

Koman

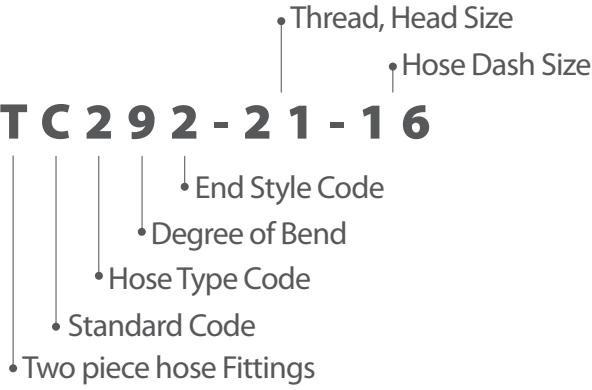
HYDRAULIC



TWO PIECE HOSE FITTINGS



NUMBERING SYSTEM



STANDARD CODE	
P	BSP
N	DIN
S	JIS
E	SAE
F	SAE FLANGE
C	JIC
K	KOMATSU

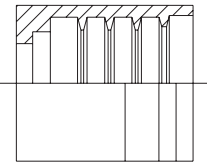
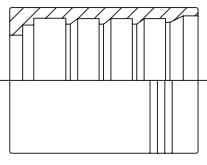
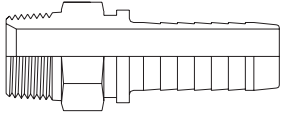
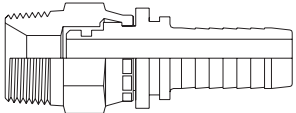

HOSE TYPE CODE	
2	Multi fit type fitting

DEGREE OF BEND	
0	Straight
4	45° Elbow
9	90° Elbow

END STYLE CODE	
1	Cone-Swivel Female or SAE Code 61 Flange
2	Flared-Swivel Female or SAE code 62 Flange
3	Taper Male
4	Flared-Male (NO Seal)
5	Flat-Swivel Female
6	Cone-Male
7	Metric 24° L Long O-ring Female
8	Taper Male Swivel
9	Stand Pipe L
B	Metric 24° L Cone Male
D	Metric 24° S Cone Male
H	Metric 24° S Cone O-ring Female
S	Stand Pipe S

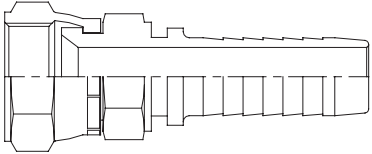
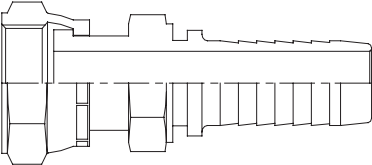
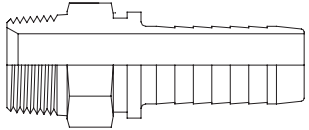
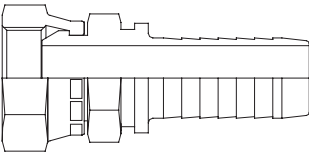
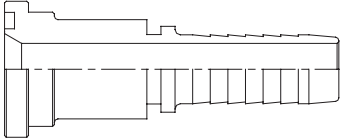
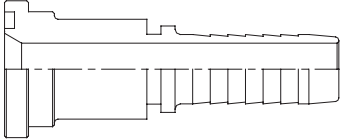
L : Low and Middle Pressure S : High Pressure

PICTORIAL INDEX

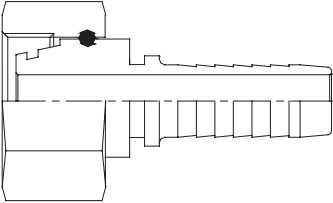
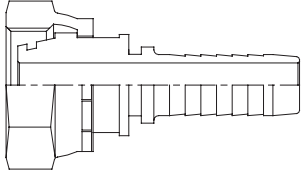
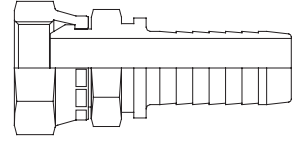
Description		Straight	Elbow 45°	Elbow 90°	Other
 Socket for braid Hose (None Skive Type)		C1 TS33W			
 Sokcet for Spiral Hose (Skive Type)		C1 TS99S			
 SAE Taper Male (NPTF)		C2 TE203			
 Male Pipe Swivel (NPTF)		C3 TE208			
 Male JIC 37° Cone		C4 TC206			



