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Quick Couplings for Skydrol



SPECIAL SERIES



Aircraft have installed a multitude of complex and sophisticated systems on board, which can represent between 40% and 60% of the weight of the aircraft.

In addition to electrical, air conditioning, pneumatic and fuel systems, the hydraulic fluid power system is an integral part for the operation of the aircraft.

This system allows the operation of many other systems and components of the aircraft itself, such as landing gear, doors, flight controls and stairs.

The on-board hydraulics of aircraft and aeronautical equipment require the use of special hydraulic fluids, very different from the standard hydraulic fluid power oils used in agricultural and earth-moving applications: the hydraulic oil used for these applications must in fact be not inflammable and work at different operating temperatures, as well as many other requests in the strict approvals of the manufacturers.

These fluids, however, possess chemical and physical characteristics that make them incompatible with the typical connections (flexible hoses, seals, quick couplings...) available on the market. For these reasons, the connections on the plane are made of special materials and gaskets, carefully selected, certified, tested and approved to be assembled on board the aircraft.

However, there are a multitude of hydraulic devices that are used on the ground. These operate when the plane is on the ground. This equipment includes: powerpacks for the maintenance, control and testing on the ground of the hydraulic system on board the aircraft, such as the operation of landing gears, testing flaps, etc.

There are also many applications of these devices for testing, repairing and checking the functioning of components that will be assembled on aircraft, to be made on special test benches.

For applications of this type of ground equipment, there is the problem of how to connect and disconnect flexible hoses and hydraulic lines quickly and easily. Suitable quick couplings containing compatible seals with the fluids mentioned above can be difficult to find in the market.

The stucchi solution for Skydrol



SPECIAL SERIES



Thanks to the close and fruitful collaboration with OEMs present in this field, Stucchi has studied, tested and put on the market several series of products that meet the strict and demanding requests for the hydraulic connection of ground equipment.

We can enumerate the following three series of flat face products: A-SK, VP-SK, VEP-SK.

Here the main features of the three series:

- Dimensions from 1/4 to 1-1/2
- Working pressures up to 500 bar
- Flow up to 750 l/m
- Valves with flat faces design
- Special sealing compatible with Skydrol® oil

Suitable applications:

- Ground equipment
- Wheeled Powerpack and fixed stand for maintenance and testing of aeronautical hydraulic systems
- Test benches

"A-SK" Series is the evolution of Stucchi technology and quality applied to flat face couplings. The series has an internal design with high resistance material to allow the achievement of higher operating pressure whilst maintaining minimal pressure drop. These features make "A-SK" Series couplings the leader in this application where high performance is necessary with the elimination of fluid loss and contamination in the circuit.

The **"VP-SK"** screw flat face coupling series is the technological solution to demanding hydraulic applications. The screw connection system eliminates premature wear and the "brinelling" caused by a mechanical locking ball system. This makes the "VP-SK" series suitable for high

operating and impulse pressures.

The flat face design is smartly avoiding fluid loss. The safety sleeve integrated in the connection system prevents accidental disconnection making the "VP-SK" Series ideal for the most extreme operating conditions where strong vibration and torsion issues are present.

The **"VEP-SK"** screw flat face coupling series is another example of the continuous improvement of Stucchi products. Designed for heavy duty applications with high operating pressure, high impulse frequency, and mechanical stress. The "VEP-SK" couplings are manufactured in high resistance carbon steel material treated with special nitriding treatment to increase the wear resistance of the coupling. Minimal fluid loss and air inclusion during the connection-disconnection process is another strength of its design.

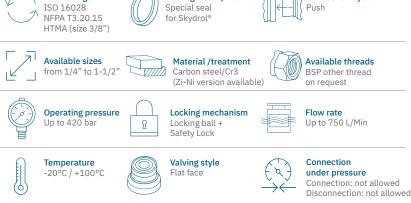
Consult the respective catalogs.

A-SK Series SPECIAL SERIES







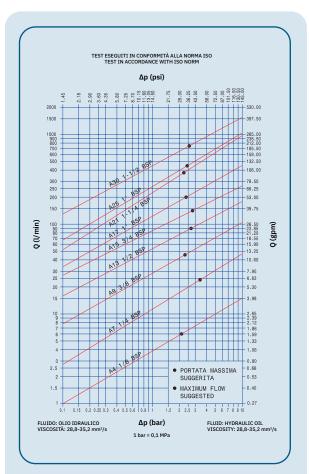


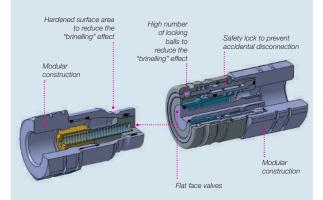
Benefits

- Ideal solution for ground equipment and test bench to be used in the aircraft industry.
- Special seals compatible with Skydrol® 500B-4, Skydrol® LD-4 and . Skydrol® 5 to be used on test bench and ground equipment.
- Flat face is easy to clean, reducing the inclusion of contamination inside the hydraulic circuit.
- Minimal fluid spillage during disconnection, reducing fluid spillage to the environment.
- · Minimal air inclusion during connection.
- Internal valve design creates minimal pressure drop, maintaining circuit efficiency in the system.
- The modular design allows flexibility with a wide range of configurations.
- Good resistance to pressure impulses.
- Compact slim design.
- . Safe and simple to use.

How to use

- Before connecting, clean the mating surface of the couplings to avoid dirt inclusion in the circuit.
- To connect, push the male half towards the female half or vice versa. .
- After connection, turn the external sleeve to engage safety lock function, to prevent accidental disconnection.
- To disconnect, turn the external sleeve until the sleeve lock notch match the safety lock ball and push back the sleeve.





MAIN APPLICATIONS







Performances

Si	ze	Series/Size	Max. flow	suggested	Connect force		Disconn	ect force	Spillage*
Inch	mm (ISO)		l/min	GPM	Ν	lbf	Ν	lbf	ml
1/4	6,3	A7SK	24	6,36	150	33,75	45	10,13	0,01
3/8	10,0	A9SK	46	12,19	170	38,25	40	9,00	0,01
1/2	12,5	A13SK	90	23,85	190	42,75	50	11,25	0,02
5/8	16,0	A15SK	148	39,22	190	42,75	55	12,38	0,02
3/4	19,0	A17SK	200	53,00	220	49,50	70	15,75	0,03
1	25,0	A21SK	378	100,17	250	56,25	75	16,88	0,03
1-1/2	-	A30SK	750	198,75	390	87,75	70	15,75	0,05

c:	ze		Мах	. operat	ing pres	sure		Burst pressure							
3	ze	Cou	Coupled		ale	Fer	nale	Cou	pled	M	ale	Female			
Inch		MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi		
1/4	A7SK	42	6090	42	6090	42	6090	126	18270	126	18270	126	18270		
3/8	A9SK	35	5075	35	5075	35	5075	100	14500	100	14500	100	14500		
1/2	A13SK	33	4785	33	4785	33	4785	100	14500	100	14500	100	14500		
5/8	A15SK	33	4785	33	4785	33	4785	100	14500	100	14500	100	14500		
3/4	A17SK	33	4785	33	4785	33	4785	100	14500	100	14500	100	14500		
1	A21SK	30	4350	30	4350	30	4350	80	11600	80	11600	80	11600		
1-1/2	A30SK	27	3915	27	3915	27	3915	80	11600	80	11600	70	10150		

*Spillage is an indicative value of the fluid loss during disconnection (according to ISO norm test method).

Temperature range:

Special seals for Skydrol[®]: -20/+100°C (from -4/+212°F). Please read carefully "Instructions and Warnings" for proper selection of the products.

