1978 - 2025 FOR A CONSTANT IMPROVEMENT





CAST SPA ORGANIZATION



- Founded in Torino in 1978
- Owned by 3 shareholders
- Board: 6 members
- Volpiano Management and main Warehouse (7.000 sqm)
- Casalgrasso Production Plant (15.000 sqm)
- Expansion plan approved in Casalgrasso (100.000 sqm of owned land)
- Sales branches in Italy, France and Germany



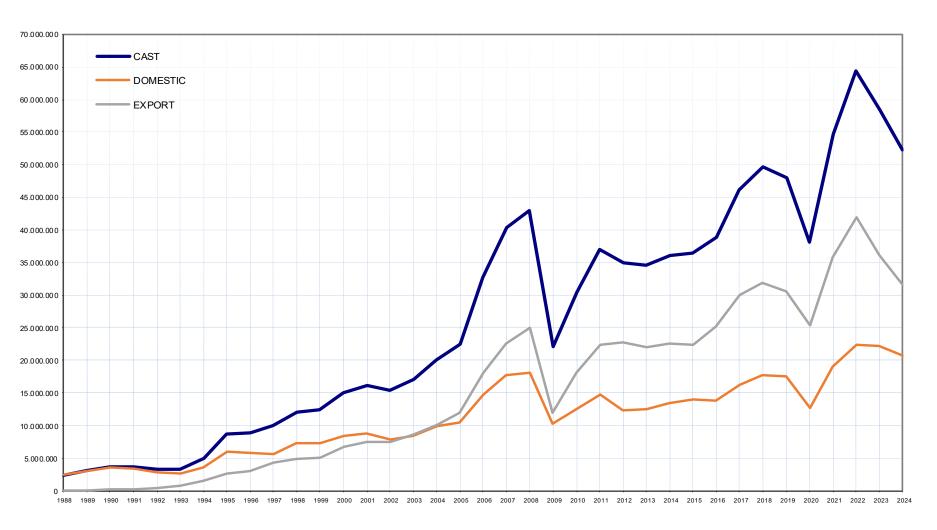
CAST SALES FIGURES



- Current Export Sales more than 60% of total turnover
- Distributors in about 70 countries worldwide
- Sales network mostly organized by partner area distributors
- Turnover record above 64 million Euro in year 2022
- Current employees: about 230



ANNUAL TURNOVER (EURO)





CAST PRODUCT RANGE



- DIN 2353 ISO 8434-1 Cutting ring fittings
- SAE J514 ISO 8434-2 JIC 37° fittings
- BS 5200 ISO 8434-6 Adaptors
- SAE J1453 ISO 8434-3 ORFS 90° fittings
- Check valves
- Available in carbon and stainless steel
- 100% made in Italy



CAST PRODUCT RANGE



- SAE J516 ISO 12151 Hose fittings Standard range and Interlock range In carbon and stainless steel 100% made in Italy
- Hydraulic hoses made by Semperit and branded CAST Braided hoses 1SN, 2SN, 1SC, 2SC Spiral hoses 4SP, 4SH, R13 Thermoplastic hoses R7



COMPANY QUALITY

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- ISO 9002 certified in 1994 by Registro Italiano Navale RINA
- ISO 9001 certified in 1997
- Confirmed and upgraded ISO 9001:2015



COMPANY QUALITY



- Certified ISO 14001:2015 by RINA Environmental Management System
- Certified ISO 45001:2018 by RINA Health and Safety Management System





Certified for DIN 2353 fittings in carbon steel and stainless steel by:

