quick disconnect coupler range





quick disconnect coupler range

€9000 - safety couplers



reinforced nylon body for compressed air - industrial and ARO 210 interchange profiles page K4-K9

industrial interchange coupler



reinforced nylon body for compressed air page K6-K7

industrial interchange coupler



brass body for compressed air page K10-K11

micro coupler



chrome plated brass body for air - water - oil page K12-K13

small coupler



chrome plated brass body for air - water - oil page K14-K15

the complete range of quick disconnect couplers

C9000 safety couplers - industrial interchange 9405U 9415U 9410U 9417U 9421U 9442U NPT Page K6, K7 9084 9083 9070 9085 9080U NPT Page K6, K7 Page K6, K7 Page K6, K7 Page K6 Page K6, K7 C9000 safety couplers - ARO 210 9442A 9405A 9415A 9410A 9417A 9421A NPT Page K8 Page K8 Page K8 Page K8 Page K8 Page K8 9084 9083 **9080A** Page K8 9085 Page K8 Page K8 Page K8 industrial interchange couplers **9L05** 9084 9083 9085 9L04 9L85 NPT Page K11 NPT Page K11 NPT Page K11 Page K11 Page K11 Page K11 micro couplers 9L05 9L06 9L02 **9L84** 9L94 9L93 Page K13 Page K13 Page K13 Page K13 NPT Page K13 Page K13 small couplers **9L05** 9L04 9L15 9L84 **9L83 9L82** NPT Page K15 Page K15



technical specifications

- · excellent flow characteristic
- maintains excellent sealing characteristics, even after 2 million cycles
- tough, impact resistant material
- · no flubbing, with buttons or collars 1, 2 disconnect



Meets your toughest application requirements.

C9000 is an innovative safety coupler for pneumatic applications. This coupler's unique two turn release quickly vents down stream air pressure before disconnecting – preventing serious injuries associated with hose whip. C9000 is made from a tough composite material which will stand up to the most abusive applications, yet is light weight. The composite body will not mar a workpiece either!

C9000 is used for any application (assembly, construction, aircraft industry, automotive) where safety, durability and performance are demanded.

ergonomic performance: ease of operation

Each detail of C9000 is designed with the requirements of industrial users in mind.

- easy to use, lightweight materials and effortless connection
- · easy to handle with non-slip surface
- easy to identify, clearly marked with profile design, part number and disconnection steps



vents plug side



disconnects

international profile for interchangeability

The C9000 range has been developed for worldwide applications:

industrial interchange profile – body size 1/4" and 3/8" ARO 210 profile – body size 1/4"

compatible fluids	compressed air
working pressure	up to 230 psi Maximum pressure of a circuit depends on the nature and thickness of the tube.
working temperature	-4° to 140°F The temperature of a circuit also depends on the nature and type of the tubing.
flow rate	industrial interchange - 47 scfm for 1/4" body 97 scfm for 3/8" body ARO 210 - 44 scfm
materials of construction	body: glass reinforced nylon 6.6 ARO profile: zamac ball bearings & spring: stainless steel seal: nitrile sleeve: reinforced polymer plugs: nickel-plated brass,

connection instructions

simply push the plug into the coupler until it clicks. no rotation of the coupler is necessary



disconnection instructions 2 steps = 100% safety

The disconnection is made by the rotation of the body: a safety movement which avoids accidental disconnection.

Rotate the body first to vent downstream pressure.



vents plug side – rotate coupler toward arrow #1 to vent downstream pressure – a safety movement which avoids accidental disconnection



disconnects - rotate coupler toward arrow #2 to disconnect the plug





An extra rapid exhaust assures safe disconnection even with rapid movement.



identification of parts

Part numbers 9410 and 9080 are designed with a LF3000 push-to-connect port. This is compatible with nylon or polyurethane tubing instead of hose.

The spring guard protects the tubing and keeps it from kinking.

push-to-connect and spring guard connection/disconnection



1. connect the tubing by inserting into the tube port



3. after the connection is made, the coupler is ready for use



2. insert the spring guard until it clicks



to disconnect the spring guard, depress buttons and pull on spring guard

flow: 47 scfm

The C9000 Industrial Interchange 1/4" body size ensures a very good flow and total security due to disconnection in two steps. Therefore C9000 is perfectly suited for numerous type of installations:

- pneumatic tools
- blowguns
- · pneumatic automotive equipment

industrial interchange profile

body size 1/4" I.D.