Tests:

All the performances and the test above are made according to ISO norm test method.

WARNINGS -

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.

Never connect or disconnect with dynamic pressure (e.g. pump on). Do not use the female coupling disconnected with high impulse pressure. Do not couple-uncouple with flow and/or pressure in the circuit. Do not couple-uncouple when the temperature inside of the circuit is higher than 80°C (176°F).

Do not use on flying aircraft but only for ground equipment&testing. Do not use with mineral or syntetic oil.

Check the maximum allowable working pressure of the port in use. Make sure that the medium used is compatible with seal and material as indicated for each series. The interchangeability is mentioned under the assumption that the manufacturer of the considered products has not changed any dimension.

In case of doubt please contact Stucchi Technical Support.

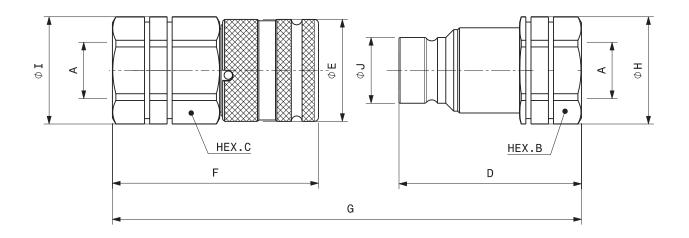
It is MANDATORY to read and closely follow the instructions. Last updated version always apply at time of installation,

see latest written Instructions on Stucchi website (www.stucchi.it) before selecting or using Stucchi products.



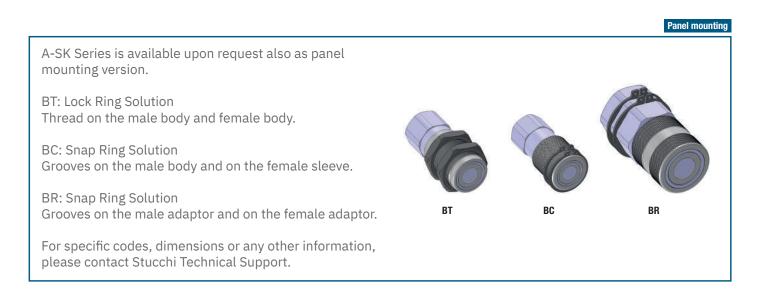


Overall Dimensions



Port description: FEMALE THREAD BSPP (ISO 1179-1) -

Body	Descriptive Code	Ito	m code	ISO	PORT (A)	0.14	arall L	ength		Lengt	h		Hex	,	n	iame	tor		iame	tor	Wo	ight
Size		110	in coue	DN		000		engui		Leng			TIEA			lanie	tei		lame	lei	vve	Sin
							mm	Inch		mm	Inch		mm	Inch		mm	Inch		mm	Inch	mm	Inch
1/4"	F A7SK 1/4 BSP M A7SK 1/4 BSP	Female Male	801300902 801300903	6,3	1/4"	G	690,2	23,55	F	53,1 47,9	2,09 1,89	C B	27,0 22,0	· ·	I H	29,0 23,8	· ·	E J	28,0 16,1	1,10 0,63	0,19 0,09	0,41 0,19
3/8"	F A9SK 3/8 BSP M A9SK 3/8 BSP	Female Male	801300904 801300905	12	3/8"	G	108,8	4,28	F	64,8 60,0		C B	30,0 27,0		I H	32,0 29,0	1,26	E J	32,0 19,7	1,26 0,78	0,27 0,15	0,60 0,32
1/2"	F A13SK 1/2 BSP M A13SK 1/2 BSP	Female Male	801300908 801300909	12,5	1/2"	G	127,5	5,02	F D	76,8 68,0	3,02 2,68	C B	36,0 36,0	· ·	I H	40,0 40,0	1,57 1,57	E J	38,0 24,5	1,50 0,96	0,45 0,24	1,00 0,52
5/8"	F A15SK 3/4 BSP M A15SK 3/4 BSP	Female Male	801300912 801300913	16	3/4"	G	139,4	5,49	F D	84,0 73,0			41,0 36,0		I H	44,8 38,5		E J	42,0 27,0	1,65 1,06	0,63 0,30	1,38 0,66
3/4"	F A17SK 1' BSP M A17SK 1' BSP	Female Male	801300914 801300915	19	1"	G	160,5	6,32	F D	98,8 83,7	3,89 3,30	C B	46,0 46,0	· ·	I H	49,8 49,8	· ·	E J	48,0 30,0	1,89 1,18	0,94 0,48	2,07 1,05
1"	F A21SK 1-1/4 BSP M A21SK 1-1/4 BSP	Female Male	801300916 801300917	25	1 1/4"	G	172,8	6,80	F D	105,8 90,0			55,0 55,0		I H	59,8 59,8		E J	55,0 36,0	2,17 1,42	1,31 0,71	2,89 1,56
1-1/2"	F A30SK 1-1/2 BSP M A30SK 1-1/2 BSP	Female Male	801300918 801300919	-	1 1/2"	G	214,9	8,46	F D	132,4 111,1		C B	65,0 65,0	· ·	I H	82,0 69,8	3,23 2,75	E J	80,0 57,0	3,15 2,24	3,14 1,67	6,92 3,67



A-SK Series

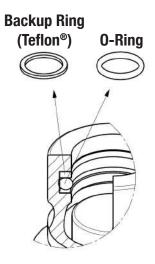


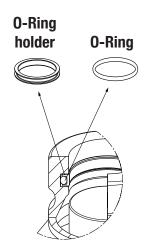


Spare kit seal for Male -

Repair kit / OR+BK										
Body Size	Description	Part Number								
1/4"	M A7SK	815701235								
3/8"	M A9SK	815701237								
1/2"	M A13SK	815701239								
5/8"	M A15SK	815700869								
3/4"	M A17SK*	815700871								
1"	M A21SK*	815700875								
1 1/2"	M A30SK*	815700873								

* Kit replacement O-Ring Holder + O-Ring O-Ring in special compound BackUp in Teflon®



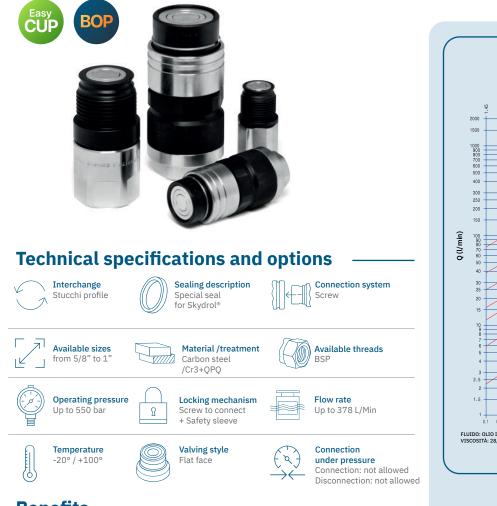


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VP-SK Series SPECIAL SERIES



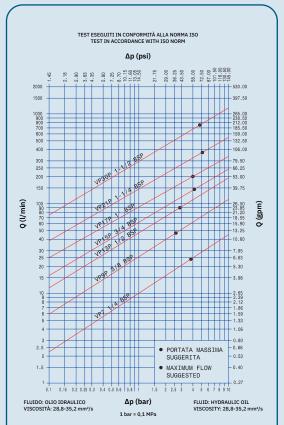


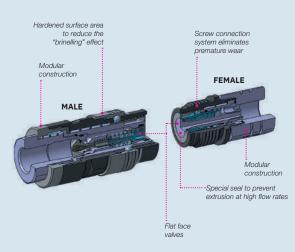
Benefits

- Ideal solution for ground equipment and test bench to be used in the aircraft industry.
- Special seals compatible with Skydrol[®] 500B-4, Skydrol[®] LD-4 and Skydrol[®] 5 to be used on test bench and ground equipment.
- Flat face is easy to clean, reducing the inclusion of contamination inside the hydraulic circuit.
- Minimal fluid spillage during disconnection, reducing fluid spillage to the environment.
- Minimal air inclusion during connection.
- Internal valve design creates minimal pressure drop, maintaining circuit efficiency in the system.
- The safety sleeve integrated in the connection system prevents the accidental disconnection.
- The modular design allows flexibility with a wide range of configurations.
- High resistance to pressure impulses.
- Safe and simple to use.

