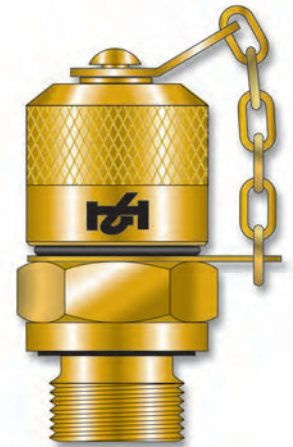
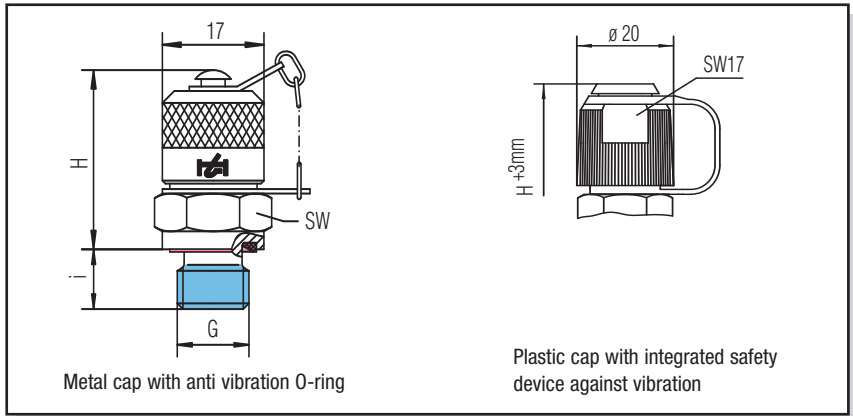
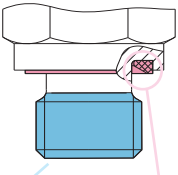


MINIMESS®-1215 Test Points



|  | | Torque in Nm | Technical data | | | | Material: Free cutting steel 1.0718 | Material: Free cutting steel 1.0718 | Material: Stainless steel 1.4571 | | | |
|---|----------------------|--------------|----------------|------------|------------|-------------|---|---|--|---------------|---------------|---------------|
| Thread G | Type of sealing A | | p max | H in mm | i in mm | SW in mm | Metal cap | Plastic cap | Metal cap | | | |
| M 8 x 1* | Form G | 6 | 25 MPa | 30 | 8,5 | 14 | 2101-06-32.00 | 2101-01-32.00 | on request | | | |
| M 10 x 1 | | 12 | | 30 | | | 14 | 2101-06-33.00 | 2101-01-33.00 | 2701-06-33.10 | | |
| M 12 x 1,5 | Form F | 30 | 63 MPa | 29 | 10 | 17 | 2101-06-13.00 | 2101-01-13.00 | on request | | | |
| M 14 x 1,5 | | 40 | | 29 | | | 19 | 2101-06-14.00 | 2101-01-14.00 | on request | | |
| ISO 228-G 1/8 | | 18 | | 40 MPa | | | 30 | 8 | 14 | 2101-06-17.00 | 2101-01-17.00 | on request |
| ISO 228-G 1/4 | | 40 | | 63 MPa | | | 29 | 10 | 19 | 2101-06-18.00 | 2101-01-18.00 | 2701-06-18.10 |
| 1/8 NPTF | Form H | - | 40 MPa | 26 | 12 | 14 | 2101-06-46.00 | 2101-01-46.00 | on request | | | |
| 1/4 NPTF | | - | | 26 | | | 15 | 14 | 2101-06-47.00 | 2101-01-47.00 | 2701-06-47.10 | |
| 7/16-20 UNF | Form E | 20 | 63 MPa | 29 | 9 | 17 | 2101-06-21.00 | 2101-01-21.00 | on request | | | |
| 9/16-18 UNF | | 35 | | 28 | | | 10 | 19 | 2101-06-53.00 | 2101-01-53.00 | on request | |
| ISO 7/-R 1/8 | Form C | - | 40 MPa | 26 | 12 | 14 | 2101-06-40.00 | 2101-01-40.00 | on request | | | |

* M 8 x 1 – please do not use for new constructions.

Option

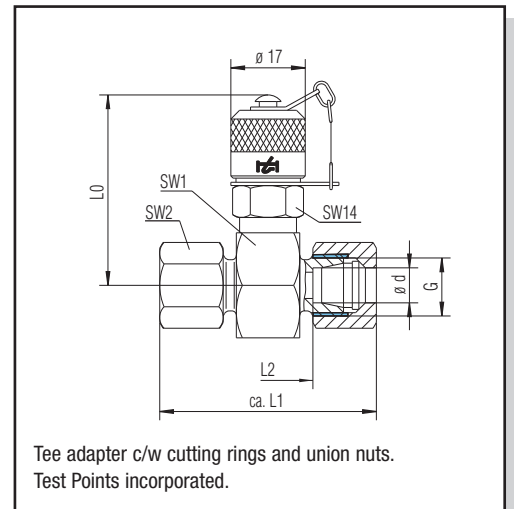
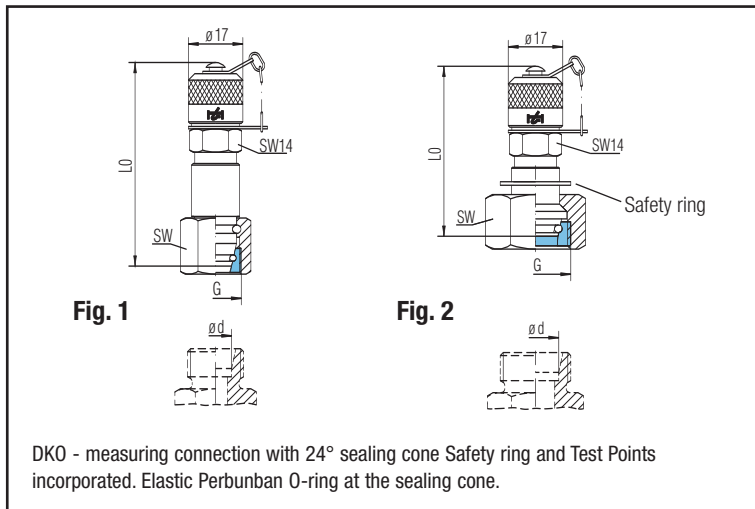
For FKM (Viton) - Exchange end digits from 00 to 10

10

Other materials, further options, sealing and screw-in threads on request.
We reserve the right to carry out technical modifications.

