4" NPT	191 / 212	34,5	32,8	5.000-15.000
1/4" AU	1/2" NPTH	VAAH 4H 15 I	3,75	9/16 x 18 ⁽²⁾	191 / 212	34,5	32,8	5.000-15.000
1/4" AU	1/2" NPTH	VAAH 4H 20 I	3	9/16 x 18 ⁽²⁾	191 / 212	34,5	32,8	15.000-20.000

(1) Valve completely open (2) Compatible with AUTOCLAVE type F250C connection

ACR Medium and high pressure Quick-Action Couplings

ABAC manufactures two lines of quick-action couplings, designed to connect and disconnect systems, hoses, instruments and other accessories. Screw-to-connect, no retention, they provide security and a large orifice, assuring high flow. Made of only 3 parts, eliminating leak points.

Manufactured entirely in AISI316 stainless steel, with Fluoroelastomer backup ring and o'ring.

ACRU-ACRY Medium pressure Quick-Action Couplings – Line M up to 22.500 psi

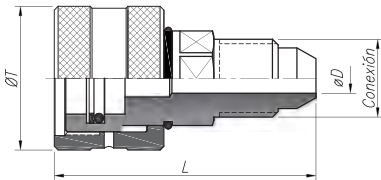
The medium pressure M line is compatible with the majority of screw-to-connect quick-Action couplings in the market that are compliant with **ISO 14540 – Size 10**. Built with silver plated nuts to avoid seizing. Orifice up to 10mm and 22.500 psi.



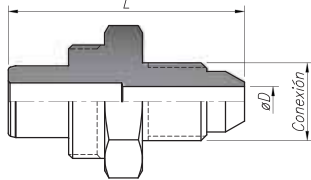
ACRY Line M Medium Pressure High Flow Quick-Couplings – Male (Hose)

Connection	Model	Dimensions [mm]		máx pressure [psi]
		L	ØT	
1/4" NPT M	ACRY-2-NPT M	52	7	15.000
1/4" NPT H	ACRY-2-NPT H	48	7	15.000
3/8" NPT M	ACRY-3-NPT M	48	10	15.000
3/8" NPT H	ACRY-3-NPT H	48	10	15.000
1/2" NPT M	ACRY-4-NPT M	55	10	15.000
1/2" NPT H	ACRY-4-NPT H	50	10	15.000
3/4" NPT M	ACRY-6-NPT M	57	10	10.000
3/4" NPT H	ACRY-6-NPT H	53	10	10.000
3/8" MU M	ACRY-3-MU M	57	5	22.500
3/8" MU H	ACRY-3-MU H	47	5	22.500
9/16" MU M	ACRY-5-MU M	62	8	22.500
9/16" MU H	ACRY-5-MU H	50	8	22.500
1/4" AU M	ACRY-2-AU M	51	2.5	22.500
1/4" AU H	ACRY-2-AU H	45	2.5	22.500
9/16" AU M	ACRY-5-AU M	64	6.35	22.500
9/16" AU H	ACRY-5-AU H	50	6.35	22.500
3/4" Type M	ACRY-6-T M	52	7.75	22.500

ACRU Model



ACRY Model



ACRU Line M Medium Pressure High Flow Quick-Action Couplings - Female (cylinder)

Connection	Model	Dimensions [mm]			máx pressure [psi]
		L	ØT	ØD	
1/4" NPT M	ACRU-2-NPT M	60	38	7	15.000
3/8" NPT M	ACRU-3-NPT M	59	38	7	15.000
1/2" NPT M	ACRU-4-NPT M	63	38	10	15.000
3/4" NPT M	ACRU-6-NPT M	63	38	10	10.000
3/8" MU M	ACRU-3-MU M	64	38	5	22.500
9/16" MU M	ACRU-5-MU M	70	38	8	22.500
1/4" AU M	ACRU-2-AU M	59	38	2.5	22.500
9/16" AU M	ACRU-5-AU M	91	38	6.35	22.500
3/4" Type M	ACRU-6-T M	60	38	7.75	22.500

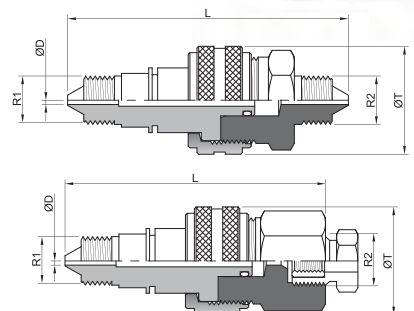
ACRH High pressure Quick-Action Couplings – Line H up to 30.000 psi

High pressure quick-action couplings up to 30.000 psi.

