CAT. 0118-GB

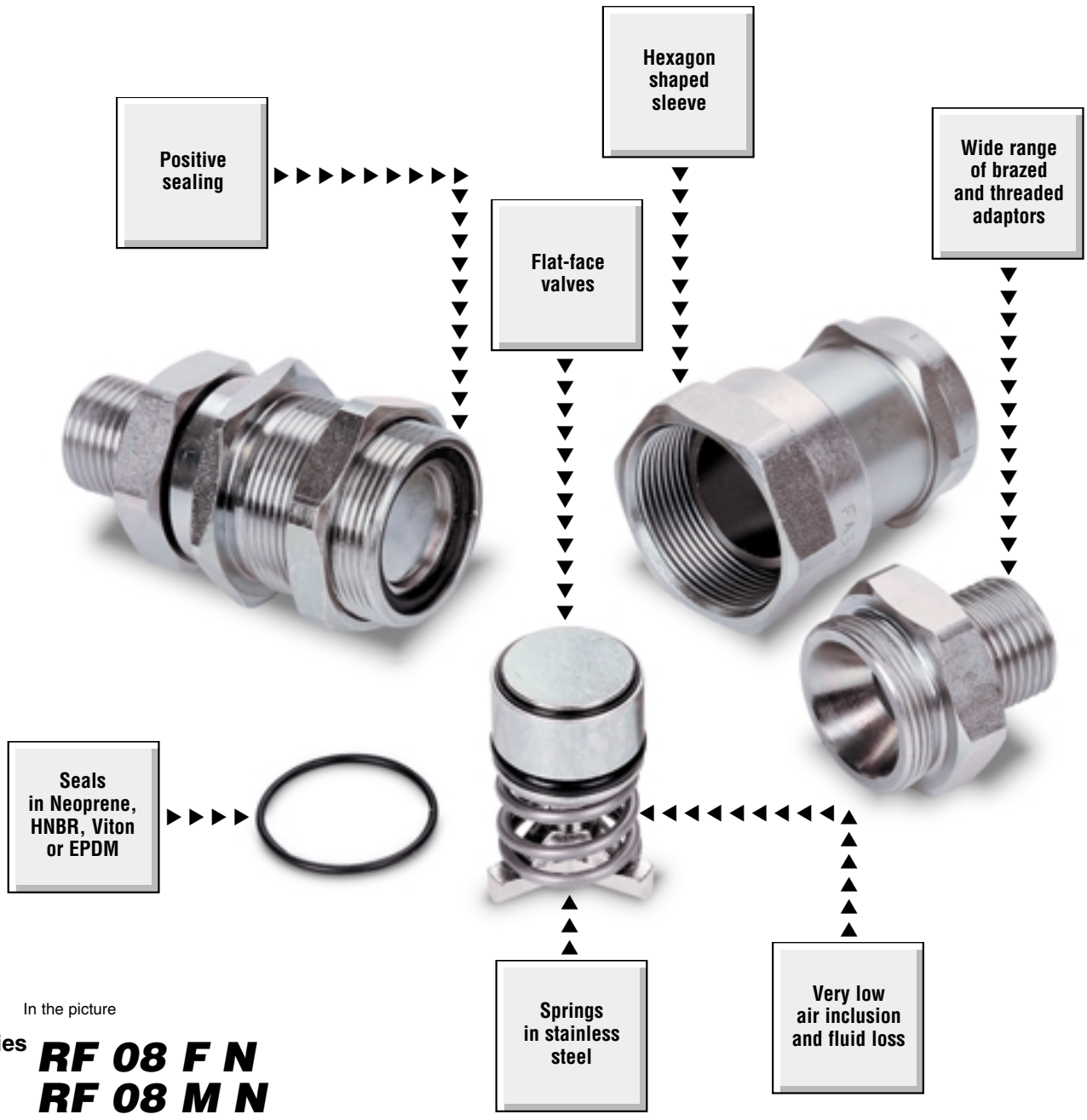
LEHENGOAK, S.A.

▶ Quick-release couplings and accessories for Air Conditioning & Refrigeration

FASTER®

ICIM
UNI EN ISO 9001
Cert. n° 2905
ISO/TS 16949

CISQ



In the picture

Series ***RF 08 F N***
RF 08 M N

▶ THE NEW REVOLUTIONARY WAY OF THE QUICK-RELEASE COUPLING

1) Specifically designed to be used on air conditioning and refrigeration systems.
2) Interchangeable with similar products by major manufacturers of the field.
3) Springs in stainless steel.
4) Surface protection treatments based on zinc plating with Cr III based passivation: 300 hours of corrosion resistance in salt atmosphere.
5) Connection achieved by threaded sleeve.
6) RFL series, designed to allow hand connection even under residual pressure
7) RFLS series, characterized by the additional safety sleeve (not interchangeable with RF, RFL Series)
8) Seals in Neoprene and HNBR to guarantee compatibility with most of refrigerants.
9) Aluminium protections and original **FASTER®** spare parts kit available.

FASTER® LEHENGOAK, S.A.

SERIES RF STEEL

▶ Features

- **Connection system:** screw-on
- **Disconnection system:** screw-on
- **Shut off system:** flat valve
- **Connectability:** both male and female couplings under residual pressure
- **Disconnection under pressure:** allowed
- **Interchangeability:** worldwide market

- Screw-on latching system
- Standard seals in Neoprene or HNBR (Hydrogenated NBR)
- Arranged for bulkhead mounting
- Wide range of brazed and threaded adaptors
- Also available in Brass (see at page 12)
- Also available with copper-sweat connections (see at page 14)
- Special versions available on request
- **UL Listed: File N° SA13163 (all sizes except 06)**
- UL marking on request

▶ Technical data

Size ❖		DN Nominal diameter		Minimum burst pressure					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
1/4"	04	5	0.20	100	14500	53	7685	10,5	1523
3/8"	06	7	0.28	70	10150	24	3480	19	2755
1/2"	08	9	0.35	55	7975	55	7975	8,3	1204
3/4"	12	16	0.63	43	6235	43	6235	10,5	1523
1"	16	25	0.98	37	5365	12	1740	7,5	1088
1-1/2"	24	35	1.38	30	4350	16	2320	11,5	1668

Air inclusion and fluid loss	Maximum leakage rate **	Vacuum rating		Connection sleeve torque
cc max.	g/year	mmHg	incHg	Nm
0,02	1,5	2	0,08	8^{+2}_{-0}
0,05	1,5	2	0,08	30^{+5}_{-0}
0,1	1,5	2	0,08	50^{+5}_{-0}
0,1	1,5	2	0,08	60^{+5}_{-0}
0,2	1,5	2	0,08	80^{+10}_{-0}
0,2	1,5	2*	0,08*	80^{+10}_{-0}

*Connected

Size ❖		DN Nominal diameter		Maximum working pressure *					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
1/4"	04	5	0.20	33	4785	17,5	2538	3,5	508
3/8"	06	7	0.28	23,3	3379	8	1160	6	870
1/2"	08	9	0.35	18,3	2654	18,3	2654	2,75	400
3/4"	12	16	0.63	14,3	2074	14,3	2074	3,5	508
1"	16	25	0.98	12,3	1784	4	580	2,5	363
1-1/2"	24	35	1.38	10	1450	5,3	769	3,8	551

* Safety factor = 1:3 - For static pressure safety factor 1:2
** R22 equivalent refrigerant, at operating range, both connected and disconnected.

Materials:
- Male, female and valves in steel.
- Surface treatment: zinc plating with Cr III passivation.
- Springs in stainless steel.

Seals: standard in Neoprene or HNBR.
On request: EPDM, Viton or other seals.

Working temperatures:
With Neoprene seals from -40°C (-40°F) to +120°C (+248°F).
With HNBR seals from -25°C (-13°F) to +140°C (+284°F).
Temperatures refer to theorical working conditions in laboratory.

▶ Pressure drop chart

See at page 21

▶ Installation and Brazing instructions

See at pages 22-23-24

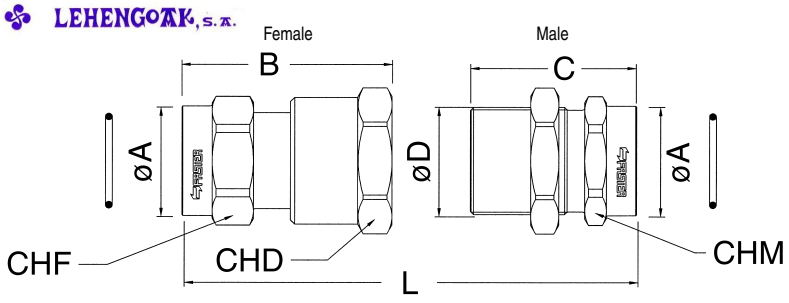
▶ Accessories - Spare part kit

See at pages 19-20

▶ Seals compatibility

See at page 24

SERIES RF STEEL

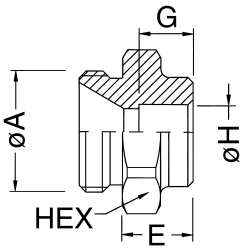


Version without adaptor

	❖	Female	Male	Ø A	Seals material	B mm	B inc.	C mm	C inc.	Ø D mm	CHD mm	CHD inc.	L mm	L inc.	CHF mm	CHF inc.	CHM mm	CHM inc.
Version without adaptor	04	RF 04 F N	RF 04 M N	1/2" - 20 UNF	Neoprene	28	1,10	27,5	1,08	5/8" - 18 UNF	19	0,75	48,5	1,91	16	0,63	19	0,75
		RF 04 F H	RF 04 M H	1/2" - 20 UNF	HNBR	28	1,10	27,5	1,08	5/8" - 18 UNF	19	0,75	48,5	1,91	16	0,63	19	0,75
		*RF 04 F E	*RF 04 M E	1/2" - 20 UNF	EPDM	28	1,10	27,5	1,08	5/8" - 18 UNF	19	0,75	48,5	1,91	16	0,63	19	0,75
		RF 04 F V	RF 04 M V	1/2" - 20 UNF	Viton	28	1,10	27,5	1,08	5/8" - 18 UNF	19	0,75	48,5	1,91	16	0,63	19	0,75
	06	*RF 06 F N	*RF 06 M N	M18x1,5	Neoprene	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
		*RF 06 F H	*RF 06 M H	M18x1,5	HNBR	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
		*RF 06 F E	*RF 06 M E	M18x1,5	EPDM	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
		*RF 06 F V	*RF 06 M V	M18x1,5	Viton	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
	08	RF 08 F N	RF 08 M N	7/8" - 20 UNEF	Neoprene	46,5	1,83	38,5	1,52	1" - 20 UNEF	30	1,18	76,5	3,01	27	1,06	27	1,06
		RF 08 F H	RF 08 M H	7/8" - 20 UNEF	HNBR	46,5	1,83	38,5	1,52	1" - 20 UNEF	30	1,18	76,5	3,01	27	1,06	27	1,06
		*RF 08 F E	*RF 08 M E	7/8" - 20 UNEF	EPDM	46,5	1,83	38,5	1,52	1" - 20 UNEF	30	1,18	76,5	3,01	27	1,06	27	1,06
		RF 08 F V	RF 08 M V	7/8" - 20 UNEF	Viton	46,5	1,83	38,5	1,52	1" - 20 UNEF	30	1,18	76,5	3,01	27	1,06	27	1,06
	12	RF 12 F N	RF 12 M N	1-1/4" - 18 UNEF	Neoprene	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
		RF 12 F H	RF 12 M H	1-1/4" - 18 UNEF	HNBR	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
		*RF 12 F E	*RF 12 M E	1-1/4" - 18 UNEF	EPDM	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
		*RF 12 F V	*RF 12 M V	1-1/4" - 18 UNEF	Viton	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
	16	RF 16 F N	RF 16 M N	1-19/32" - 20 UN	Neoprene	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97
		*RF 16 F H	*RF 16 M H	1-19/32" - 20 UN	HNBR	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97
		*RF 16 F E	*RF 16 M E	1-19/32" - 20 UN	EPDM	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97
		*RF 16 F V	*RF 16 M V	1-19/32" - 20 UN	Viton	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97
	24	*RF 24 F N	RF 24 M N	M61x1.5	Neoprene	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76
		*RF 24 F H	RF 24 M H	M61x1.5	HNBR	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76
		*RF 24 F E	*RF 24 M E	M61x1.5	EPDM	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76
		*RF 24 F V	*RF 24 M V	M61x1.5	Viton	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76

