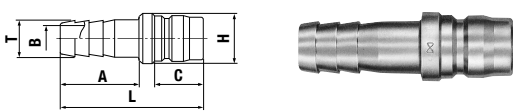


Models and Dimensions

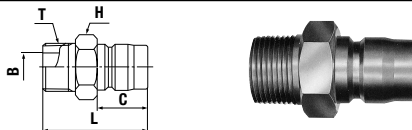
WAF : WAF stands for width across flats.

Plug TPH type (Hose barb)



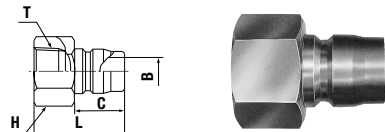
Model	Application (Hose)	Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	L	øH	A	C	øT	øB
1TPH	1/8"	12 ⁺¹	13	12	41	12	20	15.5	6.5	3
2TPH	1/4"	21	23	21	53	14	29	18	8	5
3TPH	3/8"	38	41	38	60	18	32	21	11	7
4TPH	1/2"	71	77	71	70	22	39	24	15	10
6TPH	3/4"	134	146	135	84	28	48	28	21	15
8TPH	1"	327	356	329	105	40	57	36	27	19
10TPH	1 1/4"	495	530	500	121	48	70	39	34.5	26
12TPH	1 1/2"	665	715	660	132	55	75	45	41	32
16TPH	2"	1,330	1,430	1,345	142	70	80	51	54	40

Plug TPM type (Male thread)



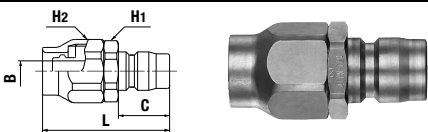
Model	Application (Thread)	Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	L	H(WAF)	C	T	øB	
1TPM	Rc 1/8	16 ⁺¹	17	17	32	Hex.12	15.5	R 1/8	4.5	
2TPM	Rc 1/4	30	33	30	38	Hex.17	18	R 1/4	6.5	
3TPM	Rc 3/8	38	42	38	43	Hex.17	21	R 3/8	10	
4TPM	Rc 1/2	81	88	81	52	Hex.22	24	R 1/2	13	
6TPM	Rc 3/4	164	179	165	59	Hex.32	28	R 3/4	17	
8TPM	Rc 1	273	297	274	73	Hex.41	36	R 1	25	
10TPM	Rc 1 1/4	520	560	530	83	Hex.50	39	R 1 1/4	32	
12TPM	Rc 1 1/2	655	705	665	93	Hex.54 ⁺²	45	R 1 1/2	38	
16TPM	Rc 2	1,240	1,345	1,250	102	75 x ø80	51	R 2	50	

Plug TPF type (Female thread)



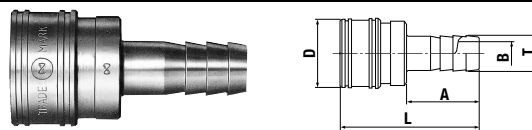
Model	Application (Thread)	Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	L	H(WAF)	C	T	øB	
1TPF	R 1/8	14 ⁺¹	15	14	26	Hex.14	15.5	Rc 1/8	4.5	
2TPF	R 1/4	28	31	29	34	Hex.17	18	Rc 1/4	6.5	
3TPF	R 3/8	43	47	43	38	Hex.21	21	Rc 3/8	10	
4TPF	R 1/2	103	113	104	45	Hex.29	24	Rc 1/2	13	
6TPF	R 3/4	166	181	167	51	Hex.35	28	Rc 3/4	17	
8TPF	R 1	321	350	323	60	Hex.41	36	Rc 1	26	
10TPF	R 1 1/4	567	615	573	64	Hex.54 ⁺³	39	Rc 1 1/4	32	
12TPF	R 1 1/2	703	763	630	75	Hex.58 ⁺⁴	45	Rc 1 1/2	38	
16TPF	R 2	1,226	1,374	1,190	83	77 x ø82	51	Rc 2	50	

Plug TPN type (For braided hose connection)



