# APMSERIES

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

Stucchi®



Easy CUP



## TECHNICAL FEATURES AND OPTIONS

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

**Sealing description**
Nitrile NBR

**Connection system**
Push

**Available sizes**
From 3/8"
to 1-1/2"

**Material /treatment**
Carbon steel /Cr3

**Available threads**
BSP - NPT - SAE

**Operating pressure**
Up to 350 bar

**Locking mechanism**
Locking ball+ Safety Lock (on female coupling)

**Flow rate**
Up to 750 l/min

**Temperature (°C)**
-20°C / +100°C

**Valving style**
Flat Face

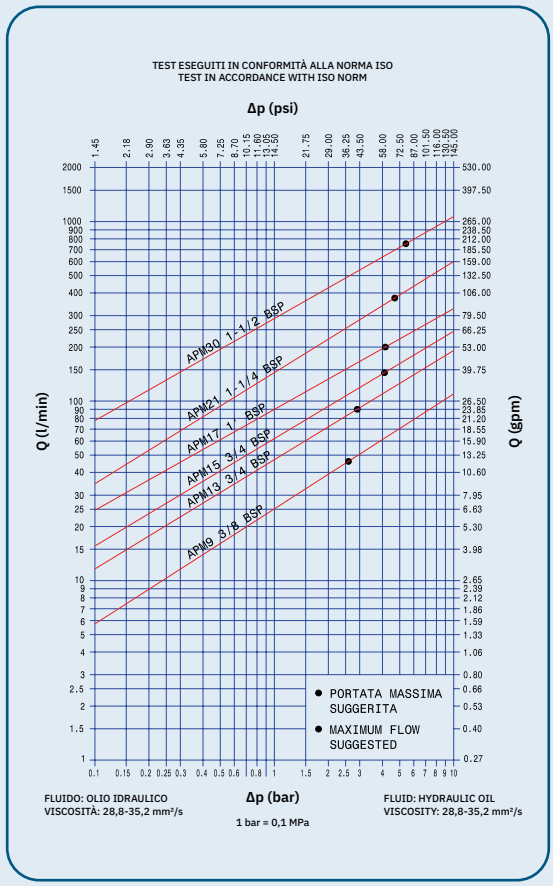
**Connection under pressure**
Connection: Male side only (see Benefits).
Disconnection: Not allowed.

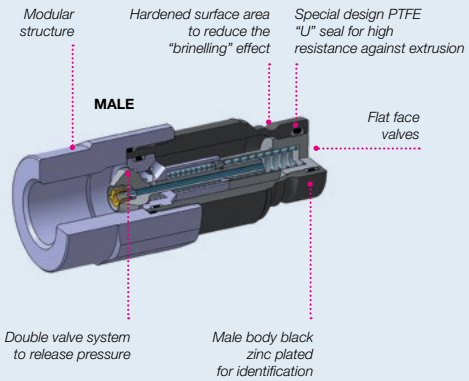
## BENEFITS

- Easy connection with male side under residual pressure (female side to drain) thanks to the internal valve.
- 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.
- Male body black zinc plated for identification
- The modular design allows flexibility with a wide range of configurations.
- Good resistance to pressure impulses.
- Compact slim design.
- Safe and simple to use.

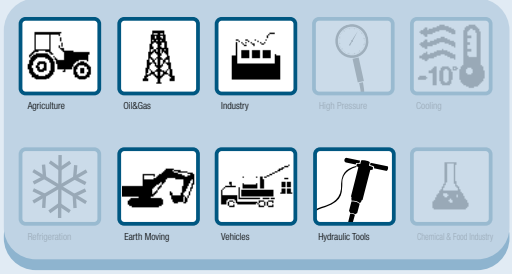
## HOW TO USE

- 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 | 10,0 | APM9 | 46 | 12,19 | 165 | 37,13 | 40 | 9,00 | 0,02 |
| 1/2 | 12,5 | APM13 | 90 | 23,85 | 190 | 42,75 | 70 | 15,75 | 0,01 |
| 5/8 | 16,0 | APM15 | 148 | 39,22 | 160 | 36,00 | 50 | 11,25 | 0,03 |
| 3/4 | 19,0 | APM17 | 200 | 53,00 | 260 | 58,50 | 80 | 18,00 | 0,18 |
| 1 | 25,0 | APM21 | 378 | 100,17 | 300 | 67,50 | 90 | 20,25 | 0,18 |
| 1 1/2 | 38,0 | APM30 | 750 | 198,75 | 440 | 99,00 | 80 | 18,00 | 0,40 |