ISO 6150 B NF.E49.053 US.MIL.C 4109 CEJN 310 Prevost IRC06.ISC06 Rectus 23.24





coupler

9405U male NPT straight body



NPT		√oz∆
1/4	9405U06 14	1.6
3/8	9405U06 18	1.6
1/2	9405U06 22	2.0

9415U female NPT straight body



NPT	€	∆oz∆
1/4	9415U06 14	1.6
3/8	9415U06 18	1.6
1/2	9415U06 22	2.0

9410U push-to-connect + spring guard



ØD		∆oz∆
5/16	9410U06 08	1.55
3/8	9410U06 60	1.60

9417U NPT bulkhead body



NPT	($\sqrt{\text{oz}}$
1/4	9417U06 14	2.0

9421U barbed connector body



ØD		$\Delta oz \Delta$
1/4, 6mm	9421U06 06	1.6
5/16, 8mm	9421U06 08	1.6
3/8, 10mm	9421U06 10	1.6

9442U "Y" connector body



NPT		$\sqrt{\text{oz}}$
3/8	9442U06 18	7.65

plugs

9084 male NPT straight



NPT		$\sqrt{\text{oz}}$
1/4	9084 23 14	1.01
3/8	9084 23 18	1.35

9083 female NPT straight



NPT	€	∆oz∆
1/4	9083 23 14	.95
3/8	9083 23 18	1.36

9085 barbed connector



ØD	€	$\sqrt{\text{oz}}$
1/4	9085 23 56	.85
5/16	9085 23 08	.88
3/8	9085 23 60	.93

9080U push-to-connect + spring guard



ØD	(∆oz∆
5/16	9080U06 08	1.03
3/8	9080U06 60	1.27

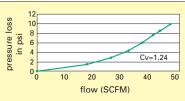
9070U oscillating male NPT



NPT	€	∆oz∆
1/4	9070U06 14	1.99

flow characteristics — industrial interchange 1/4" body size

Working pressure up to 230 psi



flow: 97 scfm

The C9000 Industrial Interchange 3/8" body size has a very high flow capacity. Its robust construction and the twist disconnect design make it perfectly suited for heavy duty applications such as:

- large pneumatic tools
- · main supply outlets
- · stamping equipment

industrial interchange profile body size 3/8" I.D.

ISO 6150 B NF.E49.053 US.MIL.C 4109 CEJN 310 Prevost IRC08.ISC08 Rectus 30





coupler

9405U male NPT straight body



NPT		∆oz∆
1/4	9405U08 14	3.2
3/8	9405U08 18	3.2
1/2	9405U08 22	4.0

9415U female NPT straight body



NPT		∆oz∆
1/4	9415U08 14	3.2
3/8	9415U08 18	3.2
1/2	9415U08 22	4.0

9410U push-to-connect + spring guard



ØD		$\sqrt{\text{oz}}$
1/2	9410U08 62	3.1

9417U NPT bulkhead body



NPT		$\sqrt{\text{oz}}$
3/8	9417U08 18	3.95

9421U barbed connector body



ØD		∆oz∆
1/4, 6mm	9421U08 06	3.20
5/16, 8mm	9421U08 08	3.25
3/8, 10mm	9421U08 10	3.45
1/2, 13mm	9421U08 13	3.90

9442U "Y" connector body



NPT		$\sqrt{\text{oz}}$
1/2	9442U08 22	10.95

plugs

9084 male NPT straight



NPT		$\sqrt{\text{oz}}$
1/4	9084 30 14	1.11
3/8	9084 30 18	1.35
1/2	9084 30 22	1.58

9083 female NPT straight



NPT		$\sqrt{\text{oz}}$
1/4	9083 30 14	1.03
3/8	9083 30 18	1.44
1/2	9083 30 22	1.58

9085 barbed connector



ØD		$\sqrt{\text{oz}}$
5/16	9085 30 08	.94
3/8	9085 30 60	.96
1/2	9085 30 62	1.01

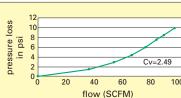
9080U push-to-connect + spring guard



ØD	€	∆oz∆
1/2	9080U08 62	1.87

flow characteristics — industrial interchange 3/8" body size

Working pressure up to 230 psi



flow: 44 scfm

The C9000 ARO 210 profile 1/4" body sizes ensure the user a very high flow and small pressure pass - therefore they are perfectly suited for numerous types of installations and equipment.