PICTORIAL INDEX

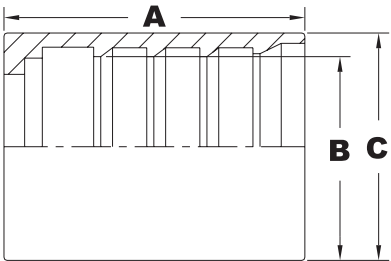
Description		Straight	Elbow 45°	Elbow 90°	Other
	Female JIC 37° Flared Swive	C5 TC202	C6 TC242	C7 TC292	
	Female Seal-Lok Swivel	C8 TE205	C9 TE245	C10 TE295	
	Male JIS/BSP Taper Pipe	C11 TS203			
	Female BSP Parallel Pipe 30° Cone Swivel	C12 TP201	C13 TP241	C14 TP291	
	SAE Code 61 Flange	C15 TF201	C16 TF241	C17 TF291	
	SAE Code 62 Flange	C18 TF202	C18 TF242	C19 TF292	

PICTORIAL INDEX

Description		Straight	Elbow 45°	Elbow 90°	Other
	O-Ring Metric Female 24° Cone Swivel	C20 L series TN207	C21 L series TN247	C22 L series TN297	
	O-Ring Metric Female 24° Cone Swivel	C23 S series TN20H	C24 S series TN24H	C25 S series TN29H	
	Female JIS Parallel Pipe 30° Flared Swivel	C26 TS202			
	Female JIS Parallel Pipe 30° Cone Swivel	C26 TS201	C27 TS241	C27 TS291	

TS33W

Socket For Wire Braid Hose, None Skive Type
SAE 100 R1 AT & R2 AT / DIN EN 853 1 SN & 2 SN

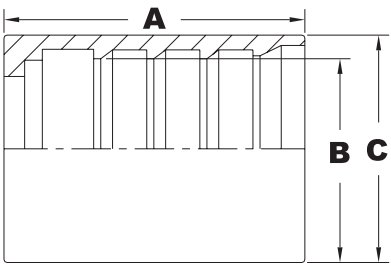


Part NO.	Hose Bore			Dimension[mm]					
	Size	Inch	DN	A	B	C			
TS33W For Use 1,2 Braid Wire Hose									
TS33W-04	04	1/4"	6	26	16	23			
TS33W-05	05	5/16"	8	30	17	24			
TS33W-06	06	3/8"	10	32	20	26			
TS33W-08	08	1/2"	12	34	23	29			
TS33W-10	10	5/8"	16	36	27	33			
TS33W-12	12	3/4"	20	48	30	36			
TS33W-16	16	1"	25	50.5	38.5	46.5			
TS33W-20	20	1.1/4"	32	59	49	59.5			
TS33W-24	24	1.1/2"	40	67	56	67			
TS33W-32	32	2"	50	82	68.5	80			

STANDARD PRODUCT

TS99S

Socket For Spiral Hose, Skive Type
SAE 100 R12 / DIN EN 856 4SH &4SP

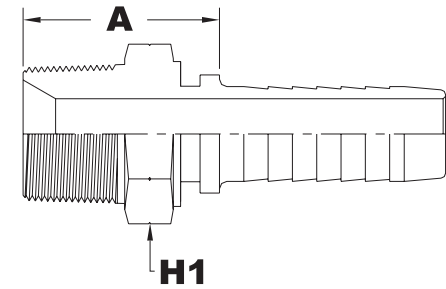


Part NO.	Hose Bore			Dimension[mm]					
	Size	Inch	DN	A	B	C			
TS99S For Use 4 Spiral Wire Hose									
TS99S-06	06	3/8"	10	34	20	27			
TS99S-08	08	1/2"	12	34	22.5	30			
TS99S-10	10	5/8"	16	37	25	33			
TS99S-12	12	3/4"	20	51	30.5	38.5			
TS99S-16	16	1"	25	58	37	47			
TS99S-20	20	1.1/4"	32	66	46.5	56			
TS99S-24	24	1.1/2"	40	71	52.5	62			
TS99S-32	32	2"	50	85	68	80			