RINA Registro Italiano Navale

DNV-GL Det Norske Veritas

ABS American Bureau of Shipping

LR Lloyd's Register

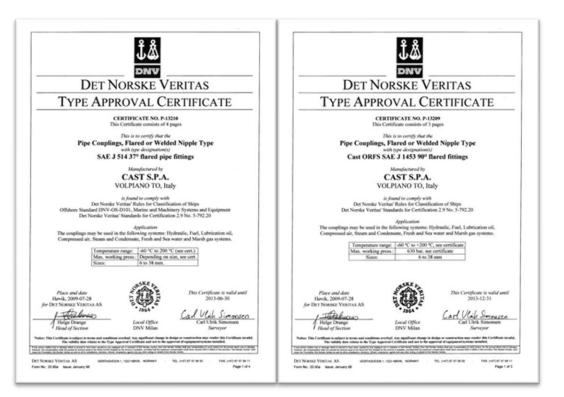
CCS China Classification Society





Certified by DVGW for DIN 2353 fittings in stainless steel for gas applications





Certified by Det Norske Veritas DNV for:

- SAE J514 JIC - SAE J1453 ORFS

in carbon steel and stainless steel





- Certified by Bureau Veritas BV and Det Norske Veritas DNV for carbon and stainless steel hose fittings assembled with spiral hoses branded Cast and Semperit
- Certified MED-B and MED-D by DNV-GL



PRODUCTION AND QUALITY



- One production plant of 15.000 sqm (expansion in progress)
- Hi Tech production machines
- More than 80 million pieces produced per year
- Few subcontractors in Italy working for us according to our specifications
- ISO 9001 working procedures
- Quality checks made following all the various production phases



MATERIAL QUALITY ASSURANCE

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- Raw materials of European origin
- Suppliers ISO 9001 certified
- Quality guaranteed by suppliers' reports and certificates
- Documentation (material certificates 3.1 and 2.2) available for customers upon request at any time

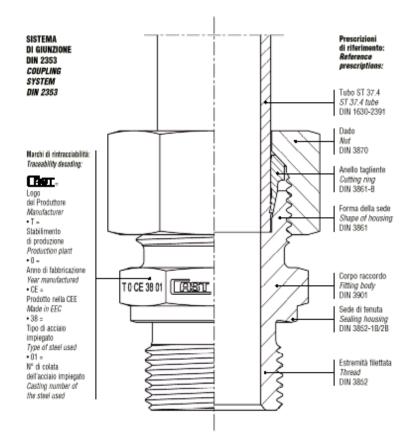
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- No internal treatment facilities
- Fe/Zn 8/C/T2 ISO 2081 ISO 4520
- Ecological "White plating" Cr6free with Topcoat
- Min thickness 8 micron
- About 400 hours against white rust and 750 hours against red rust in standard salt spray test according to ISO 9227



TRACEABILITY CODES



- All articles marked by a traceability code providing all the information concerning production
- All data recorded at least 10 years
- Easy way to find responsibilities



TRACEABILITY CODES

- Manufacturer's name (CAST logo)
- Production plant
- Year of manufacture
- General type of steel
- Heat number of steel
- UE production (CE)
- All data displayed on the 3.1 certificates of the raw steel bars and forgings



• C T 0 CE 38 01



MATERIALS

- Carbon steel 11SMnPb37/30 - 1.0737/1.0718 UNI EN 10087 28SMnPb28 - PR60 Temperature range from -40°C to +120°C
- Stainless steel X6CrNiMoTi17-12-2 - 1.4571 (AISI 316 Ti) UNI EN 10088-3 Temperature range from -60°C to +200°C
- NBR

Temperature range from -40°C to +100°C

• FKM (Viton) Temperature range from -25°C to +200°C



ADVISED TUBES

Carbon steel

Calibrated, cold-drawn weld-free pipes, standardized with inert gas, made of material E235 according to EN 10305-4 (ST 37.4 according to DIN 1630 / DIN 2391). Maximum hardness 75 HRB. Temperature -40°C and +120°C.

• Stainless steel

Calibrated and polished pipes, cold drawn without welding, in material 1.4571 according to EN 10216-5 table 6, or ASTM 269, with dimensional tolerances according to EN 10305-1. Maximum hardness 85 HRB. Temperature -60°C and +200°C.