ARO 210 PROFILE

body size 1/4" I.D.

ARO 210 CEJN300 Orion 44510 Parker 50 Rectus 14-22





coupler

9405A male NPT straight body



NPT		$\sqrt{\text{oz}}$
1/4	9405A06 14	1.6
3/8	9405A06 18	1.6
1/2	9405A06 22	2.0

9415A female NPT straight body



NPT		∆oz∆
1/4	9415A06 14	1.6
3/8	9415A06 18	1.6
1/2	9415A06 22	2.0

9410A push-to-connect + spring guard



ØD	E	∆oz∆
5/16	9410A06 08	1.55

9417A NPT bulkhead body



NPT		\sqrt{oz}
1/4	9417A06 14	2.0

9421A barbed connector body



ØD		$\sqrt{\text{oz}}$
1/4, 6mm	9421A06 06	1.6
5/16, 8mm	9421A06 08	1.6
3/8, 10mm	9421A06 10	1.6

9442A "Y" connector body



NPT		$\sqrt{\text{oz}}$
3/8	9442A06 18	7.65

plugs

9084 male NPT straight



NPT	[∆oz∆
1/4	9084 22 14	1.01
3/8	9084 22 18	1.35

9083 female NPT straight



NPT	[∆oz∆
1/4	9083 22 14	.95
3/8	9083 22 18	1.36

9085 barbed connector



ØD	€	∆oz∆
1/4, 6mm	9085 22 06	.494
5/16, 8mm	9085 22 08	.564
3/8, 10mm	9085 22 10	.635

9080A push-to-connect + spring guard



ØD		∆oz∆
5/16, 8mm	9080A06 08	1.83
3, 10, 011111	3000700 00	1.00

OSHA Recommendation —

Safety concerns regarding power tools

Pneumatic Tools - Disconnection

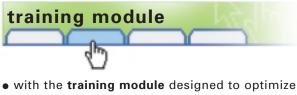
"Pneumatic tools must be checked to see that the tools are fastened securely to the air hose to prevent them from being disconnected. A short wire or positive locking device attaching the air hose to the tool must also be used and will serve as an added safeguard."

You will find C9000 couplers on legris.com

catalog space

- with the on-line catalog, regularly updated, you will easily find the whole range of C9000.
 - you will quickly find a product due to the 3 search options
 - you will get a complete product datasheet with a photo, dimensional drawing and specifications
 - you can ask for a quotation from our distributors





- with the training module designed to optimize performance of your installations, you will find animated presentations of C9000:
 - innovating technology and its functions
 - applications and solutions to match your equipment requirements

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industrial interchange coupler

features and benefits

- conforms to ANSI (NFPA) T3.20.14-1990 and MIL-C-4109 specifications
- type "A900" interchange
- more balanced connection (6 ball bearings instead of 4)
- · protective sleeve
- · pre-applied thread sealant on NPT components
- automatic and easy connection
- · plug insertion force 4.6 lbF
- · interchange with major competitors
- · prolonged life
- provides protection from accidental disconnection
- · no leaks once connection is made

application

air

interchangeability

Interchanges with other manufacturers product conforming to ANSI (NFPA) T3.20.14-1990 and MIL-C-4109 specifications

materials

body: brass plug: zinc-plated steel



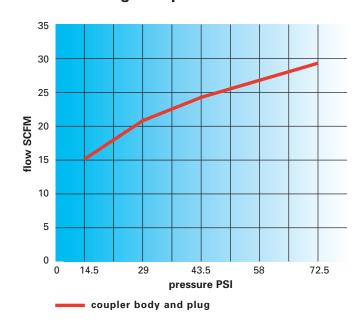
industries

- · pneumatic equipment
- · air tools
- · general industrial applications and air piping

technical performances

sealing material	nitrile (Buna-N) U-cup and O-ring
max. working pressure	250 psi
proof pressure	4:1 Safety factor
operating temperature range	-40° F to 250° F
vacuum data	disconnected, not recommended Connected, 28 in Hg
direction of flow	connected, either direction disconnected, seal only in one direction, air in from hex fitting
thread sealant	on male NPT threads

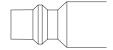
industrial interchange coupler flow rate



industrial interchange coupler range

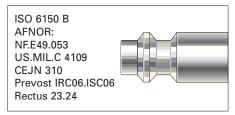
Compressed air application For other non-aggressive fluids, contact us.

