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Connection Solutions for Medical Processes and Appliances



Parker Legris connectic

products are available from

MARYLAND METRICS

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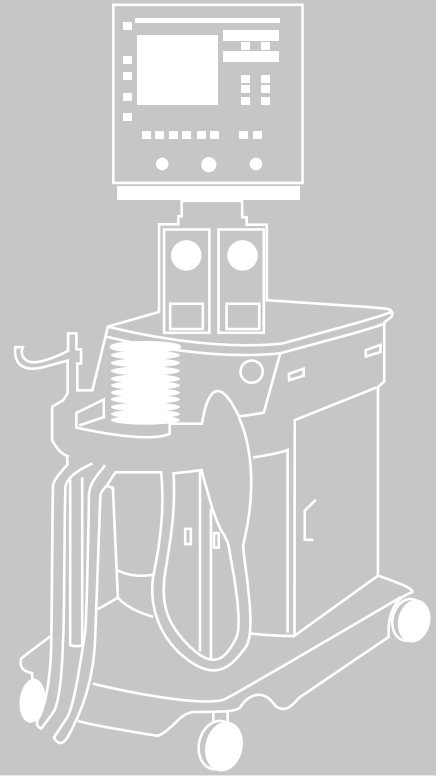
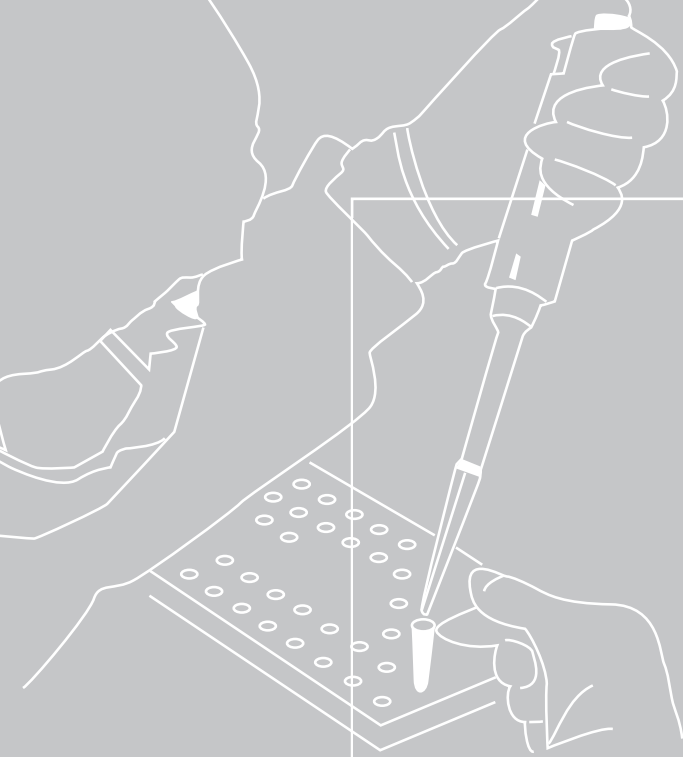
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ENGINEERING YOUR SUCCESS.



**Medical material:
anaesthesia machines,
individual respirators,
MRI systems,
dental chairs**



**A complete range of components
meeting the requirements of
medical processes and appliances**



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Products meeting the requirements of respiratory and anesthesia equipment.



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Robust and corrosion-resistant products, suitable for conveying all types of fluids.

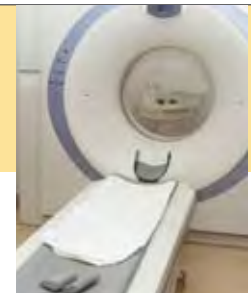


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Our Solutions for **Compressed Air and Cooling**

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Compact products with widely acknowledged technical performances.



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Fittings Suited to the Various Constraints of Medical Equipment

Inventor of the instant fitting, with more than 40 years of experience in the manufacturing and marketing of high quality fittings, Legris offers a wide range of proven solutions in various medical environments: bio-medical equipment, breathing systems, diagnosis devices, pharmaceutical processes...

