



Pentagon Romania

COUPLING

High quality couplings to global shipbuilding
and heavy industry companies



ISO 9001

www.pentagonromania.ro

We would like to express our sincere gratitude and appreciation for all your support and kind assistance.



Greetings

High quality couplings to global shipbuilding and heavy industry companies.

The aim we pursue is to be the best in quality to improve safety and productivity at the workplace. We always have been devoted to our customers' requirements. We are a long time supplier of high quality couplings to global shipbuilding and heavy industry companies.

In 1987, for the first time, we introduced a domestic QUICK COUPLER to domestic shipyards in order to increase work efficiency and productivity. Since then, we have been developing innovative couplings using the latest technologies. We currently hold more than 70 patents including registration of a utility model and a new design for practical use.

None of these achievements could have been reached without your support. As always, we will make every possible effort to create the best products in the industry.

Thank you for your continued support and interest in our company.

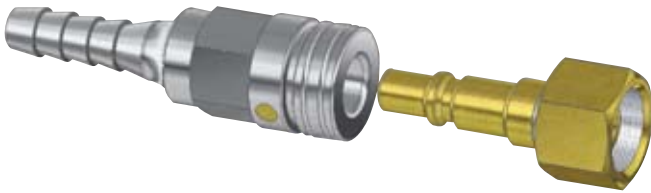
Sincerely yours,



Contents

SAFETY COUPLER	4	MANIFOLD	26
AIR FILTER COUPLER	6	SLIDING VALVE / PAINTING SWIVEL COUPLER	27
HI-COUPLER	7	HI-NIPPLE / FITTING	28
HYBRID COUPLER	12	VORTEX TUBE	29
HYBRID COIL HOSE COUPLER / CO ₂ & ARGON COUPLER	13	SPECIAL COUPLER / SHIPYARD TOOL	30
GRINDER COUPLER / UNIVERSAL COUPLER	14	COUPLER APPLICATION CHART	31
UNLOAD COUPLER	15		
HYDRAULIC COUPLER / HYDRAULIC JACK COUPLER	16		
SP-COUPLER	18		
DOUBLE PATH OPEN COUPLER	20		
FLASHBACK ARRESTOR	22		
AIR EJECTOR	24		
HOOD COUPLER	25		

SAFETY COUPLER



Safety Coupler is a welding equipment connector for Oxygen and Gas use.

Features

- Safety Coupler is fabricated as a double safety device, conveniently used during welding and cutting operations.
- Safety Couplings for Oxygen use are not interchangeable with those for Gas use.
- Safety Coupler has a special double safety sealing structure to prevent gas leaks upon connection and disconnection.
- Plug with anti-backflow check valve instantly prevents undesirable backflow of gases.
- The swivel function of Safety Couplings prevents hose twisting and provides a great convenience for welding operations.

Specifications

Application Size	1/4" 5/16" 3/8" 1/2"		
Body Material	Brass		
Sealing Material / Operating Temperature	Sealing Material	Operating Temperature Range	
	Nitrile rubber (NBR)	-20°C ~ +80°C	

Anti-backflow Check Valve

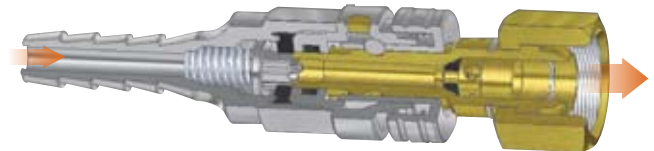
Type	Piston-Type
Feature	Check Valve blocks to resist backflow of gases and prevent failure of gas appliances.

Instructions for use

- Soapy water or gas-tight testing device should be performed for gas leak tests before use.
- When connected or disconnected, there should be no inflammable or explosive materials around the area.
- The sealing area of the Plug which is inserted into the socket should be handled very carefully to avoid any damage.
- When couplings are badly dented in a collision, they are not connected firmly which may lead to a gas leak.
- After separation, couplings should be stored in a clean location to keep dust or potentially harmful foreign substances from entering the inside of the socket. The sealing area of the plug should especially be protected from any impacts.

Direction of fluid flow

Fluid must flow from the side of the socket to the side of the plug.



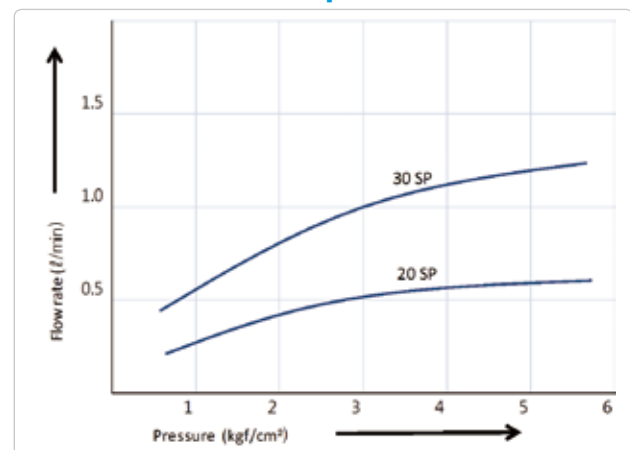
Pressure

Max. Working Pressure	7 kgf/cm ²
Proof Pressure	10 kgf/cm ²

Use

Material	Brass
Applicable fluids	Oxygen Air Acetylene
Use	▪ Gas Welding ▪ Gas hose connection ▪ Blow pipe

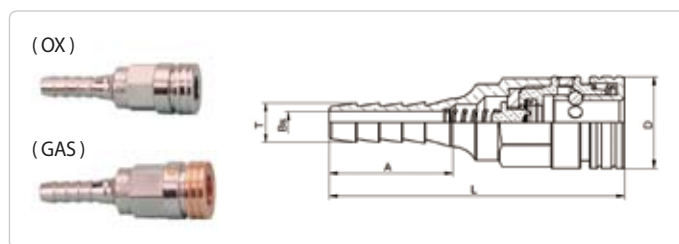
Pressure-Flow rate Graph



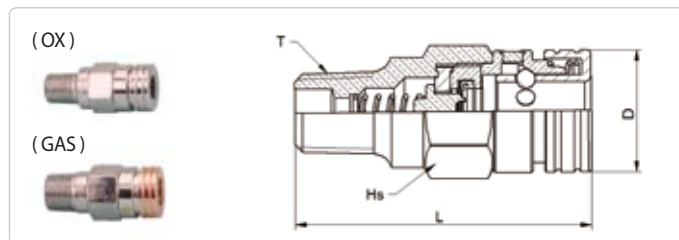
Application example



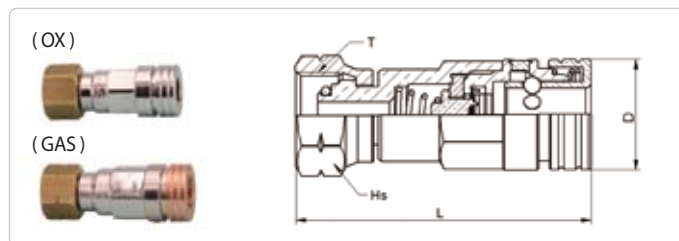
SAFETY COUPLER DIMENSIONS



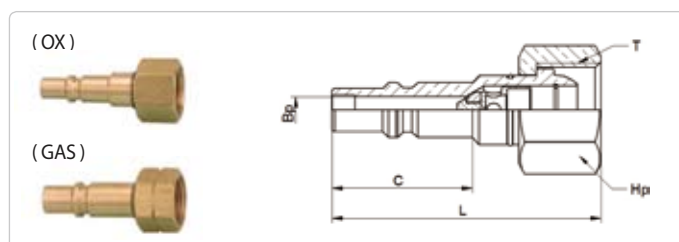
S (SOCKET)							
SH Type							
Type	Use	Model	Dimensions (mm)				
			L	D	A	T	Application
KSSN	OX	* SH-21	65.5	20	25	7.5	6A 1/4" HOSE
		SH-22	64	20	29	8.6	8A 5/16" HOSE
		* SH-23	69.5	20	34	10.5	10A 3/8" HOSE
	GAS	* SH-31	66.5	22	25	7.5	6A 1/4" HOSE
		SH-32	68	22	29	8.6	8A 5/16" HOSE
		* SH-33	74	22	34	10.5	10A 3/8" HOSE



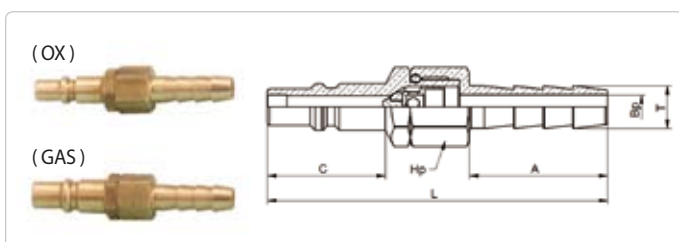
SM Type							
Type	Use	Model	Dimensions (mm)				Application
			L	D	T	Hs	
KSSN	OX	SM-22	48.1	20	PT 1/4"	19	8A PT 1/4"
		SM-23	48.1	20	PT 3/8"	19	10A PT 3/8"
		SH-24	48.1	20	PT 1/2"	19	15A PT 1/2"
	GAS	SM-32	51.5	22	PT 1/4"	21	8A PT 1/4"
		SM-33	50	22	PT 3/8"	21	10A PT 3/8"
		SM-34	52	22	PT 1/2"	22	15A PT 1/2"



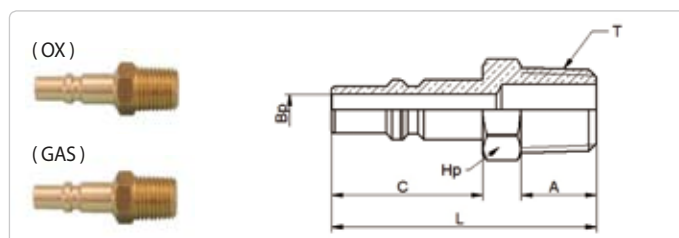
SF Type							
Type	Use	Model	Dimensions (mm)				Application
			L	D	T	Hs	
KSSN	OX	SF-22	53	20	M16 x P1.5	19	M16 x P1.5
	GAS	SF-33	55.5	22	M16 x P1.5	19	M16xP1.5 Left



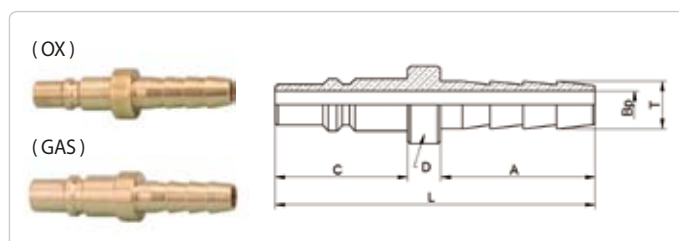
P (PLUG)								
PFB Type								
Type	Use	Model	Dimensions (mm)					Application
			L	C	Hp	T	Bp	
KSPN	OX	PFB-22	46	24	Hex 19	M16 x P1.5	5.0	M16xP1.5
	GAS	PFB-33	46	26.5	Hex 19	M16 x P1.5	7.5	M16xP1.5 Left



PHB Type									
Type	Use	Model	Dimensions (mm)						Application
			L	C	A	Hp	T	Bp	
KSPN	OX	* PHB-21	67	24	25	14	7.5	4.5	6A 1/4" HOSE
		PHB-22	69	24	28	14	8.6	5.0	8A 5/16" HOSE
	GAS	* PHB-31	69	26.5	28	14	8.6	5.0	6A 1/4" HOSE
		PHB-32	71	26.5	28	14	8.6	5.0	8A 5/16" HOSE



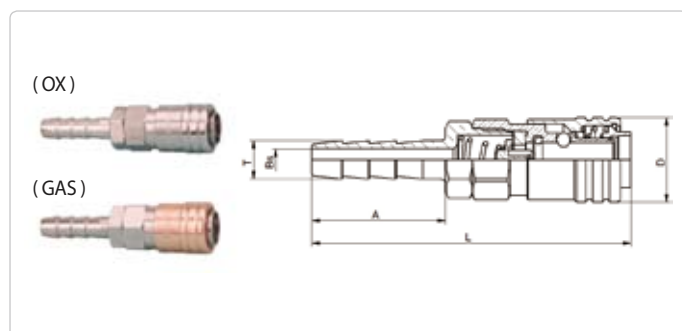
PM Type									
Type	Use	Model	Dimensions (mm)						Application
			L	C	A	Hp	T	Bp	
KSPN	OX	PM-22	42	24	13	14	PT 1/4"	5.0	PT 1/4"
		PM-23	43	24	14	19	PT 3/8"	5.0	PT 3/8"
	GAS	PM-32	45	26.5	13	14	PT 1/4"	7.5	PT 1/4"
		PM-33	46.5	26.5	14	19	PT 3/8"	7.5	PT 3/8"



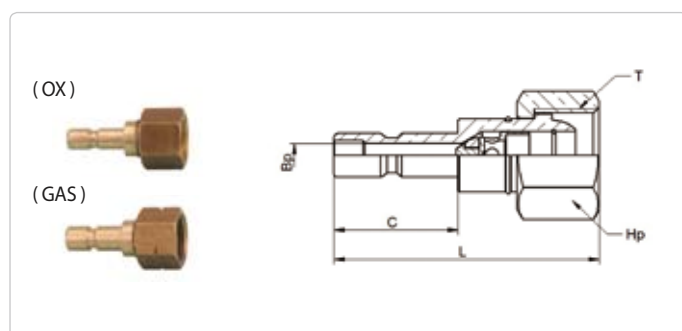
PH Type									
Type	Use	Model	Dimensions (mm)						Application
			L	C	A	D	T	Bp	
KSPN	OX	* PH-21	54	24	25	11	7.5	5.0	6A 1/4" HOSE
		PH-22	58	24	28	11	8.6	5.0	8A 5/16" HOSE
	GAS	* PH-31	54.5	26.5	25	14	7.5	5.0	6A 1/4" HOSE
		PH-32	58.5	26.5	28	14	8.6	5.0	8A 5/16" HOSE

* models are available upon request.