Extremely reliable and tested.

Suitable for instrumentation, where a large flow is not necessary.

They are provided in assemblies with different combination of AU connections.



Cone & Thread High Pressure AU	Connections		Model	Dimensions [mm]			Max. Pressure [psi]
	R1	R2		L	ØT	ØD	
		1/4" AU M	1/4" AU M	ACRH 2 MM	82.5	31.7	2.5
	1/4" AU M	1/4" AU H	ACRH 2 MH	80	31.7	2.5	30.000
	3/8" AU M	3/8" AU M	ACRH 3 MM	95.5	31.7	3.2	30.000
	3/8" AU M	3/8" AU H	ACRH 3 MH	92.5	31.7	3.2	30.000
	9/16" AU M	9/16" AU M	ACRH 5 MM	111.7	44.4	5	30.000
	9/16" AU M	9/16" AU H	ACRH 5 MH	100.7	44.4	5	30.000

Other medium and high pressure accessories

Spherical Valves

ABAC offers Maximator 2 and 3 way spherical valves, in a wide variety of styles and connections suitable for pressures up to 21,000 psi (1,500 bar).

- Trunnion design offers maximum reliability.
- 3/16" to 1/2" passages for minimum load loss.
- NPT, BSP and AU connections.
- Torlon seats with external adjustment, ensuring long leak-free lifespan.
- 2 or 3 way flow patterns pattern.
- Suitable for pneumatic and/or electric actuators.

Safety Head Assembly

Safety head assemblies are used to provide an effective protection against excessive over-pressures. Their operation is based on accurate rupture disk mounted on bodies with varying high pressure connections. Rupture disk are available in 52 different pressures ranges from 1,200 to 65,000 psi.

Valve actuators

Pneumatic actuators for needle and spherical valves, allowing them to be operated remotely. There are two basic models: Normal open and Normal Closed, both available for all valve models.

Pumps, Boosters and Compressors

Complete line of Maximator GmbH products. Provisioning and post-sale technical service guaranteed by ABAC SRL.

• Hydropneumatic pumps

Air-oil or air-water service up to 100,000 psi and 25 liters/minute. These pumps are driven by compressed air at 140 psi and allow the compression of liquids. No electric power required. Multiple compression ratios in different sizes covers most necessities of the industry.

• Pneumatic boosters

Air-gas service, Boosters compress gases using compressed air, up to 21,700 psi. Suitable for filling cylinders, high pressure pneumatic tests, etc.



Agente Autorizado
MAXIMATOR®
Maximun Pressure.



Medium and high pressure units and systems


ABAC provides compressed air powered pressure generator systems for water, gases or oil, up to 58,000 psi, integrated within a portable stainless steel structure. Devices with one or more hydro-pneumatic pumps, valves, manometers and connections, ideal for:

- Hydraulic or pneumatic high pressure testing for valves, hoses and generally any pressure recipient
- Instrument calibration
- Chemicals dosage and injection
- Control panels
- Valve actuation
- Booster equipment for filling up N, O, etc. cylinders.

Standard units are available and, in addition, special models are designed and built upon customer's requirements.

For more information, please contact our sales representatives.





▣ *The widest variety of pressure, flow and fluid control components:*

- *Needle valves*
 - *Instrument manifolds*
 - *Fluid control components*
 - *Ball valves*
 - *Tube and pipe fittings*
 - *Thermic insulation systems*
 - *High pressure components and units*
-

• For more information about these products please contact us, visit our web site or call to our Sales & Service authorized Reps.