| Size | Series/Size | Max. operating pressure | | | | Burst pressure | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Coupled | | Male | | Coupled | | Male | |
| | | MPa | psi | MPa | psi | MPa | psi | MPa | psi |
| 3/8 | APM9 | 35 | 5075 | 35 | 5075 | 100 | 14500 | 120 | 17400 |
| 1/2 | APM13 | 33 | 4785 | 33 | 4785 | 100 | 14500 | 120 | 17400 |
| 5/8 | APM15 | 33 | 4785 | 33 | 4785 | 100 | 14500 | 120 | 17400 |
| 3/4 | APM17 | 33 | 4785 | 33 | 4785 | 100 | 14500 | 120 | 17400 |
| 1 | APM21 | 30 | 4350 | 30 | 4350 | 80 | 11600 | 100 | 14500 |
| 1 1/2 | APM30 | 27 | 3915 | 27 | 3915 | 80 | 11600 | 100 | 14500 |

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

**Theoretical calculation of connect force with residual pressure:**
Fp (N) = Fi + (Pm x 5)
Fi = Connection force without residual pressure (N)
Pm = Residual pressure in the male coupling (MPa)

EXAMPLE
To connect the male coupling APM13 with 20 Mpa of residual pressure, it is necessary the following force:
Fp = Fi + (Pm x 5) = 190 + (20 x 5) = 290 N

**Different possible configurations:**
Different threads available upon request.

**Temperature range:**
Seals in NBR (Nitrile): from -20 °C to +100 °C (from -4 °F to +212 °F)
Please read carefully Instructions and warnings for proper selection of the products.

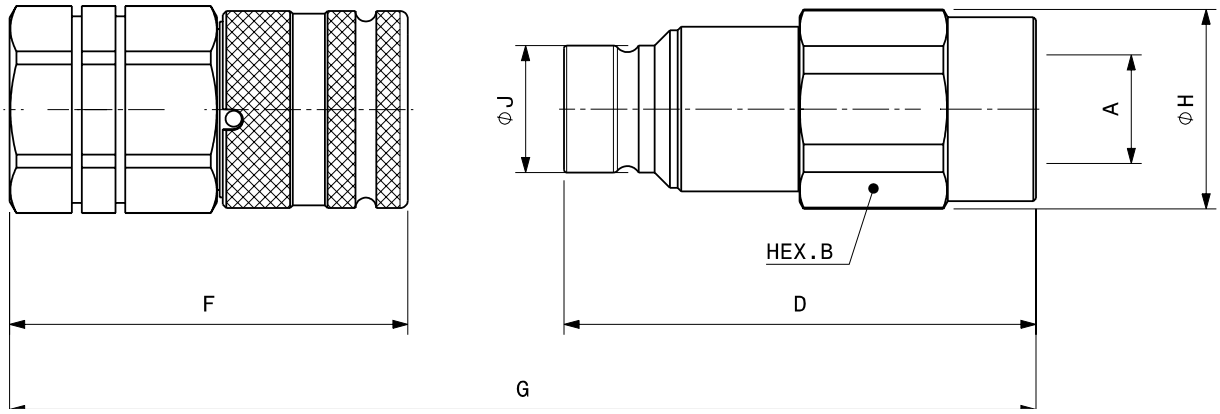
**Tests performed:**
Tested with female couplings “A” series.
Qualification tests have been performed with hydraulic oil using couplings with NBR (Nitrile) seals.
The max. operating pressure have been verified for 100.000 impulses according to ISO norm test method.

