AXSERIES

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



TECHNICAL FEATURES AND OPTIONS

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

Sealing description
FKM (VITON®), Nitrile NBR

Connection system
Push

Available sizes
from 3/8"
to 1"

Material /treatment
Stainless steel (AISI 316L)

Available threads
BSP - METRIC

Operating pressure
Up to 350 bar

Locking mechanism
Locking ball + Safety Lock

Flow rate
Up to 378 l/min

Temperature (°C)
-15°C / +180°C

Valving style
Flat face

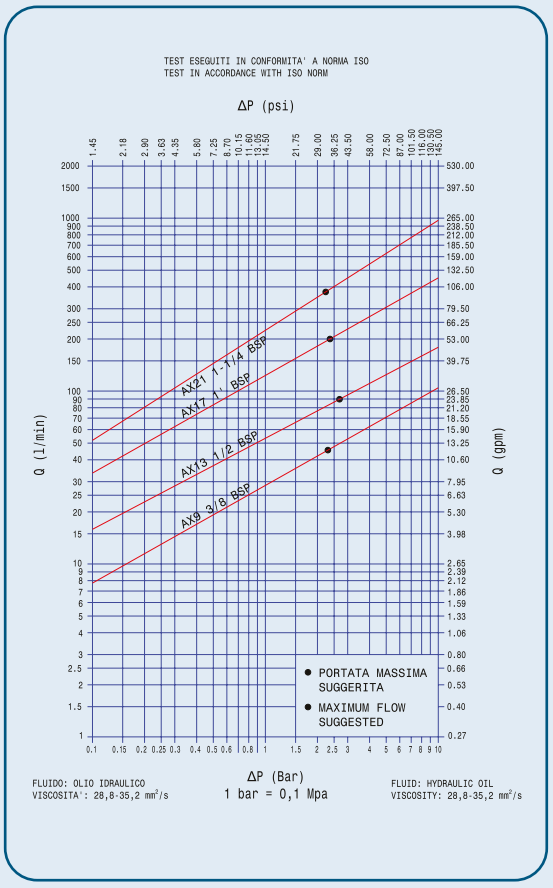
Connection under pressure
Connection: not allowed
Disconnection: not allowed

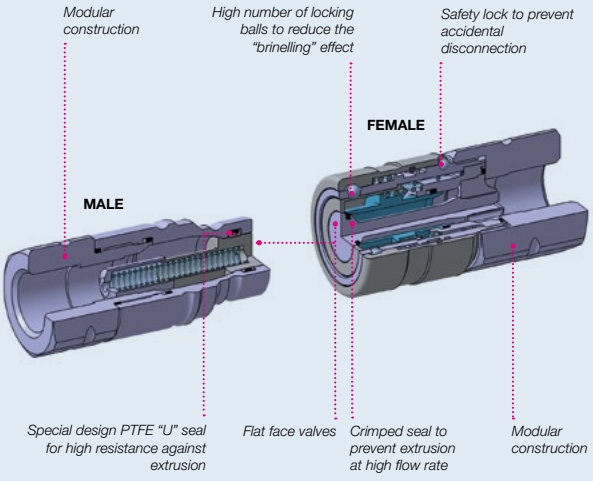
BENEFITS

- 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, maintaining circuit efficiency in the system.
- The modular design allows flexibility with a wide range of configurations.
- Optimal corrosion resistance.
- Compact slim design.
- Safe and simple to use.

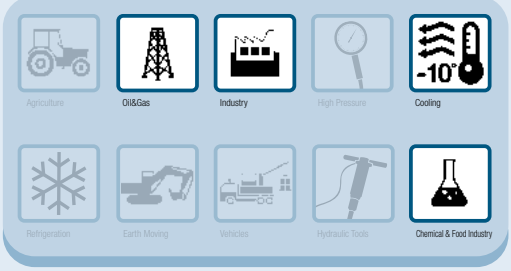
HOW TO USE

- 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*
in	mm (ISO)		l/min	gpm	N	lbf	N	lbf	ml
3/8	10	AX9	46	12,19	200	45	45	10,12	0,01
1/2	12,5	AX13	90	23,85	165	37,12	58	13,05	0,02
3/4	19	AX17	200	53	255	57,37	80	18	0,03
1	25	AX21	378	100,17	285	64,12	110	24,75	0,03

Size	Series/Size	Max. operating pressure					
		Coupled		Male		Female	
in		MPa	psi	MPa	psi	MPa	psi
3/8	AX9	35	5075	35	5075	35	5075
1/2	AX13	33	4785	33	4785	33	4785
3/4	AX17	33	4785	33	4785	33	4785
1	AX21	30	4350	30	4350	30	4350

* Spillage is an indicative value of the fluid loss during disconnection (according to ISO norm test method).