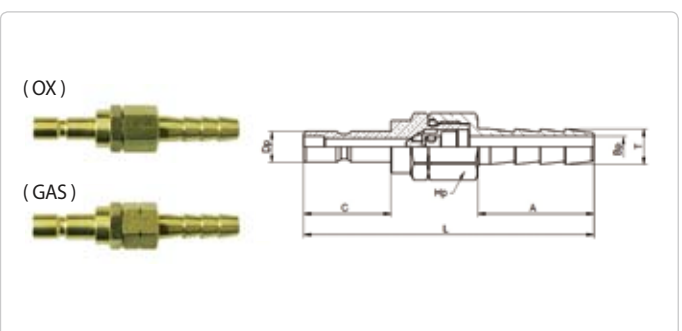
SAFETY COUPLER DIMENSIONS



S (SOCKET)								
SH Type								
Type	Use	Model	Dimensions (mm)					Application
			L	D	A	T	Bs	
KSS	OX	SH-20	71.5	19	30	8.6	5.0	8A 5/16"
	GAS	SH-30	71.5	20	30	8.6	5.0	



P (PLUG)							
PFB Type							
Type	Use	Model	Dimensions (mm)				
			L	C	Hp	Bp	T
KSP	OX	PFB-20	45.2	21.2	19	5	M16 x P1.5
	GAS	PFB-30	45.2	21.2	19	5.8	M16 x P1.5 Left

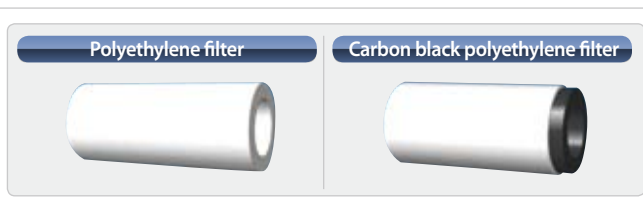


P (PLUG)										
PHB Type										
Type	Use	Model	Dimensions (mm)							Application
			L	C	A	Hp	T	Bp	Dp	
KSP	OX	PHB-20	70.2	21.2	28	Hex 14	8.6	5.0	7.5	8A 5/16"
	GAS	PHB-30	70.2	21.2	28	Hex 14	8.6	5.0	8.7	

AIR FILTER COUPLER

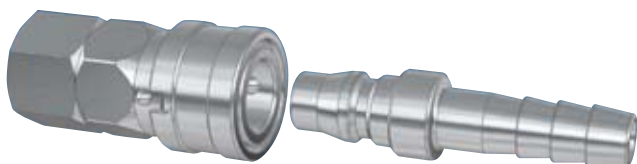
Features

- Since Air Filter Coupler has a transparent window structure to check contamination levels of the filter, it is easy to determine replacement cycles.
- Body material(Aluminum): Lightweight, Strong and Durable.



Model	Applicable Coupler
AF-22	AIR COUPLER SH-22
AF-35	HI-COUPLER SH-3508, SH-3510, SH-3515
AF-300	HI-COUPLER SH-308, SH-310, SH-315
AF-400	HI-COUPLER SH-508, SH-510, SH-515

HI-COUPLER



Hi-Coupler is a one-touch connector used for air and gas pipes, air tools, and hose connections.

Features

- Socket and Plug are convenient and easy to use with different kinds of threads and hoses. The 25 type, 35 type, 300 type, 450 type, 500 type, 900 type and other specifications are available upon request.
- Two kinds of types (the 25 type for OX use and 25 type for CO₂ use, the 900 type for OX use and 900 type for CO₂ use) are not interchangeable with each other. This helps prevent gas accidents caused by wrong connections.
- Since an automatic shut off valve is built in the socket, there is no need to lock the main valve when disconnecting a hose.
- A wide variety of products and specifications are available, depending on the purpose of use and place of use.
- Abrasion resistance and durability are excellent with improved strength.
- Different colors are used for each gas, helping to create improvements in visual safety.

Specifications

Application Size	1/4" 5/16" 3/8" 1/2" 3/4" 1" 1-1/4"				
Body Material	Steel, Brass, Stainless steel				
Sealing Material / Operating Temperature	Sealing Material		Operating Temperature Range		
	Nitrile rubber (NBR)		-20°C ~ +80°C		

Pressure

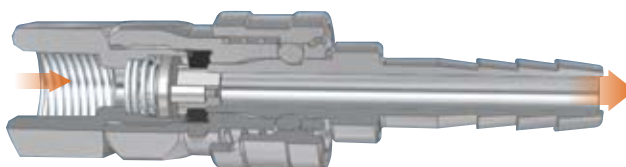
Material	Steel	Brass	Stainless steel
Max. Working Pressure	1.5 MPa (15 kgf/cm ²)	1.0 MPa (10 kgf/cm ²)	1.5 MPa (15 kgf/cm ²)
Proof Pressure	2.0 MPa (20 kgf/cm ²)	1.5 MPa (15 kgf/cm ²)	2.0 MPa (20 kgf/cm ²)

Maximum Recommended Torque: N-m(kgf-cm)

Thread Size		1/4"	3/8"	1/2"	3/4"	1"
Torque	Steel	14(143)	22(224)	60(612)	100(1020)	120(1224)
	Brass	9(92)	11(112)	30(306)	50(510)	65(663)
	Stainless Steel	14(143)	22(224)	60(612)	100(1020)	120(1224)

Direction of fluid flow

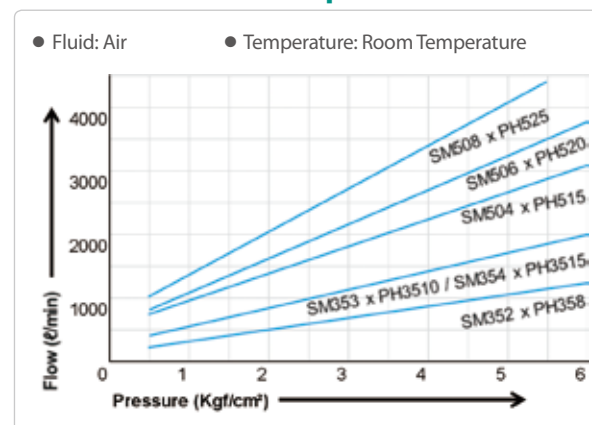
Fluid must flow from the side of the socket to the side of the plug.



Use

Material	Steel	Brass	Stainless Steel
Applicable fluids	Air, Oil	Air, Gas	Air, Gas
Use	▪ Air tools ▪ Pneumatic tools ▪ Various Air / Gas pipes		

Pressure-Flow rate Graph



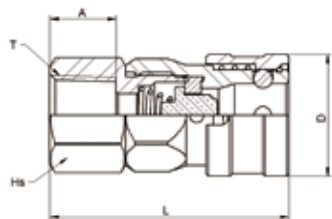
Instructions for use

- The direction of fluid always flows from the side of the socket to the side of the plug.
- When using a vibration tool, connect a rubber hose about 30cm long between the tool and coupler to absorb the shock and vibrations.

Application example



HI-COUPLER DIMENSIONS



25 type



25C type



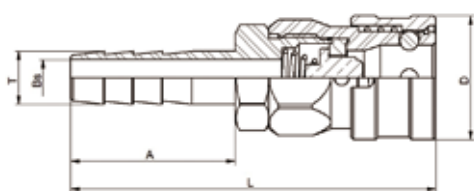
35/350 type



300 type



450 type



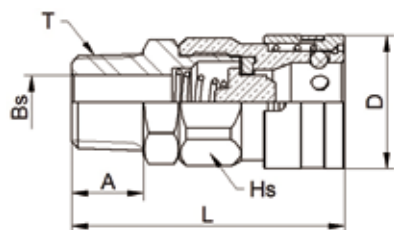
25 type



25C type



35/300/350/450 type



25 type



25C type



35/350 type



300 type



450 type



S (SOCKET)

SF Type

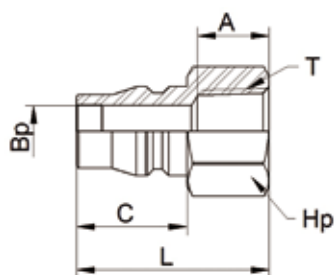
Type	Model	Dimensions (mm)				
		L	D	Hs	A	T
25 type	SF-252	49.5	23.5	17	13	PT 1/4"
	SF-253	50.5	23.5	21	14	PT 3/8"
	SF-254	52.5	23.5	27	15	PT 1/2"
25C type	SF-252C	49.5	23.5	17	13	PT 1/4"
	SF-253C	50.5	23.5	21	14	PT 3/8"
	SF-254C	52.5	23.5	27	15	PT 1/2"
35 type	SF-352	49.5	25.2	19	13	PT 1/4"
	SF-353	50.5	25.2	21	14	PT 3/8"
	SF-354	52.5	25.2	27	15	PT 1/2"
300 type	SF-303	54.5	29.7	24	14	PT 3/8"
	SF-304	55.5	29.7	27	16	PT 1/2"
	SF-306	58	29.7	32	17	PT 3/4"
350 type	SF-3503	54.5	29.7	24	14	PT 3/8"
	SF-3504	55.5	29.7	27	15	PT 1/2"
	SF-3506	58	29.7	32	17	PT 3/4"
450 type	SF-453	54.5	29.7	24	14	PT 3/8"
	SF-454	55.5	29.7	27	15	PT 1/2"
	SF-456	58	29.7	32	15	PT 3/4"

SH Type

Type	Model	Dimensions (mm)					Application
		L	D	A	Bs	T	
25 type	SH-258	71.5	23.5	30	5	8.6	8A 5/16" HOSE
25C type	SH-258C	71.5	23.5	30	5	8.6	8A 5/16" HOSE
35 type	SH-358	71.5	25.2	30	5	8.6	8A 5/16" HOSE
	SH-3510	75.5	25.2	34	7.5	10.5	10A 3/8" HOSE
	SH-3515	75.5	25.2	34	9	13.7	15A 1/2" HOSE
300 type	SH-308	74	29.7	30	5	8.6	8A 5/16" HOSE
	SH-315	78	29.7	34	10	13.7	15A 1/2" HOSE
350 type	SH-3508	74	29.7	30	5	8.6	8A 5/16" HOSE
	SH-35015	78	34	34	10	13.7	15A 1/2" HOSE
	SH-4508	74	29.7	30	5	8.6	8A 5/16" HOSE
450 type	SH-4515	78	34	34	10	13.7	15A 1/2" HOSE

SM Type

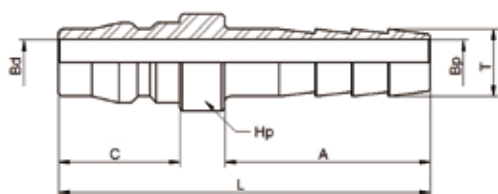
Type	Model	Dimensions (mm)					T
		L	D	Hs	A	Bs	
25 type	SM-252	55.5	23.5	17	13	8	PT 1/4"
	SM-253	56.5	23.5	19	14	9	PT 3/8"
	SM-25(CO ₂)	53.5	23.5	17	11	5	9/16"-18 UNF S-CABLE
25C type	SM-252C	55.5	23.5	17	13	8	PT 1/4"
	SM-253C	56.5	23.5	19	14	9	PT 3/8"
	SM-25C(CO ₂)	53.5	23.5	17	11	5	9/16"-18 UNF S-CABLE
35 type	SM-352	55.5	25.2	19	13	8	PT 1/4"
	SM-353	56.5	25.2	19	14	9	PT 3/8"
	SM-35(CO ₂)	53.5	25.2	19	11	5	9/16"-18 UNF S-CABLE
300 type	SM-303	59	29.7	24	14	9	PT 3/8"
	SM-304	61	29.7	24	15	13	PT 1/2"
	SM-306	62.5	29.7	32	18	15	PT 3/4"
350 Type	SM-3503	59	29.7	24	14	9	PT 3/8"
	SM-3504	61	29.7	27	15	13	PT 1/2"
	SM-3506	62.5	29.7	32	18	15	PT 3/4"
450 type	SM-453	59	29.7	24	14	9	PT 3/8"
	SM-454	61	29.7	27	15	13	PT 1/2"
	SM-456	62.5	29.7	32	18	15	PT 3/4"



25/35/300/350/450 type



25C type



25 type



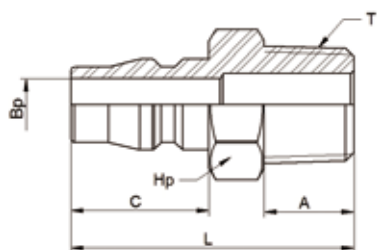
25C type



35/300/350 type



450 type



25 / 35 type



25C type



300/350/450 type



P (PLUG)

PF Type

Type	Model	Dimensions (mm)					
		L	Hp	C	A	Bp	T
25 type	PF-252	36	17	20	13	6.5	PT 1/4"
	PF-253	37	22	20	14	6.5	PT 3/8"
	SPF-25	35	17	20	13	6.5	9/16"-18 UNF
25C type	PF-252C	36	17	20	13	6.5	PT 1/4"
	PF-253C	37	22	20	14	6.5	PT 3/8"
	SPF-25C	35	17	20	13	6.5	9/16"-18 UNF
35 type	PF-352	36	17	20	13	7.5	PT 1/4"
	PF-353	37	22	20	14	7.5	PT 3/8"
	PF-354	38	27	20	15	7.5	PT 1/2"
	SPF-35	35	17	20	13	7.5	9/16"-18 UNF
300 type	PF-303	37.5	22	21.5	14	10.3	PT 3/8"
	PF-304	39.5	27	21.5	15	10.3	PT 1/2"
350 type	PF-3503	37.5	22	20.5	14	10.3	PT 3/8"
	PF-3504	38.5	27	20.5	15	10.3	PT 1/2"
450 type	PF-453	37.5	22	21.5	14	10.3	PT 3/8"
	PF-454	39.5	27	21.5	15	10.3	PT 1/2"

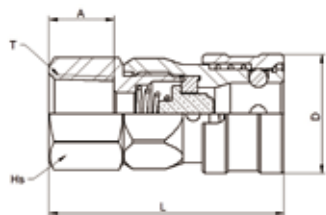
PH Type

Type	Model	Dimensions (mm)							Application
		L	Hp	C	A	T	Bp	Bd	
25 type	PH-25	56.5	16	20	30	8.6	5	6.5	8A 5/16" HOSE
25C type	PH-25C	56.5	16	20	30	8.6	5	6.5	8A 5/16" HOSE
35 type	PH-358	56.5	16	20	30	8.6	5	7.5	8A 5/16" HOSE
	PH-3510	61.5	16	20	34	10.5	7.5	7.5	10A 3/8" HOSE
	PH-3515	61.5	19	20	34	13.7	9	7.5	15A 1/2" HOSE
300 type	PH-308	58	19	21.5	30	8.6	5	10.3	8A 5/16" HOSE
	PH-310	62	19	21.5	34	10.5	5	10.3	10A 3/8" HOSE
	PH-315	63.5	19	21.5	34	13.7	10	10.3	15A 1/2" HOSE
350 type	PH-3508	58	19	20.5	30	8.6	8	10.3	8A 5/16" HOSE
	PH-35010	62	19	21.5	34	10.5	5	10.3	10A 3/8" HOSE
	PH-35015	62.5	19	20.5	34	13.7	10	10.3	15A 1/2" HOSE
450 type	PH-4508	58	19	21.5	30	8.6	8	10.3	8A 5/16" HOSE
	PH-4510	62	19	21.5	34	10.5	5	10.3	10A 3/8" HOSE
	PH-4515	63.5	19	21.5	34	13.7	10	10.3	15A 1/2" HOSE