Transfer of Breathable Gases



Types of Applications

- Equipment and material ensuring the transfer of breathable gases enriched in oxygen, possibly containing anaesthetic gases.

Requirements for all Components

- Suitable for use with O₂.
- Reliable and efficient.
- Thanks to their hygienic design, all components are suitable for use with food supply devices.

Sensitive and Aggressive Environments



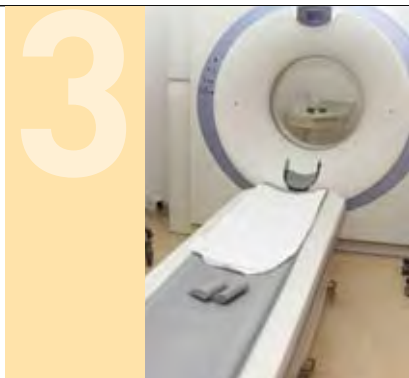
Types of Applications

- Transportation of fluids that might be in contact with the patient from: humidifiers, water treatment, dental equipment, ophthalmology...
- Cleaning and sterilization equipment, bio-reactors.

Requirements for all Components

- Mechanical, chemical and sterilization resistant.
- Reliable and robust technology.
- Suitable for use with food supply devices.

Medical and Compressed Air Devices



Types of Applications

- Input/output devices for medical equipment and cooling devices.
- Pneumatic circuits and automation.

Requirements for all Components

- Reliability and superior technical performance.
- Flexibility of the installations: instant connection/disconnection.
- Compactness and vacuum resistance.



Product Ranges

- A wide range of instant fittings, tubes, ball valves, compression fittings.
- Compatible with oxygen (AC851 OX), cleaned and assembled in a controlled environment (ASTM G93-93 class B), individually tested, dated and packed.



Product Ranges

- Stainless steel LF 3800 fittings, or nickel-plated brass LF 3600: resistant to high pressures, temperatures and sterilization; suitable for use with food supply devices.
- LIQUIfit high resistance polymer fittings: very good chemical resistance, compact and lightweight; suitable for use with water and beverages.
- Associated tubes, ball valves and accessories.







Product Ranges

- Extremely compact products allowing micro-pneumatic applications.
- A quick and reliable gripping system, unitary testing of the products, resistance to high pressures and temperatures.





POLYMER INSTANT FITTINGS		
LF 3000, MD* SUFFIX		
THREADED FITTINGS	TUBE TO TUBE FITTINGS	TUBE TO TUBE FITTINGS
 3101 male stud fitting	 3100 cartridge	 3142 plug-in "y" piece Ø4 to Ø10
 3199 male stud elbow	 3104 equal tee	 3182 plug-in elbow Ø4 to Ø10
 3109 male stud elbow	 3102 equal elbow Ø4 to Ø12	 3144 multiple "y" piece Ø4 to Ø10
 3193 male stud run tee	 3140 single "y" Ø4 to Ø12	 3166 reducer Ø4 to Ø10
 3114 female stud fitting	 3183 plug-in tee Ø4 to Ø12	 3304 unequal multiple tee Ø4 to Ø10
 3118 single banjo	 3180 plug-in 45° equal elbow	 3130 tamper-evident safety clip

NICKEL-PLATED BRASS INSTANT FITTINGS
LF 3600, MD* SUFFIX
 3601 male stud
 3693 male stud run tee
 3699 male stud elbow Ø4 to Ø12
 3600 cartridge Ø4 to Ø12

COMPRESSION FITTINGS
MD* SUFFIX
 0105 male stud coupling
 0109 male stud elbow
 0118 single banjo Ø4 to Ø12
 0106 equal straight coupling Ø4 to Ø12
 0104 equal tee Ø4 to Ø12
 0102 equal elbow Ø4 to Ø12

SECURE YOUR CONNECTION WITH THE TAMPER-EVIDENT SAFETY CLIP



POLYMER INSTANT FITTINGS
Working pressure: 20 bar maximum Vacuum: 99% Temperature range: -20°C to +80°C Available diameters: 4 to 10mm Available threads: M5 to 1/4 ASTM G93-93 cleanliness B BAM certificate