STANDARD PRODUCT

TE203

SAE Taper Male
NPTF

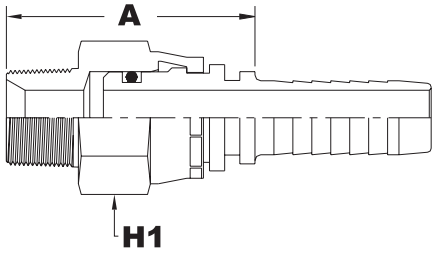


Part No.	Thread	Hose Bore			Dimension[mm]				
	T	Size	Inch	DN	A	H1			
TE203 Multi Fit Fitting for TS99S & TS33W									
TE203-02-04	1/8"-18	4	1/4"	6	24	14.2			
TE203-04-04	1/4"-18	4	1/4"	6	26	14.2			
TE203-06-04	3/8"-18	4	1/4"	6	29	17.4			
TE203-08-04	1/2"-14	4	1/4"	6	32	22.2			
TE203-04-05	1/4"-18	5	5/16"	8	27	17.4			
TE203-06-05	3/8"-18	5	5/16"	8	29	17.4			
TE203-04-06	1/4"-18	6	3/8"	10	27	17.4			
TE203-06-06	3/8"-18	6	3/8"	10	29	17.4			
TE203-08-06	1/2"-14	6	3/8"	10	32	22.2			
TE203-06-08	3/8"-18	8	1/2"	12	27	22.2			
TE203-08-08	1/2"-14	8	1/2"	12	33	22.2			
TE203-12-08	3/4"-14	8	1/2"	12	32	28.57			
TE203-06-10	3/8"-18	10	5/8"	16	27	23.8			
TE203-08-10	1/2"-14	10	5/8"	16	33	23.8			
TE203-12-10	3/4"-14	10	5/8"	16	32	30			
TE203-08-12	1/2"-14	12	3/4"	20	32	23.8			
TE203-12-12	3/4"-14	12	3/4"	20	35	28.57			
TE203-16-12	1"-11.5	12	3/4"	20	40	35			
TE203-12-16	3/4"-14	16	1"	25	36	28.57			
TE203-16-16	1"-11.5	16	1"	25	41	35			
TE203-20-20	1.1/4"-11.5	20	1.1/4"	32	49	46			
TE203-24-24	1.1/2"-11.5	24	1.1/2"	40	50	50			
TE203-32-32	2"-11.5	32	2"	50	58	63.5			

STANDARD PRODUCT

TE208

SAE Taper Male Swivel
NPTF

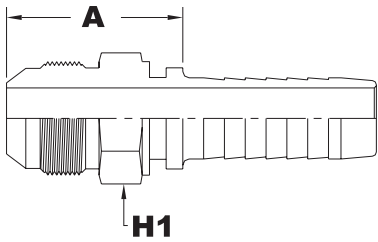


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	H1				
TS33W For Use 1,2 Braid Wire Hose										
TE208-04-04	1/4"-18	4	1/4"	6	37	17.4				
TE208-06-04	3/8"-18	4	1/4"	6	38	22.2				
TE208-04-06	1/4"-18	6	3/8"	10	40	17.4				
TE208-06-06	3/8"-18	6	3/8"	10	44	22.2				
TE208-08-06	1/2"-14	6	3/8"	10	49	25.4				
TE208-06-08	3/8"-18	8	1/2"	12	44	22.2				
TE208-08-08	1/2"-14	8	1/2"	12	49	25.4				
TE208-12-08	3/4"-14	8	1/2"	12	61	34.9				
TE208-08-12	1/2"-14	12	3/4"	20	49	25.4				
TE208-12-12	3/4"-14	12	3/4"	20	61	34.9				
TE208-16-12	1"-11.5	12	3/4"	20	73	38.1				
TE208-12-16	3/4"-14	16	1"	25	61	34.9				
TE208-16-16	1"-11.5	16	1"	25	73	38.1				

