A-HDSERIES

INTERCHANGE > **ISO 16028 - NFPA T3.20.15 - HTMA (size 3/8")**

Stucchi®

TECHNICAL FEATURES AND OPTIONS

Interchange
ISO 16028
NFPA T3.20.15
HTMA (size 3/8")

Sealing description
Nitrile
NBR & POM

Connection system
Push

Available sizes
from 3/8"
to 1/2"

Material
High strength carbon steel

Available threads
BSP - NPT - SAE

Operating pressure
Up to 350 bar

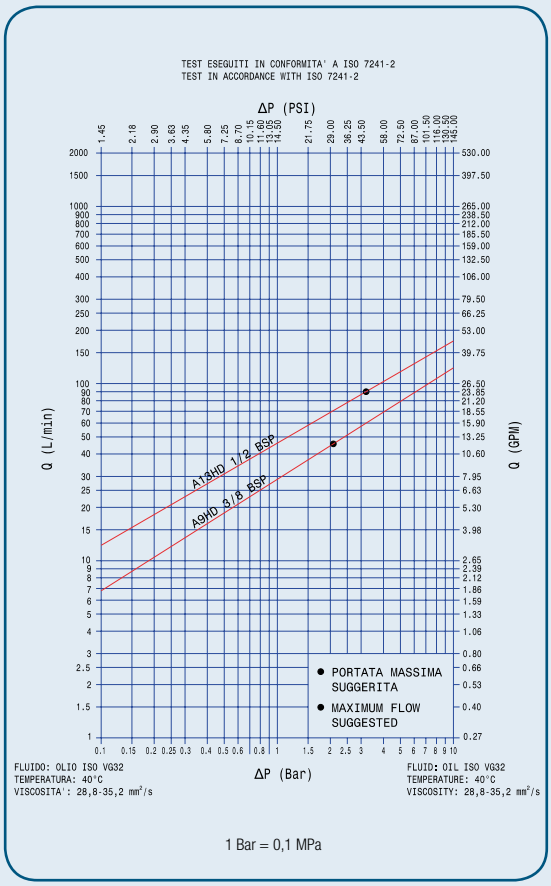
Locking mechanism
Locking ball + Safety Lock

Flow rate
Up to 90 L/Min

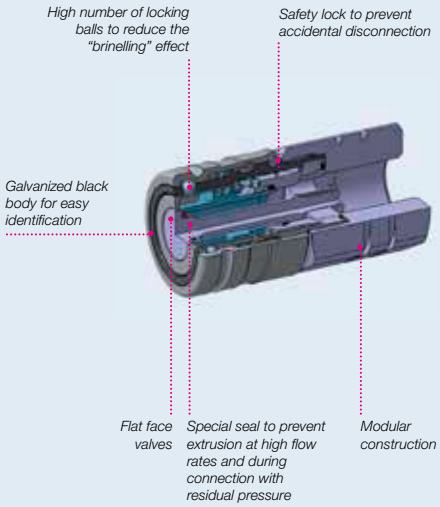
Temperature (°C)
-20° / +100°

Valving style
Flat face

Connection under pressure
Connection: Female side only (see Benefits).
Disconnetion: Not allowed.



1 Bar = 0,1 MPa



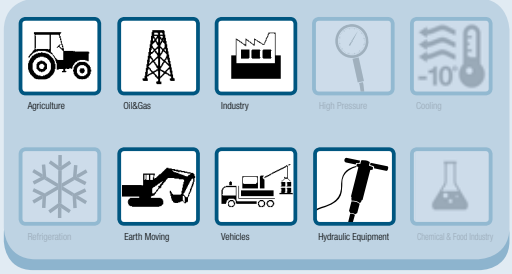
BENEFITS

- Easy connection with female side under residual pressure (male side to drain) thanks to the special Stucchi design.
- Flat face is easy to clean, reducing the inclusion of contamination inside the hydraulic circuit.
- Minimal fluid spillage during disconnection, reducing fluid spillage to the environment.
- Minimal air inclusion during connection.
- Internal valve design creates minimal pressure drop and maintaining circuit efficiency in the system
- The modular design allows flexibility with a wide range of configurations.
- Good resistance to pressure impulses.
- Galvanized black body for easy identification
- Compact slim design.
- Safe and simple to use.

HOW TO USE

- Before to connect, clean the mating surface of the couplings to avoid dirt inclusion in the circuit.
- To connect push the male half towards the female half or vice versa.
- After connection turn the external sleeve to engage safety lock function, to prevent accidental disconnection.
- To disconnect turn the external sleeve until the sleeve lock notch match the safety lock ball and push back the sleeve.