❖ Size *On request

BRAZE TUBING ADAPTOR SUITABLE FOR RF-RFL-RFLS SERIES



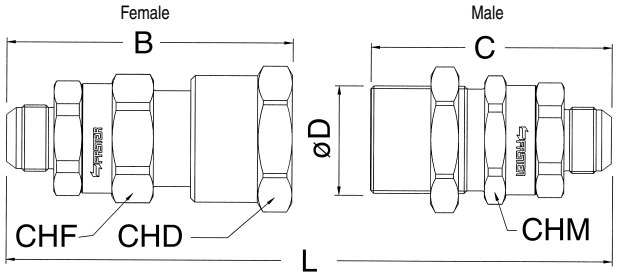
Braze tubing adaptor

	❖	Adaptor code	Ø A	Adaptor material	Ø H mm	Ø H inc.	E mm	E inc.	G mm	G inc.	HEX mm	HEX inc.	Adaptor tightening torque Nm
Braze tubing adaptor	04	RF 04 TS065	1/2" - 20 UNF	ottone	6,5	0,26	12,4	0,49	8	0,31	19	0,75	20^{+5}_{-0}
		RF 04 TS095	1/2" - 20 UNF	ottone	9,7	0,38	12,4	0,49	8	0,31	19	0,75	
	06	RF 06 TS095	M18x1,5	ottone	9,7	0,38	13	0,51	8	0,31	21	0,83	25^{+5}_{-0}
		RF 06 TS125	M18x1,5	ottone	12,8	0,50	13	0,51	12	0,47	21	0,83	
	08	RF 08 TS065	7/8" - 20 UNEF	ottone	6,5	0,26	13	0,51	8	0,31	27	1,06	40^{+5}_{-0}
		RF 08 TS095	7/8" - 20 UNEF	ottone	9,7	0,38	13	0,51	10	0,39	27	1,06	
		RF 08 TS125	7/8" - 20 UNEF	ottone	12,8	0,50	13	0,51	13	0,51	27	1,06	
		RF 08 TS160	7/8" - 20 UNEF	ottone	16,1	0,63	13	0,51	14	0,55	27	1,06	
	12	RF 12 TS125	1-1/4" - 18 UNEF	ottone	12,8	0,50	17,5	0,69	13	0,51	36	1,42	70^{+10}_{-0}
		RF 12 TS160	1-1/4" - 18 UNEF	ottone	16,1	0,63	17,5	0,69	14	0,55	36	1,42	
		RF 12 TS190	1-1/4" - 18 UNEF	ottone	19,2	0,76	17,5	0,69	17	0,67	36	1,42	
		RF 12 TS220	1-1/4" - 18 UNEF	ottone	22,4	0,88	17,5	0,69	20	0,79	36	1,42	
	16	RF 16 TS220	1-19/32" - 18 UN	ottone	22,4	0,88	38	1,50	20	0,79	46	1,81	90^{+10}_{-0}
		RF 16 TS255	1-19/32" - 18 UN	ottone	25,6	1,01	38	1,50	20	0,79	46	1,81	
		RF 16 TS290	1-19/32" - 18 UN	ottone	28,7	1,13	38	1,50	25	0,98	46	1,81	
	24	RF 24 TS350	M61x1,5	ottone	35,3	1,39	46	1,81	25	0,98	70	2,75	120^{+10}_{-0}

❖ Size *On request

▶ Available items

SERIES RF STEEL



Complete coupling with adaptor

FASTER®

LEHENGOAK, S.A.

	❖	Female	Male	Ø H	Seals material	B mm	B inc	C mm	C inc	CHD mm	CHD inc	L mm	L inc	CHF mm	CHF inc	CHM mm	CHM inc	Ø T mm	Ø T inc
Complete coupling with adaptor for buckled pipe (standard FIAT 14294)	04	*RF 04 TD14 F N	*RF 04 TD14 M N	7/16" - 24 UNS	Neoprene	43	1,69	42,5	1,67	19	0,75	78,5	3,09	16	0,63	19	0,75	5,03	0,20
		*RF 04 TD14 F H	*RF 04 TD14 M H	7/16" - 24 UNS	HNBR	43	1,69	42,5	1,67	19	0,75	78,5	3,09	16	0,63	19	0,75	5,03	0,20
		*RF 04 TD14 F E	*RF 04 TD14 M E	7/16" - 24 UNS	EPDM	43	1,69	42,5	1,67	19	0,75	78,5	3,09	16	0,63	19	0,75	5,03	0,20
		*RF 04 TD14 F V	*RF 04 TD14 M V	7/16" - 24 UNS	Viton	43	1,69	42,5	1,67	19	0,75	78,5	3,09	16	0,63	19	0,75	5,03	0,20
	06	*RF 06 TD38 F N	*RF 06 TD38 M N	5/8" - 18 UNF	Neoprene	53,8	2,12	46	1,81	24	0,94	91	3,58	22	0,87	22	0,87	8,58	0,34
		*RF 06 TD38 F H	*RF 06 TD38 M H	5/8" - 18 UNF	HNBR	53,8	2,12	46	1,81	24	0,94	91	3,58	22	0,87	22	0,87	8,58	0,34
		*RF 06 TD38 F E	*RF 06 TD38 M E	5/8" - 18 UNF	EPDM	53,8	2,12	46	1,81	24	0,94	91	3,58	22	0,87	22	0,87	8,58	0,34
		*RF 06 TD38 F V	*RF 06 TD38 M V	5/8" - 18 UNF	Viton	53,8	2,12	46	1,81	24	0,94	91	3,58	22	0,87	22	0,87	8,58	0,34
	08	RF 08 TD38 F N	RF 08 TD38 M N	5/8" - 18 UNF	Neoprene	65,5	2,58	57,5	2,26	30	1,18	114,5	4,51	27	1,06	27	1,06	8,58	0,34
		RF 08 TD38 F H	RF 08 TD38 M H	5/8" - 18 UNF	HNBR	65,5	2,58	57,5	2,26	30	1,18	114,5	4,51	27	1,06	27	1,06	8,58	0,34
		*RF 08 TD38 F E	*RF 08 TD38 M E	5/8" - 18 UNF	EPDM	65,5	2,58	57,5	2,26	30	1,18	114,5	4,51	27	1,06	27	1,06	8,58	0,34
		*RF 08 TD38 F V	*RF 08 TD38 M V	5/8" - 18 UNF	Viton	65,5	2,58	57,5	2,26	30	1,18	114,5	4,51	27	1,06	27	1,06	8,58	0,34
	12	RF 12 TD58 F N	RF 12 TD58 M N	7/8" - 14 UNF	Neoprene	83,5	3,29	72	2,83	41	1,61	141,5	5,57	36	1,42	41	1,61	14,5	0,57
		RF 12 TD58 F H	RF 12 TD58 M H	7/8" - 14 UNF	HNBR	83,5	3,29	72	2,83	41	1,61	141,5	5,57	36	1,42	41	1,61	14,5	0,57
		*RF 12 TD58 F E	*RF 12 TD58 M E	7/8" - 14 UNF	EPDM	83,5	3,29	72	2,83	41	1,61	141,5	5,57	36	1,42	41	1,61	14,5	0,57
		*RF 12 TD58 F V	*RF 12 TD58 M V	7/8" - 14 UNF	Viton	83,5	3,29	72	2,83	41	1,61	141,5	5,57	36	1,42	41	1,61	14,5	0,57
	16	*RF 16 TD34 F N	*RF 16 TD34 M N	1-1/16" - 24 UNS	Neoprene	91,5	3,60	76,5	3,01	50	1,97	152	5,98	46	1,81	50	1,97	17,7	0,70
		*RF 16 TD34 F H	*RF 16 TD34 M H	1-1/16" - 24 UNS	HNBR	91,5	3,60	76,5	3,01	50	1,97	152	5,98	46	1,81	50	1,97	17,7	0,70
		*RF 16 TD34 F E	*RF 16 TD34 M E	1-1/16" - 24 UNS	EPDM	91,5	3,60	76,5	3,01	50	1,97	152	5,98	46	1,81	50	1,97	17,7	0,70
		*RF 16 TD34 F V	*RF 16 TD34 M V	1-1/16" - 24 UNS	Viton	91,5	3,60	76,5	3,01	50	1,97	152	5,98	46	1,81	50	1,97	17,7	0,70
Complete coupling with JIC 37° adaptor (ISO 8434-2)	04	*RF 04-13/38S F N	*RF 04-13/38S M N	9/16" - 18 UNF	Neoprene	47,9	1,89	47,4	1,87	19	0,75	88,3	3,48	16	0,63	19	0,75		
		RF 04-13/14S F H	RF 04-13/14S M H	7/16" - 20 UNF	HNBR	47,9	1,89	47,4	1,87	19	0,75	88,3	3,48	16	0,63	19	0,75		
		*RF 04-13/38S F E	*RF 04-13/38S M E	9/16" - 18 UNF	EPDM	47,9	1,89	47,4	1,87	19	0,75	88,3	3,48	16	0,63	19	0,75		
		*RF 04-13/38S F V	*RF 04-13/38S M V	9/16" - 18 UNF	Viton	47,9	1,89	47,4	1,87	19	0,75	88,3	3,48	16	0,63	19	0,75		
	06	*RF 06-13/38S F N	*RF 06-13/38S M N	9/16" - 18 UNF	Neoprene	55,8	2,20	48	1,89	24	0,94	95	3,74	21	0,83	21	0,83		
		*RF 06-13/38S F H	*RF 06-13/38S M H	9/16" - 18 UNF	HNBR	55,8	2,20	48	1,89	24	0,94	95	3,74	21	0,83	21	0,83		
		*RF 06-13/38S F E	*RF 06-13/38S M E	9/16" - 18 UNF	EPDM	55,8	2,20	48	1,89	24	0,94	95	3,74	21	0,83	21	0,83		
		*RF 06-13/38S F V	*RF 06-13/38S M V	9/16" - 18 UNF	Viton	55,8	2,20	48	1,89	24	0,94	95	3,74	21	0,83	21	0,83		
	08	*RF 08-13/12S F N	*RF 08-13/12S M N	3/4" - 16 UNF	Neoprene	70,5	2,78	62,5	2,46	30	1,18	124,5	4,90	27	1,06	27	1,06		
		*RF 08-13/12S F H	*RF 08-13/12S M H	3/4" - 16 UNF	HNBR	70,5	2,78	62,5	2,46	30	1,18	124,5	4,90	27	1,06	27	1,06		
		*RF 08-13/12S F E	*RF 08-13/12S M E	3/4" - 16 UNF	EPDM	70,5	2,78	62,5	2,46	30	1,18	124,5	4,90	27	1,06	27	1,06		
		*RF 08-13/12S F V	*RF 08-13/12S M V	3/4" - 16 UNF	Viton	70,5	2,78	62,5	2,46	30	1,18	124,5	4,90	27	1,06	27	1,06		
	12	*RF 12-13/34S F N	*RF 12-13/34S M N	1-1/16" - 12 UN	Neoprene	85	3,35	73,5	2,89	41	1,61	144,5	5,69	36	1,42	41	1,61		
		*RF 12-13/34S F H	*RF 12-13/34S M H	1-1/16" - 12 UN	HNBR	85	3,35	73,5	2,89	41	1,61	144,5	5,69	36	1,42	41	1,61		
		*RF 12-13/34S F E	*RF 12-13/34S M E	1-1/16" - 12 UN	EPDM	85	3,35	73,5	2,89	41	1,61	144,5	5,69	36	1,42	41	1,61		
		*RF 12-13/34S F V	*RF 12-13/34S M V	1-1/16" - 12 UN	Viton	85	3,35	73,5	2,89	41	1,61	144,5	5,69	36	1,42	41	1,61		
	16	RF 16-13/114S F N	RF 16-13/114S M N	1-5/8" - 12 UN	Neoprene	96,5	3,80	81,5	3,21	50	1,97	162	6,38	46	1,81	50	1,97		
		*RF 16-13/114S F H	*RF 16-13/114S M H	1-5/8" - 12 UN	HNBR	96,5	3,80	81,5	3,21	50	1,97	162	6,38	46	1,81	50	1,97		
		*RF 16-13/114S F E	*RF 16-13/114S M E	1-5/8" - 12 UN	EPDM	96,5	3,80	81,5	3,21	50	1,97	162	6,38	46	1,81	50	1,97		
		*RF 16-13/114S F V	*RF 16-13/114S M V	1-5/8" - 12 UN	Viton	96,5	3,80	81,5	3,21	50	1,97	162	6,38	46	1,81	50	1,97		
Complete coupling with 120° adaptor	04	RF 04-39/18G F N	RF 04-39/18G M N	1/8" BSP	Neoprene	41,4	1,63	40,9	1,61	19	0,75	75,5	2,97	16	0,63	19	0,75		
		*RF 04-39/18G F H	*RF 04-39/18G M H	1/8" BSP	HNBR	41,4	1,63	40,9	1,61	19	0,75	75,5	2,97	16	0,63	19	0,75		
		*RF 04-39/18G F E	*RF 04-39/18G M E	1/8" BSP	EPDM	41,4	1,63	40,9	1,61	19	0,75	75,5	2,97	16	0,63	19	0,75		
		*RF 04-39/18G F V	*RF 04-39/18G M V	1/8" BSP	Viton	41,4	1,63	40,9	1,61	19	0,75	75,5	2,97	16	0,63	19	0,75		
Hose barb adaptor	04	*RF 04 P065 F N	*RF 04 P065 M N	1/4"	Neoprene	59,5	2,34	59	2,32	19	0,75	111,5	4,39	16	0,63	19	0,75		
		*RF 04 P065 F H	*RF 04 P065 M H	1/4"	HNBR	59,5	2,34	59	2,32	19	0,75	111,5	4,39	16	0,63	19	0,75		
		*RF 04 P065 F E	*RF 04 P065 M E	1/4"	EPDM	59,5	2,34	59	2,32	19	0,75	111,5	4,39	16	0,63	19	0,75		
		RF 04 P065 F V	*RF 04 P065 M V	1/4"	Viton	59,5	2,34	59	2,32	19	0,75	111,5	4,39	16	0,63	19	0,75		
	06	*RF 06 P095 F N	*RF 06 P095 M N	3/8"	Neoprene	67	2,64	59	2,32	24	0,94	117,2	4,61	22	0,87	22	0,87		
		*RF 06 P095 F H	*RF 06 P095 M H	3/8"	HNBR	67	2,64	59	2,32	24	0,94	117,2	4,61	22	0,87	22	0,87		
		*RF 06 P095 F E	*RF 06 P095 M E	3/8"	EPDM	67	2,64	59	2,32	24	0,94	117,2	4,61	22	0,87	22	0,87		
		RF 06 P095 F V	*RF 06 P095 M V	3/8"	Viton	67	2,64	59	2,32	24	0,94	117,2	4,61	22	0,87	22	0,87		
	08	*RF 08 P125 F N	*RF 08 P125 M N	1/2"	Neoprene	80,5	3,17	72,5	2,85	30	1,18	144,5	5,69	27	1,06	27	1,06		
		*RF 08 P125 F H	*RF 08 P125 M H	1/2"	HNBR	80,5	3,17	72,5	2,85	30	1,18	144,5	5,69	27	1,06	27	1,06		
		*RF 08 P125 F E	*RF 08 P125 M E	1/2"	EPDM	80,5	3,17	72,5	2,85	30	1,18	144,5	5,69	27	1,06	27	1,06		
		*RF 08 P125 F V	*RF 08 P125 M V	1/2"	Viton	80,5	3,17	72,5	2,85	30	1,18	144,5	5,69	27	1,06	27	1,06		
	12	*RF 12 P190 F N	*RF 12 P190 M N	3/4"	Neoprene	98,5	3,88	87	3,43	41	1,61	171,5	6,75	36	1,42	41	1,61		
		*RF 12 P190 F H	*RF 12 P190 M H	3/4"	HNBR	98,5	3,88	87	3,43	41	1,61	171,5	6,75	36	1,42	41	1,61		
		*RF 12 P190 F E	*RF 12 P190 M E	3/4"	EPDM	98,5	3,88	87	3,43	41	1,61	171,5	6,75	36	1,42	41	1,61		
		*RF 12 P190 F V	*RF 12 P190 M V	3/4"	Viton	98,5	3,88	87	3,43	41	1,61	171,5	6,75	36	1,42	41	1,61		
	16	*RF 16 P255 F N	*RF 16 P255 M N	1"	Neoprene	104,5	4,11	89,5	3,52	50	1,97	178	7,01	46	1,81	50	1,97		
		*RF 16 P255 F H	*RF 16 P255 M H	1"	HNBR	104,5	4,11	89,5	3,52	50	1,97	178	7,01	46	1,81	50	1,97		
		*RF 16 P255 F E	*RF 16 P255 M E	1"	EPDM	104,5	4,11	89,5	3,52	50	1,97	178	7,01	46	1,81	50	1,97		
		*RF 16 P255 F V	*RF 16 P255 M V	1"	Viton	104,5	4,11	89,5	3,52	50	1,97	178	7,01	46	1,81	50	1,97		