STANDARD PRODUCT

TC206

Male JIC 37° Cone

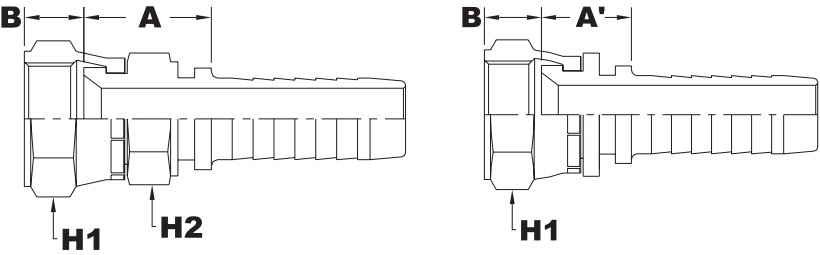


Part No.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	H1				
TC206 Multi Fit Fitting for TS99S & TS33W										
TC206-07-04	7/16"-20	4	1/4"	6	26	14.2				
TC206-08-04	1/2"-20	4	1/4"	6	26	14.2				
TC206-09-04	9/16"-18	4	1/4"	6	27	17.4				
TC206-08-06	1/2"-20	6	3/8"	10	27	19				
TC206-09-06	9/16"-18	6	3/8"	10	27	19				
TC206-12-06	3/4"-16	6	3/8"	10	30	22.2				
TC206-14-06	7/8"-14	6	3/8"	10	32	2.8				
TC206-12-08	3/4"-16	8	1/2"	12	30	22.2				
TC206-14-08	7/8"-14	8	1/2"	12	32	23.8				
TC206-17-08	1.1/16"-12	8	1/2"	12	38	28.5				
TC206-14-10	7/8"-14	10	5/8"	16	33	23.8				
TC206-17-10	1.1/16"-12	10	5/8"	16	38	28.5				
TC206-17-12	1.1/16"-12	12	3/4"	20	39	28.5				
TC206-19-12	1.3/16"-12	12	3/4"	20	40	31.7				
TC206-21-12	1.5/16"-12	12	3/4"	20	40	34.9				
TC206-21-16	1.5/16"-12	16	1"	25	40	34.9				
TC206-26-20	1.5/8"-12	20	1.1/4"	32	44	47.6				

STANDARD PRODUCT

TC202

Female JIC 37° Flared Swivel

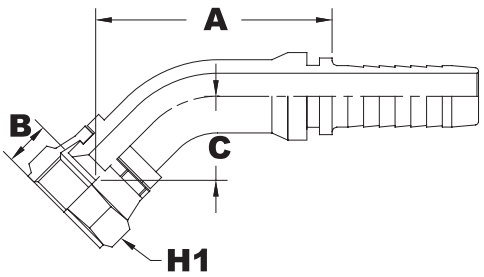


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	A'	B	H1	H2	
TC202 Multi Fit Fitting for TS99S & TS33W										
TC202-07-04	7/16"-20	4	1/4"	6	21	16	8.7	14.2	14.2	
TC202-08-04	1/2"-20	4	1/4"	6	22	17	9.5	14.2	14.2	
TC202-09-04	9/16"-18	4	1/4"	6	22	17	9.5	14.2	17.4	
TC202-08-05	1/2"-20	5	5/16"	8	22	17	9.5	17.4	14.2	
TC202-09-05	9/16"-18	5	5/16"	8	22	17	9.5	17.4	17.4	
TC202-09-06	9/16"-18	6	3/8"	10	23	18	9.5	17.4	17.4	
TC202-12-06	3/4"-16	6	3/8"	10	23	18	10.7	17.4	22.2	
TC202-14-06	7/8"-14	6	3/8"	10	23	18	12.7	22.2	25.4	
TC202-12-08	3/4"-16	8	1/2"	12	23	18	10.7	22.2	22.2	
TC202-14-08	7/8"-14	8	1/2"	12	24	19	12.7	22.2	25.4	
TC202-14-10	7/8"-16	10	5/8"	16	26	21	12.7	22.2	25.4	
TC202-17-10	1.1/16"-12	10	5/8"	16	28	23	14.3	26.9	31.7	
TC202-17-12	1.1/16"-12	12	3/4"	20	30	23	14.3	26.9	31.7	
TC202-21-16	1.5/16"-12	16	1"	25	34	27	15.1	38.1	34.9	
TC202-26-16	1.5/8"-12	16	1"	25	35	28	15.9	50.8	50.8	
TC202-26-20	1.5/8"-12	20	1.1/4"	32	36	29	15.9	50.8	50.8	
TC202-30-24	1.7/8"-12	24	1.1/2"	40	44	34	18.6	57.1	53.9	
TC202-40-32	2.1/2"-12	32	2"	50	56	47	23.8	63.5	73	