How to use

- Before connecting, clean the mating surface of the couplings to avoid dirt inclusion in the circuit.
- To connect, push the female coupling to the male coupling, push the male and twist in one motion to catch the first thread on the female half and continue to thread together (do not push together couplers, screw only).
- The screwing of the threads should be done by hand without the use of the tools for the first part of the connection.
- Always connect male and female with the male adaptor fixed on the hose (male adaptor should not rotate during connection).
- Thread the mating halves until the sleeve lock clicks into position. This activates the safety lock and eliminates accidental disconnection of the coupling.
- To disconnect push the safety locking sleeve towards the male coupling and unthread the connection.
- The lock is disengaged after one complete rotation of the coupler, continue to unthread until both halves disconnect.
- If safety lock sleeve will not push back rotate the male coupling to couple direction until the sleeve will pull back.





MAIN APPLICATIONS



VP-SK Series SPECIAL SERIES



Performances

Size	Series/Size	Max. flow	suggested	Connec	t torque	Disconne	Spillage*	
Inch		l/min	GPM	Nm	lbf ft	Nm	lbf ft	ml
5/8	VP15SK	148	39,22	1,1	0,81	1,0	0,74	0,03
3/4	VP17SK	200	53,00	2,0	1,47	1,4	1,03	0,01
1	VP21SK	378	100,17	2,2	1,62	1,8	1,33	0,06

Size	Series/Size		М	ax. operat	ing pressu	re		Burst pressure							
JIZE	Jenes/ 312e	Cou	Coupled		Male		nale	Coupled		Male		Female			
Inch		MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi		
5/8	VP15SK	55	7975	55	7975	33	4785	140	20300	140	20300	100	14500		
3/4	VP17SK	50	7250	50	7250	33	4785	125	18125	125	18125	100	14500		
1	VP21SK	47	6815	47	6815	30	4350	120	17400	120	17400	80	11600		

*Spillage is an indicative value of the fluid loss during disconnection (according to ISO norm test method).

Temperature range:

Special seals for Skydrol[®]: -20/+100°C (from -4/+212°F). Please read carefully "Instructions and Warnings" for proper selection of the products.

Tests:

All the performances and the test above are made according to ISO norm test method.

WARNINGS

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.

Never connect or disconnect with dynamic pressure (e.g. pump on). Do not use the female coupling disconnected with high impulse pressure.

Do not couple-uncouple with flow in the circuit. Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).

Check the maximum allowable working pressure of the port in use.

It is important to limit contamination in the circuit to avoid compromising the function of the internal valves. Make sure that the medium used is compatible with seal and material as indicated for each series.

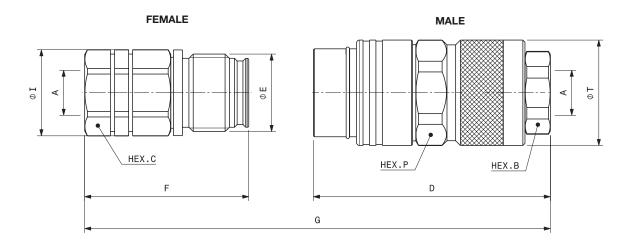
Do not use on flying aircraft but only for ground equipment&testing. Do not use with mineral or syntetic oil.

In case of doubt please contact Stucchi Technical Support. It is MANDATORY to read and closely follow the instructions. Last updated version always apply at time of installation, see latest written Instructions on Stucchi website (www.stucchi.it) before selecting or using Stucchi products.





Overall Dimensions

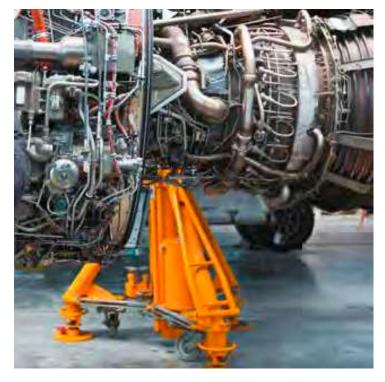


Port description: FEMALE THREAD BSPP (ISO 1179-1) —

Body Size	Descriptive Code	Item code	PORT (A)	E	Overal	l Length		Lengtl	h	Hex		Нех	(D	iame	ter	Wei	ight
					mi	m Inch		mm 1	Inch	mm Ind	h	mm	Inch		mm	Inch	mm	Inch
5/8"	F VP15SK 3/4 BSP M VP15SK 3/4 BSP	Female 807300910 Male 807300911	3/4"	M39x3	G 174	1,9 6,89	F D	83,4 3 110,0 4	·	41,0 1,6 36,0 1,4		48,0	1,89	I T	44,8 52,0	1,76 2,05	0,58 1,06	1,28 2,33
3/4"	F VP17SK 1' BSP M VP17SK 1' BSP	Female 807300902 Male 807300903	1"	M45x3	G 202	2,5 7,97	F D	98,0 3 127,1 5		46,0 1,8 46,0 1,8		55,0	2,17	I T	49,8 60,0	1,96 2,36	0,91 1,59	2,00 3,49
1"	F VP21SK 1-1/4 BSP M VP21SK 1-1/4 BSP	Female 807300904 Male 807300905	1-1/4"	M55x3	G 214	1,8 8,46	F D	105,0 4 137,0 5	·	55,0 2,1 55,0 2,1		70,0	2,76	I T	59,8 76,0	2,35 2,99	1,40 2,51	3,08 5,53

VP-SK Series SPECIAL SERIES

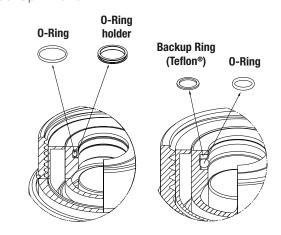




Spare kit seal for Male -

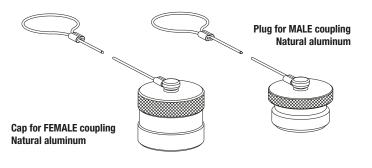
	Repair kit / OR+BK	
Body Size	Description	Part Number
5/8"	VP15SK	815700869
3/4"	VP17SK*	815700871
1"	VP21SK*	815700875

* Kit replacement O-Ring Holder + O-Ring O-Ring in special compound BackUp in Teflon®



Protective caps for VP-P Series

Protective caps are always recommended to protect the couplings from damage, dirt inclusion, and will increase the product life. For the VP-SK series aluminum screw caps complete with lanyard are available (standard color: natural aluminum, other colors available upon request).