❖ Size *On request

The descriptions and illustrations in this catalogue are for information only and are not binding.

LEHENGOAK, S.A.

FASTER® LEHENGOAK, S.A.

NEW SERIES RFL STEEL

Features

- **Connection system:** screw-on
- **Disconnection system:** screw-on
- **Shut off system:** flat valve
- **Connectability:** both male and female couplings under residual pressure
- **Disconnection under pressure:** allowed
- **Interchangeability:** worldwide market

- **Hand connection under residual pressure**
- Interchangeable with standard RF series couplings.
- Latching system by low friction threaded sleeve
- Wear reduction
- Uses standard RF series adaptors

Patent Applications Pending

Technical data

Size ❖		DN Nominal diameter		Minimum burst pressure					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
1/4"	04	5	0.20	100	14500	53	7685	10,5	1523
3/8"	06	7	0.28	70	10150	24	3480	19	2755
1/2"	08	9	0.35	55	7975	55	7975	8,3	1204
3/4"	12	16	0.63	43	6325	43	6325	10,5	1523
1"	16	25	0.98	37	5365	12	1740	7,5	1088
1-1/2"	24	35	1.38	30	4350	16	2320	11,5	1668

Air inclusion and fluid loss	Maximum leakage rate **	Vacuum rating		Connection sleeve torque
cc max.	g/year	mmHg	incHg	Nm
0.02	1,5	2	0,08	8^{+2}_{-0}
0,05	1,5	2	0,08	20^{+2}_{-0}
0,1	1,5	2	0,08	20^{+2}_{-0}
0,1	1,5	2	0,08	50^{+5}_{-0}
0,2	1,5	2	0,08	60^{+5}_{-0}
0,2	1,5	2*	0,08*	80^{+10}_{-0}

*Connected

Size ❖		DN Nominal diameter		Maximum working pressure *					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
1/4"	04	5	0.20	33	4785	17,5	2538	3,5	508
3/8"	06	7	0.28	23,3	3379	8	1160	6	870
1/2"	08	9	0.35	18,3	2654	18,3	2654	2,75	400
3/4"	12	16	0.63	14,3	2074	14,3	2074	3,5	508
1"	16	25	0.98	12,3	1784	4	580	2,5	363
1-1/2	24	35	1.38	10	1450	5,3	769	3,8	551

Max pressure allowing connection by hand (M+F)	
MPa	PSI
3,5	508
3	435
2,2	319
0,8	116
0,7	102
0,6	87

* Safety factor = 1:3 - For static pressure safety factor 1:2
** R22 equivalent refrigerant at operating range, both connected and disconnected.

Materials:
- Female in steel.
- Surface treatment: zinc plating with Cr III passivation.
- Springs in stainless steel.

Seals: standard in Neoprene or HNBR.
On request: EPDM, Viton or other seals.

Working temperatures:
With Neoprene seals from -40°C (-40°F) to +120°C (+248°F).
With HNBR seals from -25°C (-13°F) to +140°C (+284°F).
Temperatures refer to theorical working conditions in laboratory.

▶ Pressure drop chart

See at page 21

▶ Installation and Brazing instructions

See at pages 22-23-24

▶ Accessories - Spare part kit

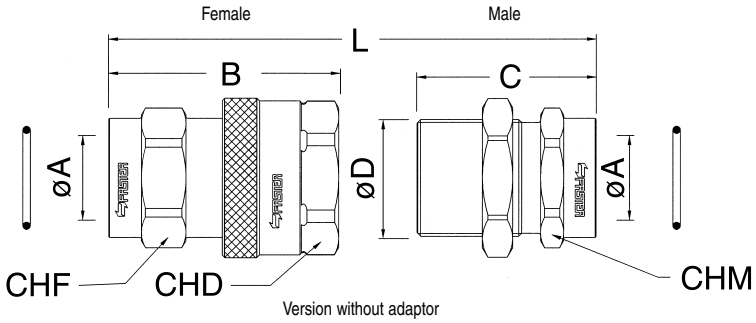
See at pages 19-20

▶ Seals compatibility

See at page 24

▶ Available items

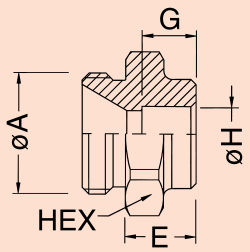
SERIES RFL STEEL



Version without adaptor

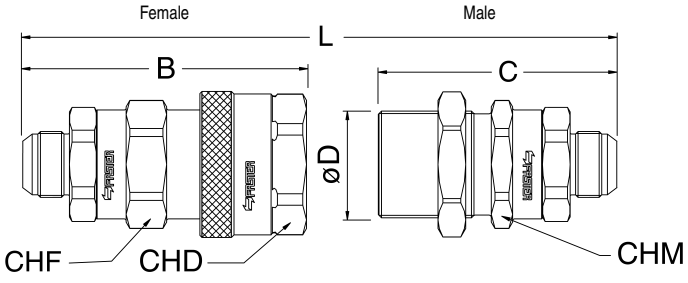
	❖	Female	Male (see RF series)	Ø A	Seals material	B mm	B inc.	C mm	C inc.	Ø D mm	CHD mm	CHD inc.	L mm	L inc.	CHF mm	CHF inc.	CHM mm	CHM inc.
Version without adaptor	**04**	RFL 04 F N	RF 04 ... N	1/2" - 20 UNF	Neoprene	29,5	1,16	-	-	5/8" - 18 UNF	19	0,75	-	-	16	0,63	19	0,75
		*RFL 04 F H	RF 04 ... H	1/2" - 20 UNF	HNBR	29,5	1,16	-	-	5/8" - 18 UNF	19	0,75	-	-	16	0,63	19	0,75
		*RFL 04 F E	RF 04 ... E	1/2" - 20 UNF	EPDM	29,5	1,16	-	-	5/8" - 18 UNF	19	0,75	-	-	16	0,63	19	0,75
		RFL 04 F V	RF 04 ... V	1/2" - 20 UNF	Viton	29,5	1,16	-	-	5/8" - 18 UNF	19	0,75	-	-	16	0,63	19	0,75
	06	*RFL 06 F N	RF 06 ... N	M18x1.5	Neoprene	35	1,38	-	-	M20x1.5	24	0,94	-	-	22	0,87	22	0,87
		*RFL 06 F H	RF 06 ... H	M18x1.5	HNBR	35	1,38	-	-	M20x1.5	24	0,94	-	-	22	0,87	22	0,87
		*RFL 06 F E	RF 06 ... E	M18x1.5	EPDM	35	1,38	-	-	M20x1.5	24	0,94	-	-	22	0,87	22	0,87
		RFL 06 F V	RF 06 ... V	M18x1.5	Viton	35	1,38	-	-	M20x1.5	24	0,94	-	-	22	0,87	22	0,87
	08	RFL 08 F N	RF 08 ... N	7/8" - 20 UNEF	Neoprene	50	1,97	-	-	1" - 20 UNEF	30	1,18	-	-	27	1,06	27	1,06
		*RFL 08 F H	RF 08 ... H	7/8" - 20 UNEF	HNBR	50	1,97	-	-	1" - 20 UNEF	30	1,18	-	-	27	1,06	27	1,06
		*RFL 08 F E	RF 08 ... E	7/8" - 20 UNEF	EPDM	50	1,97	-	-	1" - 20 UNEF	30	1,18	-	-	27	1,06	27	1,06
		RFL 08 F V	RF 08 ... V	7/8" - 20 UNEF	Viton	50	1,97	-	-	1" - 20 UNEF	30	1,18	-	-	27	1,06	27	1,06
	12	RFL 12 F N	RF 12 ... N	1-1/4" - 18 UNEF	Neoprene	57,5	2,26	-	-	1-7/16" - 16 UN	41	1,61	-	-	36	1,42	41	1,61
		*RFL 12 F H	RF 12 ... H	1-1/4" - 18 UNEF	HNBR	57,5	2,26	-	-	1-7/16" - 16 UN	41	1,61	-	-	36	1,42	41	1,61
		*RFL 12 F E	RF 12 ... E	1-1/4" - 18 UNEF	EPDM	57,5	2,26	-	-	1-7/16" - 16 UN	41	1,61	-	-	36	1,42	41	1,61
		*RFL 12 F V	RF 12 ... V	1-1/4" - 18 UNEF	Viton	57,5	2,26	-	-	1-7/16" - 16 UN	41	1,61	-	-	36	1,42	41	1,61
	16	*RFL 16 F N	RF 16 ... N	1-19/32" - 20 UN	Neoprene	65	2,56	-	-	1-3/4" - 16 UN	50	1,97	-	-	46	1,81	50	1,97
		*RFL 16 F H	RF 16 ... H	1-19/32" - 20 UN	HNBR	65	2,56	-	-	1-3/4" - 16 UN	50	1,97	-	-	46	1,81	50	1,97
		*RFL 16 F E	RF 16 ... E	1-19/32" - 20 UN	EPDM	65	2,56	-	-	1-3/4" - 16 UN	50	1,97	-	-	46	1,81	50	1,97
		RFL 16 F V	RF 16 ... V	1-19/32" - 20 UN	Viton	65	2,56	-	-	1-3/4" - 16 UN	50	1,97	-	-	46	1,81	50	1,97
	24	RFL 24 F N	RF 24 M N	M61x1.5	Neoprene	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76
		RFL 24 F H	RF 24 M H	M61x1.5	HNBR	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76
		*RFL 24 F E	*RF 24 M E	M61x1.5	EPDM	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76
		*RFL 24 F V	*RF 24 M V	M61x1.5	Viton	96	3,78	70	2,76	M68x2	80	3,15	150	5,91	70	2,76	70	2,76

❖ Size *On request



Braze tubing adaptor

▶ Braze tubing adaptor
See table at page 6



Complete coupling with adaptor

- **All versions available with adaptors as shown in the table at page 7.**
- **Female coupling code from RF …. to RFL…**
- **Dimensions can be obtained from table at page 7 considering the different lenght of the quick-release coupling without adaptor.**

FASTER® LEHENGOAK, S.A.