Check the profile and size of plug with this image.



actual size

body size 1/4" I.D.



Can be interchanged with other manufacturers.

coupler

9L05 male NPT straight body



NPT	•	\sqrt{oz}
1/4	9L05 11 14P180	3.03
3/8	9L05 11 18P180	3.09

plugs

9084 male NPT straight plug



NPT		∆oz∆
1/4	9084 23 14	1.01
3/8	9084 23 18	1.35
1/2	9084 23 22	1.50

9L04 female NPT straight body



NPT	€	∆oz∆
1/4	9L04 11 14P180	2.94
3/8	9L04 11 18P180	1.33

9083 female NPT straight plug



NPT		$\sqrt{\text{oz}}$
1/4	9083 23 14	.95
3/8	9083 23 18	1.36
1/2	9083 23 22	1.50

9L85 hose barb straight body



HOSE ID	[∆oz∆
1/4	9L85 11 14P1	3.03
3/8	9L85 11 18P1	3.10

9085 hose barb straight plug



HOSE ID		$\Delta oz \Delta$
1/4	9085 23 56	.81
5/16	9085 23 08	.88
3/8	9085 23 60	.93

Hose barb versions are to be used with single braid general purpose industrial grade rubber hose only. These versions are not to be used with nylon or polyurethane tubing. Hose should be clamped onto the barb with either a worm gear or double ear type clamp. Hose can also be crimped onto the hose barb with a crimped metal ferrule.

micro couplers

features and benefits

- · automatic shut-off valve
- · all models with external diameter of only 9.5mm
- · pre-applied thread sealant on NPT components
- · lightweight and compact for small spaces
- · automatic coupler connection
- · excellent resistance to corrosion
- · built-in push-to-connect port

applications

- air
- water
- oil

Note: For water and oil applications on push-to-connect ports, please consult us.

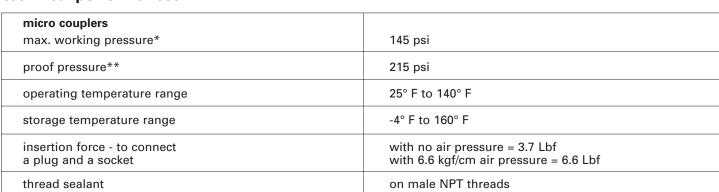
interchangeability

Bodies and plugs can be interchanged within this product range

materials

body & plug: chrome-plated brass built-in push-to-connect port: stainless steel gripping ring, nickel-plated brass sleeve and polypropylene push button.

technical performances



- Allowable maximum pressure to use the coupler continuously.
- Maximum pressure before the coupler's performance will drop. Cannot be used continuously.

compatible tubing

Push-to-connect ports - compatible with 85 and 95 Durometer Polyurethane; and Nylon tubing.

Hose barb - compatible with 85 and 95 Durometer Polyurethane only.

To install, push the tube all the way onto the hose barb. Use a double ear clamp to secure the connection.

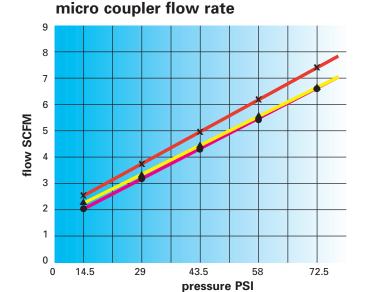


industries

ultra small applications such as:

- · pneumatic components
- · medical and dental equipment
- · automation equipment

The 5/32" (4mm) push-to-connect plugs are designed with the latest gripping ring technology. For technical performances on the push-to-connect plug, refer to the LF3000 section.