## WARNING

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.
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 female to drain.
Do not use the male 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.
It is important to limit contamination in the circuit to avoid compromising the function of the internal valves.
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.**

**FEMALE** Standard female for dimensions please refer to "A" series

**MALE**




### 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 | | Hex mm | | Hex in | | Diameter mm | | Diameter in | | Diameter mm | | Diameter in | | Weight kg | Weight lb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/8" | M APM9 3/8 BSP | Male | 805200001 | 10,0 | 3/8" | G | (F+D)-16 | (F+D)-0,630 | | D | 80,0 | 3,15 | | B | 27,0 | 1,06 | | H | 29,0 | 1,14 | | J | 19,7 | 0,78 | | 0,20 | 0,43 |
| 3/8" | M APM9 1/2 BSP | Male | 805200003 | 10,0 | 1/2" | G | (F+D)-16 | (F+D)-0,630 | | D | 82,5 | 3,25 | | B | 27,0 | 1,06 | | H | 29,0 | 1,14 | | J | 19,7 | 0,78 | | 0,20 | 0,43 |
| 1/2" | M APM13 1/2 BSP | Male | 805200005 | 12,5 | 1/2" | G | (F+D)-17,3 | (F+D)-0,681 | | D | 91,0 | 3,58 | | B | 36,0 | 1,42 | | H | 38,5 | 1,14 | | J | 24,5 | 0,96 | | 0,41 | 0,90 |
| 1/2" | M APM13 3/4 BSP | Male | 805200007 | 12,5 | 3/4" | G | (F+D)-17,3 | (F+D)-0,681 | | D | 93,5 | 3,68 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 24,5 | 0,96 | | 0,40 | 0,89 |
| 5/8" | M APM15 3/4 BSP | Male | 805200009 | 16,0 | 3/4" | G | (F+D)-17,6 | (F+D)-0,693 | | D | 95,0 | 3,74 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 27,0 | 1,06 | | 0,43 | 0,94 |
| 3/4" | M APM17 3/4 BSP | Male | 805200037 | 19,0 | 3/4" | G | (F+D)-22 | (F+D)-0,866 | | D | 108,5 | 4,27 | | B | 46,0 | 1,81 | | H | 49,8 | 1,96 | | J | 30,0 | 1,18 | | 0,812 | 1,79 |
| 3/4" | M APM17 1 BSP | Male | 805200011 | 19,0 | 1" | G | (F+D)-22 | (F+D)-0,866 | | D | 108,5 | 4,27 | | B | 46,0 | 1,81 | | H | 49,8 | 1,96 | | J | 30,0 | 1,18 | | 0,75 | 1,65 |
| 1" | M APM21 1-1/4 BSP | Male | 805200017 | 25,0 | 1 1/4" | G | (F+D)-23 | (F+D)-0,906 | | D | 123,5 | 4,86 | | B | 55,0 | 2,17 | | H | 59,8 | 2,35 | | J | 36,0 | 1,42 | | 1,16 | 2,56 |
| 1-1/2" | M APM30 1-1/2 BSP | Male | 805200015 | 38,0 | 1 1/2" | G | (F+D)-28,6 | (F+D)-1,126 | | D | 146,9 | 5,78 | | B | 70,0 | 2,76 | | H | 75,8 | 2,98 | | J | 57,0 | 2,24 | | 2,58 | 5,69 |