Material:
- Construction: Stainless steel AISI 316L
- Springs: AISI 302
- Locking ball: AISI 316

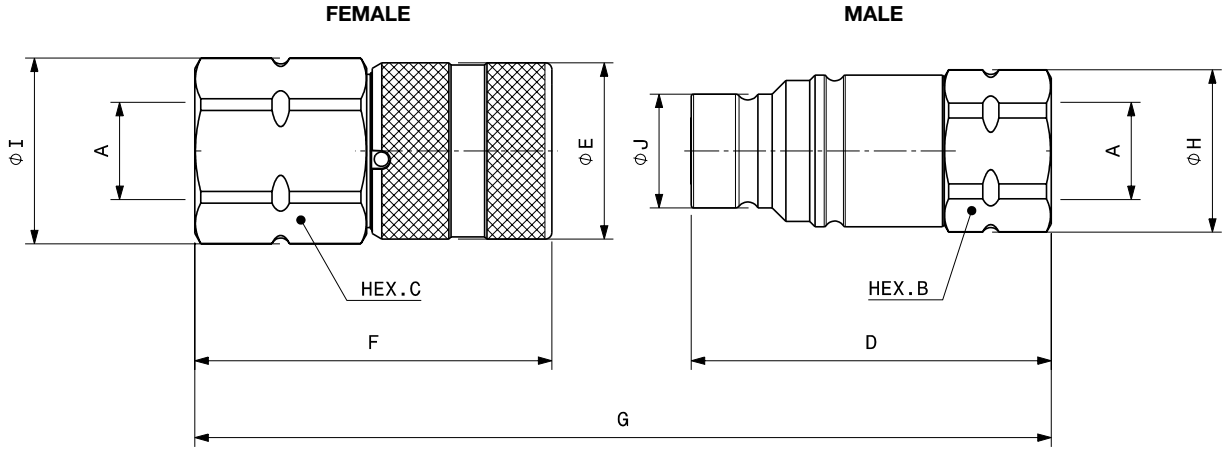
Different possible configurations:
Size AX7 and AX15 upon request.
Different threads available upon request.

Temperature range:
Seals in FKM (VITON®): from -15°C to +180°C (from +5 °F to +356 °F).
Seals in NBR (Nitrile) with water: from +5°C to +60°C (from +41°F to +140°F).
Different seals available upon request.

Tests performed:
Qualification tests have been performed with hydraulic oil using couplings with FKM (VITON®) seals.
The max. operating pressure have been verified for 100.000 impulses according to ISO norm test method.

WARNING

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.
Never connect or disconnect with dynamic pressure (e.g. pump on).
Do not use the female coupling disconnected with high impulse pressure.
Do not couple-uncouple with flow and/or pressure in the circuit.
Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).
Do not use with fluids below the freezing point to avoid damages due to ice expansion and consequential extrusion of the valving.
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 carefully read and closely follow the instructions before selecting or using any Stucchi products.
Always refer to the version uploaded in the Instructions and warning section of stucchigroup.com website for the latest release.
For specific, product-related, instructions, please contact Stucchi technical service.