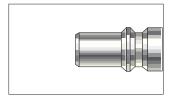


micro coupler range

The smallest of the range, these **micro** couplers are excellent for use where space is restricted. Optimum flow and light sealing, easy manageability and compatibility with tubings make them particularly well adapted for the following types of application:

- · medical and dental industries
- instrumentation
- laboratories

micro coupler



Can be interchanged within this range.

coupler

9L05 male NPT straight body



NPT		√oz∆
1/8	9L05 99 11P1	.51

9L06 push-to-connect straight body



O.D. TUBE		∆oz∆
5/32	9L06 99 04P1	.38

9L02 push-to-connect elbow body



O.D. TUBE		∆oz∆
5/32	9L02 99 04P1	.61

plugs

9L84 male NPT straight plug



NPT	•	∆oz∆
1/8	9L84 99 11X0	.37

9L94 push-to-connect straight plug



O.D. TUBE		∆oz∆
5/32	9L94 99 04X0	.17

9L93 push-to-connect elbow plug



O.D. TUBE	(∆oz∆
5/32	9L93 99 04X0	.41

small couplers

features and benefits

- · automatic shut-off valve
- · models with external diameter of only 14mm
- · pre-applied thread sealant on NPT component
- · lightweight and compact for small spaces
- · automatic coupler connection
- · excellent resistance to corrosion
- · built-in push-to-connect port

applications

- air
- water
- oil

Note: For water and oil applications on push-to-connect ports, please consult us.

interchangeability

Bodies and plugs can be interchanged within this product range.

materials

body and plug: Chrome-plated brass built-in push-to-connect port: stainless steel gripping ring, nickel-plated brass sleeve and polypropylene push button

industries

- · pneumatic components
- · medical and dental equipment
- · applications of progressive miniaturization and modularization

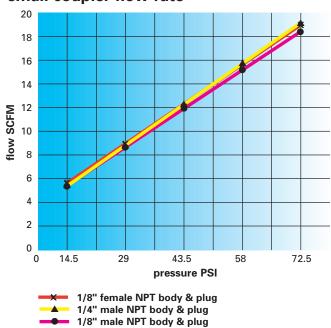
The 1/4" push-to-connect plugs are designed with the latest gripping ring technology. For technical performances on the push-to-connect plug, refer to the LF3000 section.

technical performances

max. working pressure*	100 psi
proof pressure**	150 psi
operating temperature range	25° F to 140° F
storage temperature range	-4° F to 160° F
insertion force - to connect a plug and a socket	with no air pressure = 3.3 Lbf with 6 kgf/cm air pressure = 9.9 Lbf
thread sealant	on male NPT threads

^{*} Allowable maximum pressure to use the coupler continuously.

small coupler flow rate



compatible tubing

Compatible with 85 and 95 Durometer Polyurethane: and Nylon tubing.



^{**} Maximum pressure before the coupler's performance will drop. Cannot be used continuously.

small coupler range

Where space is a premium, small couplers ensure the user a very high flow. The wide variety of probes allow these couplers many options where space is restricted.

For example:

- equipment for very small pneumatic tools
- control machines, measuring or regulatory devices
- pneumatic automation equipment

small coupler range



Can be interchanged within this range.

coupler

9L05 male NPT straight body



NPT		∆oz∆
1/8	9L05 98 11P1	.93
1/4	9L05 98 14P1	1.26

9L04 female NPT straight body



NPT	€	√oz∆
1/8	9L04 98 11P1	1.08

9L15 push-to-connect straight body



O.D. TUBE	(∆oz∆
1/4	9L15 98 14P1	.98

plugs

9L84 male NPT straight plug



NPT	[∆oz∆
1/8	9L84 98 11X0	.38
1/4	9L84 98 14X0	.72

9L83 female NPT straight plug



NPT		∆oz∆
1/8	9L83 98 11X0	.43

9L82 push-to-connect straight plug



O.D.		
TUBE		∆oz∆
1/4	9L82 98 14X0	.33

connection/disconnection

when disconnected - instantly seals valve preventing leakage.

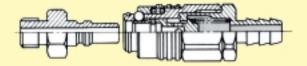
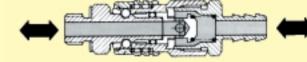
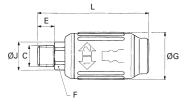


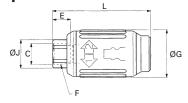
Diagram applies to micro and small couplers.

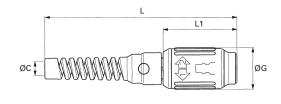
when connected - fully opens valve automatically allowing free fluid flow in either direction.



