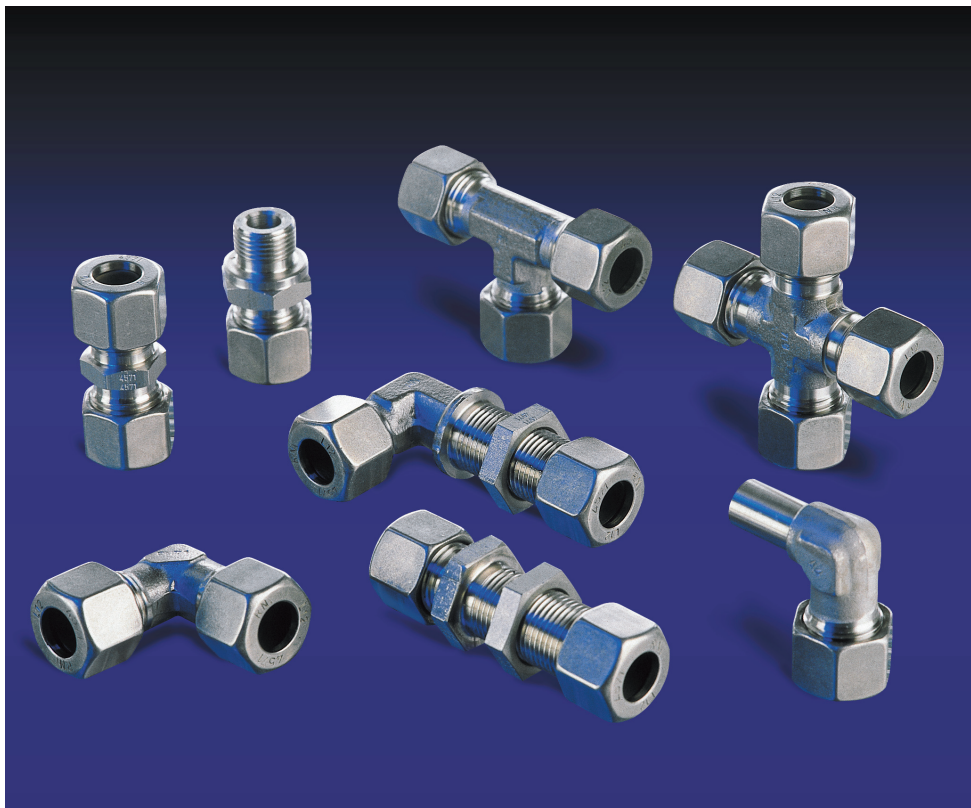


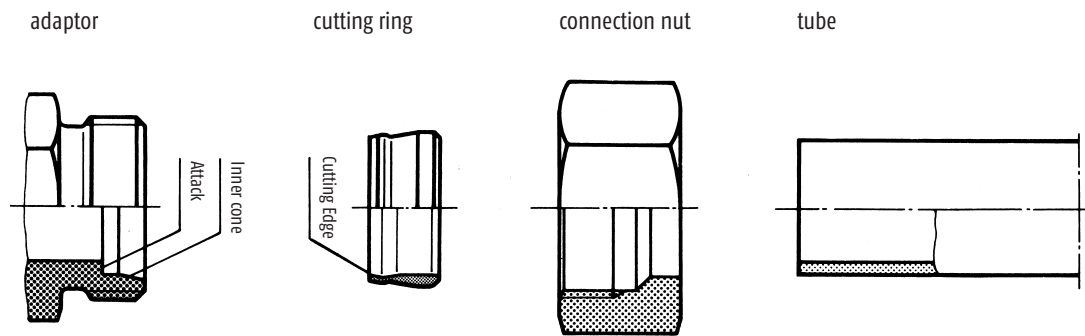
Cutting Ring Unions

ASSEMBLY INSTRUCTIONS, TECHNICAL INFORMATION

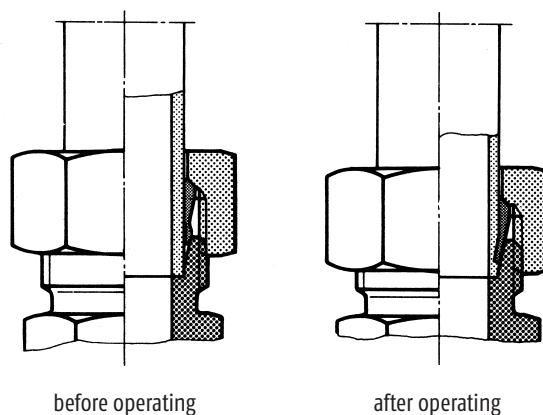


RO-FI Precision in Stainless Steel

Assembly instruction

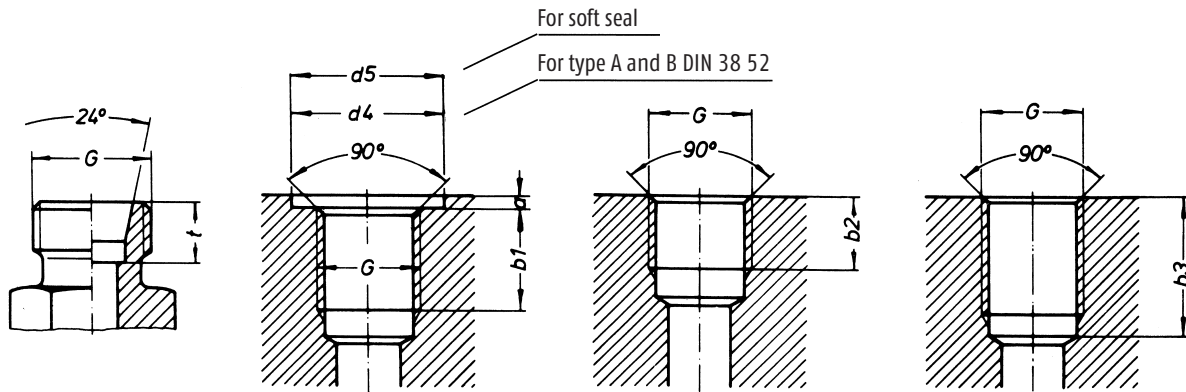


1. Cut the tube square (don't use a roll cutter) burr the tube ends internal and external.
2. Grease the windings and cutting ring with SMF assembling fat.
3. Push the cutting ring and lock nut one after another on the tube. The cutting ring points with the strongest bunch to the connection nut.
4. Push the tube against the arrester in the union adaptor and screw the lock nut manual as far as possible. The cutting ring have to be request very strong between tube, lock nut and the inner cone of the adaptor.
5. Screw the lock nut with a screw wench as following:
till tube- AD 18 circa 1 1/2 revolutions. From tube-AS 20 circa 1 1/4 revolutions. At this the cutting edge of the cutting ring enter into the pipe barrel and creates a clear viewable material ejection.
6. Unscrew the connection nuts and check the cutting ring cut. The material ejection have to cover 70 – 80% of face surface of the cutting ring (surfaced wall thickness of the cutting ring).
7. Afterwards connect the screwing again. Screw the lock nut with a screw wench at first until the noticeable rising power and after this else operate about circa 1/6 revolutions.



For the serial montage we advise hardened subassembly adaptors depending on sizes of the series

Survey Inserts



cutting ring connection
DIN 2353

screw plug hole form X
DIN 3852 sheet 1 and 2
(for cylindrical
screwed cones)

screw plug hole form Z
DIN 3852 sheet 1 and 2
(for conical screwed cones)

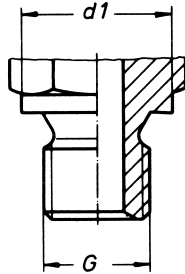
screw plug hole
NPT (USAS B 2.1 - 1968)