PM Type

Type	Model	Dimensions (mm)					
		L	Hp	C	A	Bp	T
25 type	PM-252	39	14	20	13	6.5	PT 1/4"
	PM-253	41	19	20	14	6.5	PT 3/8"
25C type	PM-252C	39	14	20	13	6.5	PT 1/4"
	PM-253C	41	19	20	14	6.5	PT 3/8"
35 type	PM-352	39	14	20	13	7.5	PT 1/4"
	PM-353	41	19	20	14	7.5	PT 3/8"
	PM-354	44	22	20	15	7.5	PT 1/2"
300 type	PM-302	41.5	19	21.5	13	10.3	PT 1/4"
	PM-303	42.5	19	21.5	14	10.3	PT 3/8"
	PM-304	49.5	22	21.5	15	10.3	PT 1/2"
350 type	PM-3502	41.5	19	20.5	13	10.3	PT 1/4"
	PM-3503	42.5	19	20.5	14	10.3	PT 3/8"
	PM-3504	49.5	22	20.5	15	10.3	PT 1/2"
450 type	PM-452	41.5	19	21.5	13	10.3	PT 1/4"
	PM-453	42.5	19	21.5	14	10.3	PT 3/8"
	PM-454	49.5	22	21.5	15	10.3	PT 1/2"

MID TO LARGE-SIZE HI-COUPLER DIMENSIONS



500 type



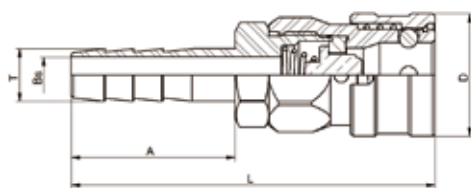
900/1000/1100 type



900A type



900C type



500 type



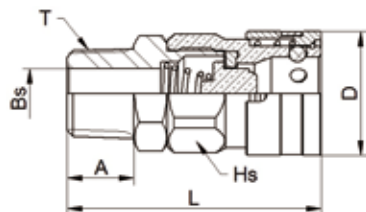
900/1000/1100 type



900A type



900C type



500 type



900/1000/1100 type



900A type



900C type



S (SOCKET)

SF Type

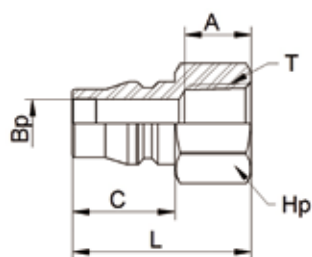
Type	Model	Dimensions (mm)				
		L	D	Hs	A	T
500 type	SF-504	57.5	35.6	30	15	PT 1/2"
	SF-506	61	35.6	32	17	PT 3/4"
	SF-508	65	35.6	41	20	PT 1"
900 type	SF-904	58	39	32	15	PT 1/2"
	SF-906	63	39	35	17	PT 3/4"
	SF-908	65.5	39	41	20	PT 1"
900A type	SF-904A	58	39	32	15	PT 1/2"
	SF-906A	63	39	35	17	PT 3/4"
	SF-908A	65.5	39	41	20	PT 1"
900C type	SF-904C	58	39	32	15	PT 1/2"
	SF-906C	63	39	35	17	PT 3/4"
	SF-908C	65.5	39	41	20	PT 1"
1000 type	SF-1008	70	47	41	20	PT 1"
	SF-1010	73	47	50.8	23	PT 1-1/4"
1100 type	SF-1108	70	47	41	20	PT 1"
	SF-1110	73	47	50.8	23	PT 1-1/4"

SH Type

Type	Model	Dimensions (mm)					Application
		L	D	A	Bs	T	
500 type	SH-515	82	35.6	34	9	13.7	15A 1/2" HOSE
	SH-520	93	35.6	45	15	20.5	20A 3/4" HOSE
	SH-525	103	35.6	55	17.5	25	25A 1" HOSE
900 type	SH-920	93	39	45	15	20.5	20A 3/4" HOSE
	SH-925	103	39	55	17.5	25	25A 1" HOSE
900A type	SH-920A	93	39	45	15	20.5	20A 3/4" HOSE
	SH-925A	103	39	55	17.5	25	25A 1" HOSE
900C type	SH-920C	93	39	45	15	20.5	20A 3/4" HOSE
	SH-925C	103	39	55	17.5	25	25A 1" HOSE
1000 type	SH-1025	113	47	55	17.5	25	25A 1" HOSE
	SH-1032	116	47	58	24	32	32A 1-1/4" HOSE
1100 type	SH-1125	113	47	55	17.5	25	25A 1" HOSE
	SH-1132	116	47	58	24	32	32A 1-1/4" HOSE

SM Type

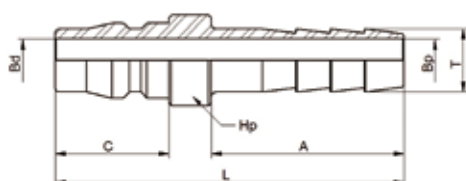
Type	Model	Dimensions (mm)					
		L	D	Hs	A	BS	T
500 type	SM-504	65	35.6	30	15	13	PT 1/2"
	SM-506	67	35.6	32	18	15	PT 3/4"
	SM-508	70	35.6	41	20	20	PT 1"
900 type	SM-904	67	39	32	15	13	PT 1/2"
	SM-906	68	39	32	18	15	PT 3/4"
	SM-908A	70	39	38	20	20	PT 1"
900A type	SM-904A	67	39	32	15	13	PT 1/2"
	SM-906A	68	39	32	18	15	PT 3/4"
	SM-908A	70	39	38	20	20	PT 1"
900C type	SM-904C	67	39	32	15	13	PT 1/2"
	SM-906C	68	39	32	18	15	PT 3/4"
	SM-908C	70	39	38	20	20	PT 1"
1000 type	SM-1008	75	47	38	20	20	PT 1"
	SM-1010	78	47	45	23	30	PT 1-1/4"
1100 type	SM-1108	75	47	38	20	20	PT 1"
	SM-1110	78	47	45	23	30	PT 1-1/4"



500/900/1000/1100 type



P (PLUG)							
PF Type							
Type	Model	Dimensions (mm)					
		L	Hp	C	A	Bp	T
500 type	PF-504	41.5	27	23.5	14	13	PT 1/2"
	PF-506	45	32	23.5	15	13	PT 3/4"
	PF-508	49	41	23.5	20	13	PT 1"
900 type	PF-904	41.5	27	23.5	17	15.5	PT 1/2"
	PF-906	45	32	23.5	17	15.5	PT 3/4"
	PF-908	49	41	23.5	20	15.5	PT 1"
900A type	PF-904A	41.5	27	23.5	17	15.5	PT 1/2"
	PF-906A	45	32	23.5	17	15.5	PT 3/4"
	PF-908A	49	41	23.5	20	15.5	PT 1"
900C type	PF-904C	41.5	27	23.5	17	15.5	PT 1/2"
	PF-906C	45	32	23.5	17	15.5	PT 3/4"
	PF-908C	49	41	23.5	20	15.5	PT 1"
1000 type	PF-1008	61.5	41	29.5	20	18.5	PT 1"
	PF-1010	63.5	50.8	29.5	23	18.5	PT 1-1/4"
1100 type	PF-1108	61.5	41	29.5	20	18.5	PT 1"
	PF-1110	63.5	50.8	29.5	23	18.5	PT 1-1/4"



500 type



900/1000/1100 type



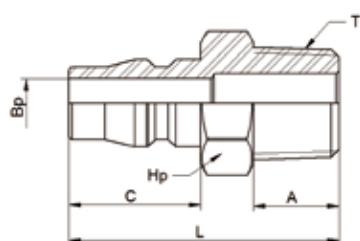
900A type



900C type



PH Type										
Type	Model	Dimensions (mm)							Application	
		L	Hp	C	A	T	Bp	Bd		
500 type	PH-508	50.5	22	23.5	30	8.6	9	13	8A 5/16" HOSE	
	PH-510	65.5	22	23.5	34	10.5	9	13	10A 3/8" HOSE	
	PH-515	65.5	22	23.5	34	13.7	9	13	15A 1/2" HOSE	
	PH-520	76.5	25	23.5	45	20.5	15	13	20A 3/4" HOSE	
	PH-525	86.5	28	23.5	55	25	17.5	13	25A 1" HOSE	
900 type	PH-915	65.5	25	23.5	34	13.7	9	15.5	15A 1/2" HOSE	
	PH-920	76.5	25	23.5	45	20.5	15	15.5	20A 3/4" HOSE	
	PH-925	86.5	28	23.5	55	25	17.5	15.5	25A 1" HOSE	
900A type	PH-915A	65.5	25	23.5	34	13.7	9	15.5	15A 1/2" HOSE	
	PH-920A	76.5	25	23.5	45	20.5	15	15.5	20A 3/4" HOSE	
	PH-925A	86.5	28	23.5	55	25	17.5	15.5	25A 1" HOSE	
900C type	PH-915C	65.5	25	23.5	34	13.7	9	15.5	15A 1/2" HOSE	
	PH-920C	76.5	25	23.5	45	20.5	15	15.5	20A 3/4" HOSE	
	PH-925C	86.5	28	23.5	55	25	17.5	15.5	25A 1" HOSE	
1000 type	PH-1025	92.5	32	29.5	55	25	17.5	18.5	25A 1" HOSE	
	PH-1032	97.5	35	29.5	55	32	24	18.5	32A 1-1/4" HOSE	
1100 type	PH-1125	92.5	32	29.5	55	25	17.5	18.5	25A 1" HOSE	
	PH-1132	97.5	35	29.5	58	32	24	18.5	32A 1-1/4" HOSE	



500 type



900/1000/1100 type



PM Type							
Type	Model	Dimensions (mm)					
		L	Hp	C	A	Bp	T
500 type	PM-504	48.5	22	23.5	15	13	PT 1/2"
	PM-506	50.5	27	23.5	17	13	PT 3/4"
	PM-508	53.5	35	23.5	20	13	PT 1"
900 type	PM-904	48.5	24	23.5	15	15.5	PT 1/2"
	PM-906	50.5	27	23.5	17	15.5	PT 3/4"
	PM-908	53.5	35	23.5	20	15.5	PT 1"
900A type	PM-904A	48.5	24	23.5	15	15.5	PT 1/2"
	PM-906A	50.5	27	23.5	17	15.5	PT 3/4"
	PM-908A	53.5	35	23.5	20	15.5	PT 1"
900C type	PM-904C	48.5	24	23.5	15	15.5	PT 1/2"
	PM-906C	50.5	27	23.5	17	15.5	PT 3/4"
	PM-908C	53.5	35	23.5	20	15.5	PT 1"
1000 type	PM-1006	56.5	27	29.5	17	18.5	PT 3/4"
	PM-1008	59.5	35	29.5	20	18.5	PT 1"
	PM-1010	62.5	45	29.5	23	18.5	PT 1-1/4"
1100 type	PM-1106	56.5	27	29.5	17	18.5	PT 3/4"
	PM-1108	59.5	35	29.5	20	18.5	PT 1"
	PM-1110	62.5	45	29.5	23	18.5	PT 1-1/4"

HYBRID COUPLER

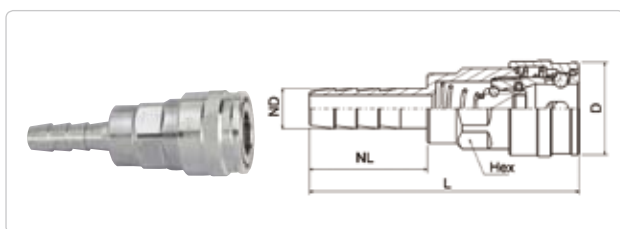
When connecting to air tools, Hybrid couplings are easily connected and disconnected between the hose and tool, and are used for hose connections.

Specifications

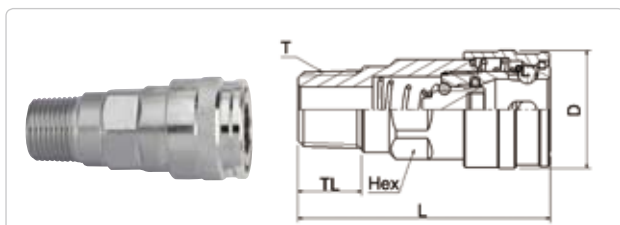
- Material: Steel
- Operating Temperature: -20°C ~ +80°C
- Working Pressure: 0 ~ 9.9kgf/cm²
- Max. Working Pressure: 15kgf/cm²

Features

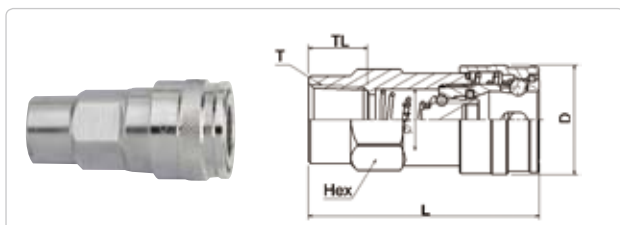
- Plug can directly be inserted into a socket without pulling back the sleeve of the socket.
- Since an outer diameter of the coupler plug is sealed with the O-ring, there is no air leak, even in the case of a small cut at the end of the plug.
- Hybrid Couplings use a heat treated sleeve to improve the product's lifecycle.



S (SOCKET)						
SH Type						
Model	Dimensions (mm)					
	ND	L	NL	D	Hex	Weight(g)
SH20-HB	9	69	28	26	20	85
SH30-HB	10.9	73	32	26	20	87
SH40-HB	13.7	73	32	26	20	90



S (SOCKET)						
SM Type						
Model	Dimensions (mm)					
	T	L	TL	D	Hex	Weight(g)
SM20-HB	PT1/4"	54	13	26	20	85
SM30-HB	PT3/8"	55	14	26	20	91
SM40-HB	PT1/2"	55	15	26	22	104



S (SOCKET)						
SF Type						
Model	Dimensions (mm)					
	T	L	TL	D	Hex	Weight(g)
SF20-HB	PT1/4"	52	12	26	19	88
SF30-HB	PT3/8"	55	14	26	21	101
SF40-HB	PT1/2"	56	15	26	27	130



P (PLUG)		
PH Type		
Type	Model	Hose Size
PH-TYPE	PH-20	5/16" HOSE
	PH-30	3/8" HOSE
	PH-40	1/2" HOSE

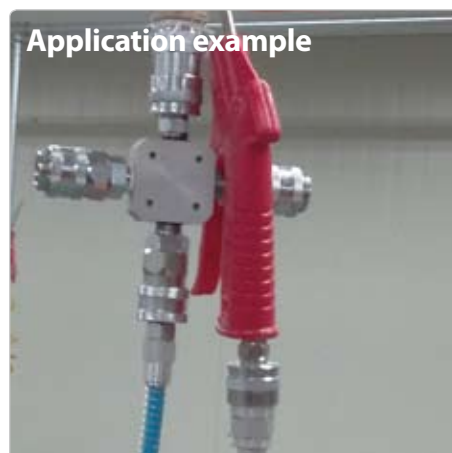
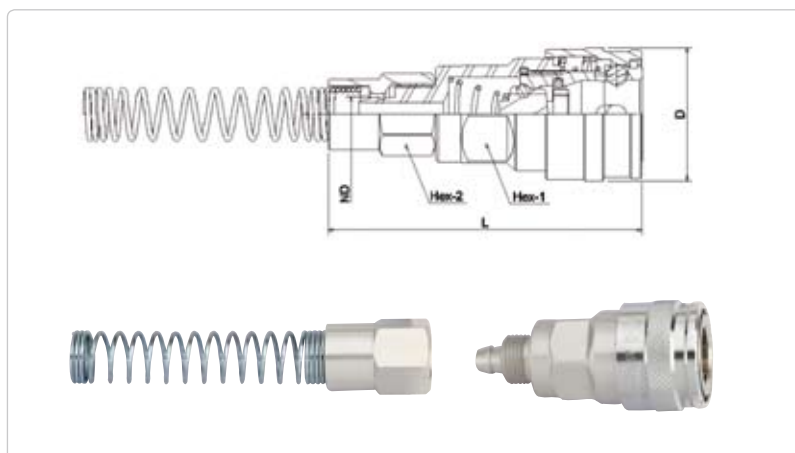