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

| Body Size | Descriptive Code | Item Code | | ISO DN | PORT (A) | Overall Length mm | | Overall Length in | | Length mm | | Length in | | Hex mm | | Hex in | | Diameter mm | | Diameter in | | Diameter mm | | Diameter in | | Weight kg | Weight lb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/8" | M APM9 3/8 NPT | Male | 805201001 | 10,0 | 3/8" | G | (F+D)-16 | (F+D)-0,630 | | D | 80,0 | 3,15 | | B | 27,0 | 1,06 | | H | 29,0 | 1,14 | | J | 19,7 | 0,78 | | 0,21 | 0,46 |
| 3/8" | M APM9 1/2 NPT | Male | 805201003 | 10,0 | 1/2" | G | (F+D)-16 | (F+D)-0,630 | | D | 82,5 | 3,25 | | B | 27,0 | 1,06 | | H | 29,0 | 1,14 | | J | 19,7 | 0,78 | | 0,21 | 0,45 |
| 1/2" | M APM13 1/2 NPT | Male | 805201005 | 12,5 | 1/2" | G | (F+D)-17,3 | (F+D)-0,681 | | D | 91,0 | 3,58 | | B | 36,0 | 1,42 | | H | 38,5 | 1,14 | | J | 24,5 | 0,96 | | 0,43 | 0,95 |
| 1/2" | M APM13 3/4 NPT | Male | 805201007 | 12,5 | 3/4" | G | (F+D)-17,3 | (F+D)-0,681 | | D | 93,5 | 3,68 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 24,5 | 0,96 | | 0,42 | 0,91 |
| 5/8" | M APM15 3/4 NPT | Male | 805201009 | 16,0 | 3/4" | G | (F+D)-17,6 | (F+D)-0,693 | | D | 95,0 | 3,74 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 27,0 | 1,06 | | 0,44 | 0,96 |
| 3/4" | M APM17 3/4 NPT | Male | 805201019 | 19,0 | 3/4" | G | (F+D)-22 | (F+D)-0,866 | | D | 108,5 | 4,27 | | B | 46,0 | 1,81 | | H | 49,8 | 1,96 | | J | 30,0 | 1,18 | | 0,81 | 1,77 |
| 3/4" | M APM17 1 NPT | Male | 805201011 | 19,0 | 1" | G | (F+D)-22 | (F+D)-0,866 | | D | 108,5 | 4,27 | | B | 46,0 | 1,81 | | H | 49,8 | 1,96 | | J | 30,0 | 1,18 | | 0,76 | 1,68 |
| 1" | M APM21 1-1/4 NPT | Male | 805201017 | 25,0 | 1 1/4" | G | (F+D)-23 | (F+D)-0,906 | | D | 123,5 | 4,86 | | B | 55,0 | 2,17 | | H | 59,8 | 2,35 | | J | 36,0 | 1,42 | | 1,20 | 2,65 |
| 1-1/2" | M APM30 1-1/2 NPT | Male | 805201015 | 38,0 | 1 1/2" | G | (F+D)-28,6 | (F+D)-1,126 | | D | 146,9 | 5,78 | | B | 70,0 | 2,76 | | H | 75,8 | 2,98 | | J | 57,0 | 2,24 | | 2,60 | 5,72 |

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

| Body Size | Descriptive Code | Item Code | | ISO DN | PORT (A) | Overall Length mm | | Overall Length in | | Length mm | | Length in | | Hex mm | | Hex in | | Diameter mm | | Diameter in | | Diameter mm | | Diameter in | | Weight kg | Weight lb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/8" | M APM9 1/2 SAE | Male | 805204001 | 10,0 | 3/4-16UNF | G | (F+D)-16 | (F+D)-0,630 | | D | 82,5 | 3,25 | | B | 27,0 | 1,06 | | H | 29,0 | 1,14 | | J | 19,7 | 0,78 | | 0,21 | 0,45 |
| 1/2" | M APM13 1/2 SAE | Male | 805204025 | 12,5 | 3/4-16UNF | G | (F+D)-17,3 | (F+D)-0,681 | | D | 89,4 | 3,52 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 24,5 | 0,96 | | 0,43 | 0,95 |
| 1/2" | M APM13 5/8 SAE | Male | 805204003 | 12,5 | 7/8-14UNF | G | (F+D)-17,3 | (F+D)-0,681 | | D | 91,0 | 3,58 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 24,5 | 0,96 | | 0,41 | 0,91 |
| 1/2" | M APM13 3/4 SAE | Male | 805204005 | 12,5 | 1-1/16-12UN | G | (F+D)-17,3 | (F+D)-0,681 | | D | 93,5 | 3,68 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 24,5 | 0,96 | | 0,40 | 0,88 |
| 5/8" | M APM15 3/4 SAE | Male | 805204007 | 16,0 | 1-1/16-12UN | G | (F+D)-17,6 | (F+D)-0,693 | | D | 95,0 | 3,74 | | B | 36,0 | 1,42 | | H | 38,5 | 1,52 | | J | 27,0 | 1,06 | | 0,43 | 0,94 |
| 3/4" | M APM17 3/4 SAE | Male | 805204027 | 19,0 | 1-1/16-12UN | G | (F+D)-22 | (F+D)-0,866 | | D | 10,8,5 | 4,27 | | B | 46,0 | 1,81 | | H | 49,8 | 1,96 | | J | 30,0 | 1,18 | | 0,81 | 1,77 |
| 3/4" | M APM17 1 SAE | Male | 805204009 | 19,0 | 1-5/16-12UN | G | (F+D)-22 | (F+D)-0,866 | | D | 108,5 | 4,27 | | B | 46,0 | 1,81 | | H | 49,8 | 1,96 | | J | 30,0 | 1,18 | | 0,76 | 1,66 |
| 1" | M APM21 1-1/4 SAE | Male | 805204017 | 25,0 | 1-5/8-12UN | G | (F+D)-23 | (F+D)-0,906 | | D | 123,5 | 4,86 | | B | 55,0 | 2,17 | | H | 59,8 | 2,35 | | J | 36,0 | 1,42 | | 1,19 | 2,61 |
| 1-1/2" | M APM30 1-1/2 SAE | Male | 805204015 | 38,0 | 1-7/8-12UN | G | (F+D)-28,6 | (F+D)-1,126 | | D | 146,9 | 5,78 | | B | 70,0 | 2,76 | | H | 75,8 | 2,98 | | J | 57,0 | 2,24 | | 2,56 | 5,64 |