NICKEL-PLATED BRASS INSTANT FITTINGS
Working pressure: 30 bar maximum Vacuum: 99% Temperature range: -20°C to +150°C Available diameters: 4 to 8mm Available threads: M5 to 1/4 ASTM G93-93 cleanliness B BAM certificate

*MD: Suffix for designating medical product ranges

Conveying Breathable Gases



NICKEL-PLATED BRASS BALL VALVES	
MD* SUFFIX	
 0414 double compression connection	 0401 male female
 0402 double female BSPP	 0469 double female vented BSPP
 0452 3-way panel mountable female BSPP	 0446 double female panel mounted

TUBES	
FEP	POLYETHYLENE(2)
 1005T 1025T	 1025Y 1100Y
CRYSTAL POLYETHER POLYURETHANE(1)	BRAIDED PVC
 1025U..R 1100U..R	 1025V 1050V

- (1) Authorized for contact with dry or temporarily moist foodstuffs (10 minutes maximum).
 (2) Authorized for contact with foodstuffs, but sensitive to very aggressive chemical cleaning agents.

COUPLERS
MD* SUFFIX
 9201 male parallel body
 9214 female parallel body
 9287 male parallel probe
 9286 female body BSP parallel
INTERNAL Ø Series X20* 2,7 mm Series X21* 5 mm Series X25* 7,4 mm



NICKEL-PLATED BRASS BALL VALVES
Working pressure: 20 to 40 bar according to the product type Vacuum: 99% Temperature range: -20°C to +80°C BAM certificate

TUBES
Working pressure: 8 to 27 bar according to material and diameter Vacuum: 99% Temperature range: -20°C to +150°C FDA approved

COUPLERS
Working pressure: 35 bar maximum Temperature range: -15°C to +200°C Available threads: M5 to 1/2



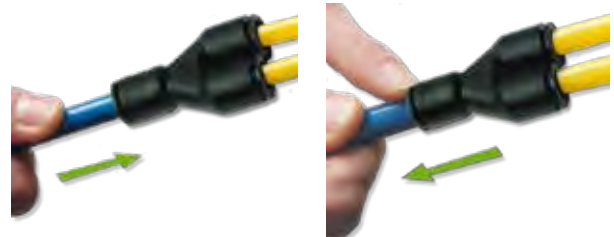
LF 3000 Instant Fittings

A range of fittings for conveying oxygen-enriched gases, **allying reliability,** performance and compactness.

Our Solutions for

A Reliable and Hygienic Product, **Compatible With O₂**

- Assembly in a controlled environment (ASTM G93-93 class B)
- Degreasing and cleaning of all pieces
- Use of an AC 851 OX grease
- Individual unit quality control and dating in order to guarantee quality and traceability of the components
- Individual airtight packaging
- A safety clip preventing any unwanted disconnections



Simply push the tubing until it can go no further. Holding and sealing are accomplished instantaneously.

First depress the manual release button, then pull the tubing out of the fitting.

> Assembly of the Tamper-Evident Safety Clip



Assemble the clip / Connect the tube



Cut the clip with pliers / Remove the clip / Release the tube

A Comprehensive Range

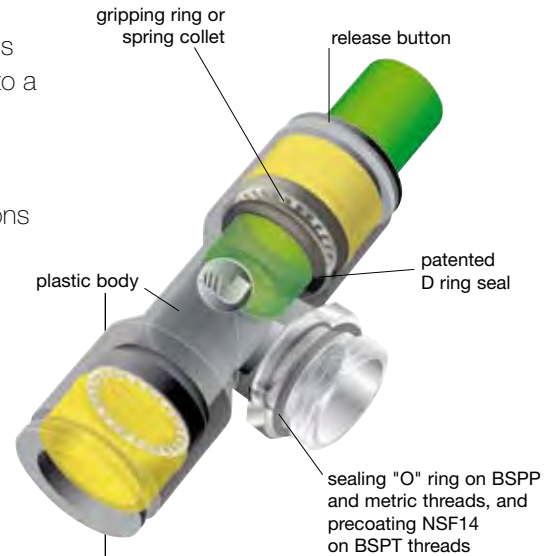
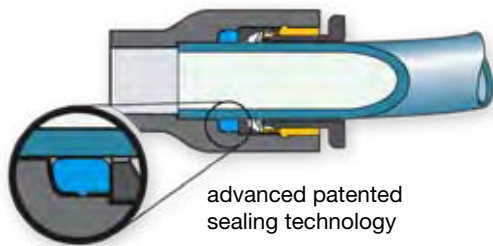
- A tamper-evident security clip to secure your connections (must be cut with pliers to disconnect)
- 17 different product shapes from Ø4 to Ø10; thread from M5 to 1/4; tapered or parallel
- Special product capability (filters, check valves...)
- 6 colors to identify circuits