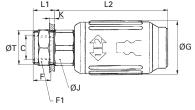
C9000 — industrial interchange profile

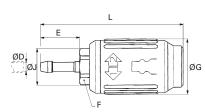




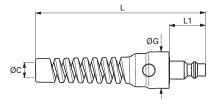


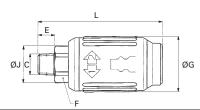
C NPT		E in	F mm	ØG in	ØJ in		C NPT	•	E in	F mm		ØJ in	L mm	C NPT	€	ØG in	L in	L1 mm
1/4	9405U06 14	.43	17	1.24	.73	2.91	1/4	9415U06 14	.47	17	1.24	.73	2.58	5/16	9410U06 08	31.5	145	56
3/8	9405U06 18	.45	19	1.24	.83	2.97	3/8	9415U06 18	.47	22	1.24	.95	2.84	3/8	9410U06 60	31.5	145	56
1/2	9405U06 22	.59	22	1.24	.95	3.17	1/2	9415U06 22	.59	27	1.24	1.16	3.01					

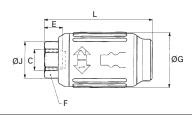




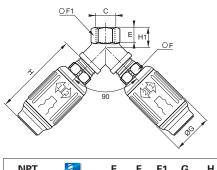
C NPT		in	mm	mm	in	in	K max in	in	in	min in	,	£	in	F mm	in	in	mm
1/4	9417U06 14	.47	22	22	1.24	.95	.24	.49	2.70	.73	1/4, 6mm	9421U06 06	1.02	17	1.24	.73	3.48
											5/16, 8mm	9421U06 08	1.02	17	1.24	.73	3.48
											3/8, 10mm	9421U06 10	1.02	17	1.24	.73	3.48





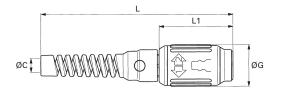


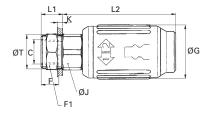
C NPT		ØG in	L in	L1 mm	C NPT			F mm	ØG in	ØJ in	L mm	C NPT		E in	F mm	ØG in	ØJ in	L mm
5/16	9080U06 08	24	112	24	1/4	9405U08 14	.43	22	1.44	.95	3.27	1/4	9415U08 14	.47	22	1.44	.95	2.95
3/8	9080U06 60	24	112	24	3/8	9405U08 18	.45	22	1.44	.95	3.29	3/8	9415U08 18	.47	22	1.44	.95	2.95
					1/2	9405U08 22	.59	22	1.44	.95	3.43	1/2	9415U08 22	.59	27	1.44	1.14	3.15



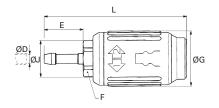
NPT		E in	F mm		G in	H in	H1 in	
3/8 94	42U06 18	.45	19	.79	1.24	2.76	.63	

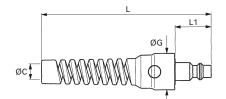
C9000 — industrial interchange profile

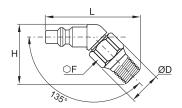




C NPT		ØG in	L in	L1 mm	ØD	4	E in	F mm	F1 mm	ØG in	ØJ in	K max in	L1 in	L2 in	ØT min in	
1/2	9410U08 62	36.5	165	63	3/8 9	417U08 18	.47	24	24	1.24	.95	.24	.49	2.70	.73	1

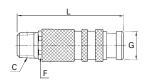


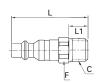


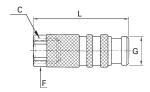


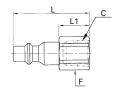
ØD		E in	F mm	ØG in	ØJ in	L in	C NPT	•	ØG in	L in	L1 mm	C NPT		ØD in	F mm	H in	L in
1/4", 6mm	9421U08 06	1.02	22	1.44	.94	3.74	1/2	9080U08 62	29.5	125	26	1/4	9070U06 1	4 .81	19	1.34	2.20
5/16", 8mm	9421U08 08	1.02	22	1.44	.94	3.74											
3/8", 10mm	9421U08 10	1.02	22	1.44	.94	3.74											
1/2", 13mm	9421U08 13	1.18	22	1.44	.94	3.74											