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

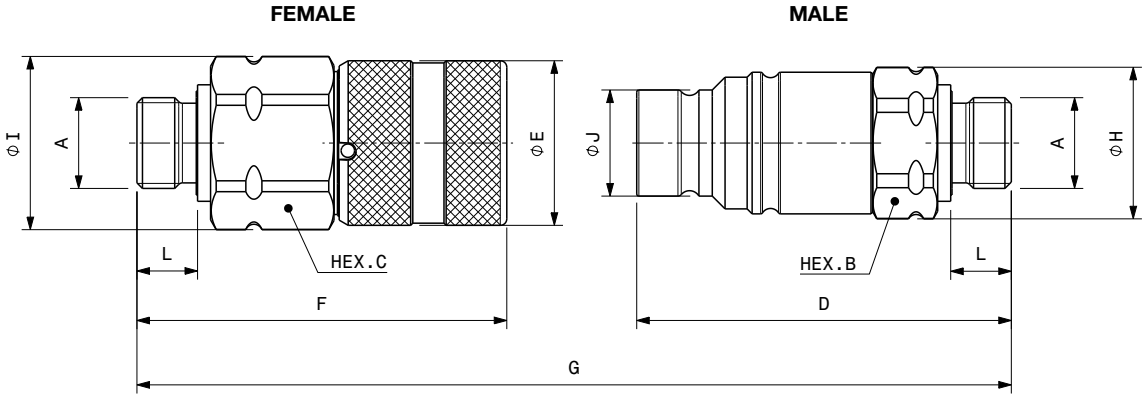
Body Size	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length mm	Overall Length in	Length mm	Length in	Wrench Flat mm	Wrench Flat in	Diameter mm	Diameter in	Diameter mm	Diameter in	Weight kg	Weight lb
3/8"	F AX9 3/8 BSP	Female	808500104	10	3/8"	G 118,8	4,67	F 69,4	2,73	C 30,0	1,18	I 32,0	1,26	E 32,0	1,26	0,30	0,66
	M AX9 3/8 BSP	Male	808500105					D 65,4	2,57	B 27,0	1,06	H 29,0	1,14	J 19,7	0,78	0,16	0,34
1/2"	F AX13 1/2 BSP	Female	808500108	12,5	1/2"	G 137,1	5,40	F 76,9	3,03	C 36,0	1,42	I 40,0	1,57	E 38,0	1,50	0,48	1,05
	M AX13 1/2 BSP	Male	808500109					D 77,5	3,05	B 32,0	1,26	H 35,0	1,38	J 24,5	0,96	0,30	0,66
3/4"	F AX17 3/4 BSP	Female	808500114	19	3/4"	G 167,5	6,59	F 103,8	4,09	C 46,0	1,81	I 49,8	1,96	E 48,0	1,89	1,06	2,33
	M AX17 3/4 BSP	Male	808500115					D 85,7	3,37	B 46,0	1,81	H 49,5	1,95	J 30,0	1,18	0,53	1,16
1"	F AX21 1 BSP	Female	808500118	25	1"	G 186,60	7,35	F 107,3	4,22	C 55	2,17	I 59,8	2,35	E 55	2,17	1,51	3,33
	M AX21 1 BSP	Male	808500119					D 102	4,02	B 55	2,17	H 59,8	2,35	J 36	1,42	0,94	2,07

Port description: FEMALE THREAD BSPP (ISO 1179-1) - with Nitrile NBR sealing

Body Size	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length mm	Overall Length in	Length mm	Length in	Wrench Flat mm	Wrench Flat in	Diameter mm	Diameter in	Diameter mm	Diameter in	Weight kg	Weight lb
3/8"	F AX9N 3/8 BSP	Female	808500004	10	3/8"	G 133,5	5,26	F 76,6	3,0	C 30	1,18	I 32,0	1,26	E 32,0	1,26	0,30	0,13
	M AX9N 3/8 BSP	Male	808500005					D 72,9	2,9	B 27	1,06	H 29,0	1,14	J 19,7	0,78	0,16	0,07
3/8"	F AX9N 1/2 BSP	Female	808500006	10	1/2"	G 125,7	4,95	F 74,4	2,9	C 30	1,18	I 32,0	1,26	E 32,0	1,26	0,30	0,14
	M AX9N 1/2 BSP	Male	808500007					D 67,4	2,7	B 27	1,06	H 29,0	1,14	J 19,7	0,78	0,16	0,07
1/2"	F AX13N 1/2 BSP	Female	808500008	12,5	1/2"	G 137,2	5,40	F 76,9	3,0	C 36	1,42	I 40,0	1,57	E 38,0	1,50	0,40	0,18
	M AX13N 1/2 BSP	Male	808500009					D 77,6	3,1	B 32	1,26	H 35,0	1,38	J 24,5	0,96	0,30	0,14
1/2"	F AX13N 3/4 BSP	Female	808500010	12,5	3/4"	G 149,1	5,87	F 86,9	3,4	C 36	1,42	I 40,0	1,57	E 38,0	1,50	0,45	0,20
	M AX13N 3/4 BSP	Male	808500011					D 79,5	3,1	B 36	1,42	H 40,0	1,57	J 24,5	0,96	0,35	0,16
3/4"	F AX17N 3/4 BSP	Female	808500014	19	3/4"	G 167,5	6,59	F 103,8	4,1	C 46	1,81	I 49,8	1,96	E 48,0	1,89	1,06	0,48
	M AX17N 3/4 BSP	Male	808500015					D 85,7	3,4	B 46	1,81	H 49,8	1,95	J 30,0	1,18	0,53	0,24
1"	F AX21N 1 BSP	Female	808500018	25	1"	G 186,3	7,33	F 107,3	4,2	C 55	2,17	I 59,8	2,35	E 55,0	2,17	1,50	0,68
	M AX21N 1 BSP	Male	808500019					D 102,0	4,0	B 55	2,17	H 59,8	2,35	J 36,0	1,42	0,82	0,37