MAIN APPLICATIONS



PERFORMANCES

Size		Series/Size	Max. flow suggested		Connect force		Disconnect force		Spillage*
Inch	mm (ISO)		l/min	GPM	N	lbf	N	lbf	ml
3/8	10	F -A9HD	46	12,19	190	42,75	30	6,75	0,01
1/2	12,5	F- A13HD	90	23,85	170	38,25	55	12,37	0,02

Size	Series/Size	Max. operating pressure				Burst pressure			
		Coupled		Female		Coupled		Female	
Inch		MPa	psi	MPa	psi	MPa	psi	MPa	psi
3/8	F- A9HD	35	5075	35	5075	100	14500	100	14500
1/2	F- A13HD	33	4785	33	4785	100	14500	100	14500

*Spillage is an indicative value of the fluid loss during disconnection (according to ISO 7241-2 test method)

Theoretical calculation of connect force with residual pressure:
Fp (N) size 3/8" = Fi + (Pf x 44)
Fp (N) size 1/2" = Fi + (Pf x 66)

Fp = Connection force with residual pressure (N)
Fi = Connection force without residual pressure (N)
Pf = Residual pressure in the female coupling (MPa)

EXAMPLE
To connect the female coupling A9HD with 5 Mpa of residual pressure, The following force is necessary:
Fp = Fi + (Pf x 44) = 190 + (5 x 44) = 410 N
This is the maximum force required to open the female valve in order to release pressure.
It is not necessary to apply this force during the entire connection but just for a short stroke. (about 1mm)

Temperature range:
Standard seals in NBR and POM: from -20 °C to +100 °C (from -4 °F to +212 °F).
Please read carefully "instruction and warning" for proper selection of the products.

Tests performed:
Tested with male couplings "A" series
The couplings have been tested at max. operating pressure for 1.000.000 impulses in connected position according to ISO 7241-2 test method.

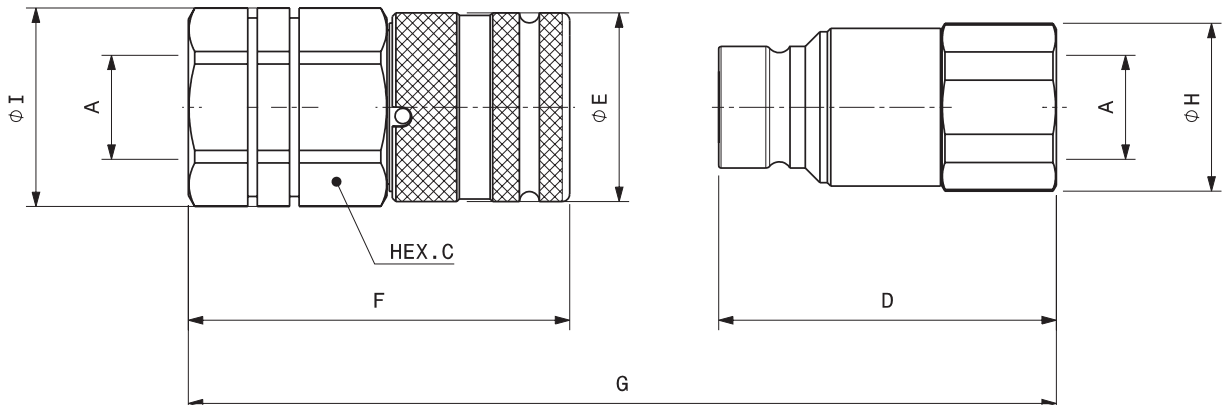
WARNING

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.
Connect under pressure products are suitable to be connected under residual (static) pressure.
Never connect or disconnect with dynamic pressure (e.g. pump on).
Connection with residual pressure (pressure trapped in the circuit) allowed with male to drain (please check the hydraulic circuit).
Do not use the female coupling disconnected with high impulse pressure.
Do not couple-uncouple with flow in the circuit.
Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).
Check the maximum allowable working pressure of the port in use.
Make sure that the medium used is compatible with seal and material as indicated for each series.
In case of doubt please contact Stucchi Technical Support.
The interchangeability is mentioned under the assumption that the manufacturer of the considered products has not changed any dimension.
It is MANDATORY to read and closely follow the instructions. Last updated version always apply at time of installation, see latest written Instructions on Stucchi website (www.stucchi.it) before selecting or using Stucchi products.