CAST CODES

Six digit	part numbers:
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•	First	digit	indicates	the	product type:
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- 1 DIN 2353 fittings
- 2 SAE J514 JIC fittings
- 3 BS 5200 adaptors
- 4 SAE J1453 ORFS fittings
- 5 Check valves
- 6 DIN 2353 DKO fittings
- 7 hose fittings (obsolete)
- 8 hose fittings (new)
- Second digit indicates the material
- 0 Carbon steel
- 1 Stainless steel
- Third and fourth digits indicate the shape
- Fifth and sixth digits indicate the size

Suffixes: .1 indicates DIN fittings body only .3 indicates standard JIC fittings .4 indicates DIN fittings assembled with B4 rings

Examples 103507 113507.1 103507.4 200305.3 310504 400106 800555

Hoses: 73..



FITTINGS DIN 2353



- The standard DIN 2353 technology (B3 ring)
- The new DIN 2353 patented leakage free technology (B4 ring)
- WP up to 800 bar, SF 4:1
- About 50% of CAST sales volumes

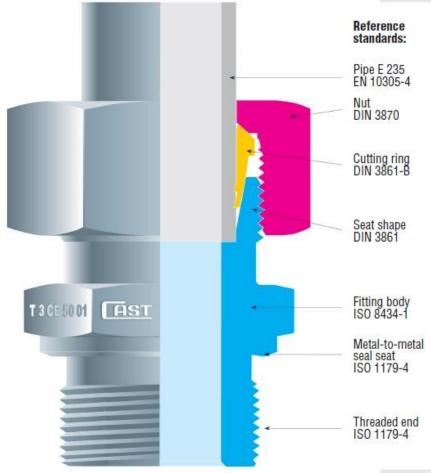


FITTINGS DIN 2353

Type of connection made of four components, where a steel tube is connected at 24° to the body of a fitting by means of a cutting ring and a nut.

- The ring must be pre-assembled onto the tube and checked for approval.
- Then, the final assembly with the nut can be performed.

It is mandatory to do the visual inspection of the ring after the preassembly, to avoid possible accidents during working under pressure.





RINGS GENERAL ASSEMBLY (DIN 3859-2)

- Lubricate 24° cone, thread, ring and nut
- Fit nut and ring onto the tube, insert tube into 24° cone
- Tighten nut by hands and then with wrench for 1 ¹/₄ of a turn
- Open and check the edge covering 80% of ring front
- Close nut until resistance is felt
- Close with a wrench by 1/4 of a turn

Use pre-assembly manual blocks, especially for stainless steel parts



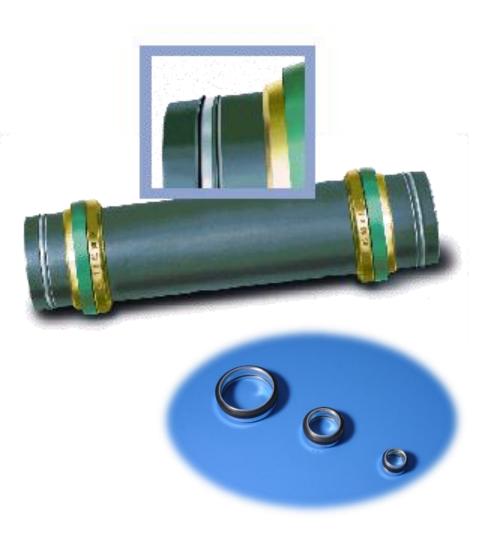
B3-B4 RINGS ASSEMBLY (CAST)

- Lubricate 24° cone, thread, ring and nut
- Fit nut and ring onto the tube, insert tube into 24° cone
- Tighten nut by hands and then with wrench until tube stops rotating
- Holding the tube, tighten nut with wrench ³/₄ of a turn
- Open and check the edge covering 80% of ring front
- Close nut until resistance is felt
- Close with a wrench by 1/4 of a turn