STANDARD PRODUCT

TC242

Female JIC 37° Flared Swivel
45° Elbow

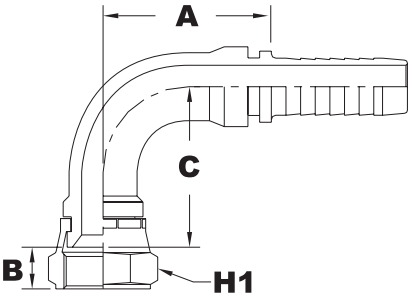


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TC206 Multi Fit Fitting for TS99S & TS33W										
TC242-07-04	7/16"-20	4	1/4"	6	34	8.7	13	14.2		
TC242-08-04	1/2"-20	4	1/4"	6	34	9.5	13	17.4		
TC242-09-04	9/16"-18	4	1/4"	6	35	9.5	14	17.4		
TC242-09-06	9/16"-18	6	3/8"	10	68	9.5	16	17.4		
TC242-12-06	3/4"-16	6	3/8"	10	68	10.7	16	22.2		
TC242-12-08	3/4"-16	8	1/2"	12	79	10.7	19	22.2		
TC242-14-08	7/8"-14	8	1/2"	12	79	12.7	19	25.4		
TC242-14-10	7/8"-14	10	5/8"	16	91	12.7	19	25.4		
TC242-17-10	1.1/16"-12	10	5/8"	16	91	14.3	19	31.7		
TC242-17-12	1.1/16"-12	12	3/4"	20	116	14.3	26	31.7		
TC242-21-16	1.5/16"-12	16	1"	25	124	15.1	31	38.1		
TC242-26-20	1.5/8"-12	20	1.1/4"	32	152	15.9	40	50.8		
TC242-30-24	1.7/8"-12	24	1.1/2"	40	174	18.6	46	53.9		
TC242-40-32	2.1/2"-12	32	2"	50	212	23.8	62	73		

STANDARD PRODUCT

TC292

Female JIC 37° Flared Swivel
/ 90° Elbow

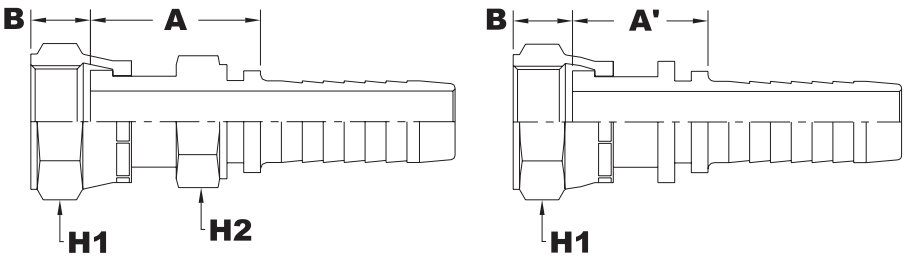


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TC292 Multi Fit Fitting for TS99S & TS33W										
TC292-07-04	7/16"-20	4	1/4"	6	30	8.7	24	14.2		
TC292-08-04	1/2"-20	4	1/4"	6	30	9.5	24	17.4		
TC292-09-04	9/16"-18	4	1/4"	6	30	9.5	25	17.4		
TC292-08-05	1/2"-20	5	5/16"	8	35	9.5	26	17.4		
TC292-07-06	7/16"-20	6	3/8"	10	42	8.7	28	14.2		
TC292-09-06	9/16"-18	6	3/8"	10	42	9.5	29	17.4		
TC292-12-06	3/4"-16	6	3/8"	10	42	10.7	29	22.2		
TC292-09-08	9/16"-18	8	1/2"	12	37	9.5	31	17.4		
TC292-12-08	3/4"-16	8	1/2"	12	37	10.7	31	22.2		
TC292-14-08	7/8"-14	8	1/2"	12	37	12.7	31	25.4		
TC292-17-08	1.1/16"-12	8	1/2"	12	37	14.3	31	31.7		
TC292-14-10	7/8"-14	10	5/8"	16	72	12.7	35	25.4		
TC292-17-10	1.1/16"-12	10	5/8"	16	72	14.3	38	31.7		
TC292-17-12	1.1/16"-12	12	3/4"	20	104	14.3	50	31.7		
TC292-21-16	1.5/16"-12	16	1"	25	128	15.1	62	38.1		
TC292-26-20	1.5/8"-12	20	1.1/4"	32	142	15.9	82	50.8		
TC292-30-24	1.7/8"-12	24	1.1/2"	40	150	18.6	86	53.9		
TC292-40-32	2.1/2"-12	32	2"	50	207	23.8	134	73		