NEW SERIES RFLs STEEL

Features

- **Connection system:** screw-on
- **Disconnection system:** screw-on
- **Shut off system:** flat valve
- **Connectability:** both male and female couplings under residual pressure
- **Disconnection under pressure:** allowed
- **Interchangeability:** according to Faster internal standard

- **Hand connection under residual pressure**
- Safety sleeve to prevent unscrewing
- No need of wrenches for connection/disconnection
- Additional safety sleeve in red anodized aluminium to prevent unscrewing
- Other colours of the sleeve available on request
- Latching system by low friction threaded sleeve
- Wear reduction
- **Not interchangeable** with standard RF series couplings
- Uses standard RF series adaptors

Patent Applications Pending

Technical data

Size ❖		DN Nominal diameter		Minimum burst pressure					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
1/4"	04	5	0.20	100	14500	53	7685	10,5	1523
3/8"	06	7	0.28	70	10150	24	3480	19	2755
1/2"	08	9	0.35	55	7975	55	7975	8,3	1204

Air inclusion and fluid loss	Maximum leakage rate **	Vacuum rating	
cc max.	g/year	mmHg	incHg
0,02	1,5	2	0,08
0,05	1,5	2	0,08
0,1	1,5	2	0,08

Size ❖		DN Nominal diameter		Maximum working pressure *					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
1/4"	04	5	0.20	33	4785	17,5	2538	3,5	508
3/8"	06	7	0.28	23,3	3379	8	1160	6	870
1/2"	08	9	0.35	18,3	2654	18,3	2654	2,75	400

Max pressure allowing connection by hand (M+F)	
MPa	PSI
3,5	508
3	435
2,2	319

* Safety factor = 1:3 - For static pressure safety factor 1:2
** R22 equivalent refrigerant at operating range, both connected and disconnected.

Materials:
- Male, female and valves in steel.
- Surface treatment: zinc plating with Cr III passivation.
- Safety sleeve in anodised aluminium.

Seals: standard in Neoprene or HNBR.
On request: EPDM, Viton or other seals.

Working temperatures:
With Neoprene seals from -40°C (-40°F) to +120°C (+248°F).
With HNBR seals from -25°C (-13°F) to +140°C (+284°F).
Temperatures refer to theorical working conditions in laboratory.

▶ Pressure drop chart

See at page 21

▶ Installation and Brazing instructions

See at pages 22-23-24

▶ Accessories - Spare part kit

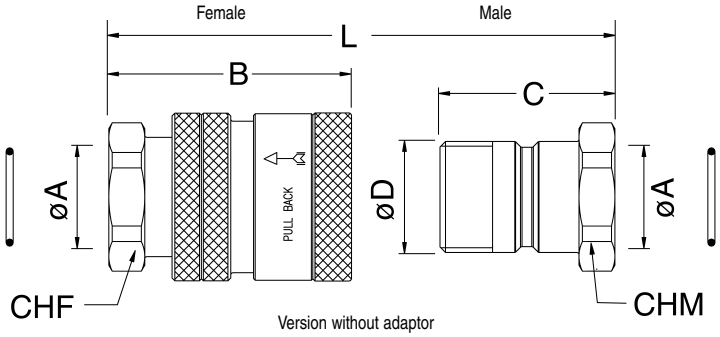
See at pages 19-20

▶ Seals compatibility

See at page 24

▶ Available items

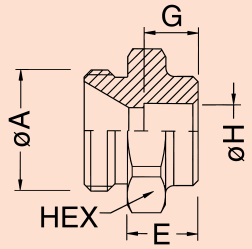
SERIES RFLS STEEL



Version without adaptor

	❖	Female	Male	Ø A	Seals material	B mm	B inc.	C mm	C inc.	Ø D mm	L mm	L inc.	CHF mm	CHF inc.	CHM mm	CHM inc.
Version without adaptor	**04**	RFLS 04 F N	RFS 04 M N	1/2" - 20 UNF	Neoprene	38,5	1,52	29	1,14	M16x3 double thread	55	2,17	19	0,75	19	0,75
		*RFLS 04 F H	*RFS 04 M H	1/2" - 20 UNF	HNBR	38,5	1,52	29	1,14	M16x3 double thread	55	2,17	19	0,75	19	0,75
		*RFLS 04 F E	*RFS 04 M E	1/2" - 20 UNF	EPDM	38,5	1,52	29	1,14	M16x3 double thread	55	2,17	19	0,75	19	0,75
		*RFLS 04 F V	RFS 04 M V	1/2" - 20 UNF	Viton	38,5	1,52	29	1,14	M16x3 double thread	55	2,17	19	0,75	19	0,75
	06	*RFLS 06 F N	*RFS 06 M N	M18x1.5	Neoprene	44,5	1,75	32	1,26	M20x3 double thread	50	1,97	22	0,87	22	0,87
		*RFLS 06 F H	*RFS 06 M H	M18x1.5	HNBR	44,5	1,75	32	1,26	M20x3 double thread	50	1,97	22	0,87	22	0,87
		*RFLS 06 F E	*RFS 06 M E	M18x1.5	EPDM	44,5	1,75	32	1,26	M20x3 double thread	50	1,97	22	0,87	22	0,87
		*RFLS 06 F V	*RFS 06 M V	M18x1.5	Viton	44,5	1,75	32	1,26	M20x3 double thread	50	1,97	22	0,87	22	0,87
	08	RFLS 08 F N	RFS 08 M N	7/8" - 20 UNEF	Neoprene	56	2,20	41,5	1,63	M26x4 double thread	75	2,95	27	1,06	32	1,26
		*RFLS 08 F H	*RFS 08 M H	7/8" - 20 UNEF	HNBR	56	2,20	41,5	1,63	M26x4 double thread	75	2,95	27	1,06	32	1,26
		*RFLS 08 F E	*RFS 08 M E	7/8" - 20 UNEF	EPDM	56	2,20	41,5	1,63	M26x4 double thread	75	2,95	27	1,06	32	1,26
		*RFLS 08 F V	*RFS 08 M V	7/8" - 20 UNEF	Viton	56	2,20	41,5	1,63	M26x4 double thread	75	2,95	27	1,06	32	1,26

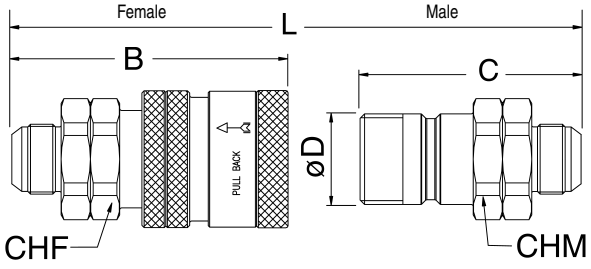
❖ Size *On request



Braze tubing adaptor

▶ Braze tubing adaptor

See table at page 6



Complete coupling with adaptor

- **All versions available with adaptors as shown in the table at page 7.**
- **Female coupling code from RF …. to RFLS…**
- **Male coupling code from RF …. to RFS…**
- **Dimensions can be obtained from table at page 7 considering the different lenght of the quick-release coupling without adaptor.**

FASTER® LEHENGOAK, S.A.

SERIES RF BRASS

▶ Features

- **Connection system:** screw-on
- **Disconnection system:** screw-on
- **Shut off system:** flat valve
- **Connectability:** both male and female couplings under residual pressure
- **Disconnection under pressure:** allowed
- **Interchangeability:** worldwide market

- Screw-on latching system
- Standard seals in Neoprene or HNBR (Hydrogenated NBR)
- Suitable for bulkhead mounting
- Wide range of brazed and threaded adaptors
- Other adaptors available on request
- Made in Brass
- Special versions available on request
- **UL Listed: File N° SA13163 (size 06 only)**
- UL marking on request

▶ Technical data

Size ❖		DN Nominal diameter		Minimum burst pressure					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
3/8”	06	7	0.28	40	5800	21	3045	19	2755
1/2”	08	9	0.35	25	3625	26	3770	8,3	1204
3/4”	12	16	0.63	19	2755	21	3045	10,5	1523
1”	16	25	0.98	15	2175	13	1885	7,5	1088

Air inclusion and fluid loss	Maximum leakage rate **	Vacuum rating		Connection sleeve torque
cc max.	g/year	mmHg	incHg	Nm
0,05	1,5	2	0,08	10^{+2}_{-0}
0,1	1,5	2	0,08	30^{+5}_{-0}
0,1	1,5	2	0,08	60^{+5}_{-0}
0,2	1,5	2	0,08	80^{+5}_{-0}

Size ❖		DN Nominal diameter		Maximum working pressure *					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
3/8”	06	7	0.28	13,3	1929	7	1015	6	870
1/2”	08	9	0.35	8	1160	8,5	1233	2,75	400
3/4”	12	16	0.63	6	870	7	1015	3,5	508
1”	16	25	0.98	5	725	4	580	2,5	363

* Safety factor = 1:3 - For static pressure safety factor 1:2
** R22 equivalent refrigerant at operanting range, both connected and disconnected.

Materials:
- Male and female in brass.
- Valves in zinc plated steel with Cr III passivation.
- Springs and guidevalves in stainless steel.

Seals: standard in Neoprene or HNBR.
On request: EPDM, Viton or other seals.

Working temperatures:
With Neoprene seals from -40°C (-40°F) to +120°C (+248°F).
With HNBR seals from -25°C (-13°F) to +140°C (+284°F).
Temperatures refer to theorical working conditions in laboratory.

▶ Pressure drop chart
See at page 21

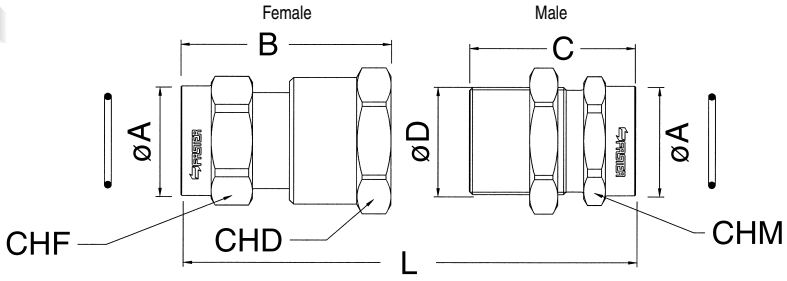
▶ Installation and Brazing instructions
See at pages 22-23-24

▶ Accessories - Spare part kit
See at pages 19-20

▶ Seals compatibility
See at page 24

▶ Available items

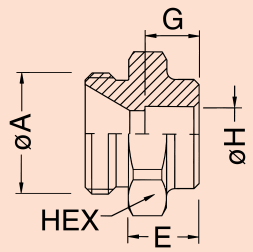
SERIES RF BRASS



Version without adaptor

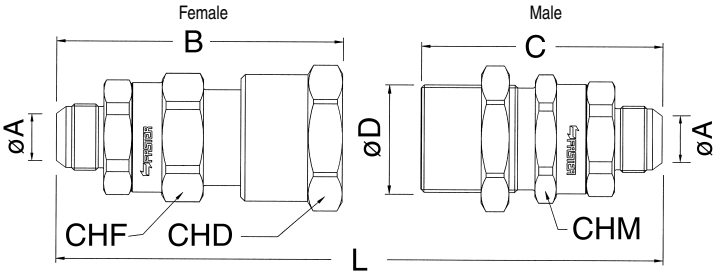
	❖	Female	Male	Ø A	Seals material	B mm	B inc.	C mm	C inc.	Ø D mm	CHD mm	CHD inc.	L mm	L inc.	CHF mm	CHF inc.	CHM mm	CHM inc.
Version without adaptor	06	RF 06 F5 N	RF 06 M5 N	M18x1,5	Neoprene	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
		RF 06 F5 H	RF 06 M5 H	M18x1,5	HNBR	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
		*RF 06 F5 E	*RF 06 M5 E	M18x1,5	EPDM	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
		*RF 06 F5 V	*RF 06 M5 V	M18x1,5	Viton	34,8	1,37	27	1,06	M20x1,5	24	0,94	53	2,09	22	0,87	22	0,87
	08	RF 08 F5 N	RF 08 M5 N	7/8" - 20 UNEF	Neoprene	46,5	1,83	38,5	1,52	1" - 20 UN	30	1,18	76,5	3,01	27	1,06	27	1,06
		RF 08 F5 H	RF 08 M5 H	7/8" - 20 UNEF	HNBR	46,5	1,83	38,5	1,52	1" - 20 UN	30	1,18	76,5	3,01	27	1,06	27	1,06
		*RF 08 F5 E	*RF 08 M5 E	7/8" - 20 UNEF	EPDM	46,5	1,83	38,5	1,52	1" - 20 UN	30	1,18	76,5	3,01	27	1,06	27	1,06
		*RF 08 F5 V	*RF 08 M5 V	7/8" - 20 UNEF	Viton	46,5	1,83	38,5	1,52	1" - 20 UN	30	1,18	76,5	3,01	27	1,06	27	1,06
	12	RF 12 F5 N	RF 12 M5 N	1-1/4" - 18 UNEF	Neoprene	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
		RF 12 F5 H	RF 12 M5 H	1-1/4" - 18 UNEF	HNBR	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
		*RF 12 F5 E	*RF 12 M5 E	1-1/4" - 18 UNEF	EPDM	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
		*RF 12 F5 V	*RF 12 M5 V	1-1/4" - 18 UNEF	Viton	55,5	2,19	44	1,73	1-7/16" - 16 UN	41	1,61	85,5	3,37	36	1,42	41	1,61
	16	RF 16 F5 N	RF 16 M5 N	1-19/32" - 20 UN	Neoprene	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97
		RF 16 F5 H	RF 16 M5 H	1-19/32" - 20 UN	HNBR	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97
		*RF 16 F5 E	*RF 16 M5 E	1-19/32" - 20 UN	EPDM	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97
		*RF 16 F5 V	*RF 16 M5 V	1-19/32" - 20 UN	Viton	61,5	2,42	46,5	1,83	1-3/4" - 16 UN	50	1,97	92	3,62	46	1,81	50	1,97