			Protective Cap	
Body Size/	Description	Part N	lumber	Material/Color
		Cap for Female	Plug for Male	
1/4"	VP7SK	815305050	815305051	Aluminum/Natural
3/8"	VP9SK	815305052	815305053	Aluminum/Natural
1/2"	VP13SK	815305054	815305055	Aluminum/Natural
5/8"	VP15SK	815305056	815305057	Aluminum/Natural
3/4"	VP17SK	815305058	815305059	Aluminum/Natural
1"	VP21SK	815305060	815305061	Aluminum/Natural
1-1/2"	VP30SK	815305062	815305063	Aluminum/Natural

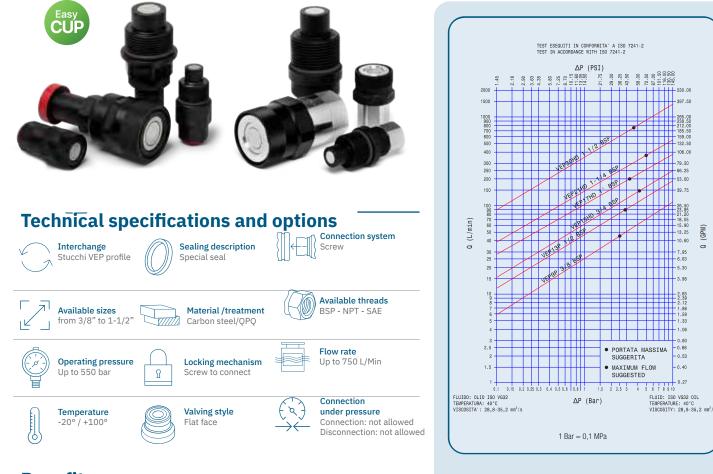
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VEP-SK Series SPECIAL SERIES



GPM)



Benefits

- · Ideal solution for ground equipment and test bench to be used in the aircraft industry.
- Special seals compatible with Skydrol® 500B-4, Skydrol® LD-4 and Skydrol® 5 to be used on test bench and ground equipment.
- Flat face is easy to clean, reducing the inclusion of contamination inside the hydraulic circuit.
- Minimal fluid spillage during disconnection, reducing fluid spillage to the environment.
- Minimal air inclusion during connection.
- Internal valve design creates minimal pressure drop, maintaining circuit . efficiency in the system.
- Internal pressure release valve system allows an easy connection with high internal residual pressure.
- The modular design allows flexibility with a wide range of configurations. . High resistance to pressure impulses.
- Safe and simple to use.
- Dimension 3/8" (VEP9SK) and 1/2" (VEP13SK) it is available with the "P" not "HD" design.

How to use

- Before connecting, clean the mating surface of the couplings to avoid dirt inclusion in the circuit.
- To connect pull forward the connection sleeve of the female coupling.
- Align the female and male coupling holding forward the connection sleeve and thread together turning the sleeve.
- Keep couplers aligned during connection process. Do not push to connect couplings.
- The screwing of the threads should be done by hand without the use of the tools for the first part of the connection.
- Screw the connecting sleeve of the female until metal surface contact with the male coupling is complete.
- Tighten the sleeve to the base of the male using the tightening torque spec. as indicated in table on page 18.
- To disconnect turn sleeve from contact position using a wrench, then unscrew making sure the couplings stay aligned through the entire process.







VEP-SK Series SPECIAL SERIES



Performances

Size	Series/Size	Max. flow	suggested	Connec	Connect torque		ect torque	Spillage*
Inch		l/min	GPM	Nm	lbf ft	Nm	lbf ft	ml
3/8	VEP9SK	46	12,19	2,2	1,62	1,4	1,03	0,04
1/2	VEP13SK	90	23,85	1,8	1,33	1,4	1,03	0,02
5/8	VEP15SK	148	39,22	3,0	2,21	1,8	1,33	0,03
3/4	VEP17SK	200	53,00	5,6	4,13	3,6	2,65	0,02
1	VEP21SK	378	100,17	8,2	6,04	5,8	4,27	0,06
1-1/2	VEP30SK	750	198,75	26,0	19,16	12,5	9,21	0,20

Size	Series/Size		М	ax. operat	ing pressu	re		Burst pressure							
Size	Series/Size	Cou	pled	Male		Female		Cou	pled	Ma	ale	Female			
Inch		MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi		
3/8	VEP9SK	55	7975	55	7975	33	4785	140	20300	140	20300	100	14500		
1/2	VEP13SK	55	7975	55	7975	33	4785	140	20300	140	20300	100	14500		
5/8	VEP15SK	55	7975	55	7975	33	4785	140	20300	140	20300	100	14500		
3/4	VEP17SK	50	7250	50	7250	33	4785	125	18130	125	18130	100	14500		
1	VEP21SK	47	6815	47	6815	30	4350	120	17400	120	17400	80	11600		
1-1/2	VEP30SK	40	5800	40	5800	27	3915	110	15950	110	15950	80	11600		

Size	Series/Size	Tightenii	ng torque
Inch		Nm	lbt ft
3/8	VEP9SK	50-60	37-44
1/2	VEP13SK	65-75	48-55
5/8	VEP15SK	70-80	52-59
3/4	VEP17SK	110-130	81-96
1	VEP21SK	125-145	92-107
1-1/2	VEP30SK	155-175	114-129

*Spillage is an indicative value of the fluid loss during disconnection (according to ISO norm test method).

Temperature range:

Special seals for Skydrol[®]: -20/+100°C (from -4/+212°F). Please read carefully "Instructions and Warnings" for proper selection of the products.

Tests:

All the performances and the test above are made according to ISO norm test method.

WARNINGS

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.

Never connect or disconnect with dynamic pressure (e.g. pump on). Do not use the female coupling disconnected with high impulse pressure.

Do not couple-uncouple with flow in the circuit. Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).

Check the maximum allowable working pressure of the port in use.

It is important to limit contamination in the circuit to avoid compromising the function of the internal valves. Make sure that the medium used is compatible with seal and material as indicated for each series.

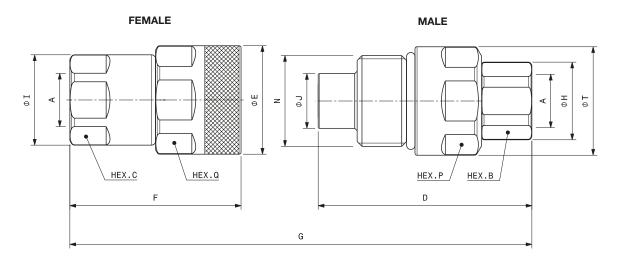
Do not use on flying aircraft but only for ground equipment&testing. Do not use with mineral or syntetic oil.

In case of doubt please contact Stucchi Technical Support. It is MANDATORY to read and closely follow the instructions. Last updated version always apply at time of installation, see latest written Instructions on Stucchi website (www.stucchi.it) before selecting or using Stucchi products.