STANDARD PRODUCT

TE205

Female Seal-Lok Swivel
O-Ring Face Seal

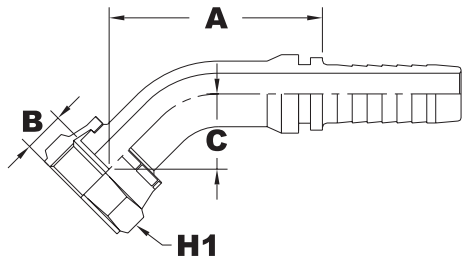


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	A'	B	H1	H2	
TE205 Multi Fit Fitting for TS99S & TS33W										
TE205-09-04	9/16"-18	4	1/4"	6	28	23	8	17.4	14.2	
TE205-11-04	11/16"-16	4	1/4"	6	30	25	10	20.6	17.4	
TE205-13-04	13/16"-16	4	1/4"	6	33	28	10	23.8	17.4	
TE205-09-06	9/16"-18	6	3/8"	10	27	22	8	17.4	17.4	
TE205-11-06	11/16"-16	6	3/8"	10	29	24	10	20.6	17.4	
TE205-13-06	13/16"-16	6	3/8"	10	32	27	10	23.8	17.4	
TE205-16-06	1"-14	6	3/8"	10	39	34	12.7	28.5	17.4	
TE205-11-08	11/16"-16	8	1/2"	12	29	24	10	20.6	20.6	
TE205-13-08	13/16"-16	8	1/2"	12	32	27	10	23.8	20.6	
TE205-16-08	1"-14	8	1/2"	12	39	34	12.7	28.5	20.6	
TE205-19-08	1.3/16"-12	8	1/2"	12	42	37	14.5	34.9	23.8	
TE205-13-10	13/16"-16	10	5/8"	16	33	28	10	23.8	23.8	
TE205-19-10	1.3/16"-12	10	5/8"	16	43	38	14.5	34.9	25.4	
TE205-16-12	1"-14	12	3/4"	20	42	35	12.7	28.5	26.9	
TE205-19-12	1.3/16"-12	12	3/4"	20	44	37	14.5	34.9	28.5	
TE205-23-12	1.7/16"-12	12	3/4"	20	46	39	14	41.2	31.7	
TE205-19-16	1.3/16"-12	16	1"	25	44	37	14.5	34.9	33.3	
TE205-23-16	1.7/16"-12	16	1"	25	46	39	14	41.2	34.9	
TE205-27-16	1.11/16"-12	16	1"	25	34	27	14	47.6	34.9	
TE205-23-20	1.7/16"-12	20	1.1/4"	32	45	38	14	41.2	44.4	
TE205-27-20	1.11/16"-12	20	1.1/4"	32	40	33	14	47.6	44.4	
TE205-32-20	2"-12	20	1.1/4"	32	42	35	16	57.1	44.4	
TE205-32-24	2"-12	24	1.1/2"	40	42	32	16	57.1	47.6	