Use pre-assembly manual blocks, especially for stainless steel parts



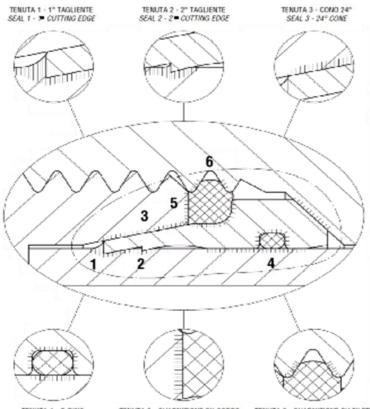
CAST B4 PATENTED RING



- Fully interchangeable
- Standard assembly
- DNV Homologated
- Complying to the Norm



CAST B4 MAIN FEATURES



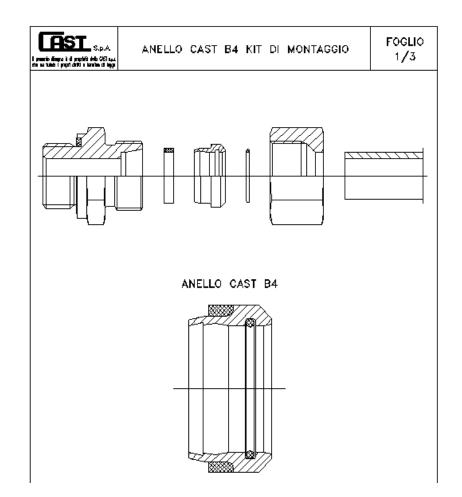
TENUTA 4 - O-RING SEAL 4 - O-RING TENUTA 5 - GUARNIZIONE SU CORPO SEAL 5 - WASHER ON BODY

TENUTA 6 - GUARNIZIONE SU FILETTO SEAL 6 - WASHER ON THREAD

- Double edge cutting ring with 6 sealing points
- Single metal component
- Metal to metal sealing with additional rubber sealing
- Rubber sealing not in direct contact with oil
- Standard assembly according to DIN 3859-2
- Easy check of proper biting into the tube
- Unthreading feature
- Vibration damping
- Perfect interchangeability
- Multiple assemblies
- Inexpensive product