Conveying Breathable Gases



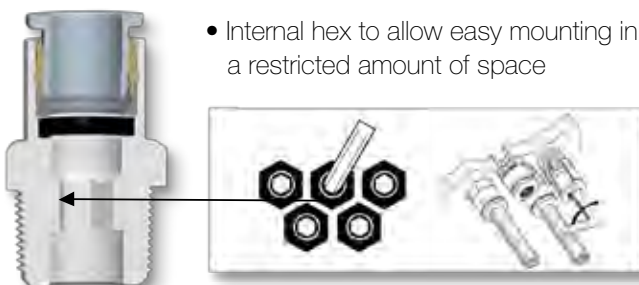
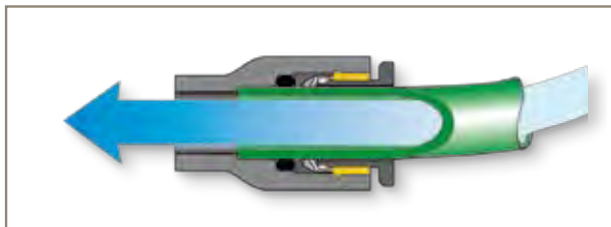
A Reliable Product

- A robust gripping system with more than 20 years' use in such applications, with excellent tear resistance during cyclic pressure tests
- Proven gripping technology and long-lasting sealing for soft polymer tubes (min. hardness 58sh) and stainless steel tubes (with preparation) thanks to a patented technology
- Technical material resistant to chemical aggressions and shocks
- An aesthetically pleasing and compact fitting with small housing dimensions



Innovative Design

Convenient compact full flow profile: as gripping and sealing within the fitting are achieved using the outside of the tube, there is no flow restriction. The smallest orifice inside the fitting is equal to or larger than the internal diameter of the tube.



Individual Testing

- Traceability according to ISO 9001
- FMEA analysing (rest course)
- The Parker Legris production process includes individual testing (at 0,05nl/h at 5,5 bar), unit quality control and dating for all instant fittings, in order to guarantee their quality and traceability



2

Our Solutions for Aggressive



STAINLESS STEEL 316L RANGES

LF 3900

INSTANT FITTINGS



3905 / 3901
taper and parallel



3909 / 3999
taper and parallel



3989 / 3979
taper and parallel
[*20 bar]



3906
Ø4 to Ø12



3916
IP51



3908/3998
taper and parallel

INSTANT FITTINGS



3902
Ø4 to Ø12



3904
Ø4 to Ø12

FUNCTION FITTINGS



7810
flow regulator parallel



4892
non-return valve parallel

316L COMPRESSION FITTINGS



1804
equal tee



1806
equal connector



1809
male stud elbow NPT

BALL VALVES



4812
Ø4 to Ø10



4810
Ø4 to Ø10

ACCESSORIES



1844
equal male stud elbow

ACCESSORIES



1817
bulkhead adaptor



1863
reducer



1861
increaser
Ø4 to Ø12



1821
male adaptor
Ø4 to Ø10



1822
tailpiece adaptor
Ø4 to Ø10



1823
tailpiece adaptor
Ø4 to Ø10

NICKEL-PLATED BRASS INSTANT FITTINGS

LF 3600

INSTANT FITTINGS



3675
male stud
BSP taper



3601
parallel and metric



3614
threaded fitting
female stud



3609
threaded fitting
male stud elbow



3699
parallel and metric

INSTANT FITTINGS



3608
taper



3606
Ø4 to Ø14



3602
Ø4 to Ø14



3604
Ø4 to Ø14



3616
IP51
Ø4 to Ø14

INSTANT FITTINGS



3639
equal bulkhead
elbow



3616
equal bulkhead
connector

INSTANT FITTINGS

Working pressure: 30 bar maximum
Vacuum: 99%
Temperature range: -20°C to +120°C
Available diameters: Ø4 to Ø12
Available threads: M5 to 1/2