industrial interchange

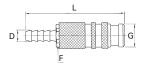


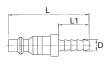






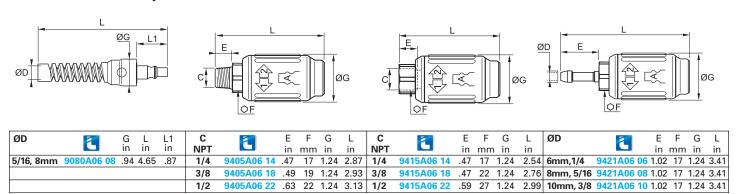
C NPT		F in	G in	L in	C NPT	€	F in	L in	L1 in	C NPT	•	F in	G in	L in	C NPT	€	F in	L in	L1 in
1/4	9L05 11 14P180	11/16	.80	2.21	1/4	9084 23 14	9/16	1.75	.81	1/4 9L	04 11 14P180	11/16	.80	2.00	1/4	9083 23 14	5/8	1.56	.63
3/8	9L05 11 18P180	11/16	.80	2.25	3/8	9084 23 18	11/16	1.75	.81	3/8 9L	04 11 18P180	3/4	.80	2.15	3/8	9083 23 18	13/16	1.60	.67

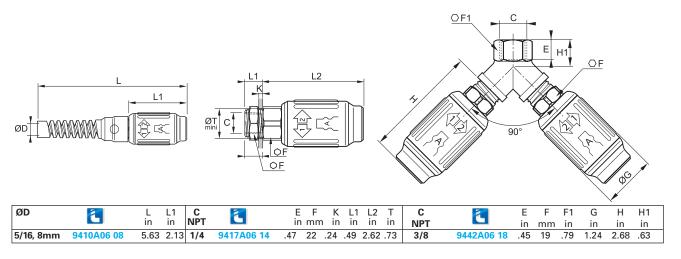




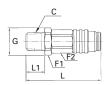
D HOSE II	D 【	F in	G in	L in	D HOSE ID		L in	L1 in
1/4 9	9L85 11 14P1	11/16	.80	2.63	1/4	9085 23 56	2.10	.95
3/8	9L85 11 18P1	11/16	.80	2.63	3/8	9085 23 60	2.10	.95

C9000 — ARO 210 profile

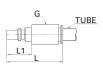




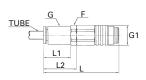
micro couplers

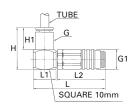




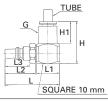


C NPT	•	F1 mm		G in	L in	L1 in	C NPT			F mm	L in		L2 in	O.D. TUBE	€	G in	L in	L1 in
1/8	9L05 99 11P1	11	9	.47	1.18	.35	1/8	9L84 99 1	11X0	11	1.02	.36	.35	5/32 9L9	94 99 04X0	.34	.89	.36



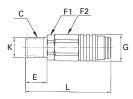


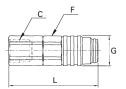
O.D. TUBE	€							O.D. TUBE	€					L in		
5/32 9	L06 99 04P1	9	.34	.37	1.26	.49	.59	5/32 9I	.02 99 04P1	.37	.34	.81	.41	1.21	.39	.79

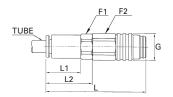


O.D. TUBE			H1 in					
5/32 9L93 99 0	4X0 .34	.81	.41	.92	.39	.49	.36	

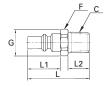
small couplers



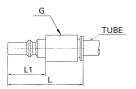




C NPT	[F1 mm	F2 mm		K in	L in	C NPT	[F mm	G in	L in	O.D. TUBE				G in		L1 in	L2 in
1/8 9L0	98 11 P 1	.35	12	13	.55		1.45	1/8	9L04 98 11P1	13	.55	1.53	1/4	9L15 98 14P1	12	13	.55	1.61	.49	.69
1/4 9L0	5 98 14 P 1	.51	14	13	.55	.60	1.61													







C NPT	•		F mm	G in	L in		L2 in	C NPT	•	F mm	G in	L in		O.D. TUBE		G in	L in	L1 in
1/8	9L84 98 °	11X0	11	.47	1.12	.60	.35	1/8	9L83 98 11X0	13	.55	1.06	.60	1/4	9L82 98 14X0	.46	1.13	.60
1/4	9L84 98	14X0	14	.60	1.28	.60	.51											