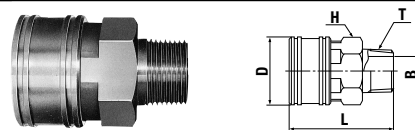
Model	Application (Hose) ¹⁵		Mass (g)		Dimensions (mm)					
	Size (mm)	Hose wall thickness (mm)	Brass	Stainless steel	L	H1(WAF)	H2(WAF)	C	øB	
2TPN-60	ø6 x ø11	2.5±0.25	60	55	(47)	Hex.19	Hex.19	18	5.5	
3TPN-90	ø9 x ø15	3±0.3	93	87	(52)	Hex.23	Hex.24	21	8.5	
4TPN-120	ø12 x ø18		140	130	(60)	Hex.27	Hex.27	24	11	
4TPN-150	ø15 x ø22	3.5±0.35	182	170	(68)	Hex.30	Hex.30	24	13	
6TPN-190	ø19 x ø26		261	245	(76)	Hex.35	Hex.35	28	17	
8TPN-250	ø25 x ø33		4±0.4	461	427	(96)	Hex.41	Hex.41	36	23

Socket TSH type (Hose barb)



Model	Application (Hose)	Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	L	øD	A	øT	øB	
1TSH	1/8"	24 ⁺¹	26	24	40	17.5	20	6.5	3	
2TSH	1/4"	63	69	64	55	24	29	8	5	
3TSH	3/8"	95	104	96	62	28	32	11	7	
4TSH	1/2"	176	192	177	74	35	39	15	10	
6TSH	3/4"	348	379	350	90	45	48	21	15	
8TSH	1"	570	605	570	102	58	57	27	19	
10TSH	1 1/4"	840	910	850	117	69	70	34.5	26	
12TSH	1 1/2"	1,060	1,140	1,070	128	75	75	41	32	
16TSH	2"	2,095	2,251	2,100	141	98	80	54	40	

Socket TSM type (Male thread)



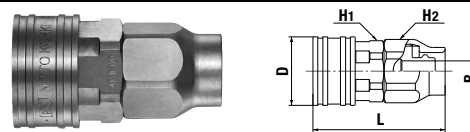
Model	Application (Thread)	Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	L	øD	H(WAF)	T	øB	
1TSM	Rc 1/8	25 ⁺¹	27	26	30	17.5	Hex.14	R 1/8	4.5	
2TSM	Rc 1/4	66	72	67	42	24	Hex.19	R 1/4	6.5	
3TSM	Rc 3/8	99	108	100	46	28	Hex.23	R 3/8	10	
4TSM	Rc 1/2	178	194	179	56	35	Hex.29	R 1/2	13	
6TSM	Rc 3/4	343	374	346	65	45	Hex.38	R 3/4	18	
8TSM	Rc 1	629	665	633	76	58	Hex.50	R 1	24	
10TSM	Rc 1 1/4	950	1,010	955	86	69	54 x ø64	R 1 1/4	32	
12TSM	Rc 1 1/2	1,180	1,275	1,190	95	75	58 x ø70	R 1 1/2	38	
16TSM	Rc 2	2,040	2,190	2,060	108	98	77 x ø82	R 2	49	

Socket TSF type (Female thread)



Model	Application (Thread)	Mass (g)			Dimensions (mm)					
		Steel	Brass	Stainless steel	L	øD	H(WAF)	T	øB	
1TSF	R 1/8	25 ⁺¹	27	25	27	17.5	Hex.14	Rc 1/8	4.5	
2TSF	R 1/4	57	62	57	32	24	Hex.19	Rc 1/4	6.5	
3TSF	R 3/8	83	90	83	35	28	Hex.23	Rc 3/8	10	
4TSF	R 1/2	153	167	154	42	35	Hex.29	Rc 1/2	13	
6TSF	R 3/4	288	314	289	48	45	Hex.38	Rc 3/4	18	
8TSF	R 1	575	607	575	59	58	Hex.50	Rc 1	24	
10TSF	R 1 1/4	821	888	825	64	69	54 x ø64	Rc 1 1/4	32	
12TSF	R 1 1/2	1,003	1,064	1,005	71	75	58 x ø70	Rc 1 1/2	38	
16TSF	R 2	1,765	1,880	1,770	80	98	77 x ø82	Rc 2	49	

Socket TSN type (For braided hose connection)