MINIMESS®-1215 Test Points Metric DKO, Tee Adaptors-1215

For solder free screw-in pipe connections according to DIN 2353; execution free-cutting steel 1.0718; sealing NBR



| Series Ø d | p max | Thread G |
|---------------|----------|-------------|
| L 6 | 31,5 MPa | M 12 x 1,5 |
| L 8 | | M 14 x 1,5 |
| L 10 | | M 16 x 1,5 |
| L 12 | | M 18 x 1,5 |
| L 15 | | M 22 x 1,5 |
| L 18 | 16 MPa | M 26 x 1,5 |
| L 22 | | M 30 x 2 |
| L 28 | | M 36 x 2 |
| L 35 | | M 45 x 2 |
| L 42 | | M 52 x 2 |

| Fig. | L ₀ | SW | Part-number |
|------|----------------|----|----------------------|
| 1 | 62 | 17 | 2101-40-06.90 |
| | 62 | 19 | 2101-40-08.90 |
| | 62 | 19 | 2101-40-10.90 |
| | 58 | 22 | 2101-40-12.90 |
| | 51,5 | 27 | 2101-40-15.90 |
| 2 | 52,5 | 32 | 2101-40-18.90 |
| | 52,5 | 36 | 2101-40-22.90 |
| | 53,5 | 41 | 2101-40-28.90 |
| | 55,5 | 50 | 2101-40-35.90 |
| | 55,5 | 60 | 2101-40-42.90 |

| L ₁ | L ₂ | L ₀ | SW ₁ | SW ₂ | Part-number |
|----------------|----------------|----------------|-----------------|-----------------|----------------------|
| 50,5 | 20,5 | 42 | 24 | 14 | 2101-11-06.90 |
| 50,5 | 20,5 | 42 | 24 | 17 | 2101-11-08.90 |
| 52,5 | 22,5 | 42 | 24 | 19 | 2101-11-10.90 |
| 52,5 | 22,5 | 42 | 24 | 22 | 2101-11-12.90 |
| 54,5 | 24,5 | 45 | 30 | 27 | 2101-11-15.90 |
| 56,5 | 23,5 | 46 | 32 | 32 | 2101-11-18.90 |
| 60,5 | 27,5 | 48 | 36 | 36 | 2101-11-22.90 |
| 60,5 | 27,5 | 50,5 | 41 | 41 | 2101-11-28.90 |
| 68,5 | 25,5 | 53 | 46 | 50 | 2101-11-35.90 |
| 70,5 | 24,5 | 57,5 | 55 | 60 | 2101-11-42.90 |

| Series Ø d | p max | Thread G |
|---------------|--------|-------------|
| S 6 | 63 MPa | M 14 x 1,5 |
| S 8 | | M 16 x 1,5 |
| S 10 | | M 18 x 1,5 |
| S 12 | | M 20 x 1,5 |
| S 14 | | M 22 x 1,5 |
| S 16 | 40 MPa | M 24 x 1,5 |
| S 20 | | M 30 x 2 |
| S 25 | | M 36 x 2 |
| S 30 | | M 42 x 2 |
| S 38 | | 31,5 MPa |

| Fig. | L ₀ | SW | Part-number |
|------|----------------|----|----------------------|
| 1 | 62 | 17 | 2101-41-06.90 |
| | 62 | 19 | 2101-41-08.90 |
| | 62 | 22 | 2101-41-10.90 |
| | 58 | 24 | 2101-41-12.90 |
| 2 | 55 | 27 | 2101-41-14.90 |
| | 55 | 30 | 2101-41-16.90 |
| | 55,5 | 36 | 2101-41-20.90 |
| | 57 | 46 | 2101-41-25.90 |
| | 58,5 | 50 | 2101-41-30.90 |
| | 61,5 | 60 | 2101-41-38.90 |

| L ₁ | L ₂ | L ₀ | SW ₁ | SW ₂ | Part-number |
|----------------|----------------|----------------|-----------------|-----------------|----------------------|
| 54,5 | 24,5 | 42 | 24 | 17 | 2101-12-06.90 |
| 54,5 | 24,5 | 42 | 24 | 19 | 2101-12-08.90 |
| 56,5 | 23,5 | 42 | 24 | 22 | 2101-12-10.90 |
| 56,5 | 23,5 | 42 | 24 | 24 | 2101-12-12.90 |
| 62,5 | 26,5 | 43,5 | 27 | 27 | 2101-12-14.90 |
| 62,5 | 25,5 | 45 | 30 | 30 | 2101-12-16.90 |
| 68,5 | 25,5 | 48 | 36 | 36 | 2101-12-20.90 |
| 74,5 | 26,5 | 50,5 | 41 | 46 | 2101-12-25.90 |
| 80,5 | 27,5 | 53 | 46 | 50 | 2101-12-30.90 |
| 91 | 29 | 57,5 | 55 | 60 | 2101-12-38.90 |

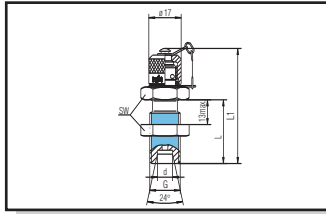
Options

| | |
|---|-----------|
| All sealing made of Viton with metal cap (when ordering, exchange end digits from 00 to 10) | 00 |
| With mounted plastic cap (when ordering, exchange end digits from 00 to 90) | 95 |

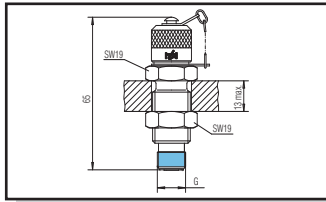
Other materials, further options, sealing and screw-in threads on request.

MINIMESS®-1215 Test Points 1215 Bulkhead Adaptors

For solder free screw-in pipe connections according to DIN 2353; execution free-cutting steel 1.0718; sealing NBR

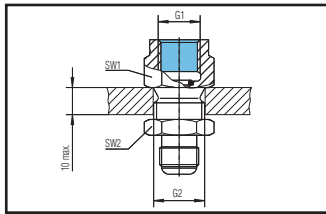


| Thread G | p max | Connection | L in mm | L ₁ in mm | SW in mm | Part-number |
|------------|----------|------------|---------|----------------------|----------|---------------|
| M 12 x 1,5 | 31,5 MPa | L 6 | 34 | 60,5 | 17 | 2101-04-22.90 |
| M 14 x 1,5 | | L 8 | 34 | 60,5 | 19 | 2101-04-23.90 |
| M 14 x 1,5 | 63 MPa | S 6 | 36 | 62,5 | 19 | 2101-04-24.90 |



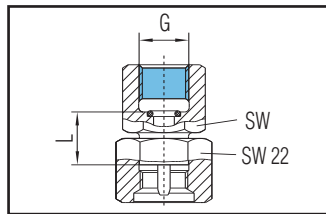
| Thread G | p max | Connection | Part-number |
|------------------|--------|---|---------------|
| Fixing thread 12 | 63 MPa | On both sides MINIMESS® - 1215 connection | 2101-04-16.90 |

MINIMESS®-1215 pressure gauge connection for bulkhead fitting



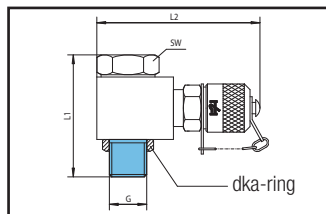
| Internal thread G1 | p max | Connection G2 | L in mm (approx.) | SW in mm | Note | Part-number |
|--------------------|--------|---------------|-------------------|----------|----------------------|---------------|
| ISO 228-G 1/4 | 63 MPa | 1215 | 31 | 19 | Without return valve | 2101-05-11.00 |
| ISO 228-G 1/2 | | | 38,5 | 27 | | 2101-05-12.00 |
| 1/4 NPT | | | - | 22 | | 2101-05-23.00 |