INSTANT FITTINGS

Working pressure: 30 bar maximum
Vacuum: 99%
Temperature range: -20°C to +120°C
Available diameters: Ø4 to Ø12
Available threads: M5 to 1/2

* Please consult our technical department for higher temperature resistance

FUNCTION FITTINGS













Flow control regulators: Working pressure: 1 to 10 bar / 1 to 16 bar (7820)
Temperature range: 0°C to +70°C / -15°C to 120°C (7820)
Available threads: M5 to 1/2

Non-return valves: Working pressure: 0,5 to 40 bar
Temperature range: -20°C to +180°C
Available threads: 1/8 to 1"

Sensitive and Environments



NICKEL-PLATED BRASS RANGES		
COUPLERS	ACCESSORIES	BALL VALVES
 9201 male parallel body	 0915 parallel and metric	 4902 double female
 9214 female parallel body	 0158 parallel and metric	 0402 double female
 9287 male parallel probe	 0220 male plug	 0439 double female with vent
 9233 body with barbed fitting	 0222 threaded plug	 0414 in-line ball valve
 9226 body with barbed fitting, panel mountable	 0205 brass hexagon	 0471 male and female
 9285 probe with barbed fitting	 0920 female bulkhead connector	 0489 in-line vented ball valve
ACCESSORIES		
 0912 female parallel and metric	 0931 tailpiece adaptor	 0491 male and female
	FUNCTION FITTINGS	
 0913 male taper female parallel	 7130 parallel and metric	

BIO-POLYMER INSTANT FITTINGS	
LIQUIFIT	
THREADED	TUBE TO TUBE
 6305 male connector	 6302 union elbow
 6379 fixed elbow	 6306 union connector
 6315 female connector	 6304 union tee
 6309 swivel elbow	 6316 bulkhead union
 6308 swivel branch tee	 6340 two-way divider
 6321 stem adaptor	 6382 plug-in elbow

WORKING PRESSURES AND TEMPERATURES	
4,6,8 mm-:	16 bar from -10° to 40°C
1/4"-5/32"-5/16"	10 bar at 65°C 4 bar at 95°C
10 mm-3/8" :	13 bar from -10° to 40°C 7 bar at 65°C 4 bar at 95°C
12 mm-1/2" :	11 bar from -10° to 40°C 7 bar at 65°C 4 bar at 95°C

TUBING
 1025U 1100U
 1025U..R 1100U..R
 1005T 1025T
 1025Y 1100Y
 1001
TUBING
External diameters: Ø4 to Ø14