| Line | cutting ring connection | | | screw plug hole form X metric winding DIN 3852 sheet 1 | | | | | form Z metr. winding DIN 3852 sheet 1 | | form X Whitworth-tube winding DIN 3852 sheet 2 | | | | | form Z Whitworth-tube winding DIN 3852 sheet 2 | | NPT-tube winding USAS B 2.1-1968 | |
|--------------------|-------------------------|------------|------|--|----|-----|-----|----|---------------------------------------|------|--|----|-----|-----|----|--|------|----------------------------------|------|
| | Rohr AD | DIN 2353 G | t | G | d4 | d5 | a | b1 | G | b2 | G | d4 | d5 | a | b1 | G | b2 | G | b3 |
| LL very easy | 4 | 8 x 1,0 | 4,0 | - | - | - | - | - | 8 x 1,0 | 5,5 | - | - | - | - | - | - | 5,5 | 1/8" | 11,6 |
| | 5 | 10 x 1,0 | 5,5 | - | - | - | - | - | 8 x 1,0 | 5,5 | - | - | - | - | - | 1/8" | 5,5 | 1/8" | 11,6 |
| | 6 | 10 x 1,0 | 5,5 | - | - | - | - | - | 10 x 1,0 | 5,5 | - | - | - | - | - | 1/8" | 5,5 | 1/8" | 11,6 |
| | 8 | 12 x 1,0 | 5,5 | - | - | - | - | - | 10 x 1,0 | 5,5 | - | - | - | - | - | 1/8" | 5,5 | 1/8" | 11,6 |
| L slightly | 6 | 12 x 1,5 | 7,0 | 10 x 1,0 | 15 | 15 | 1,0 | 8 | 10 x 1,0 | 5,5 | 1/8" | 15 | 15 | 1,0 | 8 | 1/8" | 5,5 | 1/8" | 11,6 |
| | 8 | 14 x 1,5 | 7,0 | 12 x 1,5 | 18 | 18 | 1,5 | 12 | 12 x 1,5 | 8,5 | 1/4" | 19 | 20* | 1,5 | 12 | 1/4" | 8,5 | 1/4" | 16,4 |
| | 10 | 16 x 1,5 | 7,0 | 14 x 1,5 | 20 | 20 | 1,5 | 12 | 14 x 1,5 | 8,5 | 1/4" | 19 | 20* | 1,5 | 12 | 1/4" | 8,5 | 1/4" | 16,4 |
| | 12 | 18 x 1,5 | 7,0 | 16 x 1,5 | 22 | 23* | 1,5 | 12 | 16 x 1,5 | 8,5 | 3/8" | 23 | 23 | 2,0 | 12 | 3/8" | 8,5 | 3/8" | 17,4 |
| | 15 | 22 x 1,5 | 7,0 | 18 x 1,5 | 24 | 25* | 2,0 | 12 | 18 x 1,5 | 8,5 | 1/2" | 27 | 28* | 2,5 | 14 | 1/2" | 10,5 | 1/2" | 22,6 |
| | 18 | 26 x 1,5 | 7,5 | 22 x 1,5 | 28 | 28 | 2,5 | 14 | 22 x 1,5 | 10,5 | 1/2" | 27 | 28* | 2,5 | 14 | 1/2" | 10,5 | 1/2" | 22,6 |
| | 22 | 30 x 2,0 | 7,5 | 26 x 1,5 | 32 | 33* | 2,5 | 16 | - | - | 3/4" | 33 | 33 | 2,5 | 16 | - | - | 3/4" | 23,1 |
| | 28 | 36 x 2,0 | 7,5 | 33 x 2,0 | 40 | 41* | 2,5 | 18 | - | - | 1" | 40 | 41* | 2,5 | 18 | - | - | 1" | 27,8 |
| | 35 | 45 x 2,0 | 10,5 | 42 x 2,0 | 50 | 51* | 2,5 | 20 | - | - | 1 1/4" | 50 | 51* | 2,5 | 20 | - | - | 1 1/4" | 28,3 |
| | 42 | 52 x 2,0 | 11,0 | 28 x 2,0 | 56 | 56 | 2,5 | 22 | - | - | 1 1/2" | 56 | 56 | 2,5 | 22 | - | - | 1 1/2" | 28,3 |
| S heavy | 6 | 14 x 1,5 | 7,0 | 12 x 1,5 | 18 | 18 | 1,5 | 12 | 12 x 1,5 | 8,5 | 1/4" | 19 | 20* | 1,5 | 12 | 1/4" | 8,5 | 1/4" | 16,4 |
| | 8 | 16 x 1,5 | 7,0 | 14 x 1,5 | 20 | 20 | 1,5 | 12 | 14 x 1,5 | 8,5 | 1/4" | 19 | 20* | 1,5 | 12 | 1/4" | 8,5 | 1/4" | 16,4 |
| | 10 | 18 x 1,5 | 7,5 | 16 x 1,5 | 22 | 23* | 1,5 | 12 | 16 x 1,5 | 8,5 | 3/8" | 23 | 23 | 2,0 | 12 | 3/8" | 8,5 | 3/8" | 17,4 |
| | 12 | 20 x 1,5 | 7,5 | 18 x 1,5 | 24 | 25* | 2,0 | 12 | 18 x 1,5 | 8,5 | 3/8" | 23 | 23 | 2,0 | 12 | 3/8" | 8,5 | 3/8" | 17,4 |
| | 14 | 22 x 1,5 | 8,0 | 20 x 1,5 | 26 | 27* | 2,0 | 14 | 20 x 1,5 | 10,5 | 1/2" | 27 | 28* | 2,5 | 14 | 1/2" | 10,5 | 1/2" | 22,6 |
| | 16 | 24 x 1,5 | 8,5 | 22 x 1,5 | 28 | 28 | 2,5 | 14 | 22 x 1,5 | 10,5 | 1/2" | 27 | 28* | 2,5 | 14 | 1/2" | 10,5 | 1/2" | 22,6 |
| | 20 | 30 x 2,0 | 10,5 | 27 x 1,5 | 33 | 33 | 2,5 | 16 | - | - | 3/4" | 33 | 33 | 2,5 | 16 | - | - | 3/4" | 23,1 |
| | 25 | 36 x 2,0 | 12,0 | 33 x 2,0 | 40 | 41* | 2,5 | 18 | - | - | 1" | 40 | 41* | 2,5 | 18 | - | - | 1" | 27,8 |
| | 30 | 42 x 2,0 | 13,5 | 42 x 2,0 | 50 | 51* | 2,5 | 20 | - | - | 1 1/4" | 50 | 51* | 2,5 | 20 | - | - | 1 1/4" | 28,3 |
| | 38 | 52 x 2,0 | 16,0 | 48 x 2,0 | 56 | 56 | 2,5 | 22 | - | - | 1 1/2" | 56 | 56 | 2,5 | 22 | - | - | 1 1/2" | 28,3 |