❖ Size *On request



Braze tubing adaptor

▶ Braze tubing adaptor
See table at page 6



Complete coupling with adaptor

- **All versions available with adaptors as shown in the table at page 7.**
- **Add to coupling code RF… the suffix "5".**
- **Dimensions can be obtained from table at page 7 considering the different lenght of the quick-release coupling without adaptor.**

FASTER®

LEHENGOAK, S.A.

SERIES RFS

BRASS WITH COPPER SWEAT CONNECTION

▶ Features

- **Connection system:** screw-on
- **Disconnection system:** screw-on
- **Shut off system:** flat valve
- **Connectability:** both male and female couplings under residual pressure
- **Disconnection under pressure:** allowed
- **Interchangeability:** worldwide market

- **Copper sweat connection to make the installation easier**
- Screw-on latching system
- Standard seals in HNBR (Hydrogenated NBR) or Neoprene
- Suitable for bulkhead mounting
- Made in brass and copper
- Special versions available on request
- **UL Listed: File N° SA13163**

▶ Technical data

Size ❖		DN Nominal diameter		Minimum burst pressure					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
3/8”	06	7	0.28	26	3770	21	3045	19	2755
1/2”	08	9	0.35	25	3625	26	3770	8,3	1204
3/4”	12	16	0.63	19	2755	21	3045	10,5	1523
1”	16	25	0.98	15	2175	13	1885	7,5	1088

Air inclusion and fluid loss	Maximum leakage rate **	Vacuum rating		Connection sleeve torque
cc max.	g/year	mmHg	incHg	Nm
0,05	1,5	2	0,08	20^{+2}_{-0}
0,1	1,5	2	0,08	30^{+5}_{-0}
0,1	1,5	2	0,08	60^{+5}_{-0}
0,2	1,5	2	0,08	80^{+5}_{-0}

Size ❖		DN Nominal diameter		Maximum working pressure *					
				Connected		Male		Female	
		mm	inc.	MPa	PSI	MPa	PSI	MPa	PSI
3/8”	06	7	0.28	8,5	1233	7	1015	6	870
1/2”	08	9	0.35	8	1160	8,5	1233	2,75	400
3/4”	12	16	0.63	6	870	7	1015	3,5	508
1”	16	25	0.98	5	725	4	580	2,5	363

* Safety factor = 1:3 - For static pressure safety factor 1:2

** R22 equivalent refrigerant at operating range, both connected and disconnected.

Materials:
- Male and female in brass and copper.
- Valves in zinc plated steel with Cr III passivation.
- Copper sweat connection.
- Springs and guidevalves in stainless steel.

Seals: standard in HNBR or Neoprene.
On request: EPDM, Viton or other seals.

Working temperatures:
With Neoprene seals from -40°C (-40°F) to +120°C (+248°F).
With HNBR seals from -25°C (-13°F) to +140°C (+284°F).
Temperatures refer to theorical working conditions in laboratory.

▶ Pressure drop chart

See at page 21

▶ Installation and Brazing instructions

See at pages 22-23-24

▶ Accessories - Spare part kit

See at pages 19-20

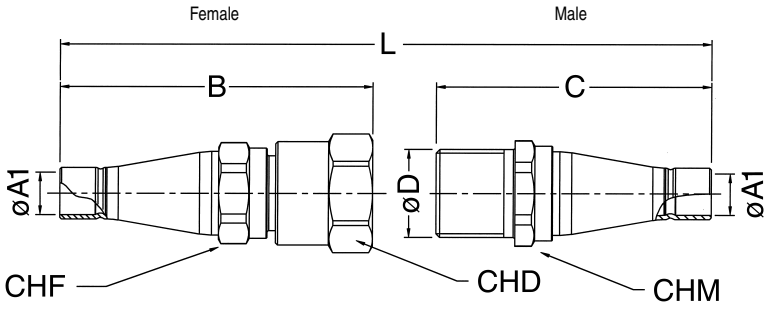
▶ Seals compatibility

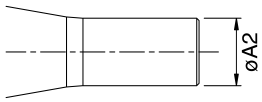
See at page 24

LEHENGOAK, S.A.

▶ Available items

SERIES RFS
BRASS
WITH COPPER
SWEAT CONNECTION





▶ Standard connection

	❖	Female	Male	Ø A1	Seals material	B mm	B inc.	C mm	C inc.	Ø D mm	CHD mm	CHD inc.	L mm	L inc.	CHF mm	CHF inc.	CHM mm	CHM inc.
HNBR Seals	06	RF 06 CS065 F5H	RF 06 CS065 M5H	6,5 (1/4")	HNBR	76	2,99	67	2,64	M20x1,5	24	0,94	135	5,31	22	0,87	22	0,87
		RF 06 CS095 F5H	RF 06 CS095 M5H	9,7 (3/8")	HNBR	76	2,99	67	2,64	M20x1,5	24	0,94	135	5,31	22	0,87	22	0,87
	08	RF 08 CS065 F5H	RF 08 CS065 M5H	6,5 (1/4")	HNBR	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
		RF 08 CS095 F5H	RF 08 CS095 M5H	9,7 (3/8")	HNBR	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
		RF 08 CS125 F5H	RF 08 CS125 M5H	12,8 (1/2")	HNBR	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
		RF 08 CS160 F5H	RF 08 CS160 M5H	16,1 (5/8")	HNBR	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
	12	RF 12 CS160 F5H	RF 12 CS160 M5H	16,1 (5/8")	HNBR	129	5,08	118	4,65	1-7/16" - 16 UN	41	1,61	233	9,17	36	1,42	41	1,61
		RF 12 CS190 F5H	RF 12 CS190 M5H	19,2 (3/4")	HNBR	129	5,08	118	4,65	1-7/16" - 16 UN	41	1,61	233	9,17	36	1,42	41	1,61
		*RF 12 CS220 F5H	*RF 12 CS220 M5H	22,4 (7/8")	HNBR	129	5,08	118	4,65	1-7/16" - 16 UN	41	1,61	233	9,17	36	1,42	41	1,61
	16	RF 16 CS220 F5H	RF 16 CS220 M5H	22,4 (7/8")	HNBR	145	5,71	131	5,16	1-3/4" - 16 UN	50	1,97	260	10,24	46	1,81	48	1,89
		*RF 16 CS255 F5H	*RF 16 CS255 M5H	25,6 (1")	HNBR	145	5,71	131	5,16	1-3/4" - 16 UN	50	1,97	260	10,24	46	1,81	48	1,89
		RF 16 CS290 F5H	RF 16 CS290 M5H	28,7 (1-1/8")	HNBR	145	5,71	131	5,16	1-3/4" - 16 UN	50	1,97	260	10,24	46	1,81	48	1,89
Neoprene Seals	06	RF 06 CS065 F5N	RF 06 CS065 M5N	6,5 (1/4")	Neoprene	76	2,99	67	2,64	M20x1,5	24	0,94	135	5,31	22	0,87	22	0,87
		RF 06 CS095 F5N	RF 06 CS095 M5N	9,7 (3/8")	Neoprene	76	2,99	67	2,64	M20x1,5	24	0,94	135	5,31	22	0,87	22	0,87
	08	RF 08 CS065 F5N	RF 08 CS065 M5N	6,5 (1/4")	Neoprene	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
		RF 08 CS095 F5N	RF 08 CS095 M5N	9,7 (3/8")	Neoprene	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
		RF 08 CS125 F5N	RF 08 CS125 M5N	12,8 (1/2")	Neoprene	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
		RF 08 CS160 F5N	RF 08 CS160 M5N	16,1 (5/8")	Neoprene	105	4,13	96	3,78	1" - 20 UNEF	30	1,18	192	7,56	27	1,06	27	1,06
	12	RF 12 CS160 F5N	RF 12 CS160 M5N	16,1 (5/8")	Neoprene	129	5,08	118	4,65	1-7/16" - 16 UN	41	1,61	233	9,17	36	1,42	41	1,61
		*RF 12 CS190 F5N	*RF 12 CS190 M5N	19,2 (3/4")	Neoprene	129	5,08	118	4,65	1-7/16" - 16 UN	41	1,61	233	9,17	36	1,42	41	1,61
		RF 12 CS220 F5N	RF 12 CS220 M5N	22,4 (7/8")	Neoprene	129	5,08	118	4,65	1-7/16" - 16 UN	41	1,61	233	9,17	36	1,42	41	1,61
	16	*RF 16 CS220 F5N	*RF 16 CS220 M5N	22,4 (7/8")	Neoprene	145	5,71	131	5,16	1-3/4" - 16 UN	50	1,97	260	10,24	46	1,81	48	1,89
		*RF 16 CS255 F5N	*RF 16 CS255 M5N	25,8 (1")	Neoprene	145	5,71	131	5,16	1-3/4" - 16 UN	50	1,97	260	10,24	46	1,81	48	1,89
		RF 16 CS290 F5N	RF 16 CS290 M5N	28,7 (1-1/8")	Neoprene	145	5,71	131	5,16	1-3/4" - 16 UN	50	1,97	260	10,24	46	1,81	48	1,89