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

Body Size	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length mm	Overall Length in	Length mm	Length in	Wrench Flat mm	Wrench Flat in	Diameter mm	Diameter in	Diameter mm	Diameter in	Weight kg	Weight lb
3/8"	F AX9 3/8 SAE	Female	808504104	10	9/16-18UNF	G 118,8	4,68	F 69,4	2,73	C 30,0	1,18	I 32,0	1,26	E 32,0	1,26	0,30	0,14
	M AX9 3/8 SAE	Male	808504105					D 65,4	2,57	B 27,0	1,06	H 29,0	1,14	J 19,7	0,78	0,16	0,07
3/8"	F AX9 1/2 SAE	Female	808504106	10	3/4-16UNF	G 125,8	4,95	F 74,4	2,93	C 30,0	1,18	I 32,0	1,26	E 32,0	1,26	0,33	0,15
	M AX9 1/2 SAE	Male	808504107					D 67,4	2,65	B 27,0	1,06	H 29,0	1,14	J 19,7	0,78	0,16	0,07
3/4"	F AX17 3/4 SAE	Female	808504114	18	1-1/16-12UN	G 167,3	6,59	F 103,8	4,09	C 46,0	1,81	I 49,8	1,96	E 48,0	1,89	0,08	0,49
	M AX17 3/4 SAE	Male	808504115					D 85,7	3,37	B 46,0	1,81	H 49,5	1,95	J 30,0	1,18	0,54	0,24
3/4"	F AX17 1 SAE	Female	808504120	19	1-5/16-12UN	G 170,3	6,70	F 103,8	4,09	C 46,0	1,81	I 49,8	1,96	E 48,0	1,89	-	-
	M AX17 1 SAE	Male	808504121					D 88,7	3,49	B 46,0	1,81	H 49,5	1,95	J 30,0	1,18	-	-
1"	F AX21 114 SAE	Female	808504122	25	1-5/8-12UN	G 185,8	7,31	F 108,3	4,26	C 55,0	2,17	I 59,8	2,35	E 55,0	2,17	1,42	0,64
	M AX21 114 SAE	Male	808504123					D 100,2	3,94	B 55,0	2,17	H 59,8	2,35	J 36,0	1,42	0,82	0,37

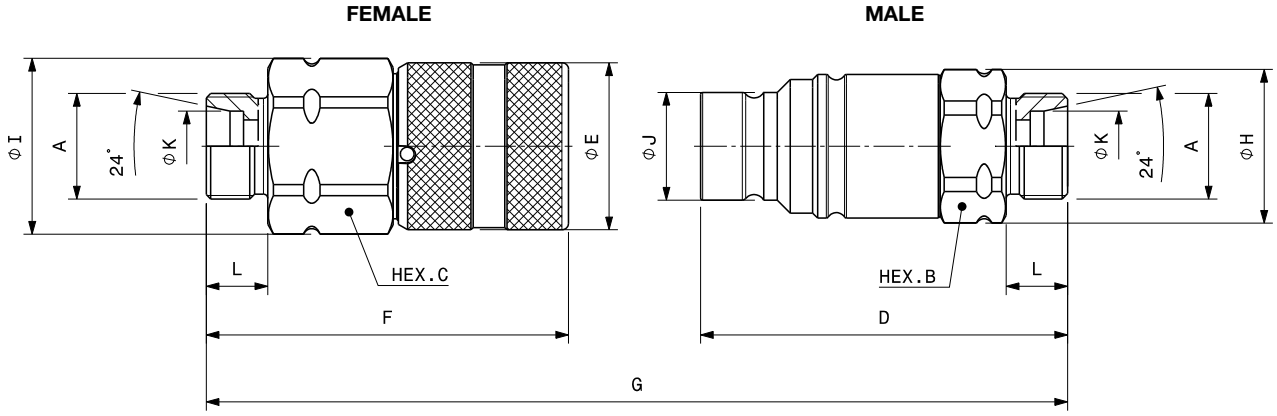


Port description: MALE THREAD BSPP (ISO 1179-2 type E)