MINIMESS®-pressure gauge – direct connection



| Internal thread G | p max | L in mm | SW in mm | Part-number |
|-------------------|--------|---------|----------|---------------|
| ISO 228-G 1/4 | 63 MPa | 14,5 | 19 | 2101-07-11.62 |
| ISO 228-G 1/2 | | 17 | 27 | 2101-07-12.62 |
| 1/4 NPT | | - | 19 | 2101-07-23.62 |

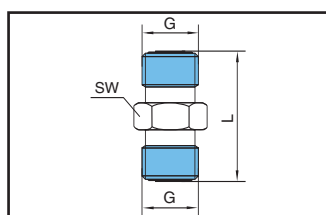
MINIMESS®-1215 Test Points 1215 90° Swivel screw connection



| Thread G | p max | L ₁ in mm | L ₂ in mm | SW in mm | Part-number |
|---------------|--------|----------------------|----------------------|----------|---------------|
| ISO 228-G 1/4 | 63 MPa | 34,5 | 46 | 19 | 2115-22-14.00 |

Sealing on screw-in thread (hollow screw) via dka-ring, on hexagon via Gi-ring (NBR). Other options on request.

MINIMESS®-1215 hose adaptors



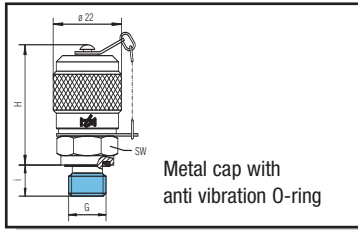
| Thread G | p max | L in mm | SW in mm | Note | Part-number |
|------------------|--------|---------|----------|----------------------|---------------|
| Fixing thread 12 | 63 MPa | 29 | 14 | Without return valve | 2146-20-00.20 |

Other materials, further options, sealing and screw-in threads on request.

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MINIMESS®-1604 Test Points



| Thread G | Type of sealing A | Torque in Nm | Technical data | | | | Part-number with NBR - sealing |
|---------------|----------------------|--------------|----------------|------------|------------|-------------|-----------------------------------|
| | | | p max | H in mm | i in mm | SW in mm | |
| M 10 x 1 | Form G | 12 | 40 MPa | 43 | 8,5 | 17 | 2106-01-33.00 |
| M 14 x 1,5 | Form F | 40 | | 40 | 10 | 19 | 2106-01-14.00 |
| ISO 228-G 1/4 | | 40 | | 40 | 10 | 19 | 2106-01-18.00 |



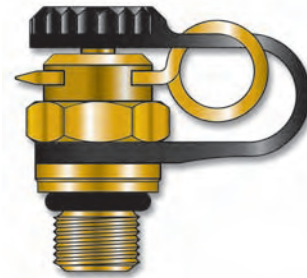
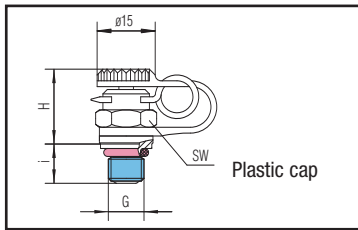
| Material: | | Part-number with NBR - sealing |
|------------------------------|---------------------------|-----------------------------------|
| Free cutting steel 1.0718 | Stainless steel 1.4571 | |
| | | on request |
| | | 2706-01-18.10 |

Option

| | |
|---|-----------|
| For FKM (Viton) Exchange end digits from 00 to 10 | 10 |
|---|-----------|

MINIMESS®-plug-in Test Points

Internal Ball Sealing



| Thread G | Type of sealing A | Torque in Nm | Technical data | | | | Part-number with FKM - sealing |
|----------------|----------------------|--------------|----------------|------------|------------|-------------|-----------------------------------|
| | | | p max | H in mm | i in mm | SW in mm | |
| M 8 x 1 | Form G | 6 | 40 MPa | 17,5 | 8,5 | 12 | 2104-30-32.00 |
| M 10 x 1 | | 12 | | 17,5 | 8,5 | 12 | 2104-30-33.00 |
| ISO 7/ I-R 1/8 | Suitable sealant | – | | 17,5 | 8,5 | 12 | 2104-30-40.00 |
| 1/8 NPT | | – | | 17,5 | 8,5 | 12 | 2104-30-43.00 |

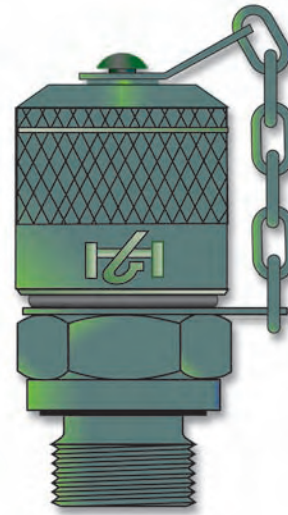
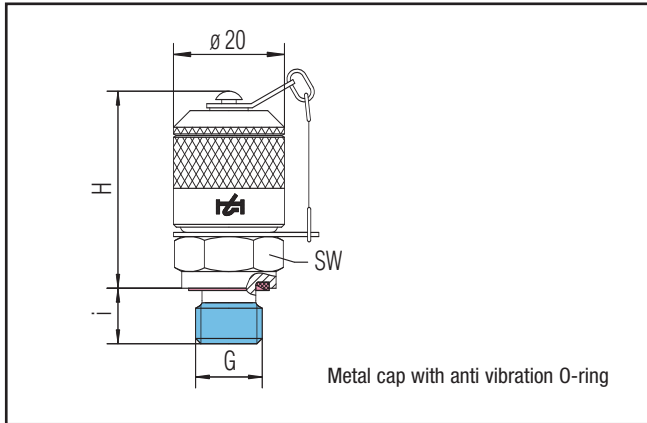


| Material: | | Part-number with FKM - sealing |
|------------------------------|---------------------------|-----------------------------------|
| Free cutting steel 1.0718 | Stainless steel 1.4571 | |
| | | on request |
| | | on request |
| | | on request |

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MINIMESS®-1615 Test Points



| Thread G | Type of sealing A | Torque in Nm | Technical data | | | | Material: Free cutting steel 1.0718 | Material: Stainless steel 1.4571 | |
|---------------|----------------------|--------------|----------------|------------|------------|-------------|--|--|----------------------|
| | | | p max | H in mm | i in mm | SW in mm | Metal cap | Metal cap | |
| M 10 x 1 | Form G | 12 | 63 MPa | 37,5 | 8,5 | 17 | Part-number with NBR - sealing 2102-01-33.00 | Part-number with NBR - sealing 2702-01-33.10 on request on request on request 2702-01-18.10 on request | |
| M 12 x 1,5 | Form F | 30 | | 36 | 10 | 17 | | | 2102-01-13.00 |
| M 14 x 1,5 | | 40 | | 36 | 10 | 19 | | | 2102-01-14.00 |
| M 16 x 1,5 | Form B | 60 | | 36 | 10 | 19 | | | 2102-01-50.00 |
| ISO 228-G 1/4 | Form F | 40 | | 36 | 10 | 19 | | | 2102-01-18.00 |
| 1/4 NPTF | Form H | - | | 33 | 16,5 | 17 | | | 2102-01-47.00 |