P (PLUG)		
PM Type		
Type	Model	Thread Size
PM-TYPE	PM-20	PT 1/4"
	PM-30	PT 3/8"
	PM-40	PT 1/2"

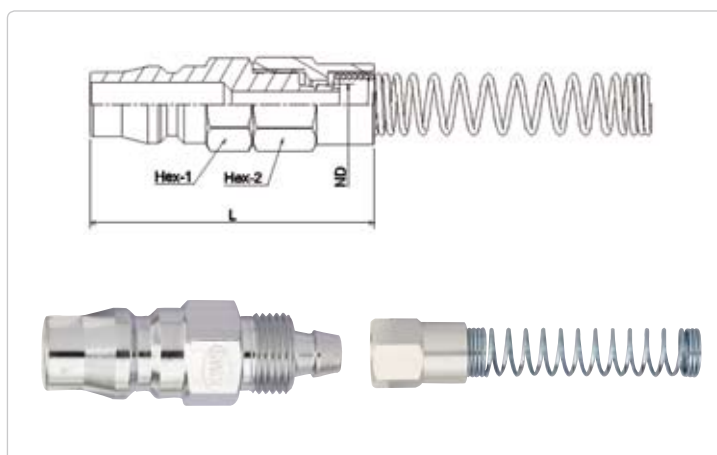


P (PLUG)		
PF Type		
Type	Model	Thread Size
PF-TYPE	PF-20	PT 1/4"
	PF-30	PT 3/8"
	PF-40	PT 1/2"

HYBRID COIL HOSE COUPLER



Model	Dimensions (mm)					
	ND	L	D	Hex-1	Hex-2	Weight(g)
KCH-08HBS	HOSE 8PIE	61.3	14	26	19	67
KCH-10HBS	HOSE 10PIE	62.8	17	26	19	70
KCH-12HBS	HOSE 12PIE	62.8	19	26	19	76



Model	Dimensions (mm)				
	ND	L	Hex-1	Hex-2	Weight(g)
KCH-08HBP	HOSE 8PIE	49	14	14	34
KCH-10HBP	HOSE 10PIE	50.5	16	17	40
KCH-12HBP	HOSE 12PIE	50.5	17	19	50

CO₂ & ARGON COUPLER

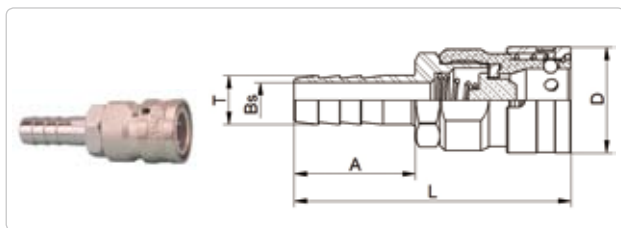


Model	Thread and Hose Size
SF-500AR	PT 3/8"
SM-500AR	PT 3/8"
TSH-500AR	5/16" HOSE

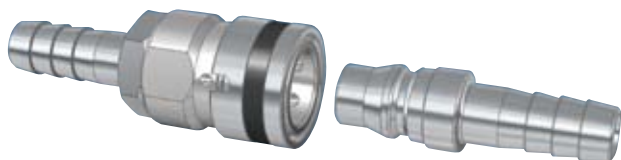


Model	Thread and Hose Size
PF-500AR	9/16 x 18 UNF
PM-500AR	PT 1/4"
PH-500AR	5/16" HOSE

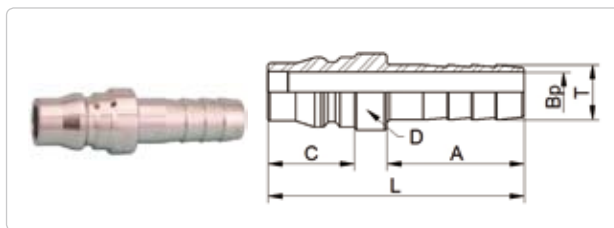
GRINDER COUPLER



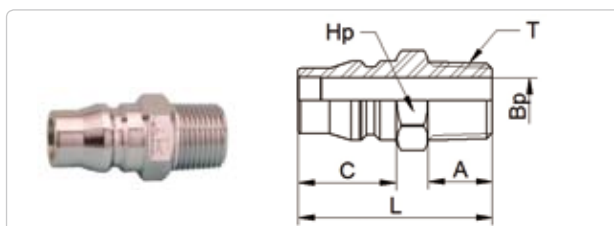
S (SOCKET)						
SH Type						
Model	Application	Dimensions (mm)				
		L	D	A	Bs	T
SH-315	15A 1/2" HOSE	78	29.7	34	10	13.7



- **Materials:** Body (AL7075), Sleeve (SUS304), Nipple (Brass, Steel, Zinc)
- **Features:**
 - ▶ Light weight, more flow compared to the size of two kinds of couplings to increase work efficiency.
 - ▶ Durability is excellent by applying duralumin(AL7075).



P (PLUG)							
PH Type							
Model	Application	Dimensions (mm)					
		L	D	A	C	T	Bp
PH-315	15A 1/2" HOSE	63.5	19	21.5	34	13.7	10



PM Type							
Model	Application	Dimensions (mm)					
		L	Hp	C	A	T	Bp
PM-302	4" Grinder	41.5	19	21.5	13	PT 1/4"	8
PM-303	7" Grinder	42.5	19	21.5	14	PT 3/8"	10

UNIVERSAL COUPLER

Universal Coupler is made free to be moved up, down, left, right and in a 360 degree swivel so that it can prevent hose twisting and kinking which often occur regularly in the workplace when moving the hose.



Model	Thread Size
USF-253	10A PT 3/8"
USF-253C	10A PT 3/8"
USF-353	10A PT 3/8"
USF-304	15A PT 1/2"
USF-504	15A PT 1/2"

UNIVERSAL NIPPLE



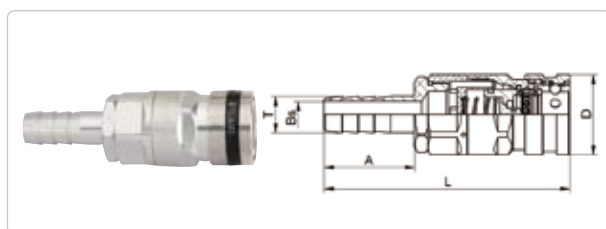
Type	Model	Hose Size	Thread Size	Applicable Grinder
HOSE-TYPE	UMH-0208	8A 5/16" HOSE	PT 1/4"	BABY
	UMH-0210	10A 3/8" HOSE		4"
	UMH-0215	15A 1/2" HOSE	PT 3/8"	7"
	UMH-0310	10A 3/8" HOSE		
	UMH-0315	15A 1/2" HOSE		
Type	Model	Thread Size	Applicable Coupler	Applicable Grinder
PLUG-TYPE	UMP-02358	PT 1/4"	SH-358	BABY
	UMP-02315	PT 1/4"	SH-315	4"
	UMP-03315	PT 3/8"	SH-315	7"
BUFFER-TYPE	UMBP-150	PT 1/4"	SH-315	4"
	UMBP-200	PT 3/8"	SH-315	7"

UNLOAD COUPLER

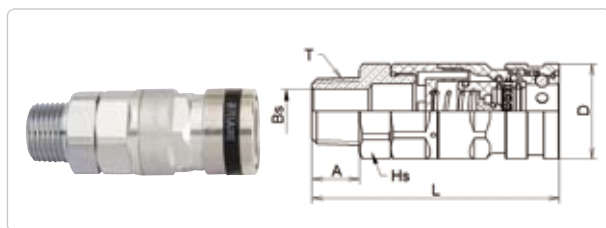
• **Materials:** AL7075, Brass, Stainless Steel

• **Features:**

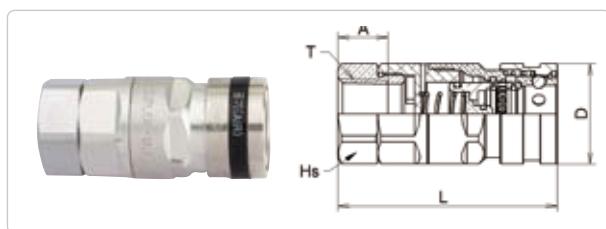
- ▶ Unload Coupler is a patent pending product with a special mechanism which can make quick and easy connections between the socket and plug even under high air pressure with a small force. Prior research and test completed.
- ▶ When the outside sleeve at the socket side is pulled back, the plug and socket are separated in an instant. On the other hand, disconnection of unload coupler is only performed after pushing the plug into the socket side. Thus, even if the sleeve of the socket side is touched or hit by an object while at work, the plug and socket of unload coupler will not be automatically separated, which helps prevent workplace accidents.



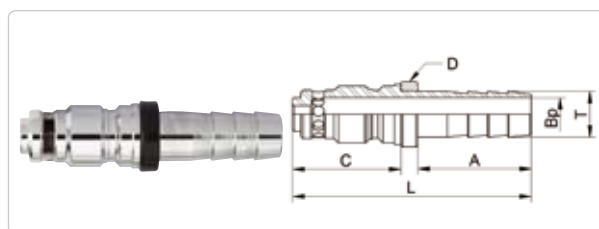
S (SOCKET)		Dimensions (mm)				
Model	Application	L	D	A	Bs	T
USH308	5/16" HOSE	87.5	30	29	5	8.6
USH315	1/2" HOSE	92.5	30	34	10	13.7



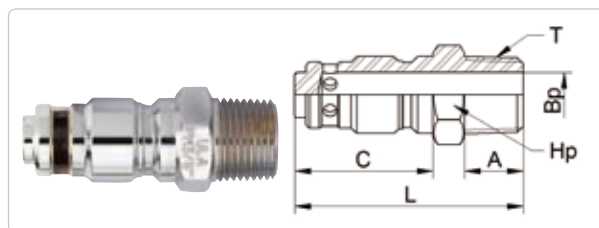
SM Type		Dimensions (mm)					
Model	Application	L	D	A	Hs	Bs	T
USM302	1/4" PT thread	76.5	30	13	27	8	PT 1/4"
USM303	3/8" PT thread	77.5	30	14	27	10	PT 3/8"
USM304	1/2" PT thread	78.5	30	15	27	13	PT 1/2"



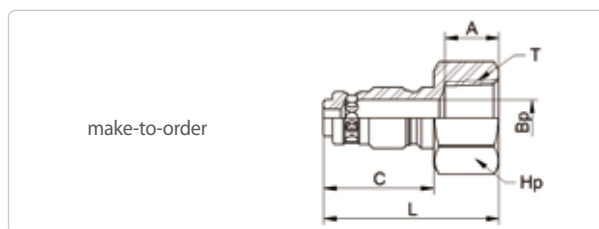
SF Type		Dimensions (mm)				
Model	Application	L	D	Hs	A	T
USF302	1/4" PT thread	65.5	30	27	13	PT 1/4"
USF303	3/8" PT thread	65.5	30	27	14	PT 3/8"
USF304	1/2" PT thread	65.5	30	27	15	PT 1/2"



P (PLUG)		Dimensions (mm)					
Model	Application	L	D	A	C	T	Bp
UPH308	5/16" HOSE	66.5	19	29	30.5	8.6	5
UPH315	1/2" HOSE	71.5	19	34	30.5	13.7	10



PM Type		Dimensions (mm)					
Model	Application	L	Hp	A	C	T	Bp
UPM302	1/4" PT thread	50.5	19	13	30.5	PT 1/4"	8
UPM303	3/8" PT thread	51.5	19	14	30.5	PT 3/8"	10
UPM304	1/2" PT thread	52.5	22	15	30.5	PT 1/2"	13



* PF Type		Dimensions (mm)					
Model	Application	L	Hp	A	C	T	Bp
UPF302	1/4" PT thread	46	19	13	30.5	PT 1/4"	8
UPF303	3/8" PT thread	48	22	14	30.5	PT 3/8"	10
UPF304	1/2" PT thread	49	27	15	30.5	PT 1/2"	10

make-to-order

HYDRAULIC COUPLER



Hydraulic coupler is a double path, switching type coupler made of special steel.

Features

- Since Hydraulic coupler is designed to have an extremely low pressure loss, it is ideal for use in hydraulic equipments.
- Highly resistant to vibration and shock.
- An automatic shut off valve is installed on both sides of the socket and plug to prevent leakage of fluid during separation.

Specifications

Application Size	1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2"					
Body Material	Special Steel (zinc plated)					
Sealing Material / Operating Temperature	Sealing Material		Operating Temperature		Notes	
	Nitrile rubber (NBR)		-20°C ~ +80°C		Standard material	
	Viton		-20°C ~ +180°C		Option available	

Pressure

Material	1/4" 3/8" 1/2" 3/4" 1"	1 1/4" 1 1/2"	2"
Max. Working Pressure	20.6 MPa (210 kgf/cm ²)	18.0 MPa (183 kgf/cm ²)	14.0 MPa (142 kgf/cm ²)
Proof Pressure	31.0 MPa (316 kgf/cm ²)	26.5 MPa (270 kgf/cm ²)	20.6 MPa (210 kgf/cm ²)

Maximum Recommended Torque: N-m(kgf-cm)

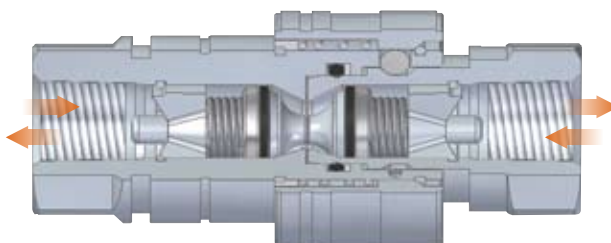
Size	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Torque	28(286)	45(459)	90(918)	100(1020)	180(1836)	290(2958)	350(3570)	500(5100)

Instructions for use

- Please provide specific information and details if hydraulic couplings are needed for use in fluids and in environments where rust can develop.
- Do not over-tighten any connections. Over-tightening may result in the damage or breakage of hydraulic couplings.
- Please install the tightening torque in each dimension.

Direction of fluid flow

Fluid can flow from either the socket or plug side.