❖ Size *On request øA1 Inside diameter

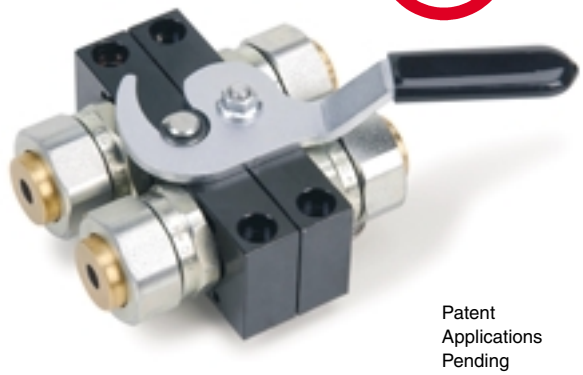
▶ Long connection

	❖	Female	Male	Ø A2	Seals material	B mm	B inc.	C mm	C inc.	Ø D mm	CHD mm	CHD inc.	L mm	L inc.	CHF mm	CHF inc.	CHM mm	CHM inc.
HNBR Seals	06	*RF 06 CS065L F5H	*RF 06 CS065L M5H	6.5 (1/4")	HNBR	146	5,75	137	5,39	M20x1.5	24	0,94	275	10,83	22	0,87	22	0,87
		*RF 06 CS095L F5H	*RF 06 CS095L M5H	9.7 (3/8")	HNBR	146	5,75	137	5,39	M20x1.5	24	0,94	275	10,83	22	0,87	22	0,87
	08	*RF 08 CS065L F5H	*RF 08 CS065L M5H	6.5 (1/4")	HNBR	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
		*RF 08 CS095L F5H	*RF 08 CS095L M5H	9.7 (3/8")	HNBR	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
		RF 08 CS125L F5H	RF 08 CS125L M5H	12.8 (1/2")	HNBR	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
		*RF 08 CS160L F5H	*RF 08 CS160L M5H	16.1 (5/8")	HNBR	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
	12	RF 12 CS160L F5H	RF 12 CS160L M5H	16.1 (5/8")	HNBR	190	7,48	179	7,05	1-7/16" - 16 UN	41	1,61	355	13,98	36	1,42	41	1,61
		*RF 12 CS190L F5H	*RF 12 CS190L M5H	19.2 (3/4")	HNBR	190	7,48	179	7,05	1-7/16" - 16 UN	41	1,61	355	13,98	36	1,42	41	1,61
		*RF 12 CS220L F5H	*RF 12 CS220L M5H	22.4 (3/4")	HNBR	190	7,48	179	7,05	1-7/16" - 16 UN	41	1,61	355	13,98	36	1,42	41	1,61
	16	*RF 16 CS220L F5H	*RF 16 CS220L M5H	22.4 (3/4")	HNBR	210	8,27	196	7,72	1-3/4" - 16 UN	50	1,97	390	15,35	46	1,81	48	1,89
		*RF 16 CS255L F5H	*RF 16 CS255L M5H	25.6 (1")	HNBR	210	8,27	196	7,72	1-3/4" - 16 UN	50	1,97	390	15,35	46	1,81	48	1,89
		*RF 16 CS290L F5H	*RF 16 CS290L M5H	28.7 (1-1/8")	HNBR	210	8,27	196	7,72	1-3/4" - 16 UN	50	1,97	390	15,35	46	1,81	48	1,89
Neoprene Seals	06	*RF 06 CS065L F5N	*RF 06 CS065L M5N	6.5 (1/4")	Neoprene	146	5,75	137	5,39	M20x1.5	24	0,94	275	10,83	22	0,87	22	0,87
		*RF 06 CS095L F5N	*RF 06 CS095L M5N	9.7 (3/8")	Neoprene	146	5,75	137	5,39	M20x1.5	24	0,94	275	10,83	22	0,87	22	0,87
	08	*RF 08 CS065L F5N	*RF 08 CS065L M5N	6.5 (1/4")	Neoprene	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
		*RF 08 CS095L F5N	*RF 08 CS095L M5N	9.7 (3/8")	Neoprene	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
		RF 08 CS125L F5N	RF 08 CS125L M5N	12.8 (1/2")	Neoprene	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
		*RF 08 CS160L F5N	*RF 08 CS160L M5N	16.1 (5/8")	Neoprene	175	6,89	166	6,54	1" - 20 UNEF	30	1,18	332	13,07	27	1,06	27	1,06
	12	*RF 12 CS160L F5N	RF 12 CS160L M5N	16.1 (5/8")	Neoprene	190	7,48	179	7,05	1-7/16" - 16 UN	41	1,61	355	13,98	36	1,42	41	1,61
		RF 12 CS190L F5N	*RF 12 CS190L M5N	19.2 (3/4")	Neoprene	190	7,48	179	7,05	1-7/16" - 16 UN	41	1,61	355	13,98	36	1,42	41	1,61
		*RF 12 CS220L F5N	RF 12 CS220L M5N	22.4 (3/4")	Neoprene	190	7,48	179	7,05	1-7/16" - 16 UN	41	1,61	355	13,98	36	1,42	41	1,61
	16	RF 16 CS220L F5N	*RF 16 CS220L M5N	22.4 (3/4")	Neoprene	210	8,27	196	7,72	1-3/4" - 16 UN	50	1,97	390	15,35	46	1,81	48	1,89
		RF 16 CS255L F5N	*RF 16 CS255L M5N	25.6 (1")	Neoprene	210	8,27	196	7,72	1-3/4" - 16 UN	50	1,97	390	15,35	46	1,81	48	1,89
		*RF 16 CS290L F5N	RF 16 CS290L M5N	28.7 (1-1/8")	Neoprene	210	8,27	196	7,72	1-3/4" - 16 UN	50	1,97	390	15,35	46	1,81	48	1,89

❖ Size *On request øA2 Outside diameter

▶ Multiconnection Multifaster M201 series

RF series quick-release couplings are also available integrated within a multiconnection system.
In this way the well consolidated technology characterizing Multifaster products gives benefits when in refrigerant fluids application too.
Thanks to the cam lever system with **M201** series multiconnection it is possible to connect and disconnect simultaneously and with minimal overall dimensions 2 lines 3/8" size.
UL Listed: File N° SA13163.
UL marking on request.

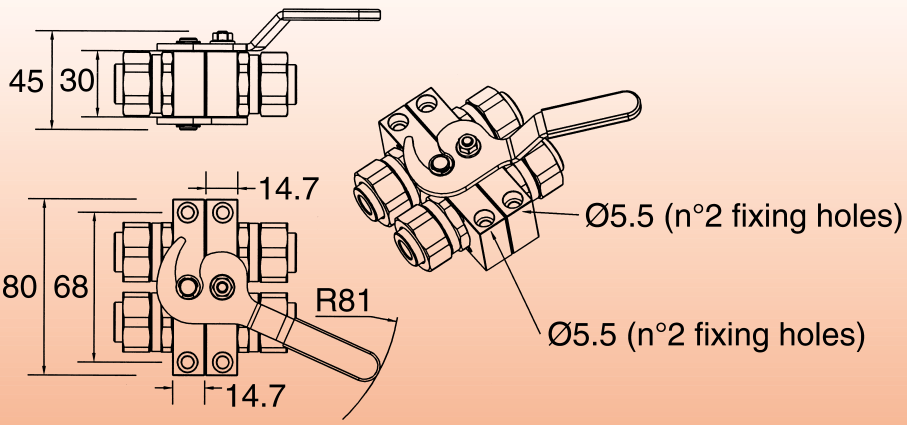


Patent Applications Pending

NEW MULTIFASTER M201 SERIES

▶ Technical data

Coupling size	3/8" (06)
Working pressure connected	11,3 MPa (1638 PSI)
Working pressure male part	8 MPa (1160 PSI)
Working pressure female part	6 MPa (870 PSI)
Spillage (for each coupling)	0.05 cc. max.
Air inclusion (for each coupling)	0.05 cc. max.
Working temperature	from -25°C (-13°F) to +140°C (+284°F)
Seals	Hydrogenated Nitrile Rubber (HNBR)



Images refer to one possible configuration. For further details please contact **Faster Technical Dept.**

▶ Quick-release couplings for Multiconnection M201 series (braze tubing adaptors)

❖	Female coupling	Male coupling	Ø Hole braze-adaptor	Seals material	Adaptor tightening torque Nm
06	*KIT RFB06 TS095 FH *KIT RFB06 TS125 FH	*KIT RFP06 TS095 MH *KIT RFP06 TS125 MH	9,7 mm. 12,8 mm.	HNBR HNBR	$20\ ^{+5}_{-0}$

❖ Size

▶ Multiconnection Multifaster M202 series

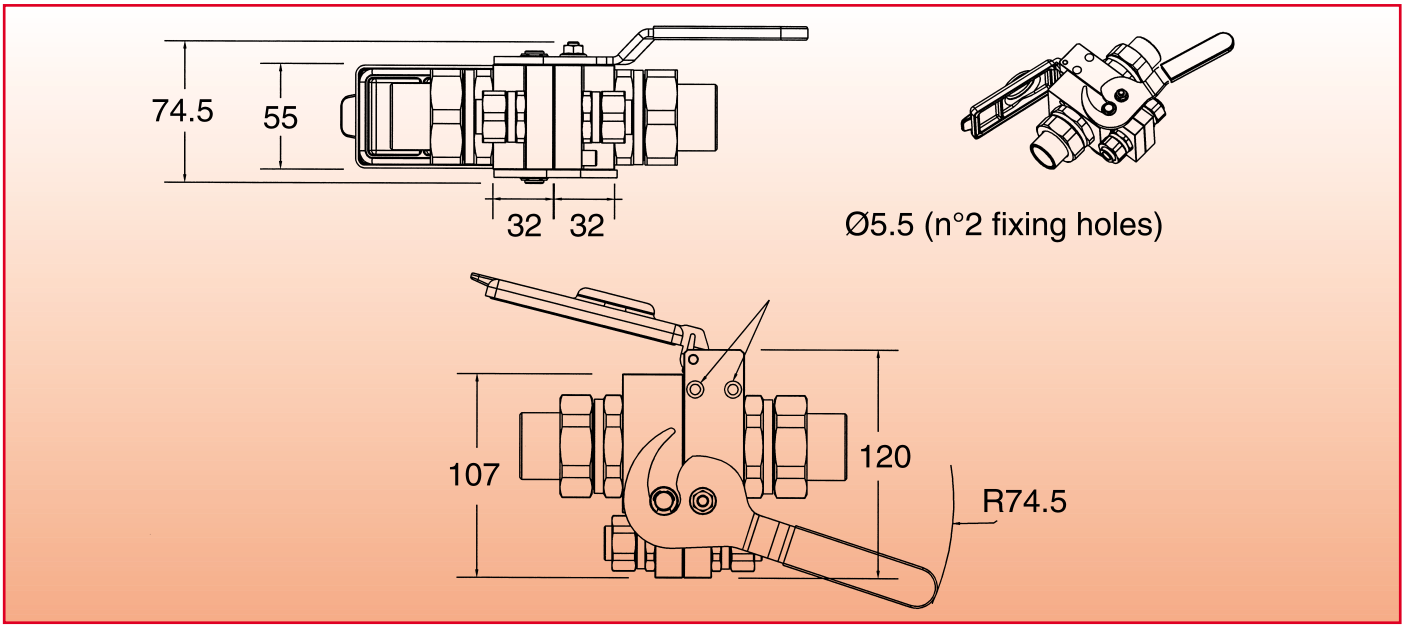
Very similar to M201 series product, the Multiconnection **M202** series allows simultaneous connection and disconnection with minimal overall dimensions of 1 line 3/8" size and 1 line 1" size.
Thanks to braze tubing adaptors installation is very easy and effective.
UL Listed: File N° SA13163.
UL marking on request.

NEW MULTIFASTER M202 SERIES

Patent Applications Pending

▶ Technical data

Coupling size	3/8" (06) - 1" (16)
Working pressure connected	8,3 MPa (1204 PSI)
Working pressure male part	4 MPa (580 PSI)
Working pressure female part	2,5 MPa (363 PSI)
Spillage (for each coupling)	**3/8":** 0.05 cc. max - **1":** 0.2 cc. max
Air inclusion	**3/8":** 0.05 cc. max - **1":** 0.2 cc. max
Working temperature	from -25°C (-13°F) to +140°C (+284°F)
Seals	Hydrogenated Nitrile Rubber (HNBR)



Images refer to one possible configuration. For further details please contact **Faster Technical Dept.**

▶ Quick-release couplings for Multiconnection M202 series (braze tubing adaptors)

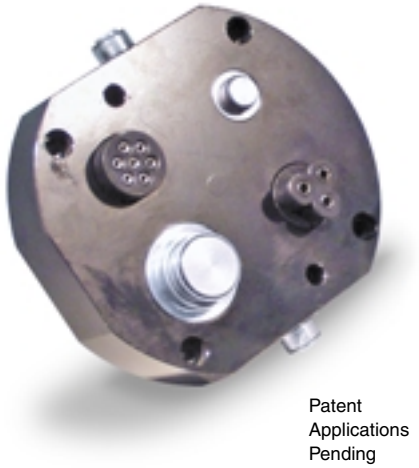
❖	Female coupling	Male coupling	Ø Hole braze adaptor	Seals material	Adaptor tightening torque Nm
06	*KIT RFB06 TS095 FN *KIT RFB06 TS125 FN	*KIT RFP06 TS095 MN *KIT RFP06 TS125 MN	9,7 mm. 12,8 mm.	HNBR HNBR	20 $^{+5}_{-0}$
16	*KIT RFB16 TS220 FN *KIT RFB16 TS255 FN *KIT RFB16 TS290 FN	*KIT RFP16 TS220 MH *KIT RFP16 TS255 MH *KIT RFP16 TS290 MH	22,4 mm. 25,6 mm. 28,7 mm.	HNBR HNBR HNBR	20 $^{+5}_{-0}$

❖ Size

▶ Multiconnection Multifaster M204 series

The Multiconnection **M204 series** has been purposely designed and developed for mobile refrigeration systems on vehicles.
Two lines 3/8" size and 3/4" size connect the refrigeration system, two electrical connections 3 and 7 poles connect the safety and control systems, while the heaters integrated on the plate, prevent ice and frost when Multifaster is working.