STANDARD PRODUCT

TE245

Female Seal-Lok Swivel
O-Ring Face Seal / 45° Elbow

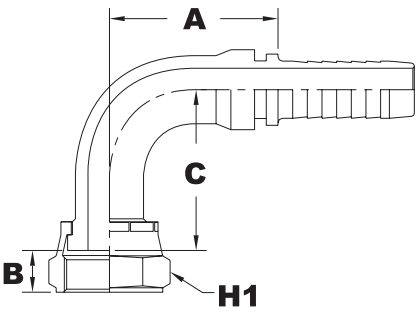


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TE245 Multi Fit Fitting for TS99S & TS33W										
TE245-09-04	9/16"-18	4	1/4"	6	34	8	13	17.4		
TE245-11-04	11/16"-16	4	1/4"	6	35	9	14	20.6		
TE245-13-04	13/16"-16	4	1/4"	6	37	11	16	23.8		
TE245-09-06	9/16"-18	6	3/8"	10	40	8	15	17.4		
TE245-11-06	11/16"-16	6	3/8"	10	41	9	16	20.6		
TE245-13-08	13/16"-16	8	1/2"	12	49	11	21	23.8		
TE245-16-08	1"-14	8	1/2"	12	50	14	21	28.5		
TE245-19-08	1.3/16"-14	8	1/2"	12	49	15	20	34.9		
TE245-13-10	13/16"-12	8	5/8"	16	54	11	20	23.8		
TE245-16-10	1"-14	10	5/8"	16	55	14	21	28.5		
TE245-19-10	1.3/16"-12	10	5/8"	16	54	15	20	34.9		
TE245-16-12	1"-14	12	3/4"	20	79	14	29	28.5		
TE245-19-12	1.3/16"-12	12	3/4"	20	78	15	28	34.9		
TE245-23-12	1.7/16"-12	12	3/4"	20	78	16	30	41.2		
TE245-19-16	1.3/16"-12	16	1"	25	78	15	30	34.9		
TE245-23-16	1.7/16"-12	16	1"	25	78	16	29	41.2		
TE245-27-16	1.11/16"-12	16	1"	25	81	16	33	47.6		
TE245-23-20	1.7/16"-12	20	1.1/4"	32	102	16	37	47.6		
TE245-27-20	1.11/16"-12	20	1.1/4"	32	105	16	40	41.2		
TE245-32-20	2"-12	20	1.1/4"	32	106	16	41	57.1		
TE245-32-24	2"-12	24	1.1/2"	40	113	16	45	57.1		

STANDARD PRODUCT

TE295

Female Seal-Lok Swivel
O-Ring Face Seal / 90° Elbow

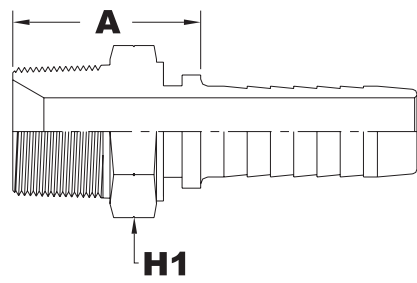


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TE295 Multi Fit Fitting for TS99S & TS33W										
TE295-09-04	9/16"-18	4	1/4"	6	30	8	24	17.4		
TE295-11-04	11/16"-16	4	1/4"	6	30	9	26	20.6		
TE295-13-04	13/16"-16	4	1/4"	6	30	11	28	23.8		
TE295-09-06	9/16"-18	6	3/8"	10	42	8	25	17.4		
TE295-11-06	11/16"-16	6	3/8"	10	42	9	26	20.6		
TE295-13-06	13/16"-16	6	3/8"	10	42	11	28	23.8		
TE295-11-08	11/16"-16	6	1/2"	12	38	9	28	20.6		
TE295-13-08	13/16"-16	8	1/2"	12	38	11	30	23.8		
TE295-16-08	1"-14	8	1/2"	12	38	14	31	28.5		
TE295-19-08	1.3/16"-12	8	1/2"	12	38	15	30	34.9		
TE295-13-10	13/16"-16	8	5/8"	16	42	11	37	23.8		
TE295-16-10	1"-14	10	5/8"	16	42	14	38	28.5		
TE295-19-10	1.3/16"-12	10	5/8"	16	42	15	37	34.9		
TE295-16-12	1"-14	12	3/4"	20	61	14	50	28.5		
TE295-19-12	1.3/16"-12	12	3/4"	20	61	15	49	34.9		
TE295-23-12	1.7/16"-12	12	3/4"	20	61	16	49	41.2		
TE295-19-16	1.3/16"-12	16	1"	25	81	15	57	34.9		
TE295-23-16	1.7/16"-12	16	1"	25	81	16	57	41.2		
TE295-27-16	1.11/16"-12	16	1"	25	81	16	60	47.6		
TE295-23-20	1.7/16"-12	20	1.1/4"	32	93	16	74	41.2		
TE295-27-20	1.11/16"-12	20	1.1/4"	32	93	16	77	47.6		
TE295-32-20	2"-12	20	1.1/4"	32	93	16	77	57.1		
TE295-32-24	2"-12	24	1.1/2"	40	91	16	80	57.1		