Option

| | |
|---|-----------|
| For FKM (Viton) Exchange end digits from 00 to 10 | 10 |
|---|-----------|

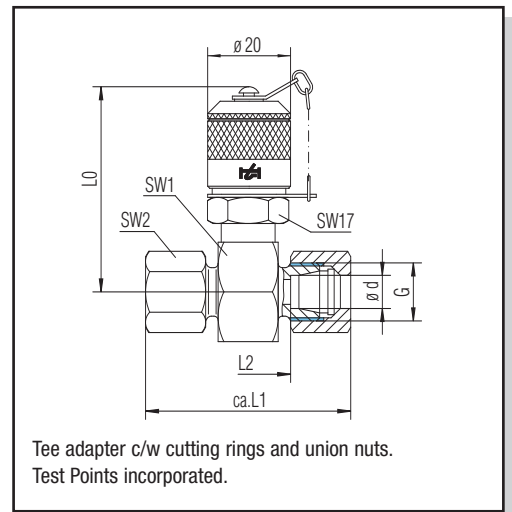
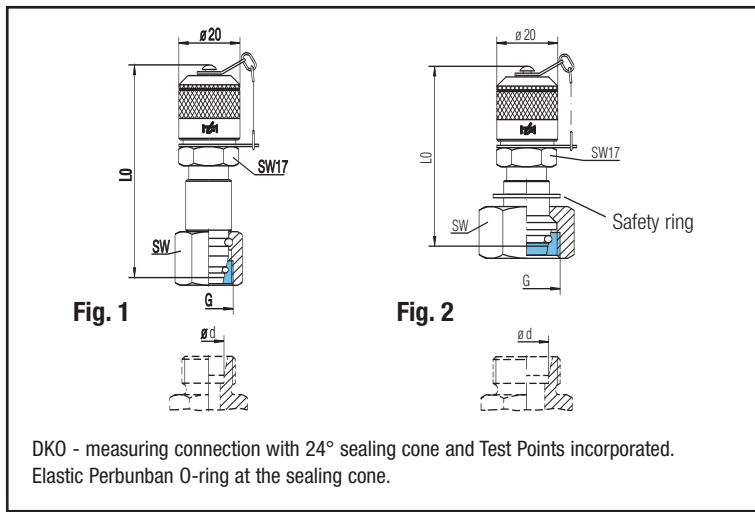
MINIMESS®-1615 Specialised Options

| Thread G | Type of sealing | p max | H in mm | L in mm | SW in mm | Execution all sealing made of Viton | Part-number |
|----------------|-----------------|--------|------------|------------|-------------|--|----------------------|
| M 14 x 1,5 | Gi-ring | 63 MPa | 36 | 12 | 19 | With anti vibration O-ring, alternative housing length | 2102-01-14.48 |
| ISO 228- G 1/4 | Sealing edge | | 38 | 10 | 19 | Low temperature -54°C to +110°C | 2102-01-51.56 |
| M 14 x 1,5 | Gi-ring | | 36 | 12 | 19 | With sintered bronze filter | 2102-72-14.10 |

Other materials, further options, sealing and screw-in threads on request.
We reserve the right to carry out technical modifications.

MINIMESS®-1615 Test Points Metric DKO, Tee Adaptors-1615

For solder free screw-in pipe connections according to DIN 2353; execution free-cutting steel 1.0718; sealing NBR



| Series Ø d | p max | Thread G |
|---------------|----------|-------------|
| L 6 | 31,5 MPa | M 12 x 1,5 |
| L 8 | | M 14 x 1,5 |
| L 10 | | M 16 x 1,5 |
| L 12 | | M 18 x 1,5 |
| L 15 | | M 22 x 1,5 |
| L 18 | 16 MPa | M 26 x 1,5 |
| L 22 | | M 30 x 2 |
| L 28 | | M 36 x 2 |
| L 35 | | M 45 x 2 |
| L 42 | | M 52 x 2 |

| Fig. | L ₀ | SW | Part-number |
|------|----------------|----|----------------------|
| 1 | 69,5 | 14 | 2102-40-06.00 |
| | 69,5 | 17 | 2102-40-08.00 |
| | 69,5 | 19 | 2102-40-10.00 |
| | 65,5 | 22 | 2102-40-12.00 |
| | 59 | 27 | 2102-40-15.00 |
| 2 | 60 | 32 | 2102-40-18.00 |
| | 60 | 36 | 2102-40-22.00 |
| | 61 | 41 | 2102-40-28.00 |
| | 63 | 50 | 2102-40-35.00 |
| | 63 | 60 | 2102-40-42.00 |

| L ₁ | L ₂ | L ₀ | SW ₁ | SW ₂ | Part-number |
|----------------|----------------|----------------|-----------------|-----------------|----------------------|
| 50,5 | 20,5 | 49,5 | 24 | 14 | 2102-11-06.00 |
| 50,5 | 20,5 | 49,5 | 24 | 17 | 2102-11-08.00 |
| 52,5 | 22,5 | 49,5 | 24 | 19 | 2102-11-10.00 |
| 52,5 | 22,5 | 49,5 | 24 | 22 | 2102-11-12.00 |
| 54,5 | 24,5 | 52,5 | 30 | 27 | 2102-11-15.00 |
| 56,5 | 23,5 | 53,5 | 32 | 32 | 2102-11-18.00 |
| 60,5 | 27,5 | 55,5 | 36 | 36 | 2102-11-22.00 |
| 60,5 | 27,5 | 58 | 41 | 41 | 2102-11-28.00 |
| 68,5 | 25,5 | 60,5 | 46 | 50 | 2102-11-35.00 |
| 70,5 | 24,5 | 65 | 55 | 60 | 2102-11-42.00 |

| | | |
|------|--------|------------|
| S 6 | 63 MPa | M 14 x 1,5 |
| S 8 | | M 16 x 1,5 |
| S 10 | | M 18 x 1,5 |
| S 12 | | M 20 x 1,5 |
| S 14 | | M 22 x 1,5 |
| S 16 | 40 MPa | M 24 x 1,5 |
| S 20 | | M 30 x 2 |
| S 25 | | M 36 x 2 |
| S 30 | | M 42 x 2 |
| S 38 | | 31,5 MPa |

| | | | |
|---|------|----|----------------------|
| 1 | 69,5 | 17 | 2102-41-06.00 |
| | 69,5 | 19 | 2102-41-08.00 |
| | 69,5 | 22 | 2102-41-10.00 |
| | 65,5 | 24 | 2102-41-12.00 |
| | 62,5 | 27 | 2102-41-14.00 |
| 2 | 62,5 | 30 | 2102-41-16.00 |
| | 63 | 36 | 2102-41-20.00 |
| | 64,5 | 46 | 2102-41-25.00 |
| | 66 | 50 | 2102-41-30.00 |
| | 69 | 60 | 2102-41-38.00 |

| | | | | | |
|------|------|------|----|----|----------------------|
| 54,5 | 24,5 | 49,5 | 24 | 17 | 2102-12-06.00 |
| 54,5 | 24,5 | 49,5 | 24 | 19 | 2102-12-08.00 |
| 56,5 | 23,5 | 49,5 | 24 | 22 | 2102-12-10.00 |
| 56,5 | 23,5 | 49,5 | 24 | 24 | 2102-12-12.00 |
| 62,5 | 26,5 | 51 | 27 | 27 | 2102-12-14.00 |
| 62,5 | 25,5 | 52,5 | 30 | 30 | 2102-12-16.00 |
| 68,5 | 25,5 | 55,5 | 36 | 36 | 2102-12-20.00 |
| 74,5 | 26,5 | 58 | 41 | 46 | 2102-12-25.00 |
| 80,5 | 27,5 | 60,5 | 46 | 50 | 2102-12-30.00 |
| 91 | 29 | 65 | 55 | 60 | 2102-12-38.00 |