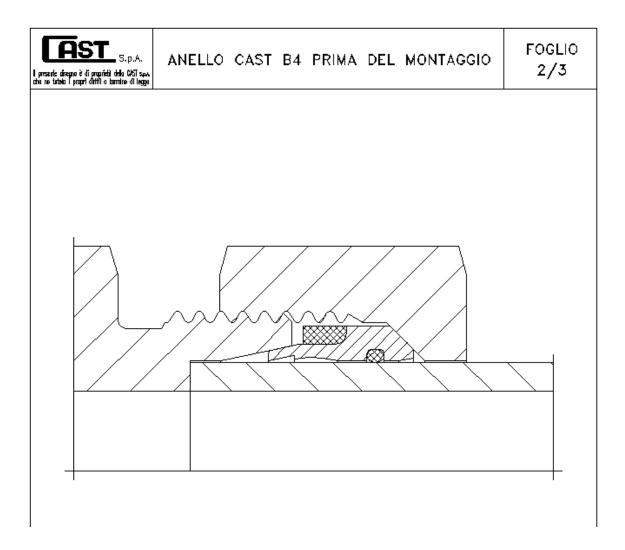


CAST B4 ASSEMBLY KIT



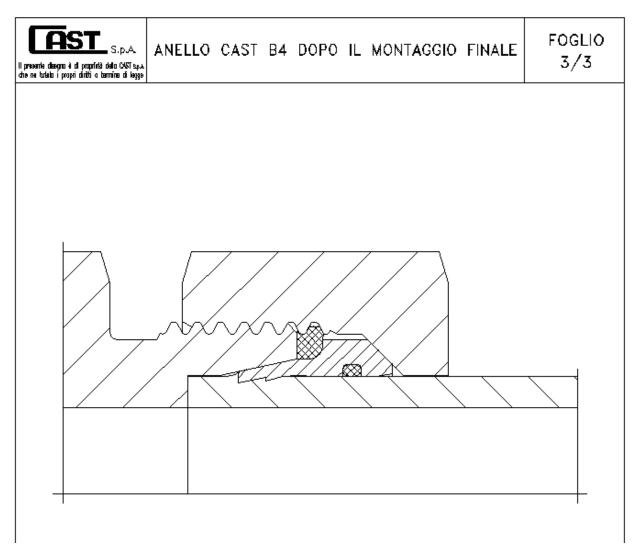


CAST B4 BEFORE ASSEMBLY





CAST B4 ASSEMBLED

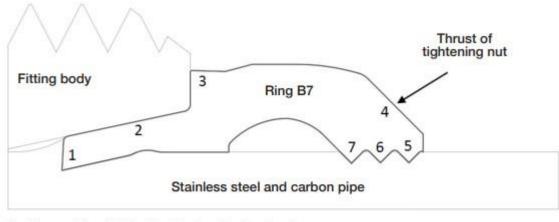




CAST B7 PATENTED RING





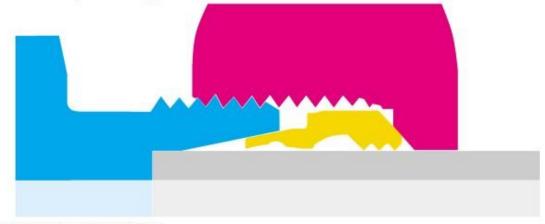


Sealing points "B7" 1-2-3-4-5-6-7

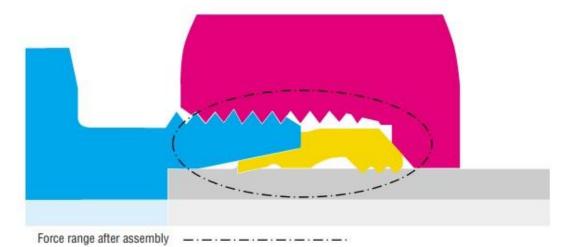


CAST B7 PATENTED RING

Before assembly on the metal pipe



After assembly on the metal pipe





B7 RING ASSEMBLY (CAST)

- Lubricate 24° cone, thread, ring and nut
- Fit nut and ring onto the tube, insert tube into 24° cone
- Tighten nut by hands and then with wrench until you feel a very high resistance and the shoulder of the ring gets in touch with the front of the fitting
- Open and check the ring does not move longitudinally and it is in touch with the body
- Tighten nut until some resistance is felt
- Tighten with a wrench by 1/4 of a turn

Use pre-assembly manual blocks, especially for stainless steel parts



FITTINGS DIN 2353

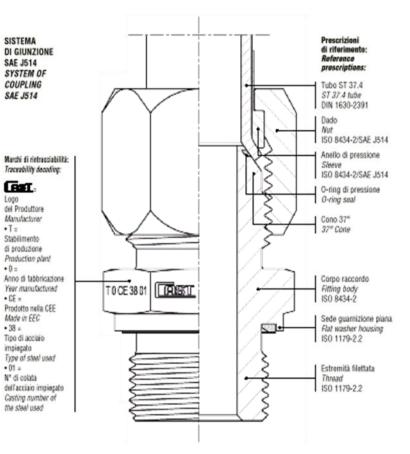
- Very high pressure (up to 800 bar)
- Very good sealing properties
- Dangerous if not assembled properly because the tube can slip away (the ring is critical)
- Complicated assembly procedure
- Metric pipes from 4 to 42 mm
- Metric parallel thread on pipe side
- Price level: average
- Popularity: very common, especially in Europe





FITTINGS SAE J 514 – JIC 37°





WP up to 450 bar, SF 4:1

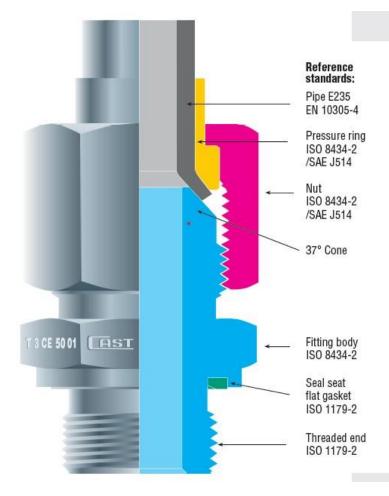


FITTINGS SAE J 514 – JIC 37°

Type of connection made of four components, where a steel tube is connected to the body of a fitting by means of a sleeve and a nut.