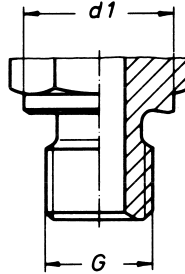
*deviant from DIN 3852 sheet 1 and 2

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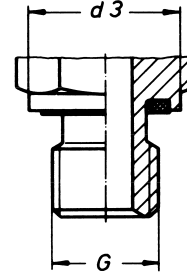
Cylindrical screwed cones



male stud thread
form A
DIN 3852 sheet 1 and 2
sealing by gasket



male stud thread
form B
DIN 3852 sheet 1 and 2
sealing by gasket



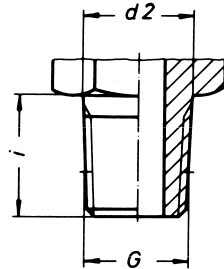
male stud thread
form E
with resilient jointing
(Viton)

| line | tube AD | metric winding cylindrical DIN 3852 sheet 1 | | | Whitworth-tube winding cylindrical DIN 3852 sheet 2 | | |
|--------------------|------------|---|----|-----|---|----|-----|
| | | G | d1 | d3 | G | d1 | d3 |
| LL very easy | 4 | - | - | - | - | - | - |
| | 5 | - | - | - | - | - | - |
| | 6 | - | - | - | - | - | - |
| | 8 | - | - | - | - | - | - |
| L slightly | 6 | 10 x 1,0 | 14 | 14 | 1/8" | 14 | 14 |
| | 8 | 12 x 1,5 | 17 | 17 | 1/4" | 18 | 19* |
| | 10 | 14 x 1,5 | 19 | 19 | 3/8" | 18 | 19* |
| | 12 | 16 x 1,5 | 21 | 22* | 1/2" | 22 | 22 |
| | 15 | 18 x 1,5 | 23 | 24* | 5/8" | 26 | 26 |
| | 18 | 22 x 1,5 | 27 | 27 | 1" | 26 | 26 |
| | 22 | 26 x 1,5 | 31 | 32* | 1 1/4" | 32 | 32 |
| | 28 | 33 x 2,0 | 39 | 40* | 1 1/2" | 39 | 39 |
| | 35 | 42 x 2,0 | 49 | 50* | 1 3/4" | 49 | 50* |
| | 42 | 28 x 2,0 | 55 | 55 | 1 1/2" | 55 | 55 |

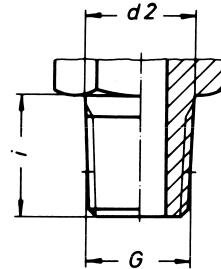
*deviant from DIN 3852

| line | tube AD | metric winding cylindrical DIN 3852 sheet 1 | | | Whitworth-tube winding cylindrical DIN 3852 sheet 2 | | |
|------------|------------|---|----|-----|---|----|-----|
| | | G | d1 | d3 | G | d1 | d3 |
| S heavy | 6 | 12 x 1,5 | 17 | 17 | 1/4" | 18 | 19* |
| | 8 | 14 x 1,5 | 19 | 19 | 3/8" | 18 | 19* |
| | 10 | 16 x 1,5 | 21 | 22* | 1/2" | 22 | 22 |
| | 12 | 18 x 1,5 | 23 | 24* | 5/8" | 22 | 22 |
| | 14 | 20 x 1,5 | 25 | 26* | 1" | 26 | 26 |
| | 16 | 20 x 1,5 | 27 | 27 | 1 1/4" | 26 | 26 |
| | 20 | 27 x 2,0 | 32 | 32 | 1 1/2" | 32 | 32 |
| | 25 | 33 x 2,0 | 39 | 40* | 1 3/4" | 39 | 39 |
| | 30 | 42 x 2,0 | 49 | 50* | 1 3/4" | 49 | 50* |
| | 38 | 48 x 2,0 | 55 | 55 | 1 3/4" | 55 | 55 |