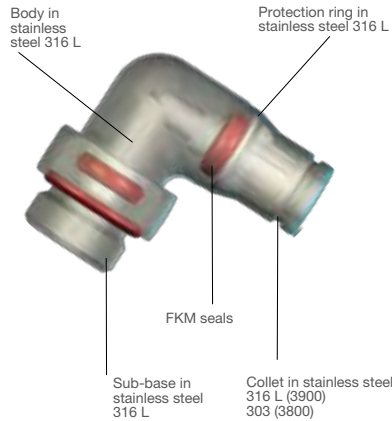


LF 3900
LF 3600
LIQUIfit

Our Solutions for Aggressive

Stainless Steel Instant Fittings: Combining Robustness

LF 3900 / 3800

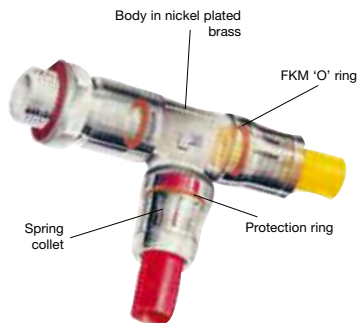


The Largest Range on the Market

- **2 new product ranges for demanding conditions of use:**
 - **LF 3900:** a range of instant fittings in full 316L stainless steel, with FKM seals, for optimum resistance to aggressive environments.
 - **LF 3800:** a range of instant fittings in full 316L stainless steel (except for the collet in 303), with FKM seals, for elemental chemical resistance and competitive price positioning.
- **21 different product shapes**, diameters from 4mm to 12mm, threads from M5 to 1/2.
- **2 thread types: taper and parallel.**
- **Compatible fluids:** all fluids compatible with fitting and tubing materials

Nickel-Plated Brass Instant Fittings: Combining Robustness

LF 3600

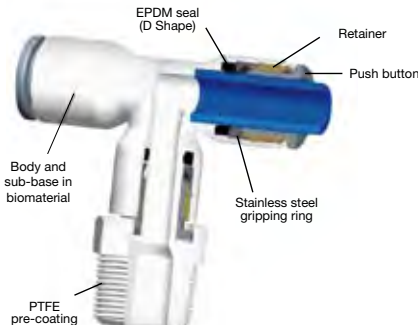


Wide Range

- **Multiple configurations.**
- **From Ø 4mm to 14 mm.**
- **BSP taper, BSP parallel and metric threads.**
- **Ideal for many types of technical tubes.**
- **Innovative cartridge system.**
- **Imperial to metric tube adaptors.**
- **Compatible fluids:** all liquids and gases compatible with the materials of the fitting. Examples: liquid foods, cleaning detergents, hot and cold water, steam, oils...

Bio-Polymer Fittings: Dedicated to the Transportation of

LIQUIfit™



A Complete Range

- **Wide range of shapes.**
- **For metric tubes:** 4, 6, 8, 10, 12 mm.
- **For inch tubes:** 1/4», 5/32», 5/16», 3/8» and 1/2».
- **BSPT / NPT threads** 1/8» to 1/2».
- **Innovative cartridge system.**
- **Ball valves, non-return valves (NRV).**
- **300 product references**
- **Compatible fluids:** Water, beverages, food, CO₂...

Sensitive and Environments



and Hygienic Design

Reliable and Robust Design

- **Proven gripping technology:**
 - The collet guarantees excellent gripping and improved pull out forces for soft and stainless steel tubing.
 - The collet is resistant to mechanical shocks and prevents fluid hammer, in particular when using metallic (pre-grooved) tubing.
- **100% control of manufactured components** in order to guarantee quality, traceability and performance.
- **FKM seal** resistant to the majority of aggressive chemicals.
- **Pressure rating:** 30 bar, temperature capability: 120°C, continuous.

(for use at 150°C: please consult us)

Hygienic Design

- Nutrient-grade materials and H1 grease conforming to FDA and 1935/2004/EC standards, permitting permanent contact with food.
- A very smooth surface design aimed at reducing retention zones for safe and easy cleaning.

and Reliability

Increased Performance

- **Excellent resistance** to abrasion and corrosion due to high phosphorus chemical nickel plating providing chemical resistance and (temporary) food contact; FDA + EC certification.
- **Working temperature** from -20°C to + 150°C due to "all metal" components.
- **Full flow** fluid passage, minimal pressure drop.
- **Automatic sealing** of BSPP and metric versions via an integrated FKM seal in sub-base.

Superior Quality

- **Very robust** and reliable gripping due to spring collet gripping system.
- **HACCP** - improved product with particularly long threads to resist shocks, stress and vibrations.
- **100 % control** of manufactured components in order to guarantee quality, traceability and performance.

Beverages

Superior Technical Performance

- **Working pressure** up to 16 bar (40°C).
- **Resistance to high temperatures:** 95°C.
- Guaranteed static and dynamic sealing, thanks to excellent tube guidance and unique D design seal profile.
- No pumping effect.
- **Quick assembly**, facilitated by threads pre-coated with sealant for an immediate seal.