Body Size	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length			Length			Wrench Flat			Diameter			Diameter			Length			Weight	
							mm	in		mm	in		mm	in		mm	in		mm	in		mm	in	kg	lb
3/8"	F AX9ED 3/8 BSP EXP	Female	808500134	10	3/8"	G	133,5	5,26	F	76,6	3,02	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	L	13,0	0,51	0,30	0,13
	M AX9ED 3/8 BSP EXT	Male	808500135						D	72,9	2,87	B	27,0	1,06	H	29,0	1,14	J	19,7	0,78		13,0	0,51	0,16	0,07
1/2"	F AX13ED 1/2 BSP EXT	Female	808500136	12,5	1/2"	G	154,6	6,09	F	85,4	3,36	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	L	14,0	0,55	0,50	0,23
	M AX13ED 1/2 BSP EXT	Male	808500137						D	86,5	3,84	B	32,0	1,26	H	35,0	1,38	J	24,5	0,96		14,5	0,57	0,30	0,14
1"	F AX21ED 1' BSP EST	Female	808500130	25	1"	G	211,0	8,31	F	119,3	4,70	C	55,0	2,17	I	59,8	2,35	E	55,0	2,17	L	18,0	0,71	1,50	0,68
	M AX21ED 1 BSP EXT	Male	808500131						D	114,7	4,52	B	55,0	2,17	H	59,8	2,35	J	36,0	1,42		18,0	0,71	0,82	0,37

Port description: MALE THREAD BSPP (ISO 1179-2 type E) - with Nitrile NBR sealing

Body Size	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length			Length			Wrench Flat			Diameter			Diameter			Length			Weight	
							mm	in		mm	in		mm	in		mm	in		mm	in		mm	in	kg	lb
3/8"	F AX9NED 3/8 BSP EXT	Female	808500034	10	3/8"	G	133,5	5,26	F	76,6	3,02	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	L	13,0	0,51	0,30	0,13
	M AX9NED 3/8 BSP EXT	Male	808500035						D	72,9	2,87	B	27,0	1,06	H	29,0	1,14	J	19,7	0,78		13,0	0,51	0,16	0,07
3/4"	F AX17NED 3/4 BSP EXT	Female	808500032	19	3/4"	G	192,1	7,56	F	112,4	4,43	C	46,0	1,81	I	49,8	1,96	E	48,0	1,89	L	16,5	0,65	1,06	0,48
	M AX17NED 3/4 BSP EXT	Male	808500033						D	101,7	4,00	B	46,0	1,81	H	49,5	1,95	J	30,0	1,18		16,5	0,65	0,53	0,24
1"	F AX21NED 1 BSP EXT	Female	808500030	25	1"	G	212,0	8,35	F	119,3	4,70	C	55,0	2,17	I	59,8	2,35	E	55,0	2,17	L	18,0	0,71	0,95	0,43
	M AX21NED 1 BSP EXT	Male	808500031						D	114,7	4,52	B	55,0	2,17	H	59,8	2,35	J	36,0	1,42		18,0	0,71	0,82	0,37



Port description: MALE THREAD METRIC S (ISO 8434-1 & DIN 2353)

Body Size	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length			Length			Wrench Flat			Diameter			Diameter			Diameter			Length			Weight	
							mm	in		mm	in		mm	in		mm	in		mm	in		mm	in		mm	in	kg	lb
3/8"	F AX9 S10	Female	808509108	10	M18x1.5	G	128,6	5,06	F	74,2	2,92	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	K	10,0	0,39	L	12,0	0,47	0,59	1,30
	M AX9 S10	Male	808509109						D	70,4	2,77	C	27,0	1,06	H	29,0	1,14	J	19,7	0,78							0,16	0,34
1/2"	F AX9 S16	Female	808509104	10	M24X1.5	G	132,5	5,22	F	76,1	3,00	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	K	16,2	0,64	L	14,0	0,55	0,26	0,57
	M AX9 S16	Male	808509105						D	72,4	2,85	C	27,0	1,06	H	29,0	1,14	J	19,7	0,78							0,18	0,40
3/4"	F AX13 S16	Female	808509106	12,5	M24X1.5	G	150,4	5,92	F	82,4	3,24	C	36,0	1,42	I	40,0	1,57	E	38,0	1,50	K	16,2	0,64	L	14,0	0,55	0,30	0,66
	M AX13 S16	Male	808509107						D	85,3	3,36	C	32,0	1,26	H	35,0	1,38	J	30,0	1,18							0,17	0,36
1"	F AX21 S30	Female	808509100	25	M42X4	G	209,0	8,23	F	118,3	4,66	C	55,0	2,17	I	59,8	2,35	E	55,0	2,17	K	30,2	1,19	L	20,0	0,79	1,47	3,23
	M AX21 S30	Male	808509101						D	113,7	4,48	C	55,0	2,17	H	59,8	2,35	J	36,0	1,42							0,89	1,96