Overall Dimensions



Port description: FEMALE THREAD BSPP (ISO 1179-1) —

Body Size	Descriptive Code	Item code	PORT (A)	E	Overall Length	Length	Hex	Hex	Diameter	Weight
					mm Inch	mm Inch	mm Inch	mm Inch	mm Inch	mm Inch
1"	F VEP21HDSK 1-1/4 BSP M VEP21HDSK 1-1/4 BSP	Female 808100914 Male 808100915	1-1/4"	M58x3	G 216,2 8,51	F 106,8 4,20 D 133,4 5,25	C 55,0 2,17 B 55,0 2,17	Q 65,0 2,56 P 65,0 2,56	E 69,8 2,75 T 69,8 2,75	2,02 4,45 1,79 3,95

Port description: FEMALE THREAD NPT (ANSI B.1.20.1) ———

Body	Descriptive Code	Ito	m code	PORT (A)	N	0.4	arall L	andth		Lengt	h		Hex	.		Hex		П	iame	tor	Wo	aht
Size		110	in coue			Overall Length		engui	Length		IICA						Diameter		lei	Weight		
							mm	Inch		mm	Inch		mm	Inch		mm	Inch		mm	Inch	mm	Inch
5/8"	F VEP15HDSK 3/4 NPT	Female	808101910	3/4"	M45x3	G	172,4	6,79	F	· ·	3,34	С	41,0	1,61	Q	50,0	1,97	Е	53,8	2,12	0,93	2,05
0,0	M VEP15HDSK 3/4 NPT	Male	808101911	0, 1		0	±, =, .	0,77	D	106	4,17	В	36,0	1,42	Ρ	50,0	1,97	Т	53,8	2,12	0,95	2,09
3/4"	F VEP17HDSK 1' NPT	Female	808101912	1"	M50x3	G	200,9	7,91	F	99,7	3,93	С	46,0	1,81	Q	55,0	2,17	E	58,8	2,31	1,28	2,82
5/4	M VEP17HDSK 1' NPT	Male	808101913	_ <u> </u>	1.0000	u	200,7	7,71	D	124,0	4,88	В	46,0	1,81	Ρ	55,0	2,17	Т	58,8	2,31	1,30	2,87
1"	M VEP21HDSK 1-1/4 NPT	Male	808101915	1-1/4"	M58x3	G	216,2	8,51		133,4	5,25	С	55,0	2,17	Ρ	65,0	2,56	Т	69,8	2,75	1,79	3,95
_				, .		-	;_	-,	D			В										
1-1/2"	M VEP30HDSK 1-1/2 NPT	Male	808101917	1"	M80x4	G	253,9	10,00	F D	150,0	5,91	C B	65,0	2,56	Ρ	75,0	2,95	Т	94,4	3,72	3,30	7,28

Port description: FEMALE THREAD SAE (ISO11962-1 & SAE J1926-1) —

Body	Descriptive Code	Ite	m code	PORT (A)	N	Ove	erall Lo	anoth		Lengt	'n		Hex	,		Hex		D	iame	ter	Wei	ight
Size						Length		Length		ПСА					Blancter			Weight				
							mm	Inch		mm	Inch		mm	Inch		mm	Inch		mm	Inch	Kg	Lbs
3/8"	F VEP9SK 3/8 SAE	Female	807204900	"9/16-18UNF"	M33x2	G	122 5	F 00	F	65,8	2,59	С	30,0	1,18	Q	38,0	1,50	Е	41,8	1,65	0,37	0,81
3/8	M VEP9SK 3/8 SAE	Male	807204901	9/10-100INF	110082	G	132,5	5,22	D	83,7	3,30	В	27,0	1,06				Т	37,8	1,49	0,35	0,76
1/2"	F VEP13SK 1/2 SAE	Female	807204906	"3/4-16UNF"	M40x3	G	160,1	6,30	F	77,8	3,06	С	36,0	1,42	Q	46,0	1,81	Е	49,8	1,96	0,63	1,39
1/2	M VEP13SK 1/2 SAE	Male	807204907	3/4=100NF	114073	G	100,1	0,30	D	100,5	3,96	В	36,0	1,42				Т	45,8	1,80	0,67	1,48
5/8"	F VEP15HDSK 3/4 SAE	Female	808104910	1-1/16-12UN	M45x3	G	172,4	6.79	F	84,9	3,34	С	41,0	1,61	Q	50,0	1,97	Е	53,8	2,12	0,91	2,01
5/0	M VEP15HDSK 3/4 SAE	Male	808104911	1-1/10-1201	114373	G	1/2,4	0,79	D	106	4,17	В	41,0	1,61	Ρ	50,0	1,97	Т	53,8	212	1,0	2,20
3/4"	F VEP17HDSK 1 SAE	Female	808104912	1-5/16-12UN	M50x3	G	201,9	7,95	F	100,7	3,96	С	46,0	1,81	Q	55,0	2,17	Е	58,8	2,31	1,27	2,80
5/4	M VEP17HDSK 1 SAE	Male	808104913	1-5/10-1201	113073	G	201,9	7,95	D	124,0	4,88	В	46,0	1,81	Ρ	55,0	2,17	Т	58,8	2,31	1,29	2,84
1"	F VEP21HDSK 1-1/4 SAE	Female	808104914	1-5/8-12UN	M58X3	G	216,2	8,51	F	106,8	4,20	С	55,0	2,17	Q	65,0	2,56	Е	69,8	2,75	2,01	4,43
T	M VEP21HDSK 1-1/4 SAE	Male	808104915	1-3/0-12010	113073	G	210,2	0,51	D	133,4	5,25	В	55,0	2,17	Ρ	65,0	2,56	Т	69,8	2,75	1,78	3,92
1-1/2"	F VEP30HDSK 1-1/2 SAE	Female	808104916	1-7/8-12UN	MROVA	C	253,9	10.00	F	133,5	5,26	С	65,0	2,56	Q	85,0	3,35	Е	95,0	3,74	4,34	9,56
1-1/2	M VEP30HDSK 1-1/2 SAE	Male	808104917	1-1/0-120IN	M80X4 G	G	253,9	10,00	D	150,0	5,91	В	65,0	2,56	Ρ	75,0	2,95	Т	94,4	3,72	3,28	7,23

VEP-SK Series SPECIAL SERIES

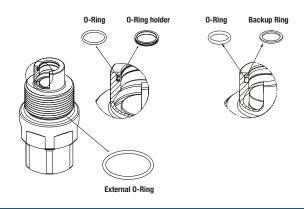




Spare kit seal

Repai	r kit / OR+BK+EXTERN	IAL OR
Body Size	Description	Part Number
3/8"	M VEP9SK	815701241
1/2"	M VEP13SK	815701243
5/8"	M VEP15SK	815701245
3/4"	M VEP17SK*	815701247
1"	M VEP21SK*	815701249
1-1/2"	M VEP30SK*	815701251

* Kit replacement O-Ring Holder + O-Ring + External O-Ring O-Ring in special compound



Protective caps for VEP-HD Series

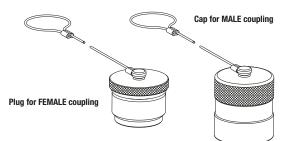
Protective caps are always recommended to protect the couplings from damage, dirt inclusion, and will increase the product life.

Two solutions are available:

- threaded aluminum caps with lanyard (standard color: natural aluminum, other colors available upon request)
- threaded plastic caps with lanyard (standard color black).

			Protective Cap		
Body Size	/Description	Part Ni	Material/Color		
		Plug for Female	Cap for Male		
5/8"	VEP15SK	815305076	815305077	Aluminum/Natural	
3/4"	VEP17SK	815305078	815305079	Aluminum/Natural	
1"	VEP21SK	815305080	815305081	Aluminum/Natural	
1-1/2"	VEP30SK	815305082	815305083	Aluminum/Natural	

			Protective Cap		
Body Size/	Description	Part N	Material/Color		
		Plug for Female	Cap for Male		
5/8"	VEP15SK	815303130	815303131	Plastic/Black	
3/4"	VEP17SK	815303132	815303133	Plastic/Black	
1"	VEP21SK	815303134	815303135	Plastic/Black	
1-1/2"	VEP30SK	815303136	815303137	Plastic/Black	



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Multicouplings for Eutectic System



SPECIAL SERIES



Eutectic systems are mounted on the vehicles used for the **transport of frozen and fresh products.**

This system identifies the technology according to which the **cold is accumulated by charging with an electric-operated refrigerating unit** (compressor) that freezes the plates containing the eutectic solution. The defrosting solution then releases the previously accumulated "cold", thus compensating for the thermal dispersion of the bodywork, preserving the food products in compliance with the regulations.