High Quality, Modern Materials

- **Material approved** by the FDA, 1935/2004/EC, NSF 51 and 61 (C hot), ACS.
- Excellent chemical resistance.
- Body and threads in plastic material (100% renewable bio-material).
- Sustainable products.
- **High mechanical strength** polymer for long-term resistance.
- Very compact design.

POLYMER INSTANT FITTINGS

LF 3000

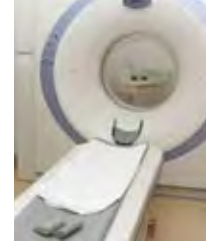
THREADED FITTINGS	MALE STUD ELBOWS	TEES	TUBE TO TUBE FITTINGS	TUBE TO TUBE FITTINGS	CARTRIDGES	PLUG-IN ACCESSORIES
 3175 taper	 3109 taper	 3108 taper	 3106 Ø3 to Ø14	 3116 Ø4 to Ø14	 3100 Ø4 to Ø12	 3182 Ø4 to Ø12
 3101 parallel and metric	 3129 taper	 3103 taper	 3102 Ø4 to Ø14	 3136 Ø4 to Ø12	MULTI-CONNECTORS	
 3181 metric	 3113 taper	 3198 parallel and metric	 3104 Ø4 to Ø14	 3139 Ø4 to Ø14	 3320 male screw body	 3188 Ø4 to Ø12
 3114 parallel and metric	 3199 parallel and metric	 3193 parallel and metric	 3140 Ø4 to Ø12		 3321 female screw body	 3126 Ø3 to Ø14
 3192 female stud elbow		 3118 parallel and metric	 3144 Ø4 to Ø6			 3151 Ø4 to Ø12
 3310 manifold			 3304 Ø6 to Ø10			




























INSTANT FITTINGS

Working pressure: 20 bar maxi
 Vacuum: 99%
 Temperature range: -20°C to +80°C
 Available diameters: Ø3 to Ø14
 Available threads: M3, M5, 1/8 to 1/2, BSPP and BSPT

Compressed Air and Cooling



POLYMER FUNCTION FITTINGS			TUBING	NICKEL-PLATED BRASS BALL VALVES	COUPLERS	
FLOW REGULATORS WITH INSTANT FITTING  7010 parallel  7060 parallel  7040 parallel  7770 in line  7030 plug-in	BLOCKING FITTINGS WITH PUSH-IN CONNECTION  7883 parallel	NON-RETURN VALVES  7996 double union Ø4 to Ø12  7984 parallel and metric  7985 taper  3391 self-sealing male stud BSPP  3091 self-sealing male stud BSPT  3160 plug-in	SEMI-RIGID POLYAMIDE  1025P 1100P FLEXIBLE POLYESTHER POLYURETHANE  1025U 1100U POLYETHER POLYURETHANE BLACK, BLUE  1025U..R 1100U..R	 0492 double female  0491 male and female	NICKEL-PLATED BRASS COUPLERS  9101 male parallel body  9114 female parallel body  9087 male parallel probe  9086 female parallel probe	SAFETY COUPLERS  9401U male parallel body  9414U female parallel body  9087U male parallel probe  9086 female parallel probe
					Ø INTERNAL Series 23 5,5 mm Series 25 7,4 mm Series 30 8,5 mm	


FUNCTION FITTINGS
Working pressure: 1 to 10 bar Temperature range: 0°C to +70°C Available diameters: Ø4 to Ø12 Available threads: M3 to 1/2, BSPP and BSPT

TUBING
External diameters: Ø3 to Ø14

BALL VALVES
Working pressure: 12 bar maximum Temperature range: -20°C to +80°C Internal diameter: 4 to 13 mm Available threads: 1/4 to 3/4

COUPLERS
Working pressure: 35 bar / 16 bar (safety couplers) Temperature range: -20°C to +100°C / -20°C to +60°C (safety couplers) Available threads: 1/4 to 1/2

Find all the technical characteristics of these products on our website www.legris.com. From the «Low pressure» menu, enter the reference for each item and access full details: technical data, dimensions, certificates, CAD drawings.



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