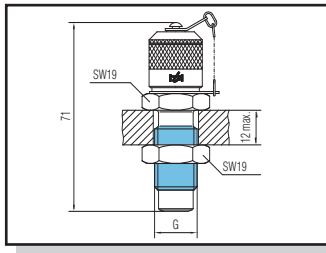
Option

All sealing made of Viton with metal cap (when ordering, exchange end digits from 00 to 10)

10

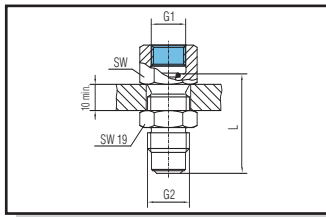
Other materials, further options, sealing and screw-in threads on request.

MINIMESS®-1615 Test Points 1615 Bulkhead Adaptors



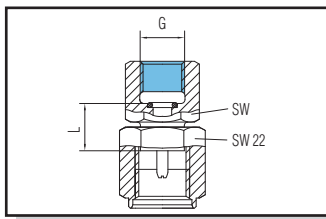
| Thread G | p max | Connection | Part-number |
|------------|--------|---|---------------|
| M 16 x 1,5 | 63 MPa | On both sides MINIMESS® 1615 connection | 2102-04-01.00 |

MINIMESS®-1615 pressure gauge connection for bulkhead fitting



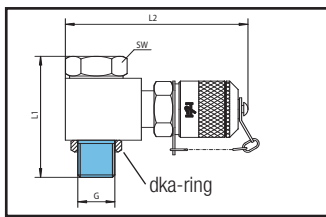
| Internal thread G1 | p max | Connection G2 | L in mm | SW in mm | Note | Part-number |
|--------------------|--------|-------------------|---------|----------|----------------------|---------------|
| ISO 228-G 1/4 | 63 MPa | 1615 / M 16 x 1,5 | 38 | 19 | Without return valve | 2102-05-11.00 |
| ISO 228-G 1/2 | | | 42,5 | 27 | | 2102-05-12.00 |

MINIMESS®-1615 pressure gauge – direct connection



| Internal thread G | p max | L in mm | SW in mm | Part-number |
|-------------------|--------|---------|----------|---------------|
| ISO 228-G 1/4 | 63 MPa | 14,5 | 19 | 2102-07-11.62 |
| ISO 228-G 1/2 | | 17 | 27 | 2102-07-12.62 |
| 1/4 NPT | | – | 19 | 2102-07-23.62 |

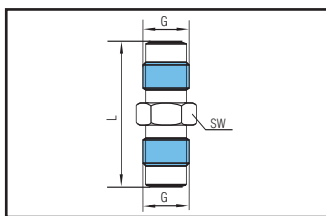
MINIMESS®-1615 Test Points 1615 90° Swivel screw connection



| Thread G | p max | L ₁ in mm | L ₂ in mm | SW in mm | Part-number |
|---------------|--------|----------------------|----------------------|----------|---------------|
| ISO 228-G 1/4 | 63 MPa | 43 | 69,5 | 19 | 2115-22-24.00 |

Sealing on screw-in thread (hollow screw) via dka-ring, on hexagon via Gi-ring (NBR).
Other options on request.

MINIMESS®-1615 Hose Adaptors



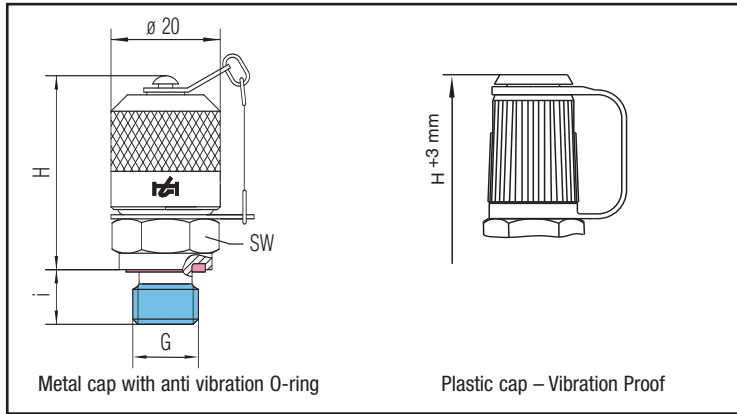
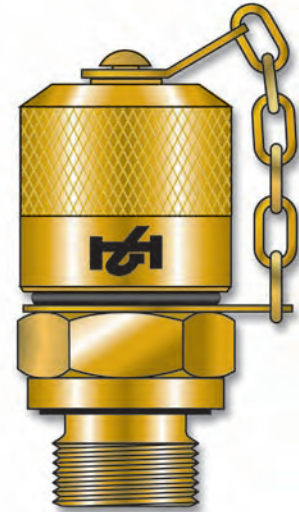
| Thread G | p max | L in mm | SW in mm | Note | Part-number |
|------------------------------|--------|---------|----------|----------------------|---------------|
| MINIMESS® 1615 M 16 x 1,5 | 63 MPa | 42 | 17 | Without return valve | 2146-10-00.00 |

Other materials, further options, sealing and screw-in threads on request.