The **main advantage of the eutectic system** compared to the convectional refrigeration of the ventilated type is that to cool it does not need to have the engines turned on to run the compressor. The **couplings are used to connect the compressor to the vehicle during the charging phase,** which typically takes place at night while during the day the vehicle is on the road for the delivery of the products.

The multicoupling has two couplings: one for the inlet line (pressure) and one for the return line (suction) and have the function of circulating the refrigerant gas inside the system. In addition to the refrigerant conduction couplings, there is also the electrical connection which has the function of activating very low voltage signals / instruments (24V max).

The stucchi solution for Eutectic system

SPECIAL SERIES





Thanks to the multicoupling these **three main lines are connected and disconnected simultaneously** by a single and quick movement.

The use of the quick coupling allows the compressor to be removed from the van with its weight, therefore it allows to add weight of food product to be delivered or at the same load, to **consume less energy.**

Thanks to its vast experience with vehicle manufacturers, Stucchi is able to propose **specific solution for the Eutectic systems:** two multicouplings configured with two couplings (pressure and suction) and electrical connector.

DP3 1A-1B-1EC

GR4 1B-1D-1EC

These models have the following characteristics:

- **Special Flat Face couplings** designed for refrigerant gases (R404A R452A R507) that ensure a minimal gas loss after the disconnection of the multicoupling.
- **Predisposition for heater resistance** avoiding icing of the couplings during the charge process.
- Predisposition for **sensor that allows to block the vehicle** when it is being charged.
- **Predisposition for indexator pin** in order to always use the same multi fix with the same multi-mobile and therefore keep the same amount of gas in the circuit.

The fixed multicoupling with male couplings is mounted on the vehicle while the mobile multicoupling with female couplings is on the compressor.

When the multicoupling is disconnected the fixed part is protected by a metal cap that ensure

a good resistance to the severe condition existing on the roads.

While the mobile part can be easily parked on its parking station located on the compressor.





SPECIAL SERIES





FAQ9 (A)	FAQ13 (B)	FAQ15 (C)	FAQ17 (D)	FAQ21 (E)	FAQ30 (G)	EC
3/8"	1/2"	5/8"	3/4"	1"	1-1/2"	instead of DN9 or DN13
1	1					1

Technical specifications and options

Stuce	r change chi profile (only with chi multicouplings)	Sealing Ethylene Propylene EPDM	Available sizes 3/8" - 1/2"		Material Aluminium, Carbon steel, Stainless steel
Valvi Flat f	i ng style face	Connection Under Pressure Not Allowed	Operating pressure Up to 30 bar	8	Locking mechanism Pin, Cam
	perature C / +80°C	Connection system Lever	Available threads ORFS		Flow rate na

Benefits

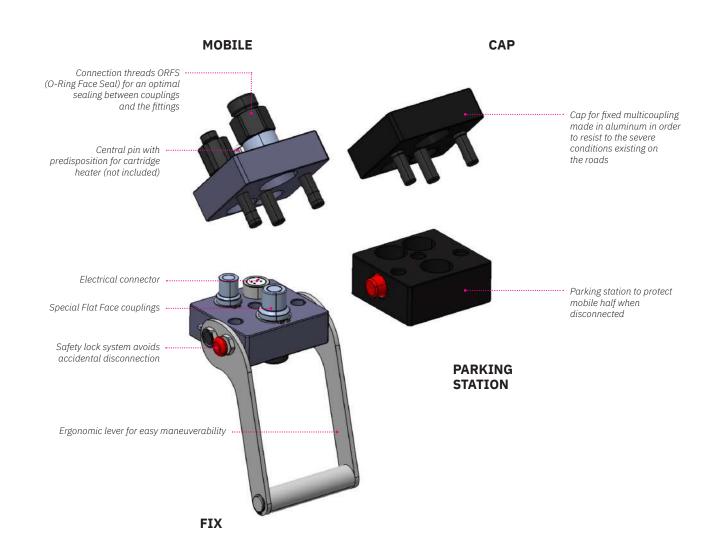
- Simultaneous connection and disconnection of the two lines for refrigerant gas and the electrical connector by a single and quick movement.
- Special Flat Face couplings designed for refrigerant gases (R404A R452A R507) ensure a minimal gas loss after the disconnection of the multicoupling.
- No risk of misalignment or misconnection thanks to guidance pins design.
- Central pin with hole where is possible to integrate the cartridge heater in order to keep the multicoupling unfrozen during the recharge process.
- Good resistance to the severe condition existing on the roads.
- Couplings mounted with Snap Rings for ease of installation and replacement.
- Compact slim design.
- Safe and simple to use.





Stucchi[®]

Features



Performances

c :	6 - 11 - 1	Ma	ax. op	erat	ing p	oressi	ire
Size	Series	Coupled		Male		Female	
Inch		MPa	psi	MPa	psi	MPa	psi
3/8	FAQR9D	3	435	3	435	3	435
1/2	FAQR13	3	435	3	435	3	435

Temperature range: Special seals EPDM -40°C to + 80°C (from -40 °F to + 176 °F).

Other threads available upon request.

DP3 1A-1B-1EC

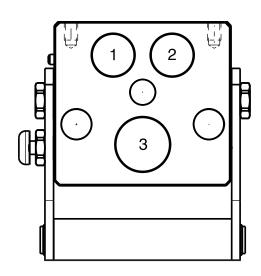
SPECIAL SERIES



Installation, use and maintenance

- Install the fixed multicoupling with the proper fixing holes, by referring to the drawing shown in the datasheet.
- Install the flexible hoses on the couplings of the fixed and mobile multicoupling, by screwing them with proper torque.
- Install the electrical connector following the proper instruction (see Stucchi Multicoupling Catalog) and fix the cartridge heater into the central pin.
- Before connecting, clean the flat mating surface of the couplings to avoid inclusion of dirt in the circuit.
- Insert the guidance pins of the mobile multicoupling into the holes of the fixed multicoupling and move the mobile half till the contact of the couplings faces.
- Act on the handle turning the lever in the direction if the fixed multicoupling.
- Continue to rotate till the safety lock (red button) automatically engage itself.
- Now the multicoupling is coupled and ready to work.
- When the mobile is connected with fixed multicoupling, the cap can be easily parked in the parking station.
- To disconnect push the red safety button and at the same time act on the handle turning the lever in the direction of the mobile multicoupling.
- Continue to rotate till the mechanical stop of the levers. Now the multicoupling is uncoupled and it is possible to pull out the mobile half.
- After disconnecting, clean the parts and apply the cap on the fixed part, then park the mobile part in the parking station in order to protect it.
- Clean frequently the multicoupling and the components using sweet water or compressed air. Don't use aggressive substances that could damage the seals.
- Keep the internal circuit lubricated with the proper lubricant (Polyester oil-POE) and lubricate (use only Silicon grease) also the guidance pins to improve the connection-disconnection movement.
- Check periodically the multiconnection by looking for leakage, damage or malfunctioning.