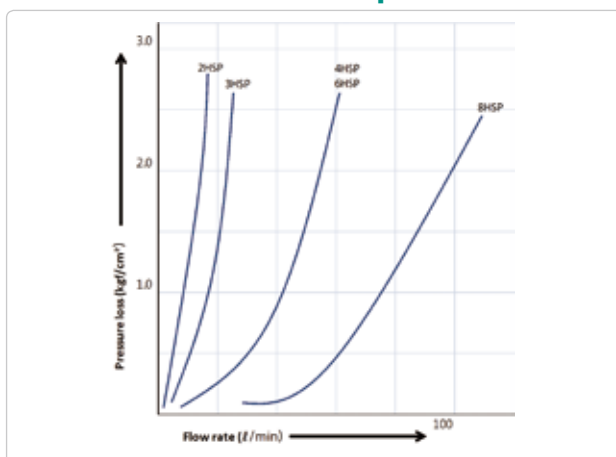
Use

Material	Special Steel
Applicable fluids	Hydraulic fluid
Use	Hydraulic equipments

Minimum Cross-Sectional Area (mm²)

Model	2HSP	3HSP	4HSP	6HSP	8HSP
Min. Cross-Sectional Area	22	37	75	75	230

Flow rate-Pressure loss Graph



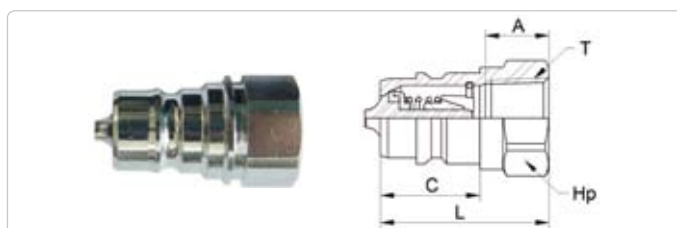
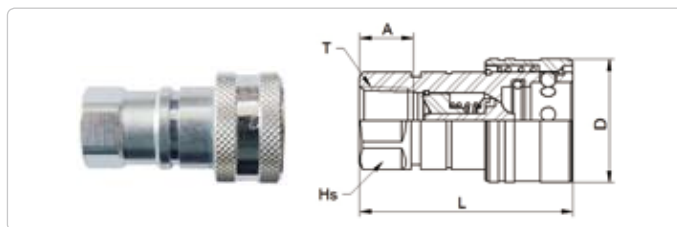
Application example



HYDRAULIC COUPLER DIMENSIONS

* Special shapes and dimensions are available upon request.

* Flat Face (Airless) Hydraulic Couplings available.



S (SOCKET)						
Model	Application	Dimensions (mm)				
		L	D	Hs	A	T
2HS	PT 1/4"	53	25	19	13	PT 1/4"
3HS	PT 3/8"	57	32	22	14	PT 3/8"
4HS	PT 1/2"	66	38	27	15	PT 1/2"
6HS	PT 3/4"	82.5	48	34	17	PT 3/4"
8HS	PT 1"	100	56	41	20	PT 1"

P (PLUG)						
Model	Application	Dimensions (mm)				
		L	C	Hp	A	T
2HP	PT 1/4"	38.5	15	19	13	PT 1/4"
3HP	PT 3/8"	39	18.5	22	14	PT 3/8"
4HP	PT 1/2"	44	26	27	15	PT 1/2"
6HP	PT 3/4"	55	29	34	17	PT 3/4"
8HP	PT 1"	66	35	41	20	PT 1"

HYDRAULIC JACK COUPLER

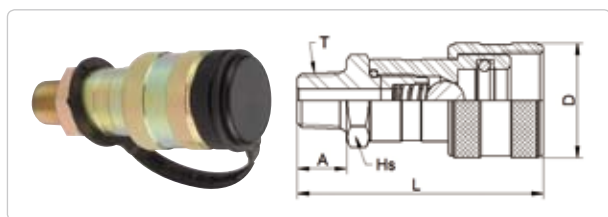
- Ball Type: Since the valve has a metal to metal airtight type, there may be a small amount of oil leaking when disconnected.
- Non Leak Type: Since valve has a special rubber packing on both sides of the female and male, there is no leakage of oil.

* Both PT and NPT thread specifications are available.

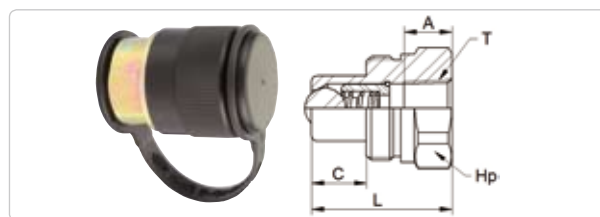


Type	Thread size	Material	Max. Working Pressure
FEMALE	PT 3/8"	STEEL & SUS	700 kgf/cm ²
	NPT 3/8"		
	PT 1/2"		
	NPT 1/2"		

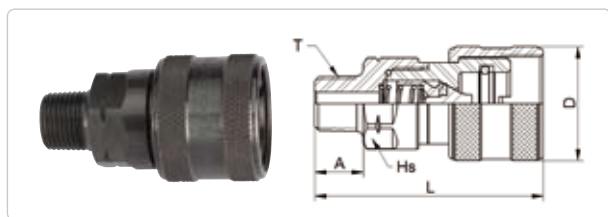
Type	Thread size	Material	Max. Working Pressure
MALE	PT 3/8"	STEEL & SUS	700 kgf/cm ²
	NPT 3/8"		
	PT 1/2"		
	NPT 1/2"		



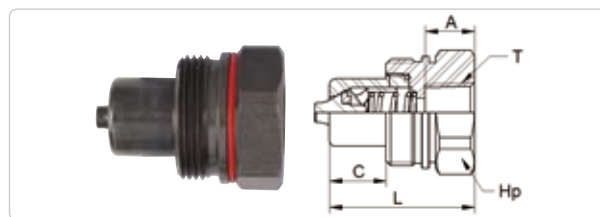
FEMALE (Ball Type)						
Model	Dimensions (mm)					
	L	D	Hs	A	T	
JFB83	75	35	25	15	PT 3/8"	
JFB21	77	35	25	16	PT 1/2"	



MALE (Ball Type)						
Model	Dimensions (mm)					
	L	C	Hp	A	T	
JMB83	41	16	32	14	PT 3/8"	
JMB21	41	16	33	15	PT 1/2"	

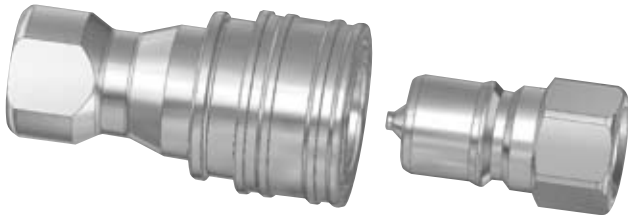


FEMALE (Non Leak Type)						
Model	Dimensions (mm)					
	L	D	Hs	A	T	
JFN83	70	35	25	15	NPT 3/8"	
JFN21	71	35	25	16	NPT 1/2"	



MALE (Non Leak Type)						
Model	Dimensions (mm)					
	L	C	Hp	A	T	
JMN83	41	16	32	14	NPT 3/8"	
JMN21	42	16	33	15	NPT 1/2"	

SP-COUPLER



SP coupler is a double-path, switching type coupler that has valves on both sides of the socket and plug.

Features

- Since both the socket and plug have check-valves, there are no fluid leaks upon connection and disconnection.
- Rubber packing materials are determined by applicable fluids.
- Prevents hose twisting and distortion.
- A wide range of packing materials can be applied to each use, according to the types of fluids.

Specifications

Application Size	1/8" 1/4" 3/8" 1/2" 3/4" 1"		
	1 1/4" 1 1/2" 2"		
Body Material	Brass, Stainless steel, Steel		
Sealing Material / Operating Temperature	Sealing Material	Operating Temperature	Notes
	Nitrile rubber (NBR)	-20°C ~ +80°C	Standard material
	Viton	-20°C ~ +180°C	Option available

Pressure

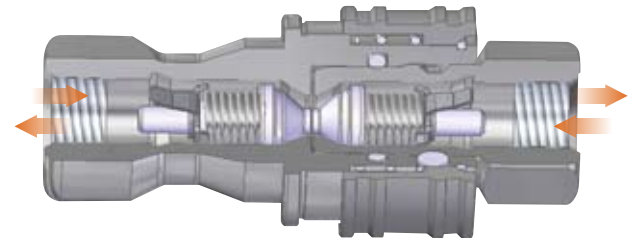
Material	Brass			
Size	1/8" 1/2" 3/8"	1/2" 3/4" 1"	1 1/4" 1 1/2"	2"
Max. Working Pressure	5 MPa (51kg/cm ²)	3 MPa (31kg/cm ²)	2 MPa (20kg/cm ²)	1.5 MPa (15kg/cm ²)
Proof Pressure	7.5 MPa (76kg/cm ²)	4.5 MPa (46kg/cm ²)	3 MPa (31kg/cm ²)	2.3 MPa (24kg/cm ²)
Material	Stainless steel, Steel			
Size	1/8" 1/2" 3/8"	1/2" 3/4" 1"	1 1/4" 1 1/2"	2"
Max. Working Pressure	7.5 MPa (76kg/cm ²)	4.5 MPa (46kg/cm ²)	3 MPa (31kg/cm ²)	2MPa (20kg/cm ²)
Proof Pressure	10MPa (102kg/cm ²)	6.5 MPa (66kg/cm ²)	4.5 MPa (46kg/cm ²)	3 MPa (31kg/cm ²)

Maximum Recommended Torque: N-m(kgf-cm)

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Torque	Steel	9(92)	14(143)	22(224)	60(612)	90(918)	120(1224)	260(2652)	280(2856)
	Brass	5(51)	9(92)	12(122)	30(306)	50(510)	65(663)	150(1530)	150(1530)
	Stainless Steel	9(92)	14(143)	22(224)	60(612)	90(918)	12(1224)	260(2652)	280(2856)

Direction of fluid flow

Fluid can flow from either the socket or plug side.



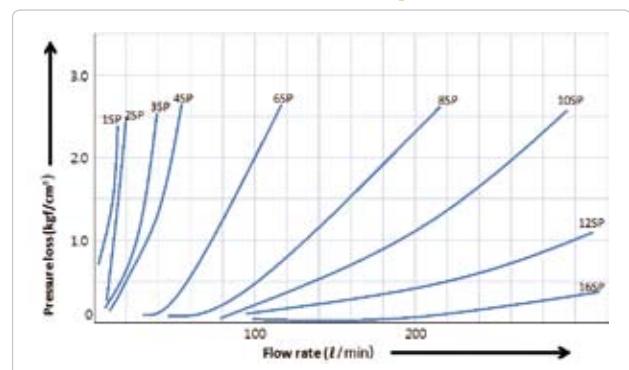
Use

Material	Brass	Stainless steel	Steel
Applicable fluids	Gasoline, Heavy oil, Kerosene, Water, Air	Acid, Alkali, Salt water	Hydraulic fluid
Use	▪ Chemical Plant ▪ Shipbuilding ▪ Nuclear energy / other various pipes		

Minimum Cross-Sectional Area (mm²)

Model	1SP	2SP	3SP	4SP	6SP	8SP	10SP	12SP	16SP
Min. Cross-Sectional Area	13	22	51	59	116	170	358	552	801

Flow Rate-Pressure Loss Graph

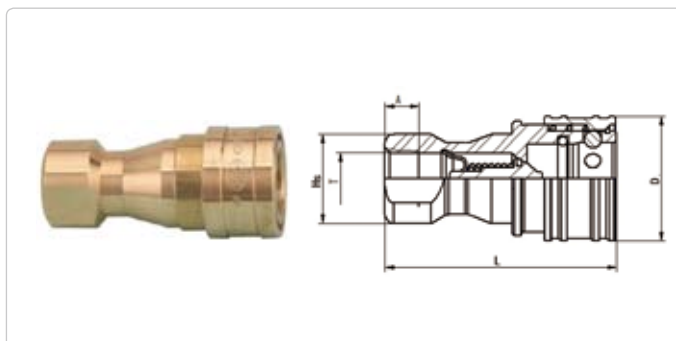


Instructions for use

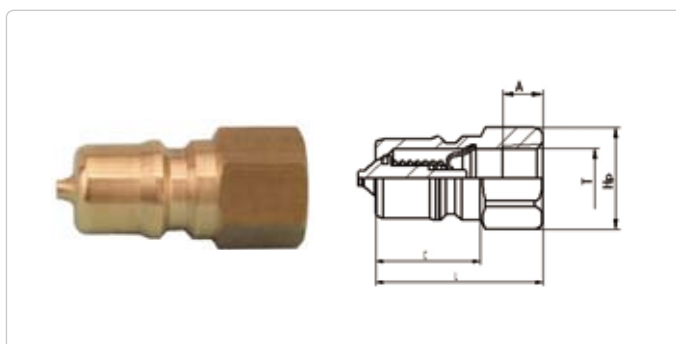
- Please select the appropriate sealing materials in accordance with the type of fluid and temperature.

SP-COUPLER DIMENSIONS

* Material: BSBM, SUS303 (O-RING's material is NBR)



S (SOCKET)						
Model	Application	Dimensions (mm)				
		L	D	Hs	A	T
1S	PT 1/8"	48	24	Two flats 14xø18	11	PT 1/8"
2S	PT 1/4"	58	28	Two flats 19xø22	13	PT 1/4"
3S	PT 3/8"	65	35	Two flats 21xø25	13	PT 3/8"
4S	PT 1/2"	72	45	Two flats 29xø35	15	PT 1/2"
6S	PT 3/4"	88	55	Two flats 35xø41	17	PT 3/4"
8S	PT 1"	102	65	Two flats 41xø48	20	PT 1"
10S	PT 1 1/4"	115	79	Two flats 54xø59	24	PT 1 1/4"
12S	PT 1 1/2"	124	89	Two flats 63xø69	24	PT 1 1/2"
16S	PT 2"	132	109	Two flats 77xø84	27	PT 2"



P (PLUG)						
Model	Application	Dimensions (mm)				
		L	C	Hp	A	T
1P	PT 1/8"	29	19	Hex 14xø16.2	11	PT 1/8"
2P	PT 1/4"	36	22	Hex 17xø19.6	13	PT 1/4"
3P	PT 3/8"	40	25	Hex 21xø24.2	13	PT 3/8"
4P	PT 1/2"	44	28	Hex 29xø33.3	15	PT 1/2"
6P	PT 3/4"	52	36	Hex 35xø40.4	17	PT 3/4"
8P	PT 1"	62	40	Hex 41xø47.4	20	PT 1"
10P	PT 1 1/4"	70	45	Two flats 54xø59	24	PT 1 1/4"
12P	PT 1 1/2"	75	49	Two flats 63xø69	24	PT 1 1/2"
16P	PT 2"	80	52	Two flats 77xø84	27	PT 2"

SP-COUPLER (310-TYPE)



S (SOCKET)		
Type	Model	Thread Size
310-TYPE	make-to-order	PT 1/4"



P (PLUG)		
Type	Model	Thread Size
310-TYPE	make-to-order	PT 1/4"

Application example



HYDRAULIC COUPLER /
HYDRAULIC JACK COUPLER

SP-COUPLER

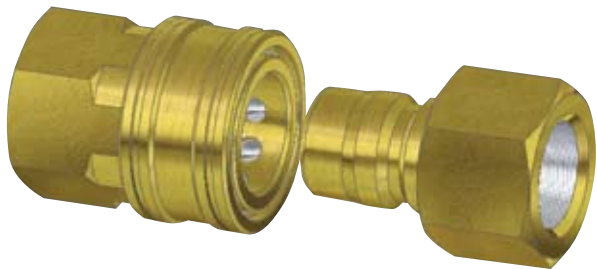
DOUBLE PATH
OPEN COUPLER

FLASHBACK ARRESTOR

AIR EJECTOR

HOOD COUPLER

DOUBLE PATH OPEN COUPLER



This is a double path, open type coupler which does not have a valve mechanism at neither the socket nor the plug.