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MINIMESS®-1620 Test Points



Metal cap with anti vibration O-ring

Plastic cap – Vibration Proof

| Thread G | Type of seal A | Torque in Nm | Technical data | | | | Material: Free cutting steel 1.0718 | Metal cap | Material: Free cutting steel 1.0718 | Plastic cap | Material: Stainless steel 1.4571 | Metal cap |
|---------------|-------------------|--------------|----------------|------------|------------|-------------|---|---------------|---|---------------|--|-----------|
| | | | p max | H in mm | i in mm | SW in mm | | | | | | |
| M 8 x 1* | Form G | 6 | 25 MPa | 41 | 8,5 | 17 | 2103-01-32.00 | 2103-30-32.00 | on request | | | |
| M 10 x 1 | | 12 | | 37,5 | 8,5 | 17 | | | | 2103-01-33.00 | 2703-01-33.10 | |
| M 12 x 1,5 | Form F | 30 | 63 MPa | 36 | 10 | 17 | 2103-01-13.00 | 2103-30-13.00 | on request | | | |
| M 14 x 1,5 | | 40 | | 36 | 10 | 19 | | | | 2103-01-14.00 | 2703-01-14.10 | |
| M 16 x 1,5 | | 60 | | 36 | 10 | 22 | | | | 2103-01-15.00 | on request | |
| M 14 x 1,5 | Form E** | 45 | 40 MPa | 35,5 | 11 | 19 | 2103-01-96.00 | 2103-30-96.00 | on request | | | |
| ISO 228-G 1/8 | Form F | 18 | | 38 | 8 | 17 | 2103-01-17.00 | 2103-30-17.00 | 2703-01-17.10 | | | |
| ISO 228-G 1/4 | | 40 | 63 MPa | 36 | 10 | 19 | 2103-01-18.00 | 2103-30-18.00 | 2703-01-18.10 | | | |
| ISO 228-G 3/8 | | 60 | | 36 | 10 | 22 | 2103-01-16.00 | on request | | | | |
| 1/8 NPTF | Form H | – | 40 MPa | 33 | 9,5 | 17 | 2103-01-46.00 | 2103-30-46.00 | on request | | | |
| 1/4 NPTF | | – | | 33 | 16,5 | 17 | 2103-01-47.00 | 2103-30-47.00 | 2703-01-47.10 | | | |
| 7/16-20 UNF | Form E | 20 | 63 MPa | 37 | 9 | 17 | 2103-01-21.00 | 2103-30-21.00 | on request | | | |
| 9/16-18 UNF | | 35 | | 36 | 10 | 19 | 2103-01-53.00 | on request | | | | |
| ISO 7/I-R 1/8 | Form C | – | 40 MPa | 33 | 13 | 17 | 2103-01-40.00 | 2103-30-40.00 | on request | | | |
| ISO 7/I-R 1/4 | | – | | 63 MPa | 33 | 13 | 17 | 2103-01-41.00 | 2103-30-41.00 | on request | | |

* M8x1 - Please do not use for new machinery design.

** Form E – ISO 6149-2.

Option

For sealing in FKM (Viton) Exchange end digits from 00 to 10

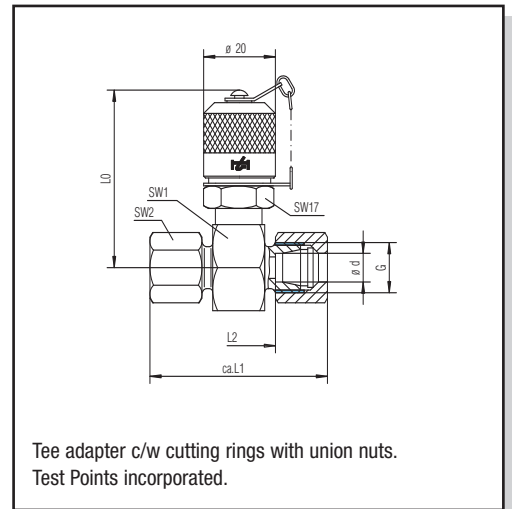
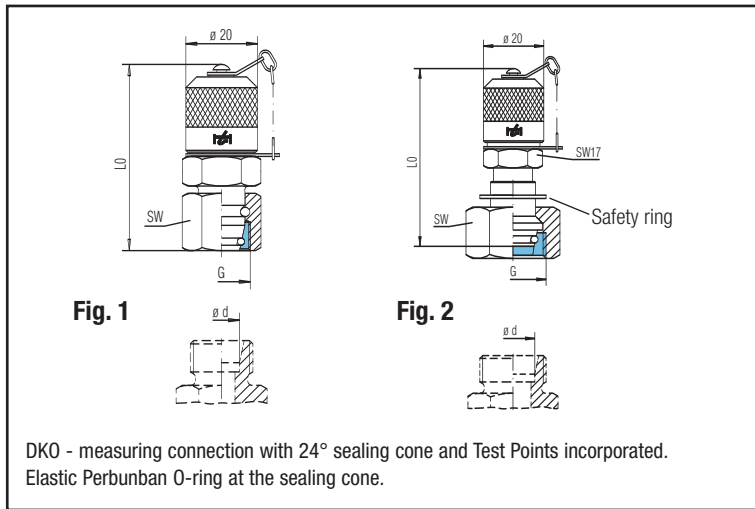
10

Other materials, designs, sealing and screw-in threads on request.
We reserve the right to carry out technical modifications.

MINIMESS®-1620 Test Points

Metric DKO, Tee Adaptors - 1620

For solder free screw-in pipe connections according to DIN 2353; free-cutting steel 1.0718; sealing NBR



| Series Ø d | p max | Thread G |
|---------------|----------|-------------|
| L 6 | 31,5 MPa | M 12 x 1,5 |
| L 8 | | M 14 x 1,5 |
| L 10 | | M 16 x 1,5 |
| L 12 | | M 18 x 1,5 |
| L 15 | | M 22 x 1,5 |
| L 18 | | M 26 x 1,5 |
| L 22 | 16 MPa | M 30 x 2 |
| L 28 | | M 36 x 2 |
| L 35 | | M 45 x 2 |
| L 42 | | M 52 x 2 |

| Fig. | L ₀ | SW | Part-number |
|------|----------------|----|----------------------|
| 1 | 52 | 14 | 2103-93-06.00 |
| | 52 | 17 | 2103-93-08.00 |
| | 52 | 19 | 2103-93-10.00 |
| | 52 | 22 | 2103-93-12.00 |
| | 52 | 27 | 2103-93-15.00 |
| | 52 | 32 | 2103-93-18.00 |
| 2 | 60 | 36 | 2103-40-22.00 |
| | 61 | 41 | 2103-40-28.00 |
| | 63 | 50 | 2103-40-35.00 |
| | 63 | 60 | 2103-40-42.00 |

| L ₁ | L ₂ | L ₀ | SW ₁ | SW ₂ | Part-number |
|----------------|----------------|----------------|-----------------|-----------------|----------------------|
| 50,5 | 20,5 | 49,5 | 24 | 14 | 2103-11-06.00 |
| 50,5 | 20,5 | 49,5 | 24 | 17 | 2103-11-08.00 |
| 52,5 | 22,5 | 49,5 | 24 | 19 | 2103-11-10.00 |
| 52,5 | 22,5 | 49,5 | 24 | 22 | 2103-11-12.00 |
| 54,5 | 24,5 | 52,5 | 30 | 27 | 2103-11-15.00 |
| 56,5 | 23,5 | 53,5 | 32 | 32 | 2103-11-18.00 |
| 60,5 | 27,5 | 55,5 | 36 | 36 | 2103-11-22.00 |
| 60,5 | 27,5 | 58 | 41 | 41 | 2103-11-28.00 |
| 68,5 | 25,5 | 60,5 | 46 | 50 | 2103-11-35.00 |
| 70,5 | 24,5 | 65 | 55 | 60 | 2103-11-42.00 |

| Series Ø d | p max | Thread G |
|---------------|------------|-------------|
| S 6 | 63 MPa | M 14 x 1,5 |
| S 8 | | M 16 x 1,5 |
| S 10 | | M 18 x 1,5 |
| S 12 | | M 20 x 1,5 |
| S 14 | M 22 x 1,5 | 40 MPa |
| S 16 | M 24 x 1,5 | |
| S 20 | M 30 x 2 | |
| S 25 | M 36 x 2 | |
| S 30 | M 42 x 2 | |
| S 38 | 31,5 MPa | M 52 x 2 |

| Fig. | L ₀ | SW | Part-number | |
|------|----------------|------|----------------------|----------------------|
| 1 | 52 | 17 | 2103-94-06.00 | |
| | 52 | 19 | 2103-94-08.00 | |
| | 52 | 22 | 2103-94-10.00 | |
| | 52 | 24 | 2103-94-12.00 | |
| 2 | 63 | 27 | 2103-41-14.00 | |
| 1 | 52 | 30 | 2103-94-16.00 | |
| | 63 | 36 | 2103-41-20.00 | |
| | 2 | 64,5 | 46 | 2103-41-25.00 |
| | | 66 | 50 | 2103-41-30.00 |
| | | 69 | 60 | 2103-41-38.00 |