Male Stud Couplings Taper and NPT



male stud thread
form C
DIN 3852
sealing by
taper thread



male stud thread
NPT (USAS B 2.1 - 1968)

| line | metric winding conical DIN 158 | | | | | Whitworth tube winding conical DIN 3859 | | | NPT-tube winding conical | | |
|-----------------|-----------------------------------|----------|-------|----|------|--|----|------|--------------------------|--------|--------|
| | tube AD | G | d2 | i | | G | d2 | i | G | d2 | i |
| LL very easy | 4 | 8 x 1,0 | 8,40 | 8 | 1/8" | 9,97 | 8 | 1/8" | 10,287 | 9,967 | |
| | 5 | 8 x 1,0 | 8,40 | 8 | 1/8" | 9,97 | 8 | 1/8" | 10,287 | 9,967 | |
| | 6 | 10 x 1,0 | 10,40 | 8 | 1/8" | 9,97 | 8 | 1/8" | 10,287 | 9,967 | |
| | 8 | 10 x 1,0 | 10,40 | 8 | 1/8" | 9,97 | 8 | 1/8" | 10,287 | 9,967 | |
| L slightly | 6 | 10 x 1,0 | 10,40 | 8 | 1/8" | 9,97 | 8 | 1/8" | 10,287 | 9,967 | |
| | 8 | 12 x 1,5 | 12,53 | 12 | 1/4" | 13,53 | 12 | 1/4" | 13,716 | 15,103 | |
| | 10 | 14 x 1,5 | 14,53 | 12 | 1/4" | 13,53 | 12 | 1/4" | 13,716 | 15,103 | |
| | 12 | 16 x 1,5 | 16,53 | 12 | 3/8" | 17,01 | 12 | 3/8" | 17,145 | 15,255 | |
| | 15 | 18 x 1,5 | 18,53 | 12 | 1/2" | 21,32 | 14 | 1/2" | 21,336 | 19,850 | |
| | 18 | 22 x 1,5 | 22,65 | 14 | 1/2" | 21,32 | 12 | 1/2" | 21,336 | 19,850 | |
| | 22 | - | - | - | - | - | - | - | 3/4" | 26,670 | 20,155 |
| | 28 | - | - | - | - | - | - | - | 1" | 33,401 | 25,006 |
| | 35 | - | - | - | - | - | - | - | 1 1/4" | 42,164 | 25,616 |
| | 42 | - | - | - | - | - | - | - | 1 1/2" | 48,260 | 26,040 |

| line | metric winding conical DIN 158 | | | | | Whitworth-tube winding conical DIN 3859 | | | NPT-tube winding conical | | |
|------------|-----------------------------------|----------|-------|----|------|--|----|------|--------------------------|--------|--------|
| | tube AD | G | d2 | i | | G | d2 | i | G | d2 | i |
| S heavy | 6 | 12 x 1,5 | 12,53 | 12 | 1/4" | 13,53 | 12 | 1/4" | 13,716 | 15,103 | |
| | 8 | 14 x 1,5 | 14,53 | 12 | 1/4" | 13,53 | 12 | 1/4" | 13,716 | 15,103 | |
| | 10 | 16 x 1,5 | 16,53 | 12 | 3/8" | 17,01 | 12 | 3/8" | 17,145 | 15,255 | |
| | 12 | 18 x 1,5 | 18,53 | 12 | 3/8" | 17,01 | 12 | 3/8" | 17,145 | 15,255 | |
| | 14 | 20 x 1,5 | 20,65 | 14 | 1/2" | 21,32 | 14 | 1/2" | 21,336 | 19,850 | |
| | 16 | 22 x 1,5 | 22,65 | 14 | 1/2" | 21,32 | 14 | 1/2" | 21,336 | 19,850 | |
| | 20 | - | - | - | - | - | - | - | 3/4" | 26,670 | 20,155 |
| | 25 | - | - | - | - | - | - | - | 1" | 33,401 | 25,006 |
| | 30 | - | - | - | - | - | - | - | 1 1/4" | 42,164 | 25,616 |
| | 38 | - | - | - | - | - | - | - | 1 1/2" | 48,260 | 26,040 |

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RO-FI Precision in Stainless Steel



Reliability by quality management - ISO 9001