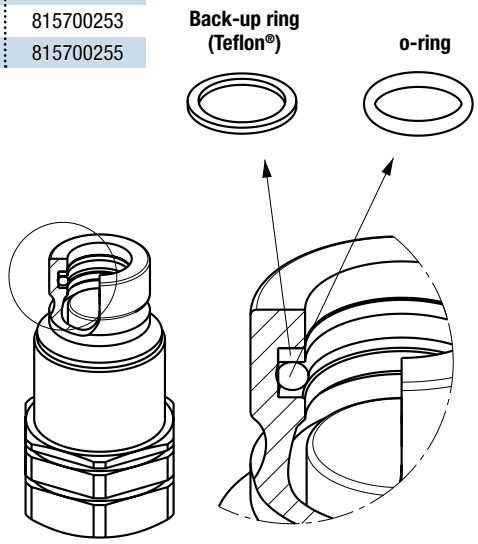
Port description: MALE THREAD METRIC S (ISO 8434-1 & DIN 2353) - with Nitrile NBR sealing

Body Size	Descriptive Code	Item Code		ISO DN	PORT (A)	Overall Length			Length			Wrench Flat			Diameter			Diameter			Diameter			Length			Weight	
							mm	in		mm	in		mm	in		mm	in		mm	in		mm	in		mm	in	kg	lb
3/8"	F AX9N S16	Female	808509004	10	M24x1.5	G	132,5	5,22	F	76,1	3,00	C	30,0	1,18	I	32,0	1,26	E	32,0	1,26	K	16,2	0,64	L	14,0	0,55	0,59	1,30
	M AX9N S16	Male	808509005						D	72,4	2,85	C	27,0	1,06	H	29,0	1,14	J	19,7	0,78							0,16	0,34
3/4"	F AX17N S20	Female	808509002	19	M30X2	G	186,1	7,33	F	109,4	4,31	C	46,0	1,81	I	50,0	1,97	E	48,0	1,89	K	20,2	0,80	L	16,0	0,63	1,02	2,24
	M AX17N S20	Male	808509003						D	98,7	3,89	C	46,0	1,81	H	49,5	1,95	J	30,0	1,18							0,53	1,17
1"	F AX21N S30	Female	808509000	25	M42X4	G	209,0	8,23	F	118,3	4,66	C	55,0	2,17	I	59,8	2,35	E	55,0	2,17	K	30,2	1,19	L	20,0	0,79	1,47	3,23
	M AX21N S30	Male	808509001						D	113,7	4,48	C	55,0	2,17	H	59,8	2,35	J	36,0	1,42							0,89	1,96



SPARE KIT SEAL FOR MALE

Repair kit / OR+BK		
Body Size	Description	Part Number
3/8”	M AX9	815700247
1/2”	M AX13	815700249
3/4”	M AX17	815700253
1”	M AX21	815700255

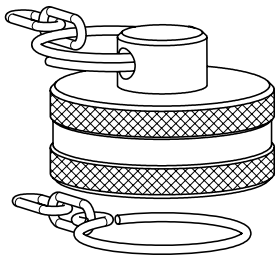


O-Ring in FKM (VITON®)
BackUp in Teflon®

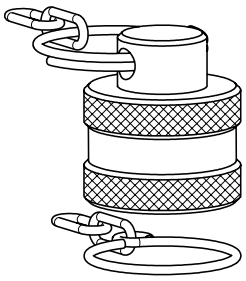
PROTECTIVE CAPS FOR AX SERIES

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 AX couplings are manufactured in aluminum with lanyard (colors: natural aluminum).

Cap for FEMALE coupling
Aluminum



Cap for MALE coupling
Aluminum



Protective Cap				
Body Size/Description		Part Number		Material/Color
		Cap for Female	Cap for Male	
3/8”	AX9	816005004	816005005	Aluminum/Natural
1/2”	AX13	816005006	816005007	Aluminum/Natural
3/4”	AX17	816005010	816005011	Aluminum/Natural
1”	AX21	816005012	816005013	Aluminum/Natural

The protective caps for AX couplings are also available in plastic (see A series caps at page 51).

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