The tube must be flared at 37° before being put over the front of the body of the fitting carrying the sleeve and the nut.

The connection is then made by screwing the nut, holding the tube between the body and the sleeve.





FITTINGS SAE J 514 – JIC 37°

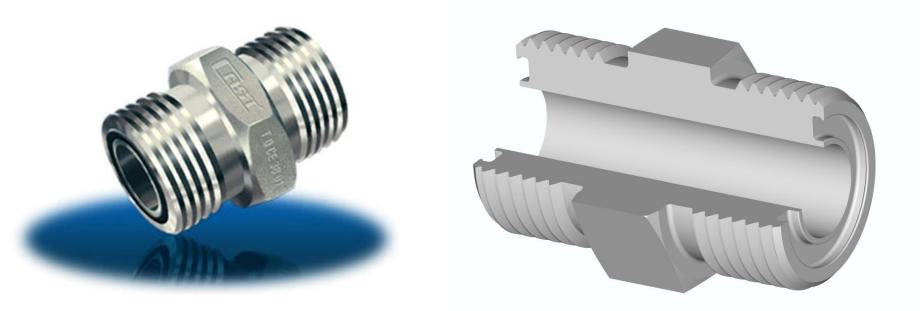
- Medium pressure (up to 450 bar)
- Good sealing properties
- Relatively dangerous if not assembled properly, because the tube cannot slip away
- Not complicated assembly procedure
- Metric and imperial pipes (6 38 mm; ¹/₄ 1 ¹/₂ inch)
- UNF thread on pipe side
- Price level: low
- Popularity: very common, especially in America







FITTINGS SAE J1453 – ORFS 90°



O-ring groove made according to best and modern technical knowledge to avoid leakage and o-rings' falling from seat (captive groove - CORG) WP up to 630 bar, SF 4:1



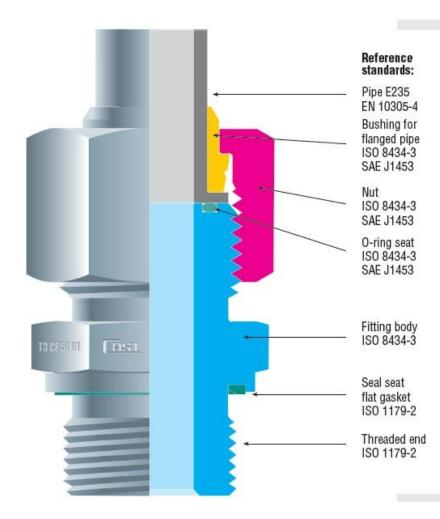
FITTINGS SAE J 1453 – ORFS 90°

Type of connection made of four components, where a steel tube is connected to the body of a fitting by means of a sleeve and a nut.

The tube must be flared at 90° before being put over the front of the body of the fitting carrying the sleeve and the nut.

The connection is then made by screwing the nut, holding the tube between the body and the sleeve.

The oring of the body is fundamental for the sealing.



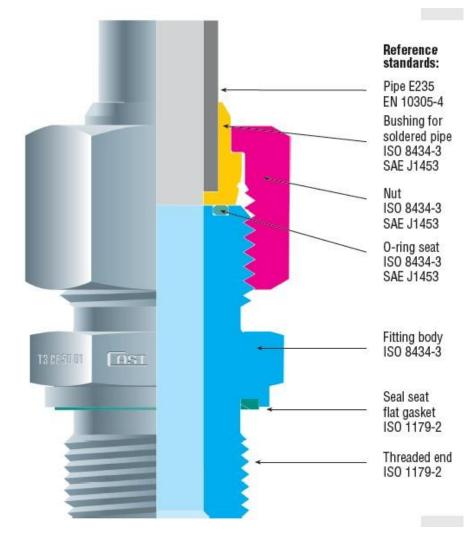


FITTINGS SAE J 1453 – ORFS 90°

As alternative, which allows avoiding to flare the tube at 90°, a special sleeve can be brazed onto the tube.