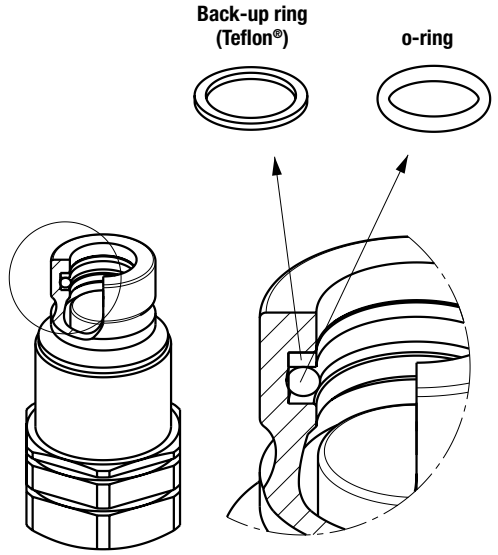
To calculate G see measure F in the leaflet A series



## SPARE KIT SEAL FOR MALE

| Repair kit / OR+BK | | |
|---|---|---|
| Body Size | Description | Part Number |
| 3/8” | M APM9 | 815700337 |
| 1/2” | M APM13 | 815700339 |
| 5/8” | M APM15 | 815700341 |
| 3/4” | M APM17 | 815700655 |
| 1” | M APM21 | 815700345 |
| 1 1/2” | M APM30 | 815700697* |

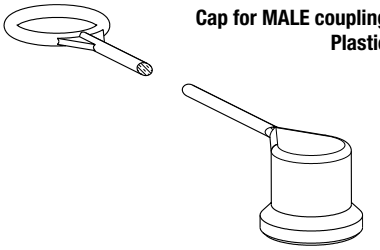
* OR + O-Ring holder




O-Ring in NBR
BackUp in PTFE

## PROTECTIVE CAPS FOR APM 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 protection caps for APM couplings are manufactured in plastic with connection lanyard (standard color red, other colors available upon request).




| Protective Cap | | | | |
|---|---|---|---|---|
| Body Size | Port size | Description | Part number Cap for Male | Material/Color |
| 3/8" | 3/8" | M APM9 | 815100025 | Plastic/Red |
| 3/8" | 1/2" | M APM9 | 815100027 | Plastic/Red |
| 1/2" | 1/2" | M APM13 | 815100029 | Plastic/Red |
| 1/2" | 3/4" | M APM13 | 815100031 | Plastic/Red |
| 5/8" | 3/4" | M APM15 | 815100011 | Plastic/Red |
| 3/4" | 1" | M APM17 | 815100013 | Plastic/Red |
| 1" | 1-1/4" | M APM21 | 815100015 | Plastic/Red |
| 1-1/2" | 1-1/4" | M APM30 | 815100017 | Plastic/Red |

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