Features

- Double path open coupler is used in piping system that does not need to block the fluid when disconnected.
- It is designed specifically for extremely low pressure loss, which can lead to more fluid flow.
- It is ideal for high viscosity fluids or steaming pipe lines.
- A variety of other types are available according to the place of use and purpose of use.

Specifications

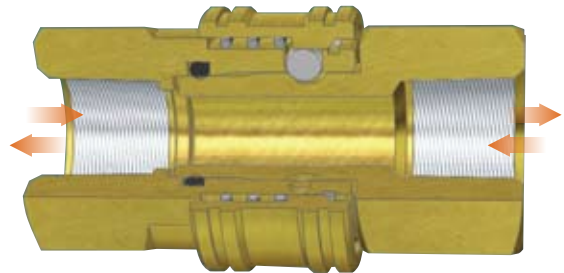
Application Size	1/8" 1/4" 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2" 2"		
Body Material	Brass, Stainless steel, Steel		
Sealing Material / Operating Temperature	Sealing Material	Operating Temperature	Notes
	Nitrile rubber (NBR)	-20°C ~ +80°C	Standard material
	Viton	-20°C ~ +180°C	Option available
	Neoprene rubber	-20°C ~ +80°C	
	Ethylene-propylene rubber	-40°C ~ +150°C	

Maximum Recommended Torque: N-m(kgf-cm)

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Torque	Steel	9(92)	14(143)	22(224)	60(612)	90(918)	120(1224)	260(2652)	500(5100)
	Brass	5(51)	9(92)	12(122)	30(306)	50(510)	65(663)	150(1530)	260(2652)
	Stainless Steel	9(92)	14(143)	22(224)	60(612)	90(918)	120(1224)	260(2652)	500(5100)

Direction of fluid flow

Fluid can flow from either the socket or plug side.



Use

Material	Brass	Stainless steel	Steel
Applicable fluids	Gasoline, Heavy oil, Kerosene, Water	Acid, Alkali, Chlorine	Hydraulic fluid
Use	▪ Hydraulic equipments / pipes ▪ Sea water / Steam pipes ▪ Chemicals ▪ High-pressure gas (nitrogen freon etc.)		

Pressure

Material	Brass				
Size	1/8" 1/2" 3/8"	1/2" 3/4" 1"	1 1/4" 1 1/2"	2"	
Max. Working Pressure	5 MPa (51kg/cm ²)	3 MPa (31kg/cm ²)	2 MPa (20kg/cm ²)	1.5 MPa (15kg/cm ²)	
Proof Pressure	7.5 MPa (76kg/cm ²)	4.5 MPa (46kg/cm ²)	3 MPa (31kg/cm ²)	2.3 MPa (24kg/cm ²)	

Material	Stainless steel, Steel				
Size	1/8" 1/2" 3/8"	1/2" 3/4" 1"	1 1/4" 1 1/2"	2"	
Max. Working Pressure	7.5 MPa (76kg/cm ²)	4.5 MPa (46kg/cm ²)	3 MPa (31kg/cm ²)	2 MPa (20kg/cm ²)	
Proof Pressure	10MPa (102kg/cm ²)	6.5 MPa (66kg/cm ²)	4.5 MPa (46kg/cm ²)	3 MPa (31kg/cm ²)	

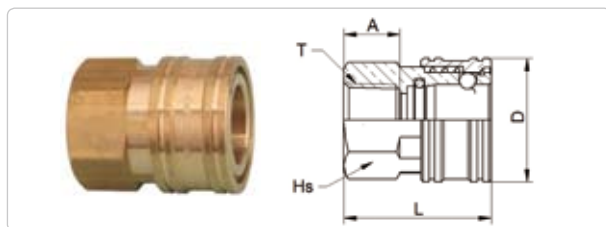
Instructions for use

- Please select the appropriate sealing materials according the type of fluid and temperature.
- Please make sure to check the following before use: the greater dimension, the lower ability to resist pressure.

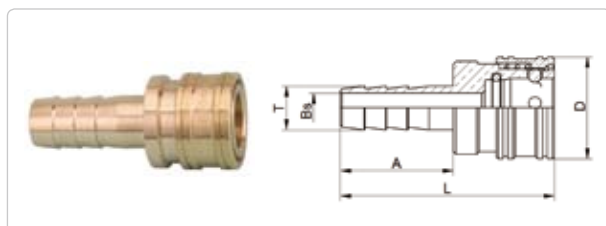
DOUBLE PATH OPEN COUPLER DIMENSIONS

* Dimension of A can be adjusted upon request.

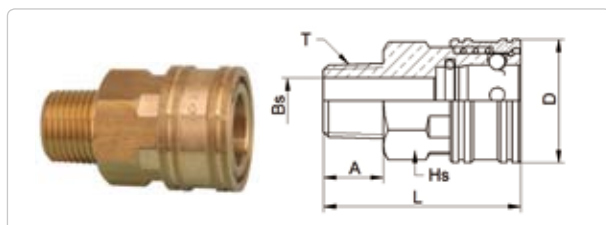
* Special dimensions and specifications are available upon request.



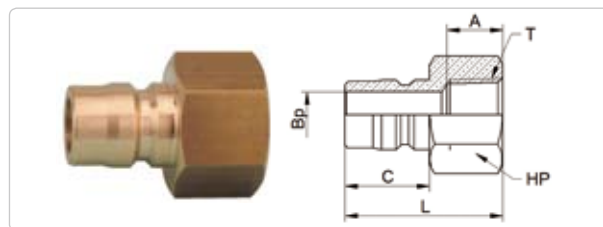
S (SOCKET)							
TSF Type							
Model	Application	Dimensions (mm)					
		L	D	Hs	A	T	
1TSF	PT 1/8"	27	17.5	Hex 14	9	PT 1/8"	
2TSF	PT 1/4"	32	24	Hex 19	13	PT 1/4"	
3TSF	PT 3/8"	35	28	Hex 23	14	PT 3/8"	
4TSF	PT 1/2"	42	35	Hex 29	17	PT 1/2"	
6TSF	PT 3/4"	48	45	Hex 38	19	PT 3/4"	
8TSF	PT 1"	59	58	Hex 50	22	PT 1"	
10TSF	PT 1 1/4"	64	69	ø62xTwo flats 54	23	PT 1 1/4"	
12TSF	PT 1 1/2"	71	75	ø66xTwo flats 58	25	PT 1 1/2"	
16TSF	PT 2"	80	95	ø82xTwo flats 77	27	PT 2"	



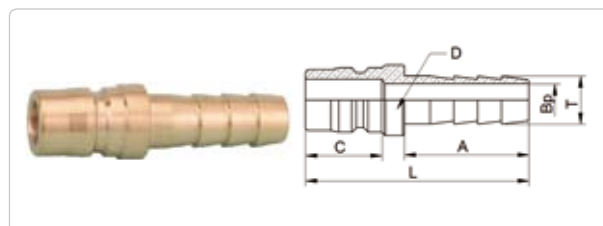
S (SOCKET)							
TSH Type							
Model	Application	Dimensions (mm)					
		L	D	A	Bs	T	
1TSH	1/8" HOSE	40	17.5	20	3	6.5	
2TSH	1/4" HOSE	55	24	29	5	8	
3TSH	3/8" HOSE	62	28	32	7	11	
4TSH	1/2" HOSE	74	35	39	10	15	
6TSH	3/4" HOSE	90	45	48	15	21	
8TSH	1" HOSE	102	58	57	19	27	
10TSH	1 1/4" HOSE	163	69	70	26	34.5	
12TSH	1 1/2" HOSE	183	75	75	32	41	
16TSH	2" HOSE	185	95	80	40	54	



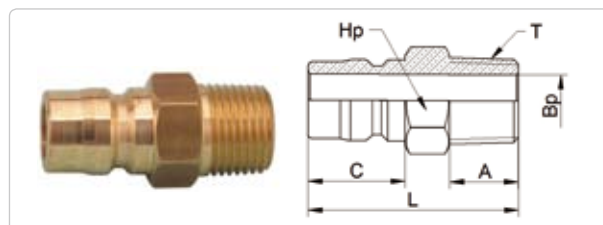
S (SOCKET)							
TSM Type							
Model	Application	Dimensions (mm)					
		L	D	A	Hs	Bs	T
1TSM	PT 1/8"	30	17.5	9	Hex 14	4.5	PT 1/8"
2TSM	PT 1/4"	42	24	13	Hex 19	7	PT 1/4"
3TSM	PT 3/8"	46	28	14	Hex 23	10	PT 3/8"
4TSM	PT 1/2"	56	35	17	Hex 29	13	PT 1/2"
6TSM	PT 3/4"	65	45	19	Hex 38	18	PT 3/4"
8TSM	PT 1"	76	58	22	Hex 50	24	PT 1"
10TSM	PT 1 1/4"	86	69	25	ø62xTwo flats 54	32	PT 1 1/4"
12TSM	PT 1 1/2"	95	75	25	ø66xTwo flats 58	38	PT 1 1/2"
16TSM	PT 2"	108	95	29	ø82xTwo flats 77	49	PT 2"



P (PLUG)							
TPF Type							
Model	Application	Dimensions (mm)					
		L	Hp	A	C	T	Bp
1TPF	PT 1/8"	26	Hex 14	9	15.5	PT 1/8"	4.5
2TPF	PT 1/4"	34	Hex 17	13	18	PT 1/4"	6.5
3TPF	PT 3/8"	38	Hex 21	14	21	PT 3/8"	10
4TPF	PT 1/2"	45	Hex 29	17	24	PT 1/2"	13
6TPF	PT 3/4"	51	Hex 38	19	28	PT 3/4"	17
8TPF	PT 1"	60	Hex 50	22	36	PT 1"	26
10TPF	PT 1 1/4"	64	ø59xTwo flats 45	23	39	PT 1 1/4"	32
12TPF	PT 1 1/2"	75	ø65xTwo flats 58	25	45	PT 1 1/2"	38
16TPF	PT 2"	83	ø82xTwo flats 77	29	51	PT 2"	50



P (PLUG)							
TPH Type							
Model	Application	Dimensions (mm)					
		L	D	A	C	T	Bp
1TPH	1/8" HOSE	41	12	20	15.5	6.5	3
2TPH	1/4" HOSE	53	14	29	18	8	5
3TPH	3/8" HOSE	60	18	32	21	11	7
4TPH	1/2" HOSE	70	22	39	24	15	10
6TPH	3/4" HOSE	84	28	48	28	21	15
8TPH	1" HOSE	105	40	57	36	27	19
10TPH	1 1/4" HOSE	121	48	70	39	34.5	26
12TPH	1 1/2" HOSE	132	55	75	45	41	32
16TPH	2" HOSE	142	70	80	51	54	40



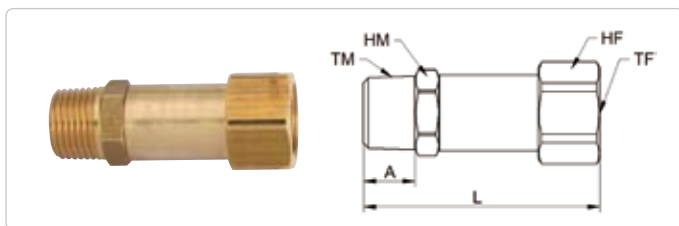
P (PLUG)							
TPM Type							
Model	Application	Dimensions (mm)					
		L	Hp	A	C	T	Bp
1TPM	PT 1/8"	32	Hex 12	9	15.5	PT 1/8"	4.5
2TPM	PT 1/4"	38	Hex 17	13	18	PT 1/4"	6.5
3TPM	PT 3/8"	43	Hex 19	14	21	PT 3/8"	10
4TPM	PT 1/2"	52	Hex 23	17	24	PT 1/2"	13
6TPM	PT 3/4"	59	Hex 32	19	28	PT 3/4"	17
8TPM	PT 1"	73	Hex 41	22	36	PT 1"	25
10TPM	PT 1 1/4"	83	ø55xTwo flats 50	23	39	PT 1 1/4"	32
12TPM	PT 1 1/2"	93	ø60xTwo flats 55	26	45	PT 1 1/2"	38
16TPM	PT 2"	102	ø80xTwo flats 75	27	51	PT 2"	50

FLASHBACK ARRESTOR

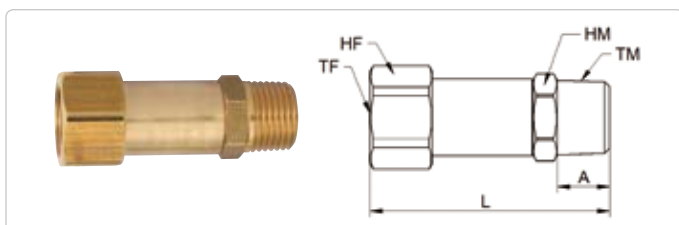
Dry Flashback Arrestor For Torch

- When a flashback occurs, the flame enters the portion of the honeycomb monolith and the temperature of the flame goes down below the point of combustion, thereby leading to flame extinction. During the flashback, the check-valve blocks backflow of explosion pressure to prevent the failure of other gas appliances from high-pressure backflow.
- A variety of shapes and specifications are available in accordance with piping system requirements.