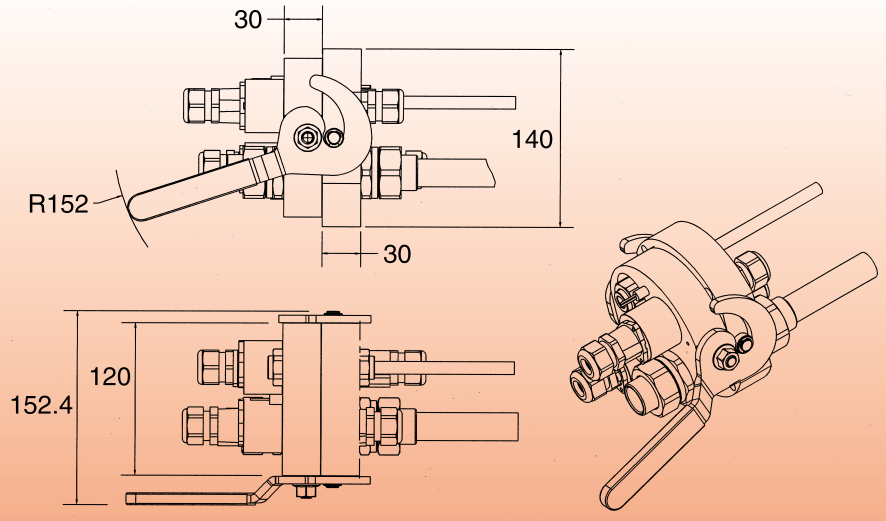
NEW MULTIFASTER M204 SERIES



Patent
Applications
Pending

▶ Technical data

Coupling size	3/8" (06) 3/4" (12)
Working pressure connected	14,3 MPa (2074 PSI)
Working pressure male part	8 MPa (1160 PSI)
Working pressure female part	3,5 MPa (508 PSI)
Spillage (for each coupling)	3/8": 0.05 cc max – 3/4": 0.1 cc max
Air inclusion	3/8": 0.05 cc max – 3/4": 0.1 cc max
Working temperature	from -50°C (-58°F) to +140°C (+284°F)
Seals	EPDM Peroxide for low temperature
Heaters Power	2x75 Watt (max. voltage 24 Volt)



Images refer to one possible configuration. For further details please contact **Faster Technical Dept.**

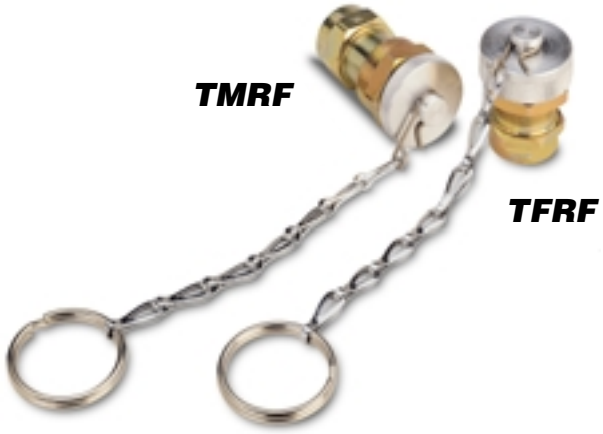
▶ Quick-release couplings for Multiconnection M204 series (braze tubing adaptors)

❖	Female coupling	Male coupling	Ø Hole braze adaptor	Seals material	Adaptor tightening torque Nm
06	KIT RFB06 TS100 FX	KIT RFP06 TS100 MX	10 mm.	EPDM X	20^{+5}_{-0}
12	KIT RFB12 TS220 FX	KIT RFP12 TS220 MX	22.4 mm.	EPDM X	20^{+5}_{-0}

❖ Size

▶ Dust protections

Dust protections are very useful accessories in order to ensure maximum service life to the coupling.
Those accessories are available in aluminium with metal chain and ring in steel or without metal chain.
Refer to the following table for ordering codes.
TMRF and TFRF protections are suitable for both RF and RF...CS couplings.
Regarding to dust protections for RFLS couplings, please contact FASTER Technical Dept.



Size		Aluminium dust protection with metal chain		Aluminium dust protections without metal chain	
		Male protection	Female protection	Male protection	Female protection
1/4"	04	TMRF 04 S N	TFRF 04 S N	TMRF 04 SN SC	TFRF 04 SN SC
3/8"	06	TMRF 06 S N	TFRF 06 S N	TMRF 06 SN SC	TFRF 06 SN SC
1/2"	08	TMRF 08 S N	TFRF 08 S N	TMRF 08 SN SC	TFRF 08 SN SC
3/4"	12	TMRF 12 S N	TFRF 12 S N	TMRF 12 SN SC	TFRF 12 SN SC
1"	16	TMRF 16 S N	TFRF 16 S N	TMRF 16 SN SC	TFRF 16 SN SC
1-1/2"	24	* TMRF 24 S N	* TFRF 24 S N	* TMRF 24 SN SC	* TFRF 24 SN SC

*On request

▶ Spare part kits

When seals are damaged due to wear or foreign material, it is necessary to replace them.
Original FASTER® spare parts kits are now available.
Detailed instructions are included to achieve the correct replacement of damaged parts.
No special tools are required to carry out replacements.
For seal changing do not use sharpened tools that could damage the new seals or the coupling itself.

KIT RF 08 H

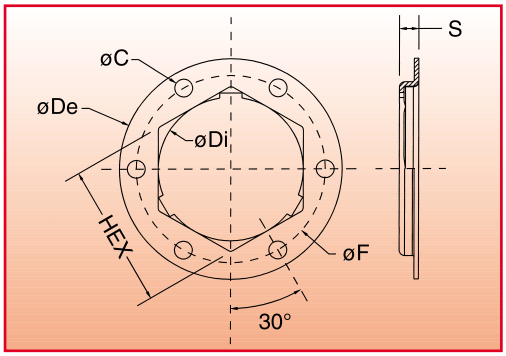
Size		Neoprene	HNBR	EPDM	Viton
1/4"	04	* KIT RF04 N	* KIT RF04 H	* KIT RF04 E	* KIT RF04 V
3/8"	06	* KIT RF06 N	* KIT RF06 H	* KIT RF06 E	* KIT RF06 V
1/2"	08	KIT RF08 N	KIT RF08 H	* KIT RF08 E	* KIT RF08 V
3/4"	12	KIT RF12 N	KIT RF12 H	* KIT RF12 E	* KIT RF12 V
1"	16	* KIT RF16 N	* KIT RF16 H	* KIT RF16 E	* KIT RF16 V
1-1/2"	24	* KIT RF24 N	* KIT RF24 H	* KIT RF24 E	* KIT RF24 V

*On request

▶ Mounting flanges

RF...CS series male couplings may be mounted through a bulkhead by using the suitable RFMF mounting flanges.
Refer to the following table for dimensions and ordering codes.

Size ❖	Code	Ø De mm	Ø Di mm	Ø F mm	HEX mm	Ø C mm	S mm	Ø Hole on the panel mm
3/8" 06	Contact **Faster Technical Dept.**							
1/2" 08	RFMF 08	50,8	28,7	42,9	28,7	5,1	5,5	25,9 $^{+0,5}_{-0}$
3/4" 12	RFMF 12	63,5	41,4	53,9	41,4	5,1	5,5	36,8 $^{+0,5}_{-0}$
1" 16	RFMF 16	69,9	47,8	60,5	47,8	5,1	5,5	44,9 $^{+0,5}_{-0}$



▶ Flat seals & o-rings

Quick release couplings RF series are delivered complete of the proper flat seals (assembled on the male coupling) and o-ring seals (for braze adaptors).
Should their replacement be necessary, please refer to the following table.
Bulk o-rings are also available for higher quantities.

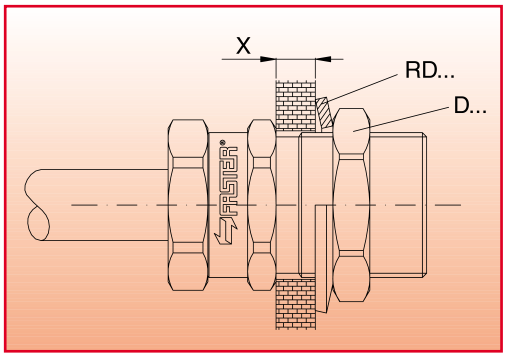
Size	Neoprene	HNBR	EPDM	Viton
1/4" 04	KIT OR RF04 N	* KIT OR RF04 H	* KIT OR RF04 E	* KIT OR RF04 V
3/8" 06	KIT OR RF06 N	* KIT OR RF06 H	* KIT OR RF06 E	* KIT OR RF06 V
1/2" 08	KIT OR RF08 N	* KIT OR RF08 H	* KIT OR RF08 E	* KIT OR RF08 V
3/4" 12	KIT OR RF12 N	* KIT OR RF12 H	* KIT OR RF12 E	* KIT OR RF12 V
1" 16	KIT OR RF16 N	* KIT OR RF16 H	* KIT OR RF16 E	* KIT OR RF16 V
1-1/2" 24	* KIT OR RF24 N	* KIT OR RF24 H	* KIT OR RF24 E	* KIT OR RF24 V

*On request

▶ Lock washer and jam nut for bulkhead mounting

RF series male couplings are arranged for bulkhead mounting by specific lock washers and jam nuts.
Those components are available within accessory kits specified in the following table.

RDRF



Size		Lock Washer	Jam Nut	Jam Nut Thickness mm	Jam Nut Thickness inc	Max. Panel Thickness X (with lock washer) mm	Max. Panel Thickness X (with lock washer) inc	Max. Panel Thickness X (without lock washer) mm	Max. Panel Thickness X (without lock washer) inc	Suggested Hole Diameter on the Panel mm	Suggested Hole Diameter on the Panel inc	Hole Diameter on the Lock Washer mm	Hole Diameter on the Lock Washer inc	Jam Nut Torque Nm
1/4"	04	RDRF 04	D RF 04	5	0,20	4	0,16	5,5	0,22	16,5	0,65	17	0,67	40
3/8"	06	RDRF 06	D RF 06	4,5	0,18	3	0,12	4,5	0,18	21	0,83	21	0,83	40
1/2"	08	RDRF 08	D RF 08	6,5	0,26	6 (5)	0,24 (0,20)	8 (7)	0,31 (0,28)	26	1,02	27	1,06	60
3/4"	12	RDRF 12	D RF 12	8	0,31	5	0,20	7,5	0,30	37	1,46	38	1,50	90
1"	16	RDRF 16	D RF 16	8	0,31	3 (1,5)	0,12 (0,06)	5,5 (4)	0,22 (0,16)	45	1,77	46	1,81	100
1-1/2"	24	(*) RDRF 16	(*) D RF 24	12	0,47	n.a.	n.a.	5	0,20	69	2,72	n.a.	n.a.	120

*On request Values in (...) are referred to the configuration with RFL female couplings

SERIES RF
PRESSURE DROP CHART

▶ Pressure drop chart

Tests have been run according to ANSI/ASHRAE Standard 78-1985 (RA 2003).
The diagram shows for each coupling size the pressure drop factor **WΔP** related to massive air flow rate **Q.**
The graph allows to calculate the pressure drop (kPa) occurring at specified flow rate (g/s) and viceversa, starting from the known specific weight of the refrigerant gas in fixed conditions.
The table below shows the specific weight of the most common refrigerant gases at different temperatures both liquid and vapour.
The data are referred to saturated gas conditions.

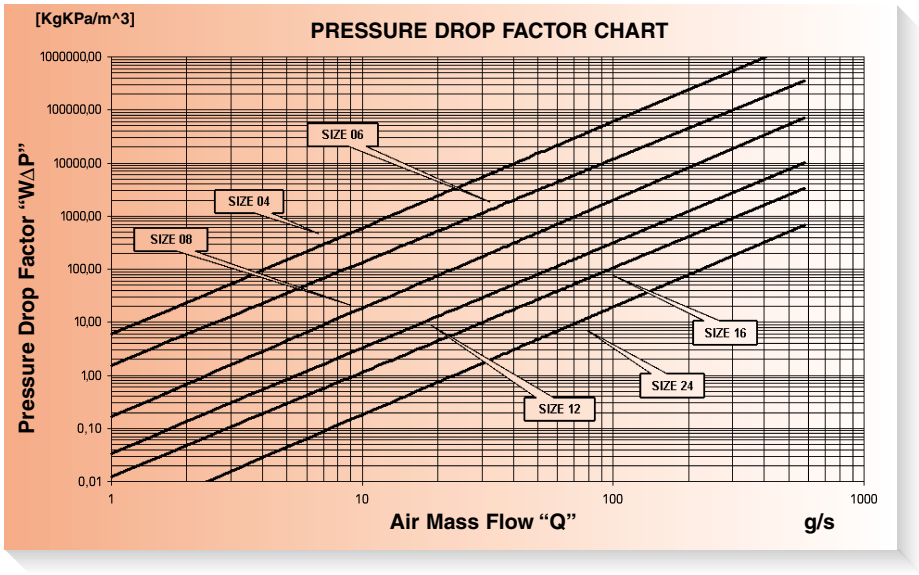
Examples

- *You need to calculate a R134a flow rate at 10°C (50°F) in vapour status causing a pressure drop of 13,8 kPa through a RF 08 coupling.*

  From the table you notice that in such conditions the specific weight is 20.32 kg/m³.
  You multiply the pressure drop and the specific weight and you obtain the "WΔP" equal to 280,42 kgkPa/m³.
  From the diagram, the massive flowrate "Q" is roughly 40 g/s.

- *You need to calculate the pressure drop of a R410A refrigerant in liquid status with a 50 g/s flowrate at 5°C (41°F) through a RF16 coupling.*

  The massive flowrate value of 50 g/s shows in the diagram a "WΔP" close to 30 kgkPa/m³.
  To calculate the pressure drop you need to divide 30 kgkPa/m³ by the specific weight shown in the table: close to 5°C (41°F) you obtain 1152 kg/m³ and the corresponding pressure drop is 0,026 kPa.