Configurations



Possible configurations

Position	Coupling Size	Predisposition for electrical connector
1	FAQR9D	-
2	EC	YES
3	FAQR13	-

DP3 1A-1B-1EC

SPECIAL SERIES



Plates and spare parts

Multicoupling (couplings included)

Code	Name	Description
870009012	MULTI COMPLETE DP3 1A-1B-1EC	1 FAQR9D 3/8 ORFS - 1 FAQR13 3/4 ORFS - 1 EC4 - CAP

Multicoupling spare parts (couplings not included)

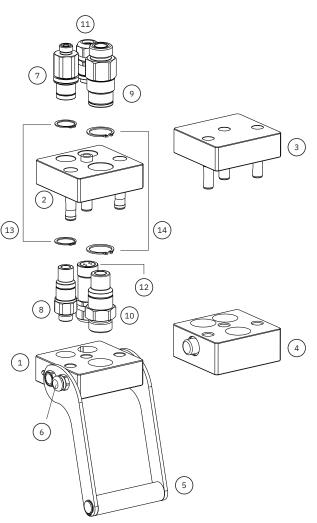
Code	Name	Key
806000356	MULTI FIX EMPTY DP3 1A-1B-1EC	1
806000367	MULTI MOBILE EMPTY DP3 1A-1B-1EC V01	2
815606276	CAP FIX MULTICOUPLING DP 105x98	3
815606277	PARKING STATION MOBILE MULTICOUPLING DP 105x98	4
815701081	SPARE KIT LEVER GROUP DP 170x121	5
815701090	SPARE KIT SAFETY BUTTON DP	6

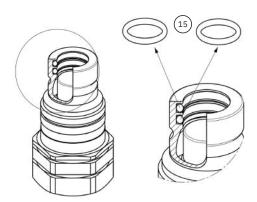
EC with crimped cable available upon request

Couplings spare parts

Code	Name	Key
806313212*	F FAQR9D 3/8 ORFS	7
806313213*	M FAQR9D 3/8 ORFS	8
806313214*	F FAQR13 3/4 ORFS	9
806313215*	M FAQR13 3/4 ORFS	10
806422016	FEC4	11
806422015	M EC4DT	12
815701033	SET OF 10 SEEGER FOR PLUG FAP-FAQ9	13
815701034	SET OF 10 SEEGER FOR PLUG FAP-FAQ13	14
815701071	SET OF 10 OR EPDM M FAQ9E	15
815701073	SET OF 10 OR EPDM M FAQ13E	15

* Seeger ring is not included in the female and male couplings; seeger ring to be ordered separately.





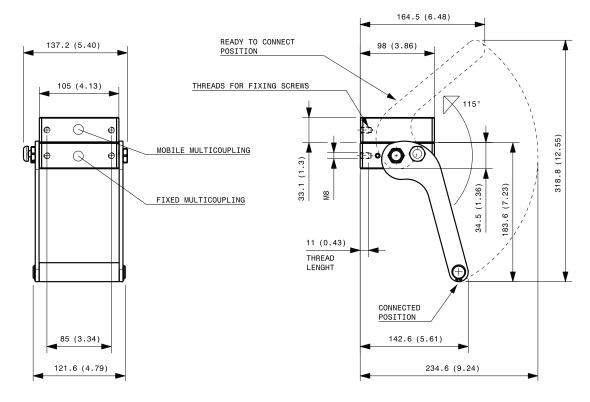




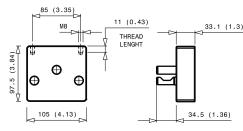


Plates and spare parts

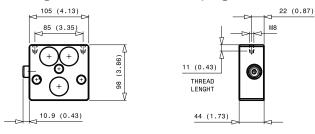
Fixed and mobile multicoupling



Cap for fix multicoupling



Parking station for mobile multicoupling



Dimensions in mm (inches)

🗛 WARNINGS

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.

Never connect or disconnect when the compressor is working and there is pressure in the circuit. Apply to the multicoupling the proper heater resistance in order to avoid the creation of the ice during the operation. Do not disconnect in case there is presence of ice.

It is important to limit contamination in the circuit to avoid compromising the function of the internal valves. Make sure that the medium used in the circuit is only that indicated in this document (refrigeration gases R404A - R452A - R507 and lubricant oil POE). Others medium can damage the seals.

Do not force the lever without pushing the red safety button.

Do not use extensions or other tools to ease the rotating of the lever. Do not connect the fixed half with the mobile half if dirt or tools are between them.

Pay attention during the connection not to put finger between the plates.

When the multicoupling is disconnected, it is suggested to use the protection cover for the fixed half and the parking station for the mobile half. Do not to modify, disassemble or damage the multiconnection, part of it or coupling/electrical connector, the lever or safety lock system.

Stucchi Multicoupling above described is intended to be used for refrigerant gas only: do not use the products for dangerous, inflammable or explosive fluid or gas. The quick coupling FAQ series is intended to be used only on Stucchi Multicouplings. Do not use the FAQ couplings on a Custom-made multiconnection or other device different than a Stucchi Multicouplings.

In case of doubt please contact Stucchi Technical Support

It is MANDATORY to read and closely follow the instructions. Last updated version always applies at time of installation, see latest Instructions and warnings on Stucchi website (English version: www.stucchigroup.com/en) before selecting or using Stucchi products.

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FAQ9 (A)	FAQ13 (B)	FAQ15 (C)	FAQ17 (D)	FAQ21 (E)	FAQ30 (G)	EC
3/8"	1/2"	5/8"	3/4"	1"	1-1/2"	instead of DN9 or DN13
	1		1			1

Technical specifications and options

Stucchi multicouplin		Available sizes 1/2" - 3/4"	Material Brass, Carbon steel, Stainless steel
Valving style	Connection Under Pressure	Operating pressure	Locking mechanism
Flat face		Up to 30 bar	Pin, Cam
Temperature	Connection system	Available threads	Flow rate
-40°C / +80°C		ORFS	na

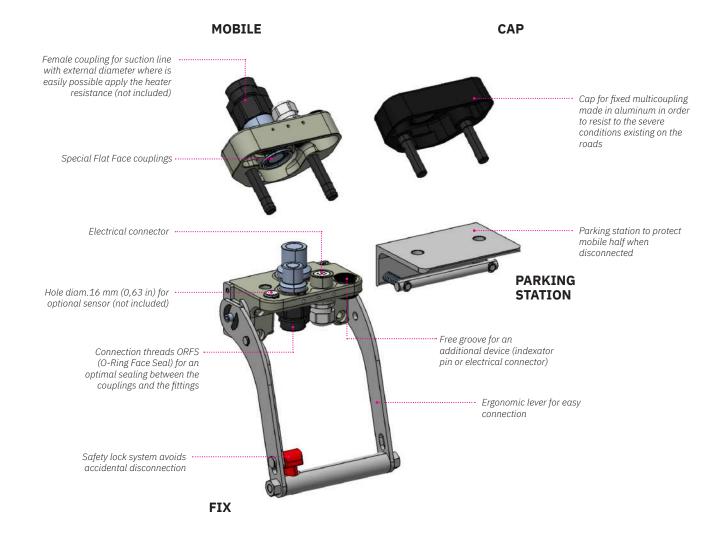
Benefits

- Simultaneous connection and disconnection of the two lines for refrigerant gas and the electrical connector by a single and quick movement.
- Special Flat Face couplings designed for refrigerant gases (R404A R452A R507) ensure a minimal gas loss after the disconnection of the multicoupling.
- The multicoupling has the predisposition to add additional devices such as a sensor, another electrical connector or a indextor pin.
- The safety button located directly on the handle allows the operator to operate with one hand while with the other can hold the mobile part.
- No risk of misalignment or misconnection thanks to guidance pins design.
- Female coupling for suction line with external diameter where can be easily apply a heater resistance in order to keep the multicoupling unfrozen during the recharge process.
- Good resistance to the severe condition existing on the roads.
- Couplings mounted with Snap Rings for ease of installation and replacement.
- Safe and simple to use.