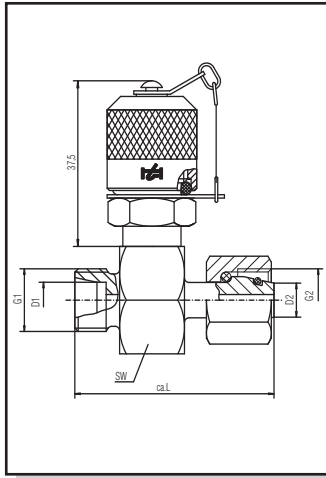
| L ₁ | L ₂ | L ₀ | SW ₁ | SW ₂ | Part-number |
|----------------|----------------|----------------|-----------------|-----------------|----------------------|
| 54,5 | 24,5 | 49,5 | 24 | 17 | 2103-12-06.00 |
| 54,5 | 24,5 | 49,5 | 24 | 19 | 2103-12-08.00 |
| 56,5 | 23,5 | 49,5 | 24 | 22 | 2103-12-10.00 |
| 56,5 | 23,5 | 49,5 | 24 | 24 | 2103-12-12.00 |
| 62,5 | 26,5 | 51 | 27 | 27 | 2103-12-14.00 |
| 62,5 | 25,5 | 52,5 | 30 | 30 | 2103-12-16.00 |
| 68,5 | 25,5 | 55,5 | 36 | 36 | 2103-12-20.00 |
| 74,5 | 26,5 | 58 | 41 | 46 | 2103-12-25.00 |
| 80,5 | 27,5 | 60,5 | 46 | 50 | 2103-12-30.00 |
| 91 | 29 | 65 | 55 | 60 | 2103-12-38.00 |

Options

| | |
|---|-----------|
| All sealing made of Viton with metal cap (when ordering, exchange end digits from 00 to 10) | 10 |
| With mounted plastic cap (when ordering, exchange end digits from 00 to 90) | 90 |
| All sealing made of Viton with plastic cap (when ordering, exchange end digits from 00 to 95) | 95 |

MINIMESS®-1620 Test Points Metric DKO 1620 Male/Female Tee Adaptors

For solder free screw-in pipe connections according to DIN 2353

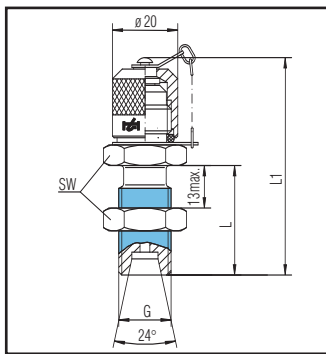


| Series | p max | G1 | D1 | G2 | D2 | SW | L | Part-number |
|--------|----------|------------|----|------------|----|----|------|---------------|
| L 6 | 31,5 MPa | M 12 x 1,5 | 6 | M 12 x 1,5 | 6 | 24 | 44,5 | 2103-KL-06.00 |
| L 8 | | M 14 x 1,5 | 8 | M 14 x 1,5 | 8 | 24 | 44,5 | 2103-KL-08.00 |
| L 10 | | M 16 x 1,5 | 10 | M 16 x 1,5 | 10 | 24 | 47,5 | 2103-KL-10.00 |
| L 12 | | M 18 x 1,5 | 12 | M 18 x 1,5 | 12 | 24 | 48,5 | 2103-KL-12.00 |
| L 15 | | M 22 x 1,5 | 15 | M 22 x 1,5 | 15 | 30 | 51,5 | 2103-KL-15.00 |
| L 18 | 16 MPa | M 26 x 1,5 | 18 | M 26 x 1,5 | 18 | 32 | 55,5 | 2103-KL-18.00 |
| L 22 | | M 30 x 2 | 22 | M 30 x 2 | 22 | 36 | 58,5 | 2103-KL-22.00 |
| L 28 | | M 36 x 2 | 28 | M 36 x 2 | 28 | 41 | 59 | 2103-KL-28.00 |
| L 35 | | M 45 x 2 | 35 | M 45 x 2 | 35 | 46 | 68 | 2103-KL-35.00 |
| L 42 | | M 52 x 2 | 42 | M 52 x 2 | 42 | 55 | 68 | 2103-KL-42.00 |

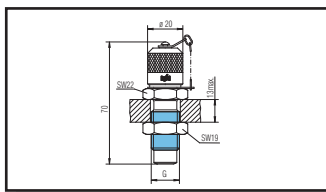
| Series | | G1 | D1 | G2 | D2 | SW | L | Part-number |
|--------|--------|------------|----|------------|----|----|------|---------------|
| S 6 | 63 MPa | M 14 x 1,5 | 6 | M 14 x 1,5 | 6 | 24 | 46,5 | 2103-KS-06.00 |
| S 8 | | M 16 x 1,5 | 8 | M 16 x 1,5 | 8 | 24 | 48,5 | 2103-KS-08.00 |
| S 10 | | M 18 x 1,5 | 10 | M 18 x 1,5 | 10 | 24 | 49,5 | 2103-KS-10.00 |
| S 12 | | M 20 x 1,5 | 12 | M 20 x 1,5 | 12 | 24 | 50 | 2103-KS-12.00 |
| S 14 | | M 22 x 1,5 | 14 | M 22 x 1,5 | 14 | 27 | 53,5 | 2103-KS-14.00 |
| S 16 | 40 MPa | M 24 x 1,5 | 16 | M 24 x 1,5 | 16 | 30 | 56,5 | 2103-KS-16.00 |
| S 20 | | M 30 x 2 | 20 | M 30 x 2 | 20 | 36 | 64,5 | 2103-KS-20.00 |
| S 25 | | M 36 x 2 | 25 | M 36 x 2 | 25 | 41 | 66 | 2103-KS-25.00 |

MINIMESS®-1620 Test Points 1620 Bulkhead Adaptors

For solder free screw-in pipe connections according to DIN 2353, to MINIMESS® - 1620 Test Points, NBR sealing



| Thread G | p max | Connectoin | L in mm | L ₁ in mm | SW in mm | Part-number |
|------------|----------|------------|---------|----------------------|----------|---------------|
| M 12 x 1,5 | 31,5 MPa | L 6 | 34 | 67 | 17 | 2103-04-22.00 |
| M 14 x 1,5 | | L 8 | 34 | 67 | 19 | 2103-04-23.00 |
| M 16 x 1,5 | | L 10 | 33,5 | 66,5 | 22 | 2103-04-18.00 |
| M 14 x 1,5 | 63 MPa | S 6 | 36 | 69 | 19 | 2103-04-24.00 |
| M 16 x 1,5 | | S 8 | 33,5 | 66,5 | 22 | 2103-04-25.00 |
| M 18 x 1,5 | | S 10 | 37 | 70 | 24 | 2103-04-26.00 |