Model	Application (Hose) ¹⁵		Mass (g)		Dimensions (mm)					
	Size (mm)	Hose wall thickness (mm)	Brass	Stainless steel	L	øD	H1(WAF)	H2(WAF)	øB	
2TSN-60	ø6 x ø11	2.5±0.25	91	84	(49)	24	Hex.19	Hex.19	5.5	
3TSN-90	ø9 x ø15	3±0.3	139	129	(54)	28	Hex.23	Hex.24	8.5	
4TSN-120	ø12 x ø18		222	206	(62)	35	Hex.29	Hex.27	11	
4TSN-150	ø15 x ø22	3.5±0.35	255	237	(70)	35	Hex.30	Hex.30	13	
6TSN-190	ø19 x ø26		435	408	(81)	45	Hex.38	Hex.35	17	
8TSN-250	ø25 x ø33		4±0.4	677	633	(93)	58	Hex.50	Hex.41	23

¹: 1TSP steel is a made-to-order item. ²: Stainless steel: 54 x ø60 ³: Stainless steel: 54 x ø59 ⁴: Stainless steel: 58 x ø65 ⁵: Braided hoses for TPN type and TSN type should be made of soft PVC and woven by reinforcement thread. Before use, please be sure to read "Safety Guide" described at the end of this book and "Instruction Sheet" that comes with the products.

For Low Pressure

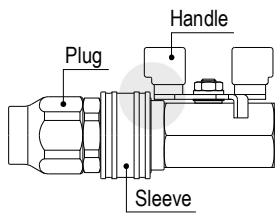
TSP CUPLA Socket with Ball Valve

For low pressure general applications

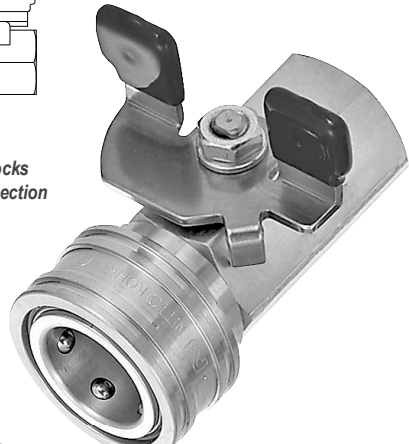
Working pressure	Valve structure	Applicable fluids			
1.0 MPa (10 kgf/cm ²)					
	One-way shut-off	Water	Hydraulic oil	Air	Gas

One-piece design of TSP CUPLA socket and ball valve. Sleeve stopper mechanism prevent accidental disconnection during connection. (when the valve is open.)

- Socket valve can be opened and shut off while socket and plug are connected.
- Ball valve design provides for high flow rate.
- High viscosity fluids such as grease can be applied.



The handle of the ball valve locks the sleeve to prevent disconnection of the plug during use.



Interchangeable with standard TSP CUPLA plug in the same size.



Specifications					
Model	BV-2TSF	BV-3TSF	BV-4TSF	BV-6TSF	BV-8TSF
Size (Thread)	1/4"	3/8"	1/2"	3/4"	1"
Body material	Brass				
Pressure unit	MPa	kgf/cm ²	bar	PSI	
Working pressure	1.0	10	10	145	
Seal material	CUPLA Part		Seal material	Fluoro rubber	Mark
	Ball Valve Part		Fluoropolymer resin	FKM	Working temperature range
Working temperature range					-5°C to +120°C

Maximum Tightening Torque					Nm {kgf·cm}
Model	BV-2TSF	BV-3TSF	BV-4TSF	BV-6TSF	BV-8TSF
Torque	9 {92}	12 {122}	30 {306}	50 {510}	65 {663}

Flow Direction

Fluid flow can be bi-directional when socket and plug are connected.

Interchangeability

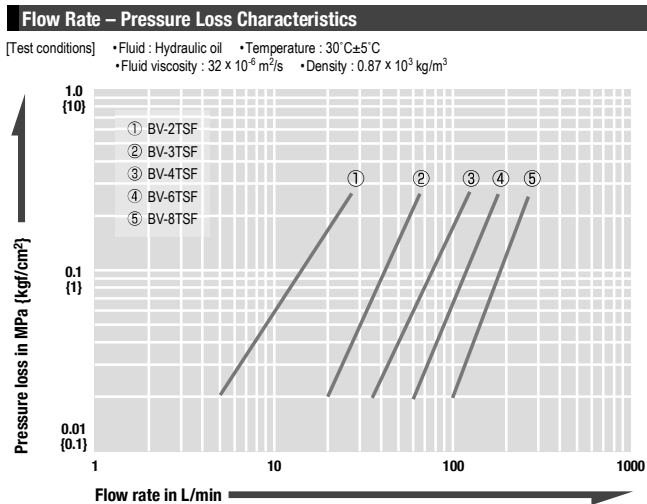
TSP CUPLA plugs of the same size can be connected regardless of end configurations.