Performances

e :	c onico	Max. operating pressure					
Size	Series	Coupled		Male		Female	
Inch		MPa	psi	MPa	psi	MPa	psi
1/2	FAQR13	3	435	3	435	3	435
3/4	FAQR17	3	435	3	435	3	435

Temperature range: Special seals EPDM -40°C to + 80°C (from -40 °F to + 176 °F).

Other threads available upon request.

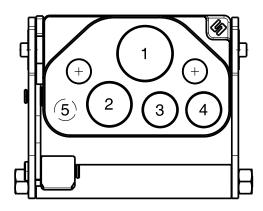
GR4 1B-1D-1EC SPECIAL SERIES



Installation, use and maintenance

- Install the fixed multicoupling with the proper fixing holes, by referring to the drawing shown in the datasheet.
- Install the flexible hoses on the couplings of the fixed and mobile multicoupling, by screwing them with proper torque.
- Install the electrical connector following the proper instruction (see Stucchi Multicoupling Catalog) and assemble the heater around the female coupling of suction line.
- Before connecting, clean the flat mating surface of the couplings to avoid inclusion of dirt in the circuit.
- Insert the guidance pins of the mobile multicoupling into the holes of the fixed multicoupling and move the mobile half till the contact of the couplings faces.
- Push the red safety button to unlock the rotation of the lever, and in the same time act on the handle turning the lever in the direction of the fixed multicoupling.
- After a short rotation release the red button
- Continue to rotate till the safety lock automatically engage itself.
- Now the multicoupling is coupled and ready to work.
- When the mobile is connected with fixed multicoupling, the cap can be easily parked in the parking station.
- To disconnect push the red safety button and at the same time act on the handle turning the lever in the direction of the mobile multicoupling.
- After a short rotation release the red button.
- Continue to rotate till the mechanical stop of the levers. Now the multicoupling is uncoupled and it is possible to pull out the mobile half.
- After disconnecting, clean the parts and apply the cap on the fixed part, then park the mobile part in the parking station in order to protect it.
- Clean frequently the multicoupling and the components using sweet water or compressed air. Don't use aggressive substances that could damage the seals.
- Keep the internal circuit lubricated with the proper lubricant (Polyester oil-POE) and lubricate (use only Silicon grease) also the guidance pins to improve the connection-disconnection movement.
- Check periodically the multiconnection by looking for leakage, damage or malfunctioning.

Configurations



Possible configurations

Position	Coupling Size	Predisposition for electrical connector
1	FAQR17	-
2	FAQR13	-
3	EC	YES
4	EC	YES
5	*	-

* Holes diam.16 mm (0,65) for optional sensor.





Plates and spare parts

Multicoupling (couplings included)

Code	Name	Description
870016040	MULTI COMPLETE GR4 1B-1D-1EC	1 FAQR13 3/4 ORFS - 1 FAQR17 1 ORFS - 1 EC6 - CAP

Multicoupling spare parts (couplings not included)

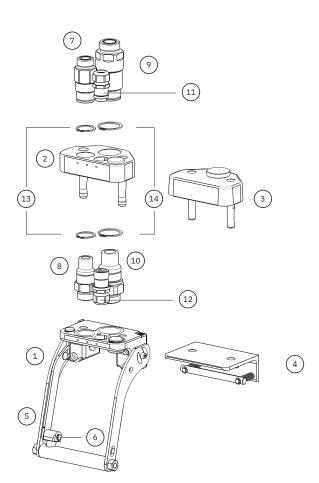
Code	Name	Key
806000280	MULTI FIX EMPTY GR4 2A-1B-1D-2EC	1
806000281	MULTI MOBILE EMPTY GR4 2A-1B-1D-2EC	2
815606244	CAP FIX MULTICOUPLING GR 139x90	3
815606249	PARKING STATION MOBILE MULTICOUPLING GR 140x100	4
815701052	SPARE KIT LEVER GROUP GR 200x176	5
815701079	SPARE KIT SAFETY BUTTON GR	6

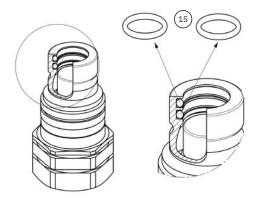
EC with crimped cable available upon request

Couplings spare parts

Code	Name	Key
806313214*	F FAQR13 3/4 ORFS	7
806313215*	M FAQR13 3/4 ORFS	8
806313216*	F FAQR17 1 ORFS	9
806313217*	M FAQR17 1 ORFS	10
806422000	F EC6	11
806422007	M EC6D	12
815701034	SET OF 10 SEEGER FOR PLUG FAP-FAQ13	13
815701036	SET OF 5 SEEGER FOR PLUG FAP-FAQ17	14
815701073	SET OF 10 OR EPDM M FAQ13E	15
815701077	SET OF 10 OR EPDM M FAQ17E	15

* Seeger ring is not included in the female and male couplings; seeger ring to be ordered separately.



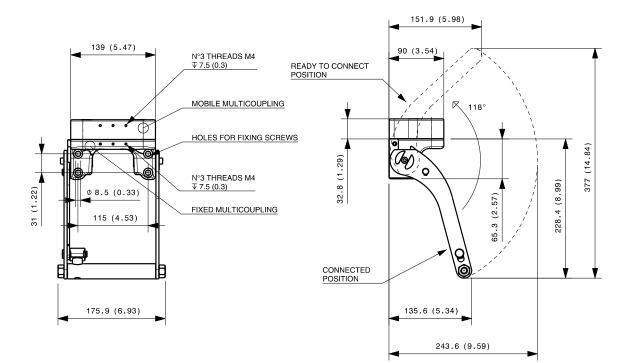


GR4 1B-1D-1EC SPECIAL SERIES

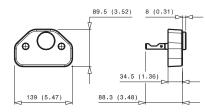


Plates and spare parts

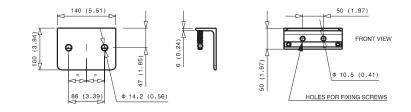
Fixed and mobile multicoupling



Cap for fix multicoupling



Parking station for mobile multicoupling



Dimensions in mm (inches)

🗛 WARNINGS

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.

Never connect or disconnect when the compressor is working and there is pressure in the circuit. Apply to the multicoupling the proper heater resistance in order to avoid the creation of the ice during the operation. Do not disconnect in case there is presence of ice.

It is important to limit contamination in the circuit to avoid compromising the function of the internal valves. Make sure that the medium used in the circuit is only that indicated in this document (refrigeration gases R404A - R452A - R507 and lubricant oil POE). Others medium can damage the seals.

Do not force the lever without pushing the red safety button.

Do not use extensions or other tools to ease the rotating of the lever. Do not connect the fixed half with the mobile half if dirt or tools are between them.

Pay attention during the connection not to put finger between the plates.

When the multicoupling is disconnected, it is suggested to use the protection cover for the fixed half and the parking station for the mobile half. Do not to modify, disassemble or damage the multiconnection, part of it or coupling/electrical connector, the lever or safety lock system.

Stucchi Multicoupling above described is intended to be used for refrigerant gas only: do not use the products for dangerous, inflammable or explosive fluid or gas. The quick coupling FAQ series is intended to be used only on Stucchi Multicouplings. Do not use the FAQ couplings on a Custom-made multiconnection or other device different than a Stucchi Multicouplings.

In case of doubt please contact Stucchi Technical Support.

It is MANDATORY to read and closely follow the instructions. Last updated version always applies at time of installation, see latest Instructions and warnings on Stucchi website (English version: www.stucchigroup.com/en) before selecting or using Stucchi products.

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