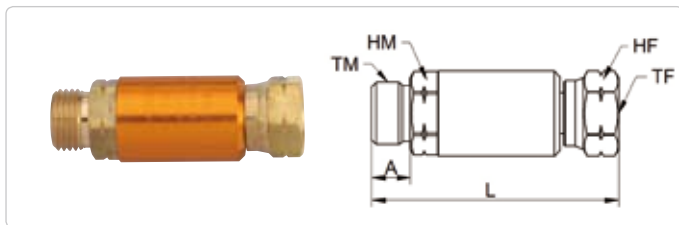
Torch Flashback Arrestor Dimensions



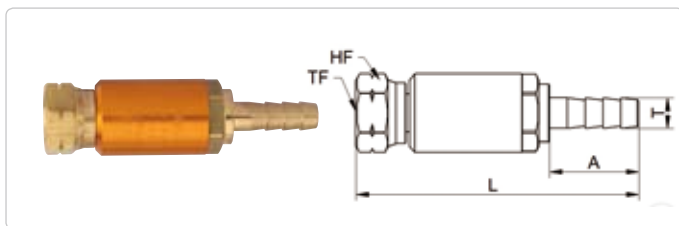
Model	Dimensions (mm)					
	L	A	TF	HF	TM	HM
KFM-02	67	13	PT 1/4"	Hex 19	PT 1/4"	Hex 19
KFM-03	68	14	PT 3/8"	Hex 22	PT 3/8"	Hex 19
KFM-04	69	15	PT 1/2"	Hex 27	PT 1/2"	Hex 22



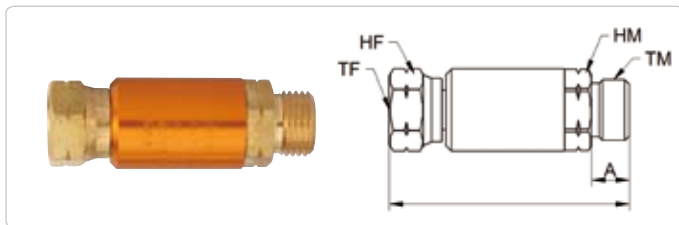
Model	Dimensions (mm)					
	L	A	TM	HM	TF	HF
KMF-02	67	13	PT 1/4"	Hex 19	PT 1/4"	Hex 19
KMF-03	68	14	PT 3/8"	Hex 19	PT 3/8"	Hex 22
KMF-04	69	15	PT 1/2"	Hex 22	PT 1/2"	Hex 27



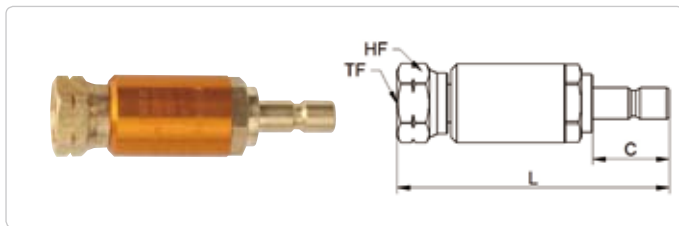
Model	Dimensions (mm)					
	L	A	TF	HF	TM	HM
KRM-M16	63.5	10	M16xP1.5	Hex 19	M16xP1.5	Hex 19
KRM-G83	63.5	10	G 3/8	Hex 19	G 3/8	Hex 19



Model	Dimensions (mm)				
	L	TF	A	HF	T
KTH-M1608A	79	M16xP1.5	25	Hex 19	8.5
KTH-G8308A	79	G 3/8	25	Hex 19	8.5



Model	Dimensions (mm)					
	L	A	TM	HM	TF	HF
KTM-M12	63.5	10	M12xP1.0	Hex 19	M16xP1.5	Hex 19
KTM-M16	63.5	10	M16xP1.5	Hex 19	M16xP1.5	Hex 19
KTM-G83	64.5	10	G 3/8	Hex 19	G 3/8	Hex 19



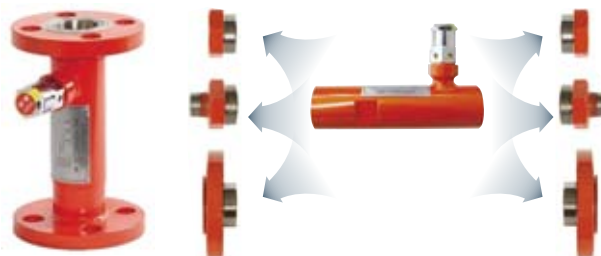
Model	Dimensions (mm)			
	L	C	TF	HF
KTP-M16-P30	75	21.2	M16xP1.5	Hex 19
KTP-G83-P30	76	21.2	G 3/8	Hex 19
KTP-M16-P33	80.5	26.5	M16xP1.5	Hex 19
KTP-G83-P33	81.5	26.5	G 3/8	Hex 19

FLASHBACK ARRESTOR

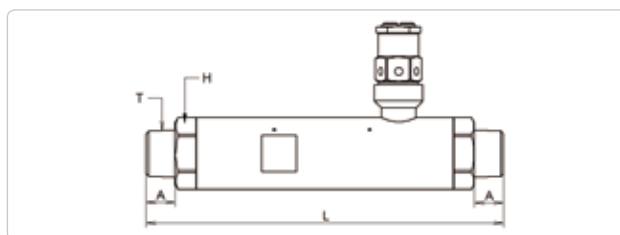
Dry Flashback Arrestor For Piping

Causes of Flashback

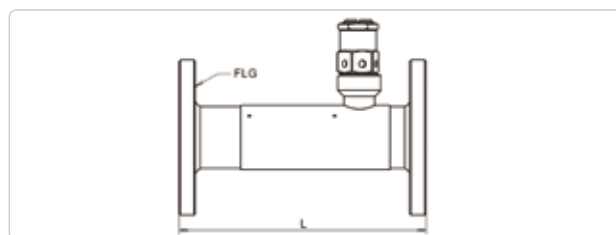
- Combustible pipes and hoses mixed with air or oxygen can form an explosive atmosphere.
- Over-supply of oxygen and a serious failure of pressure regulators.
- Torch's poor performance and Torch clogged with foreign matter.



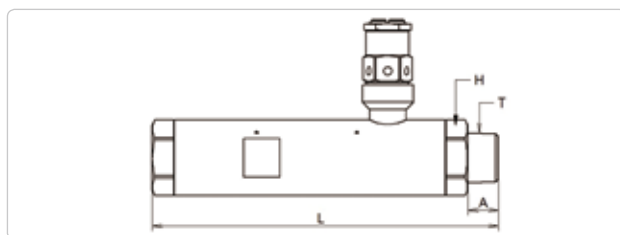
Piping Flashback Arrestor Dimensions



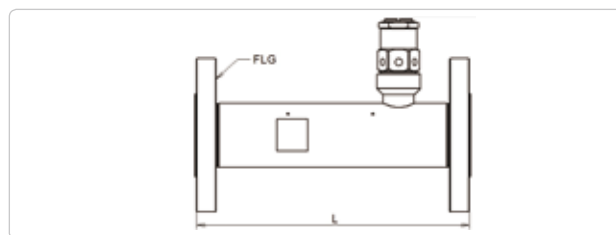
Model	Dimensions (mm)			
	L	A	T	H
KF-PT20MM	255	19	PT3/4"	46
KF-PT25MM	259	21	PT 1"	46



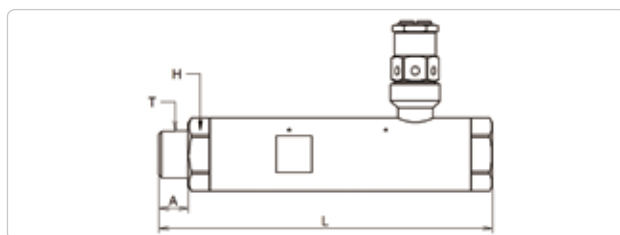
Model	Dimensions (mm)	
	L	FLG
KF-10K20FLG	140	10K 20A
KF-20K25FLG	200	20K 25A



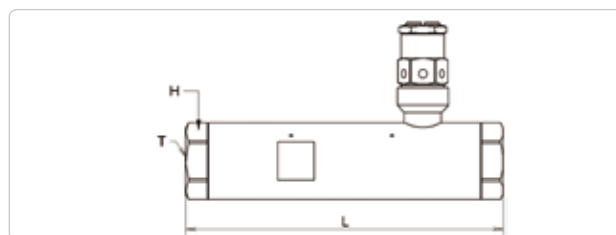
Model	Dimensions (mm)			
	L	A	H	T
KF-PT20FM	236	19	46	PT3/4"
KF-PT25FM	238	21	46	PT 1"



Model	Dimensions (mm)	
	L	FLG
KF-10K20FSW	220	10K 20A
KF-10K25FSW	222	20K 25A



Model	Dimensions (mm)			
	L	A	H	T
KF-PT20MF	236	19	46	PT3/4"
KF-PT25MF	238	21	46	PT 1"



Model	Dimensions (mm)		
	L	H	T
KF-PT20FF	217	46	PT3/4"
KF-PT25FF	217	46	PT 1"

AIR EJECTOR

Features

- A large amount of air can be inhaled or exhaled by consuming a small amount of compressed air.
- Without using electricity, air ejector only works with compressed air so there is no danger of electric shock.
- Affordable price.
- No major malfunctions because of its simple structure.
- It allows an easy separation of hoses from the body for convenient storage.
- Since many kinds of plugs can be applied, it has a more convenient choice of couplings.



Use

Shipyard

- In the case of rain, the air ejector can inhale the dirty and stagnant water collected in the rounded lower part of a ship under construction and remove the water in order to prevent accidents due to slippery and dangerous conditions.
- It eliminates dust, fumes, gases, and odors when working with welding and grinding in the block or tank, and supplies fresh air to the workplace.
- Paint dry on ships.

Other

- Carrying light grains, powder, and dust inhalation.
- Sewer and septic tank cleaning or air ventilation in environments where electric pump cannot be used.

Installation Methods

When the air ejector is used as an exhauster to vent gases from a tank or vessel (#Shipyard ▪), please install inhalation hose inside of the tank and exhalation hose outside of the tank. After that, when the valve of compressed air is opened, fresh air is inhaled to the tank as much as contaminated air in the tank is exhaled so that it can help prevent suffocation inside the tank.

Caution

After ground cable connection, please use when inhaling objects (such as flour, plastic raw materials, etc) that cause static electricity.



AIR EJECTOR



AIR BLOWER

SCMH (m³/h)

Model	Size	Air Pressure	Air Consumption	Air Discharge Volume
AIR EJECTOR	32A	7 kg/m³	45	206
	40A		103	406
AIR BLOWER	50A	5 kg/m³	15.6	350
	100A		170	1580

Model	Size	Applicable Hose	Applicable Coupler	Standing Type
AIR EJECTOR	EJ32G	above 10A(3/8")	Hi-Coupler SH-3510, SH-3515	Magnetic adherence type (Available upon request)
	EJ32SW			
	EJ40G	above 15A(1/2")	Hi-Coupler SH-3015, SH-520	
	EJ40SW			
AIR BLOWER	ABL50G			
	ABL50SW			
	ABL100G			
	ABL100SW			

HOOD COUPLER

Features

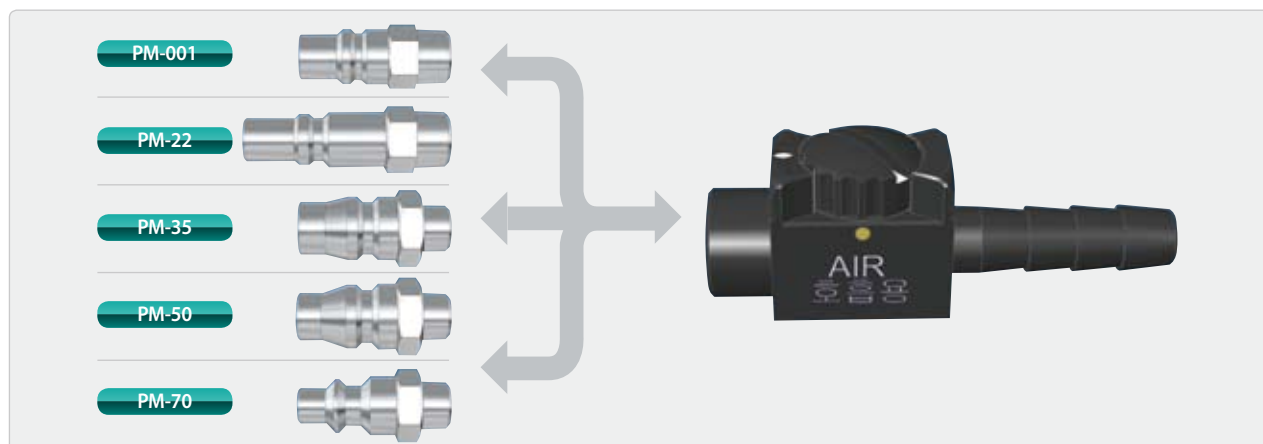
- Simultaneous air supply to both Air Grinder and Air Supplied Respirator.
- Since Hood coupler is made in accordance with specifications of safety belts, it can be easily fastened around the waist.



S (SOCKET)		
Type	Model	Size
HOOD-COUPLER	TSM20SG-STN1515	15A x 15A
	TSM22SG-H1515-B	15A x 15A
	TSM22DBY-H1515-B	15A x 15A
	TSM22SG-P300HM30-B	15A
	TSM22DBY-P300HM30-B	15A
	TSM22DBL-H15	15A

Air supplied respirator valve (New)

 * Flow Rate : Maximum closing flow rate - 120 ~130 ℓ/min Maximum open-flow rate - 450ℓ/min	Model	Size	Applicable Hose
	Air supplied respirator valve	PHV-001	8A(5/16")
		PHV-22	
		PHV-35	
		PHV-50	
		PHV-70	

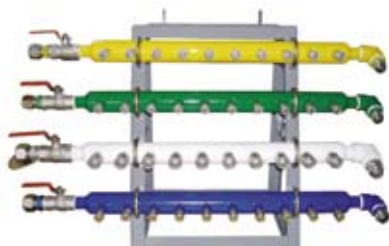


MANIFOLD

Features

- This is a gas distributor which has fixed and portable types. Manifolds are made of materials such as Steel, Stainless and Aluminium. Other material options are available upon request.
- A coupler applied to each gas distributor is not interchangeable. The appearance of distributors is painted in different colors for each gas, preventing gas accidents caused by the wrong connections. (* Special shapes and specifications are available upon request)

4 Types 10 Holes



Flange Type



Two-way Distributor



Small size Distributor



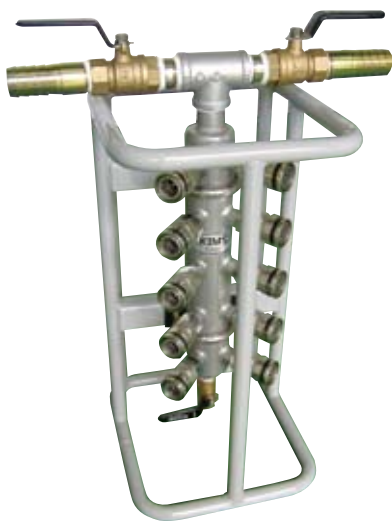
Portable Distributor



Two-way distributor (U-type)



Portable Distributor (T-type)



* All the designs, materials, and application methods can be adjusted upon request.

Application example



SLIDING VALVE

SLIDING VALVE



SLIDING SWIVEL VALVE



SLD - M M 02 02

IN-TYPE

OUT-TYPE

OUT-SIZE

IN-SIZE

M : MALE
F : FEMALE
H : HOSE
01 : PT1/8"
02 : PT3/8"
03 : PT1/2"
8 : 5/16" HOSE
15 : 1/2" HOSE

Type	Model	Size
SLIDING VALVE	SLD-MM0202	PT 1/4"
	SLD-MM0303	PT 3/8"
	SLD-MM0404	PT 1/2"
	SLD-FM0202	PT 1/4"
	SLD-FM0303	PT 3/8"
	SLD-FM0404	PT 1/2"
	SLD-HH88	8A HOSE
	SLD-HH1515	15A HOSE
SLIDING SWIVEL VALVE	SLD-HM152	15A *PT 1/4"
	SLD-HM153	15A *PT 3/8"

PAINTING SWIVEL COUPLER

Registration of Design



Model	Size	Working Pressure
SWV G41	NPS 1/4" x NPS 1/4"	5,800PSI
SWV M4141	NPS 1/4" x NPS 1/4"	
SWV M8341	NPS 3/8" x NPS 1/4"	
SWV M8383	NPS 3/8" x NPS 3/8"	
SWV M2183	NPS 1/2" x NPS 3/8"	
SWV M2121	NPS 1/2" x NPS 1/2"	

* Material (Special Steel), Heat treatment,
Operating Pressure Range: 350~400 bar

HI-NIPPLE / FITTING



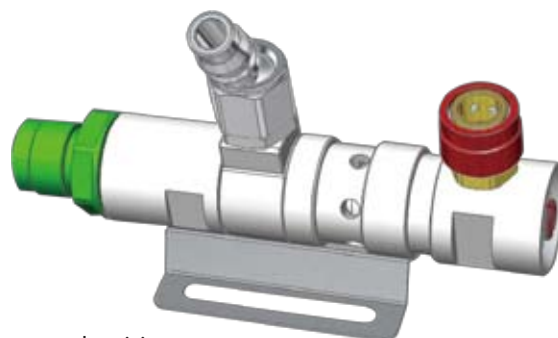
Type	Model	Size
PTF	PTF 25A	
	PTF 32A	
PFF	PFF 25A	
	PFF 32A	
CAP	25A	
	32A	
CLOSING CAP	25A	
	32A	
NIPPLE	25A	
	32A	
	HOSE NIPPLE	5/16", 1/2" HOSE
	PIPE NIPPLE	PT 3/8", PT 1/2"

Type	Model	Size
TSL SWIVEL NIPPLE	TSL-300	PT 1/2"
	TSL-300	1/2" HOSE
	TSL-35	1/2" HOSE
SWIVEL NIPPLE	8A	5/16" HOSE
	10A	3/8" HOSE
	15A	1/2" HOSE
	20A	3/4" HOSE
	25A	1" HOSE
HM NIPPLE	HM-30	PT 1/4" HOSE 1/2"
	HM-300	PT 3/8" HOSE 1/2"

* Materials: Steel, Brass, Stainless steel

* All the designs, materials, and application methods can be adjusted upon request.