▶ Specific weight refrigerant Gases

Temperature °C	Temperature °F	R22 Specific weight kg/m³		R134a Specific weight kg/m³		R404A Specific weight kg/m³		R407C Specific weight kg/m³		R410A Specific weight kg/m³	
		Liquid	Vapour	Liquid	Vapour	Liquid	Vapour	Liquid	Vapour	Liquid	Vapour
-50	-58	1438	3.08	1443	1.65	1314	4.40	1399	2.32	1340	4.52
-45	-49	1424	3.97	1428	2.15	1300	5.53	1385	2.99	1325	5.61
-40	-40	1409	4.86	1414	2.77	1285	6.87	1370	3.82	1310	6.90
-35	-31	1395	6.11	1400	3.53	1270	8.45	1354	4.82	1294	8.43
-30	-22	1380	7.36	1385	4.44	1255	10.31	1339	6.01	1279	10.22
-25	-13	1365	9.06	1371	5.52	1239	12.48	1323	7.43	1262	12.31
-20	-4	1349	10.77	1356	6.80	1222	14.99	1307	9.10	1245	14.73
-15	+5	1333	13.03	1341	8.31	1205	17.90	1290	11.06	1228	17.54
-10	+14	1317	15.30	1325	10.08	1188	21.24	1273	13.32	1210	20.78
-5	+23	1301	18.25	1309	12.12	1170	25.07	1256	15.94	1191	24.51
0	+32	1284	21.21	1293	14.49	1151	29.44	1238	18.94	1172	28.79
5	+41	1267	25.01	1277	17.20	1131	34.44	1219	22.38	1152	33.69
10	+50	1250	28.81	1260	20.32	1111	40.14	1200	26.29	1131	39.31
15	+59	1232	33.63	1243	23.87	1090	46.63	1181	30.75	1109	45.75
20	+68	1213	38.46	1225	27.91	1067	54.04	1160	35.81	1086	53.14
25	+77	1193	44.56	1206	32.50	1044	62.51	1139	41.56	1061	61.64
30	+86	1173	50.65	1187	37.71	1019	72.22	1117	48.10	1036	71.44
35	+95	1152	58.35	1167	43.61	993	83.40	1094	55.56	1008	82.79
40	+104	1131	66.05	1146	50.31	964	96.35	1070	64.09	978	96.06
45	+113	1108	75.87	1125	57.91	934	111.50	1044	73.89	945	111.72
50	+122	1084	85.68	1102	66.55	900	129.45	1017	85.26	909	130.50

▶ Conversions
1 g/s = 0.035 oz/s
1 oz/s = 28.35 g/s
1 kPa = 0.145 PSI
1 PSI = 6.89 kPa

▶ Basic Working Principle

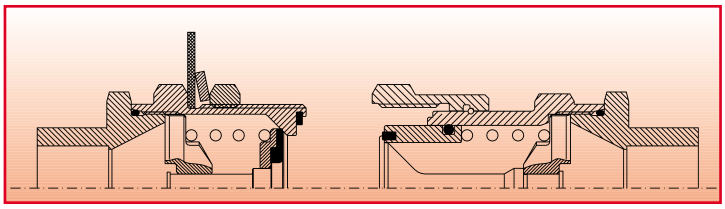
RF... series quick-release couplings are specific devices used in air conditioning and refrigeration systems making line connections and disconnections safer and quicker.
Briefly, quick-release couplings help connection and disconnection of circuits parts involving just a minimal fluid loss and make maintenance, repair and replacement operations, even for complex systems, quicker and more comfortable.
RF... series quick-release couplings are composed of a female half (characterized by the screw-to-connect sleeve) and of a male half.
The two halves, when coupled, guarantee the line connection while, when uncoupled, suitable valves assembled within female and male parts close the line and prevent any fluid loss.

▶ Connection Steps

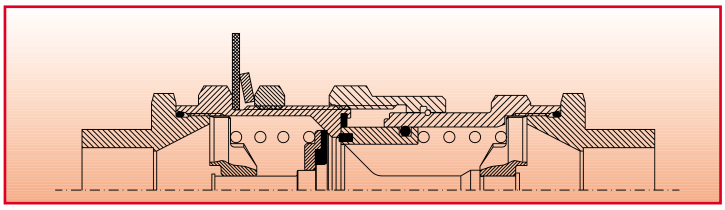
Connection is achieved by acting on the connection sleeve (assembled on the female coupling) that engages on the connection thread present on the male part.
Once connection is achieved, a further tightening action is necessary following the suggested torque values specified within technical data.

Note: referring to RFLS series couplings, in order to perform connection it is always necessary to pull back the safety sleeve in anodized aluminium and then to engage the male half within the female one.
Connection is fully achieved by screwing the main sleeve till the safety sleeve is released without need of further tightening actions by dynamometric wrench.

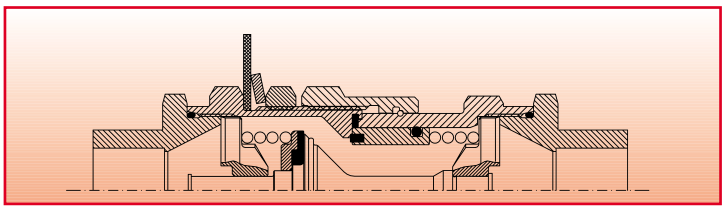
Disconnected Couplings
- Valves are closed.
- No fluid loss.
- No air inclusion.
- Leakage rate lower than 1.5 g/year



Partially Connected Couplings
- Connection sleeve is engaged on the male half.
- Valves are still closed.
- Thanks to the flat gasket assembled on the male half any fluid loss is prevented.



Connected Couplings
- Connection sleeve is tightened at the correct torque.
- Valves are fully open.
- No fluid loss.
- No air inclusion.
- Leakage rate lower than 1.5 g/year

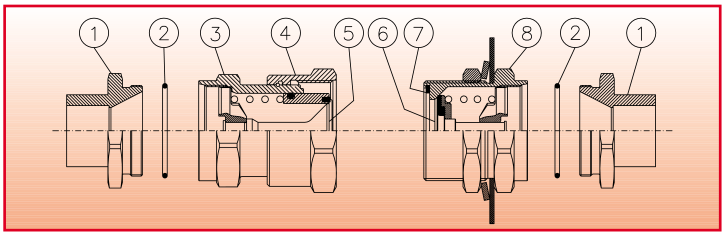


▶ Installation and connection instructions for RF, RFL and RFLS series

The RF series couplings are designed to allow a quick connection-disconnection of the lines in refrigeration and air conditioning systems without losing refrigerant.
Installation can be achieved by either threaded or braze tubing adaptors.
Bulkhead installation of the male coupling can be achieved by using the suitable jam nut.

Installation by brazing tubing adaptor

- Carefully clean and flux the stub and insert it in the suitable counterbore of the adaptor “1”.
- Braze the stub in the adaptor.
- Cool the part and remove any residue.
- Liberally lubricate the o-ring seal “2” using compatible refrigeration oil.
- Install the o-ring seal on the adaptor making certain the o-ring is not twisted or damaged.
- Thread the coupling body “3” and “8” on the adaptor “1” and tighten the coupling on the adaptor to the suitable torque (see at pages 6, 9, 11 and 13).
- Liberally lubricate the mating surfaces of valves “5”, “6” and the rubber flat gasket “7” using a compatible refrigeration oil. Also lubricate the male body thread.



Bulkhead installation

- Insert the male coupling trough the installation hole.
- Put on the male coupling the suitable RDRF lock washer.
- Tighten the jam nut to the proper torque (see drawing at page 20)

Connection for RF and RFL series

- Liberally lubricate the mating surfaces of valves, the rubber flat gasket and the o-ring using a compatible refrigeration oil.
- Engage the female sleeve on the male part.
- Tighten the sleeve to the suitable torque (see at pages 5, 8 and 12).
- During connection make certain the couplings don’t rotate. To prevent this, always use a second wrench.

Connection for RFLS series

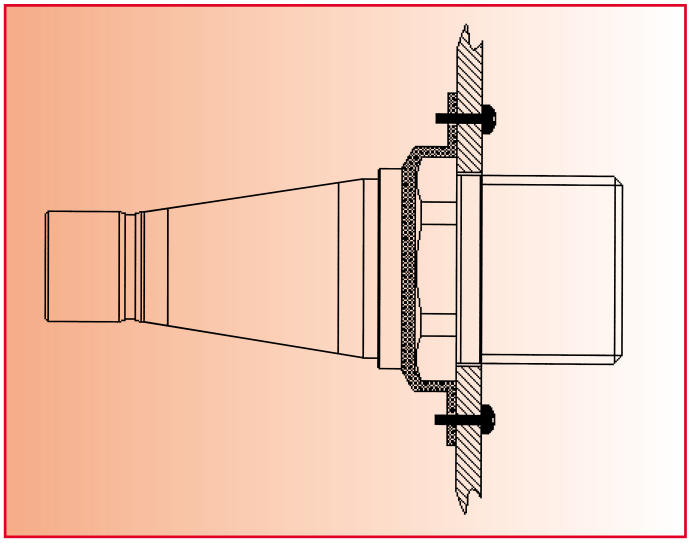
- Liberally lubricate the mating surfaces of valves, the rubber flat gasket and the o-ring using a compatible refrigeration oil.
- Pull back the anodized safety sleeve on the female part.
- Engage the female part on the male part.
- Screw the female sleeve on the male part.
- Connection is fully achieved when the anodized safety sleeve is released.
  In this case the final tightening by dynamometric wrench is not necessary.
- To disconnect the couplings pull back the anodized safety sleeve and disengage the female part from the male one.

Patent Applications Pending

SERIES RFCS
INSTALLATION AND CONNECTION

▶ Installation and connection instructions for RF...CS series

The RF...CS series couplings are designed to allow a quick connection-disconnection of the lines in refrigeration and air conditioning systems without losing refrigerant.
Installation can be achieved by brazing the copper connection on the tubing system: adaptors are not required.
Bulkhead installation of the male coupling can be achieved by using the suitable RFMF mounting flange (see at page 20) or by the proper jam nut.



Brazing
- Carefully clean the copper tube and make certain that chips or other residue do not enter the tube.
- It is advisable to use the suitable brazing paste.
- Protect from heat the internal components and the seals by cooling the brass portion of the coupling.
  For example wrap the coupling in a wet rag or immerse the coupling in cool water to cover completely the brass portion while brazing.
- Insert the copper system tube into the coupling copper connection.
- Braze into place, taking care not to direct heat towards the coupling body.
- When finished brazing, cool the coupling.

Bulkhead installation by RFMF mounting flange
- Drill holes in bulkhead to accomodate the male coupling and the mounting screws.
- Place the flange on the male coupling as shown in the picture.
- Check the correct alignment of flange in relation to screw holes.
- Slide the male coupling back taking care not to damage the connection thread.
- Braze the coupling as explained in the previous paragraph.
- Insert the male coupling through bulkhead hole and fix the flange by the suitable screws.

Bulkhead installation by the jam nut
- Insert the male coupling through the installation hole.
- Put on the male coupling the suitable RDRF lock washer.
- Tighten the jam nut to the proper torque. Please note that the lock washer has to be placed between the panel and the jam nut (see picture at page 20).

Connection
- Liberally lubricate the mating surfaces of valves and the rubber flat gasket using a compatible refrigeration oil.
- Engage the female sleeve on the male part.
- Tighten the sleeve to the suitable torque (see at page 14).
- During connection make certain the couplings don't rotate. To prevent this, always use a second wrench.

▶ Seals compatibility

Standard seals and materials are compatible with oils and refrigerants shown in the table.
Anyway, due to the continuous evolution in fluids composition, compatibility cannot be fully guaranteed.
For suggestions on the most correct choice of seals for your refrigerant and lubricating oil combination and in case of fluids not included in the table,
please contact Faster Technical Dept.

Refrigerants	Lubricants	Suggested seals
R22	AB (Alkyl Benzene) MO (Mineral Oil) POE (Polyol Ester)	Viton Neoprene Neoprene
R134a	MO (Mineral Oil) PAG (Polyalkylene Glycol) PAO (Polyalpha Olefin) POE (Polyol Ester)	HNBR - Neoprene HNBR - Neoprene HNBR - Neoprene HNBR - Neoprene
R404A	AB (Alkyl Benzene) POE (Polyol Ester)	Viton HNBR - Neoprene
R407C	AB (Alkyl Benzene) MO (Mineral Oil) PAO (Polyalpha Olefin) POE (Polyol Ester) PVE (Polyvinyl Ether)	Viton HNBR - Neoprene HNBR - Neoprene HNBR - Neoprene HNBR - Neoprene
R410A	PAO (Polyalpha Olefin) POE (Polyol Ester)	HNBR - Neoprene HNBR - Neoprene
R507	POE (Polyol Ester)	HNBR - Neoprene