In this case the sealing is not made by the contact of the wall of the tube and the oring of the front of the fitting but by the brazed sleeve in touch with the oring.

Also in this case, the oring of the body is fundamental for the sealing.





FITTINGS SAE J1453 – ORFS 90°





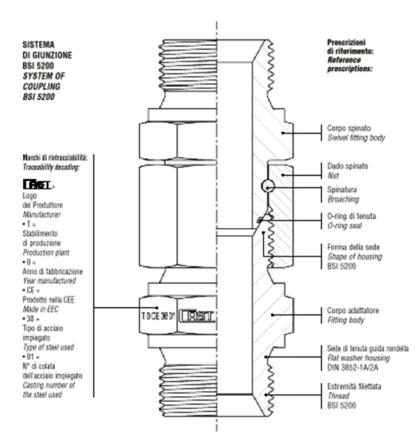
- High pressure (up to 630 bar)
- Very good sealing properties
- Relatively dangerous if not assembled properly because the tube cannot slip away
- Not complicated assembly procedure
- Metric and imperial pipes (6 38 mm; ¹/₄ - 1 ¹/₂ inch)
- UNF thread on pipe side
- Price level: very high
- Popularity: average, especially in America



ADAPTERS BS 5200



WP up to 400 bar, SF 4:1

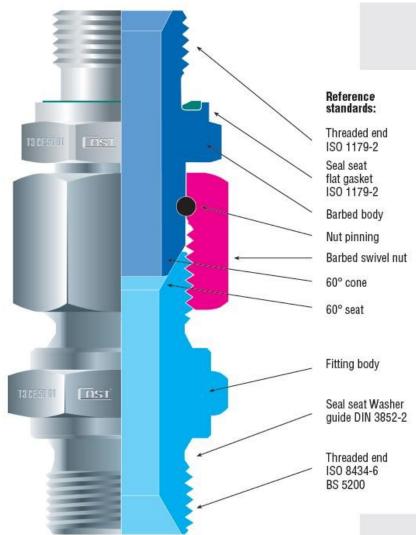




ADAPTERS BS 5200

Type of connection which involves threaded components only and no tubes.

It is used to connect fittings and threaded ports, often extending lengths, adapting threads, going from male to female or the other way round.





ADAPTERS BS 5200

- Medium pressure (up to 400 bar)
- Good sealing properties
- Relatively dangerous if not assembled properly
- Not complicated assembly procedure
- Not assembled on pipes
- Threads Metric, BSPP, BSPT, NPT
- Price level: low
- Popularity: very common





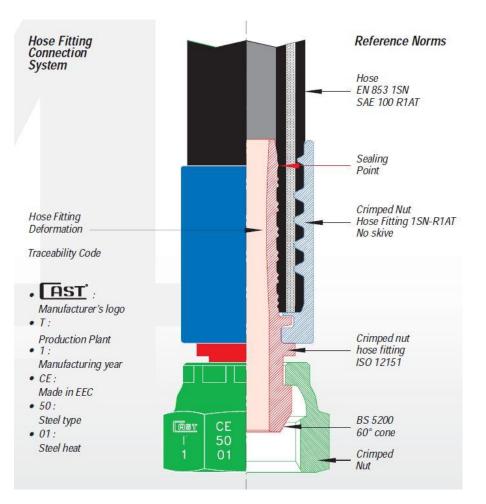
HOSE FITTINGS AND HOSES



- Manufacturer of full range of standard hose fittings since 2004
- New range C4 since 2012
- Interlock range since 2013
- Stockist of hydraulic hoses made by Semperit
- Stockist of thermoplastic hoses



HOSE FITTINGS RANGE C4



- CAST design of ferrules and tails
- Sealing improvement
- Cast design
- 80 series replacing old 70 series
- Cost saving
- Standard series for braided and spiral hoses
- Interlock series for spiral hoses