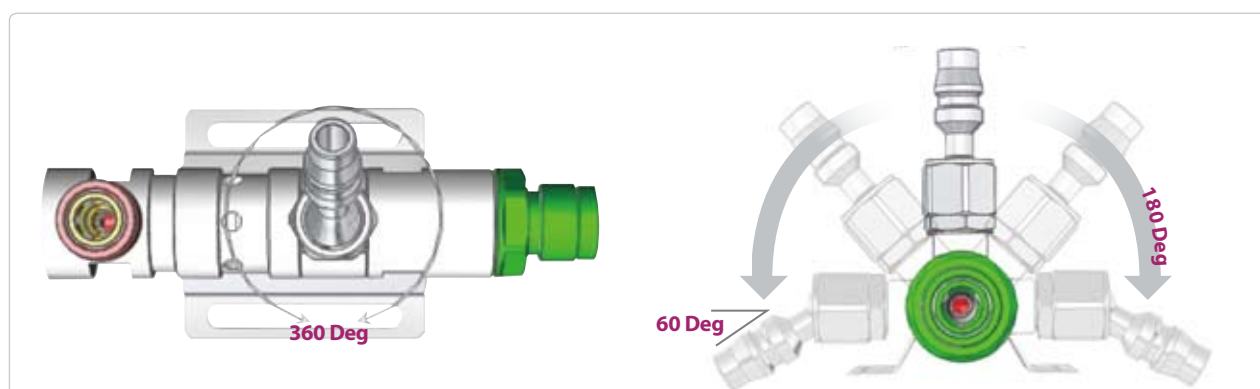
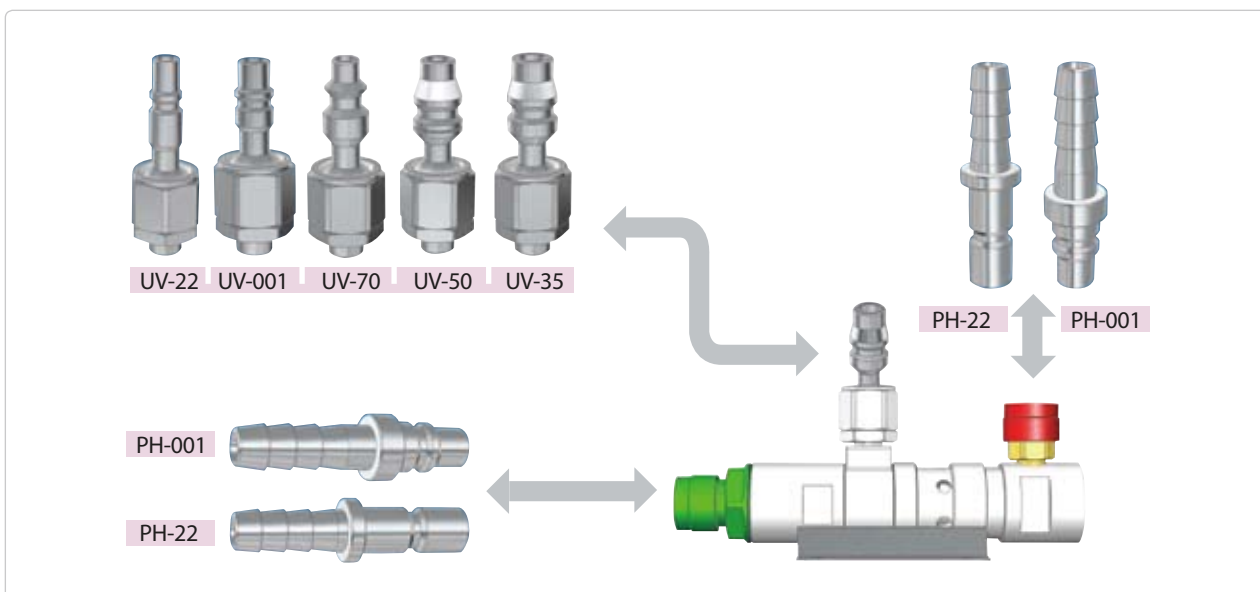
VORTEX TUBE



Features

- Only use compressed air for spot cooling without using refrigerant gas or electricity.
- Since Vortex tube has belt hooks designed for safety belts, it is easy to be fastened around the waist.
- Vortex Tube body and Air jacket feature one-touch connection and disconnection.
- Semi-permanent product.
- Since universal plug is free to rotate 360 degrees, and INLET (180 degrees) plus INLET PLUG (60 degrees) can rotate a full 240 degrees, there is no hose twisting and kinking when workers move from left to right.

Air Pressure (kg/cm ²)	Cold Air Discharge	Compressed Air Consumption (ℓ/min)	Air Discharge Volume (ℓ/min)		Total Discharge Volume (ℓ/min) C + H	Discharge Air Temperature (°C)		
			COOL	HOT		IN	COOL	HOT
5	Maximum	135	315	50	365	25.8	12.8	60.7
	Minimum		235	130	365	25.7	1.9	53.7



SPECIAL COUPLER / SHIPYARD TOOL

Articulation Coupler

- Articulation coupler is free to rotate according to the moving hose, and bends freely without hose twisting even when moving more than 90 degrees of the action radius.
- From using ball bearings in the rotating parts, the coupler performs well under pressure.



Model	Size	Bending Degree	Swivel Degree
AT06FM	PT 1/4"	90 Deg	360 Deg
AT08FM	PT 3/8"		
AT15FM	PT 1/2"		
AT20FM	PT 3/4"		
AT25FM	PT 1"		

Line Coupler

It is used when simultaneously connecting a multiple number of hoses to a single air pipe.



Valve Coupler

- When handle(valve) is open, plug is not separated even if workers make mistakes, which can help prevent accidents.
- When connecting to plug, valve is closed and the pressure in the coupler hole will be at low or no pressure, so connection can be easily done.



Foldable & Adjustable Protractor for Ship

Working Angle Range (45° ~ 135°), Material (SUS)

Air Block Tester (Patented Product)



Leak Tester (Patented Product)



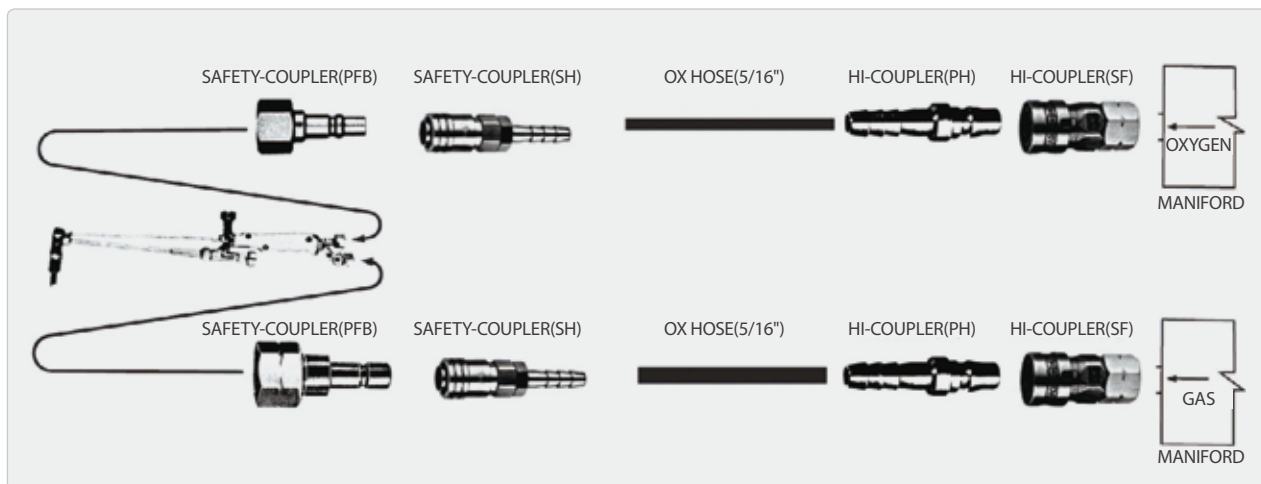
* Testing fluid - AIR

* Pressure gauges are subject to change according to types of gases.

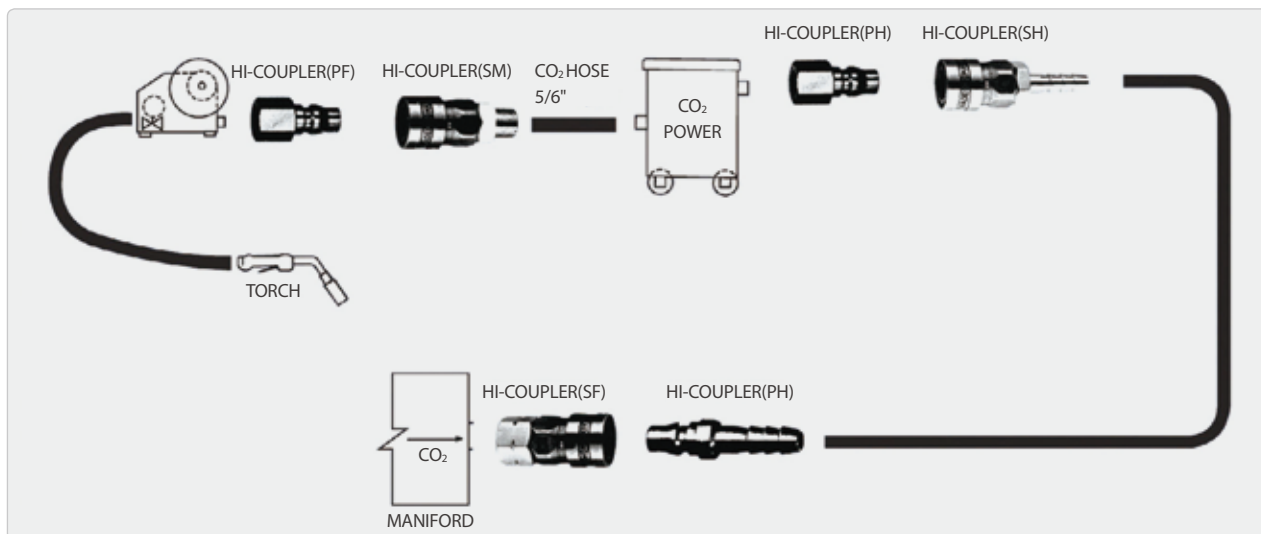
Please notify the type of gas and working pressure when ordering.

COUPLER APPLICATION CHART

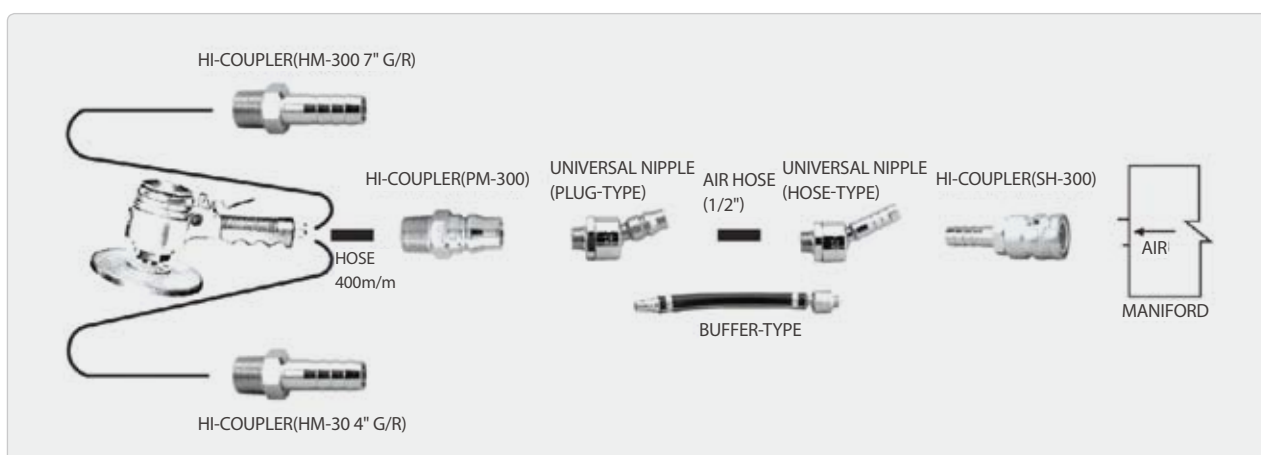
Gas Torch Coupler



CO₂ Welding Coupler



Air Grinder Coupler



MANIFOLD

SLIDING VALVE
/PAINTING SWIVEL COUPLERHI-NIPPLE
/FITTING

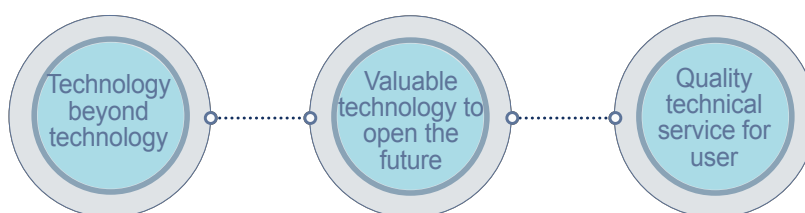
VORTEX TUBE

SPECIAL COUPLER

COUPLER
APPLICATION CHART



Pentagon Romania



Galați - Expomarket, str.Traian nr.444; tel/fax: 0236-412.088

Otopeni - str. Calea Bucureștilor nr.1; tel/fax: 021-35.20.267

Constanța - str. Amurgului nr.39; tel/fax: 0241-693.926

Brăila - str. Grivița nr.240; tel/fax: 0239-611.403

Tulcea - str. Spitalului 19 bl.19 parter; tel/fax: 0240-511.098