Minimum Cross-Sectional Area					(mm ²)
Model	BV-2TSF	BV-3TSF	BV-4TSF	BV-6TSF	BV-8TSF
Min. cross-sectional area	19.6	44.1	63.6	122	201

* Value of BV type only. The minimum cross-sectional area may vary depending upon the end configuration of the plug.

Suitability for Vacuum

Not suitable for vacuum application in either connected or disconnected condition.



Ball Valve Open

Sleeve is locked.

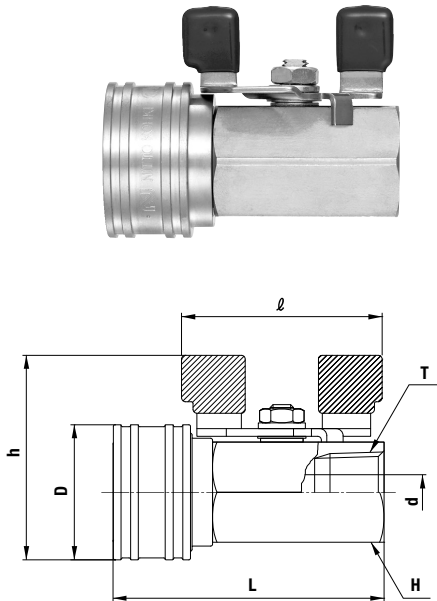
Ball Valve Shut

Sleeve is free.

Models and Dimensions

WAF: WAF stands for width across flats.

Socket BV-TSF type (Female thread)

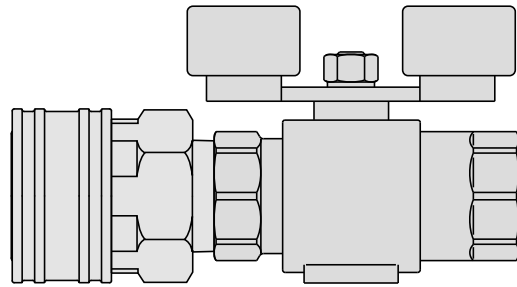


Model	Application (Thread)	Mass (g)	Dimensions (mm)						
			L	h	øD	H(WAF)	T	ød	ℓ
BV-2TSF	R 1/4	104	(52.3)	(43)	24	Hex.17	Rc 1/4	5	(38.5)
BV-3TSF	R 3/8	163	(60.5)	(47.5)	28	Hex.21	Rc 3/8	7.5	(44)
BV-4TSF	R 1/2	270	(70.3)	(53)	35	Hex.26	Rc 1/2	9	(52)
BV-6TSF	R 3/4	491	(82.8)	(66.1)	45	Hex.32	Rc 3/4	12.5	(60.5)
BV-8TSF	R 1	904	(102.3)	(76.6)	58	Hex.41	Rc 1	16	(76)

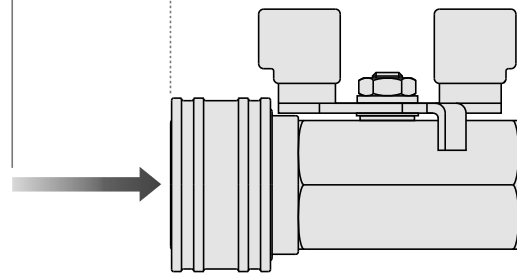
Application

TSP CUPLA Socket with Ball Valve

TSP CUPLA Socket + Commercially Available Ball Valve



Overall length reduced by around 30%



Compact and enhanced sealing design

Connection part between a Standard TSP CUPLA socket and a commercially available ball valve is eliminated for enhanced sealing and the overall length is reduced by around 30%.

Accessory

CUPLA ADAPTER for Braided Hose Connection

Can be screwed into CUPLA with female threads, 3/8", 1/2", 3/4"



See page 152 for the details.