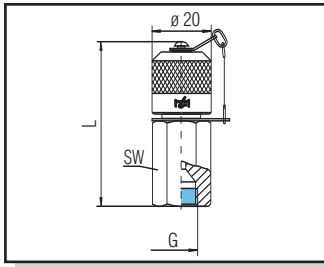


| Thread G | p max | Connectoin | Part-number |
|----------|--------|--|---------------|
| M 16 x 2 | 63 MPa | Both sides for MINIMESS® 1620 (M 16 x 2) | 2103-04-16.00 |

MINIMESS®-1620 Test Points

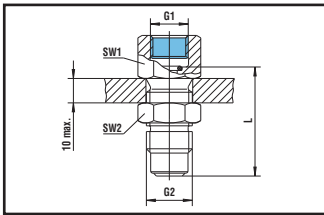
1620 Standpipe adaptor 37° - edged screwing SAE J514

NBR sealing



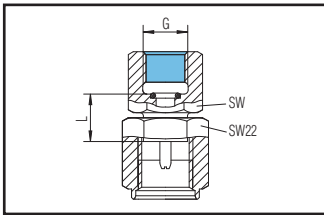
| Thread G | p max | Pipe Ø in mm | Pipe Ø in inch | L in mm | SW in mm | Part-number |
|-------------|----------|--------------|----------------|---------|----------|---------------|
| 7/16-20 UNF | 60 MPa | 6 | 1/4" | 55 | 17 | 2103-85-21.00 |
| 1/2 -20 UNF | 42 MPa | 8 | 5/16" | 56,5 | 17 | 2103-85-22.00 |
| 9/16-18 UNF | 31,5 MPa | 10 | 3/8" | 57,5 | 19 | 2103-85-23.00 |
| 3/4- 16 UNF | | 12 | 1/2" | 60,5 | 22 | 2103-85-24.00 |

MINIMESS®- pressure gauge connection for bulkhead fitting



| Internal thread G1 | p max | Connection G2 | L in mm | SW in mm | Note | Part-number |
|--------------------|--------|-----------------|---------|----------|----------------------|---------------|
| ISO 228-G 1/4 | 63 MPa | 1620 / M 16 x 2 | 38 | 19 | Without return valve | 2103-05-11.00 |
| ISO 228-G 1/2 | | | 42,5 | 27 | | 2103-05-12.00 |
| 1/4 NPT | | | - | 19 | | 2103-05-23.00 |

MINIMESS®-1620 pressure gauge – direct connection

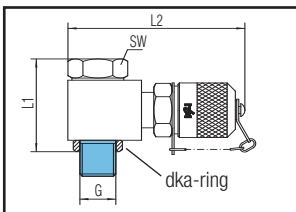


| Internal thread G | p max | L in mm | SW in mm | Part-number |
|-------------------|--------|---------|----------|---------------|
| ISO 228-G 1/4 | 63 MPa | 14,5 | 19 | 2103-07-11.62 |
| ISO 228-G 1/2 | | 17 | 27 | 2103-07-12.62 |
| 1/4 NPT | | - | 19 | 2103-07-23.62 |

MINIMESS®-1620

90° Swivel screw connection

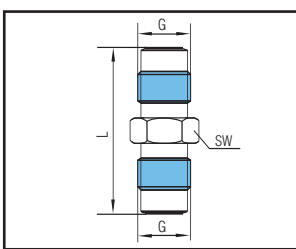
NBR sealing



| Thread G | p max | L ₁ in mm | L ₂ in mm | SW in mm | Part-number |
|---------------|--------|----------------------|----------------------|----------|---------------|
| ISO 228-G 1/4 | 63 MPa | 34,5 | 64,5 | 19 | 2115-22-34.00 |

Sealing on screw-in thread (hollow screw) via dka-ring, on hexagon via Gi-ring (NBR). Other options on request.

MINIMESS®-1620 hose adaptor

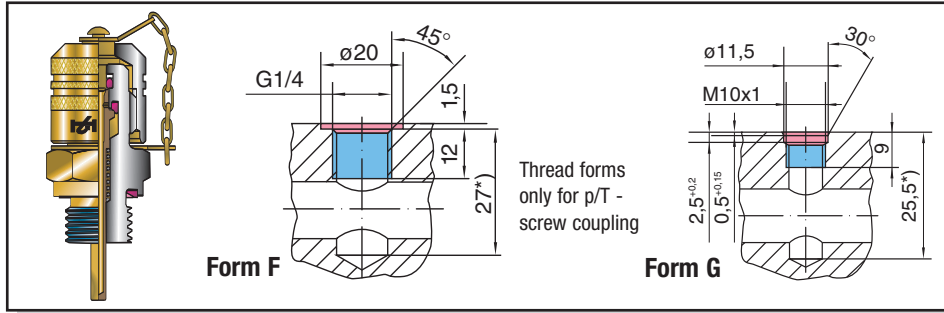
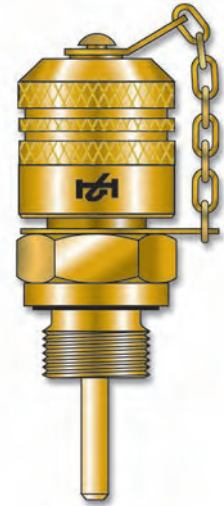


| Thread G | p max | L in mm | SW in mm | Note | Part-number |
|----------|--------|---------|----------|----------------------|---------------|
| M 16 x 2 | 63 MPa | 42 | 17 | Without return valve | 2146-01-00.00 |

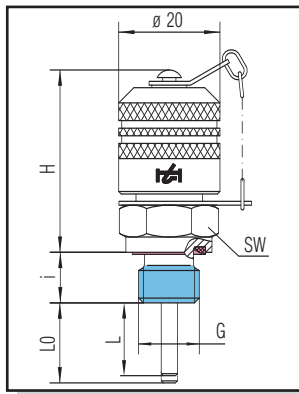
Other materials, further executions, sealing and screw-in threads on request.

MINIMESS®-1620 p/T Test Points

for pressure and temperature measurement



*) = recommended min. depth of drill



| Thread G | Type of sealing A | Torque in Nm | Technical data | | | | | | SW in mm | Part-number with NBR - sealing |
|---------------|-------------------|--------------|----------------|---------|---------|----------------------|---------|----|---------------|--------------------------------|
| | | | p max | H in mm | i in mm | L ₀ in mm | L in mm | | | |
| ISO 228-G 1/4 | Form F | 40 | 63 MPa | 36,5 | 10 | 16 | 14,5 | 19 | 2149-04-15.13 | |
| M 10 x 1 | Form G | 12 | | 38 | 8,5 | 16 | 14,5 | 17 | 2149-04-19.13 | |

L₀ = max. immersion depth in coupled state, L = not coupled state

Option

For FKM (Viton) - exchange end digits from 13 to 53

53

Other materials, further options, sealing and screw-in threads on request.
We reserve the right to carry out technical modifications.

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