OVERALL DIMENSIONS

FEMALE

MALE Standard male for dimensions please refer to “A” series



ISO 16028

Port description: FEMALE THREAD BSPP (ISO 1179-1)

BODY SIZE	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length			Length			Hex			Diameter			Diameter			Weight	
							mm	inch		mm	inch		mm	inch		mm	inch		mm	inch	Kg	Lbs
3/8”	A9HD 3/8 BSP	Female	808300004	10,0	3/8”	G	(F+D)-16	(F+D)-0,630	F	64,8	2,55	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	0,28	0,62
3/8”	A9HD 1/2 BSP	Female	808300006	10,0	1/2”	G	(F+D)-16	(F+D)-0,630	F	69,8	2,75	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	0,29	0,64
1/2”	A13HD 1/2 BSP	Female	808300008	12,5	1/2”	G	(F+D)-17,3	(F+D)-0,681	F	76,8	3,02	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	0,47	1,03
1/2”	A13HD 3/4 BSP	Female	808300010	12,5	3/4”	G	(F+D)-17,3	(F+D)-0,681	F	83,8	3,30	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	0,48	1,06

Port description: FEMALE THREAD NPT (ANSI B.1.20.1)

BODY SIZE	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length			Length			Hex			Diameter			Diameter			Weight	
							mm	inch		mm	inch		mm	inch		mm	inch		mm	inch	Kg	Lbs
1/2”	F A13HD 1/2 NPT	Female	808301008	12,5	1/2”	G	(F+D)-16	(F+D)-0,630	F	76,8	3,02	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	0,47	1,04
1/2”	F A13HD 3/4 NPT	Female	808301010	12,5	3/4”	G	(F+D)-16	(F+D)-0,630	F	83,8	3,30	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	0,49	1,07

Port description: FEMALE THREAD SAE (ISO 11926-1 & SAE J1926-1)

BODY SIZE	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length			Length			Hex			Diameter			Diameter			Weight	
							mm	inch		mm	inch		mm	inch		mm	inch		mm	inch	Kg	Lbs
3/8”	F A9HD 1/2 SAE	Female	808304008	10,0	3/4-16 UNF	G	(F+D)-16	(F+D)-0,630	F	69,8	2,75	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	0,30	0,66
3/8”	F A9HD 5/8 SAE	Female	808304010	10,0	7/8-14UNF	G	(F+D)-17,3	(F+D)-0,681	F	71,8	2,83	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	0,29	0,64
1/2”	F A13HD 1/2 SAE	Female	808304016	12,5	3/4-16UNF	G	(F+D)-17,3	(F+D)-0,681	F	76,8	3,02	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	0,48	1,05
1/2”	F A13HD 5/8 SAE	Female	808304012	12,5	7/8-14UNF	G	(F+D)-17,6	(F+D)-0,693	F	78,8	3,10	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	0,47	1,04
1/2”	F A13HD 3/4 SAE	Female	808304014	12,5	1-1/16-12UNF	G	(F+D)-22	(F+D)-0,866	F	83,8	3,30	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	0,47	1,03

Also possible with following male threads:

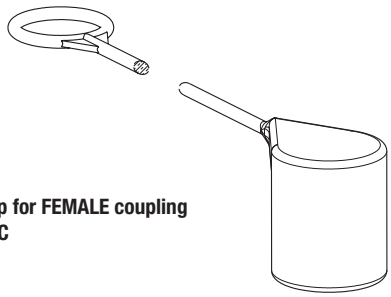
- SAE
- JIC
- JIC Bulkhead

Please check availability by contacting your Stucchi contact
To calculate G see measure D in the leaflet A series

PROTECTIVE CAPS FOR A-HD SERIES

Protective caps are always recommended to protect the couplings from damage, dirt inclusion, and will increase the product life. This is particularly important in mobile applications where exposure to weather and aggregate materials are common.
The protective caps for A-HD couplings are manufactured in two versions:

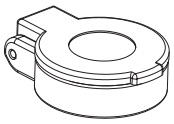
- PVC with connection lanyard (standard color red, other colors available upon request).
- Nylon flip caps version (standard color red, other colors available upon request).



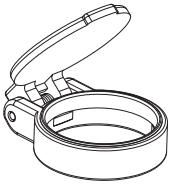
Cap for FEMALE coupling
PVC

Protective Cap			
Body Size/Description		Part Number Cap for Female	Material/Color
3/8”	F A9HD	815100002	PVC/Red
1/2”	F A13HD	815100004	PVC/Red

Cap for FEMALE coupling
Red Plastic



Closed



Open

Protective Cap			
Body Size/Description		Part Number Cap for Female	Material/Color
3/8”	A9HD	815200002	Nylon/Red
1/2”	A13HD	815200004	Nylon/Red

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