STANDARD PRODUCT

TS203

Male JIS Taper Pipe
BSPT

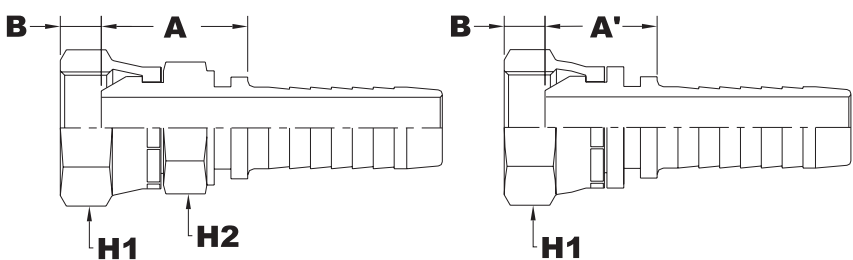


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	H1				
TS203 Multi Fit Fitting for TS99S & TS33W										
TS203-04-04	1/4"-19	4	1/4"	6	22	19				
TS203-06-04	3/8"-19	4	1/4"	6	27	22				
TS203-04-06	1/4"-19	6	3/8"	10	26	22				
TS203-06-06	3/8"-19	6	3/8"	10	27	22				
TS203-08-06	1/2"-14	6	3/8"	10	31	27				
TS203-06-08	3/8"-19	8	1/2"	12	28	27				
TS203-08-08	1/2"-14	8	1/2"	12	31	27				
TS203-08-12	1/2"-14	12	3/4"	20	31	32				
TS203-12-08	3/4"-14	8	1/2"	12	33	32				
TS203-12-12	3/4"-14	12	3/4"	20	39	32				
TS203-16-12	1"-11	12	3/4"	20	42	36				
TS203-12-16	3/4"-14	16	1"	25	39	36				
TS203-16-16	1"-11	16	1"	25	41	36				
TS203-20-16	1.1/4"-11	20	1.1/4"	25	43	46				
TS203-16-20	1"-11	16	1"	25	42	46				
TS203-20-20	1.1/4"-11	20	1.1/4"	32	48	46				

STANDARD PRODUCT

TP201

Female BSP Parallel Pipe
30° Cone Swivel

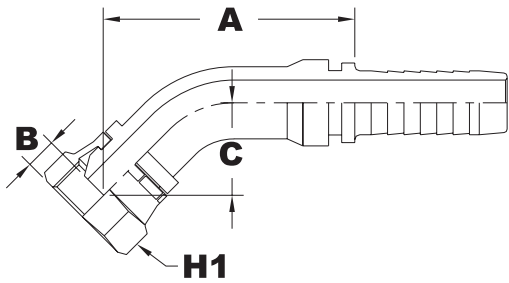


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	A'	B	H1	H2	
TP201 Multi Fit Fitting for TS99S & TS33W										
TP201-04-04	1/4"-19	4	1/4"	6	25	20	4.4	17	19	
TP201-06-06	3/8"-19	6	3/8"	10	28	23	6.2	19	22	
TP201-08-08	1/2"-14	8	1/2"	12	29	24	6.7	22	27	
TP201-10-10	5/8"-14	10	5/8"	16	29	24	7.5	27	27	
TP201-12-12	3/4"-14	12	3/4"	20	32	25	8.9	27	32	
TP201-16-16	1"-11	16	1"	25	36	29	10.7	36	41	
TP201-20-20	1.1/4"-11	20	1.1/4"	32	46	39	10.3	46	50	
TP201-24-24	1.1/2"-11	24	1.1/2"	40	50	40	12.7	46	50	
TP201-32-32	2"-11	32	2"	50	52	31	16.3	46	50	

STANDARD PRODUCT

TP241

Female BSP Parallel Pipe Swivel
30° Cone / 45° Elbow

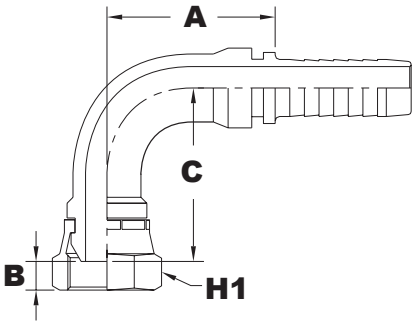


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TP241 Multi fit fitting for TS99S & TS33W										
TP241-04-04	1/4"-19	4	1/4"	6	38	4.4	17	19		
TP241-06-06	3/8"-19	6	3/8"	10	44	6.2	19	22		
TP241-08-08	1/2"-14	8	1/2"	12	51	6.7	21	27		
TP241-10-10	5/8"-14	10	5/8"	16	53	7.5	20	27		
TP241-12-12	3/4"-14	12	3/4"	20	80	8.9	30	32		
TP241-16-16	1"-11	16	1"	25	82	10.7	34	41		
TP241-20-20	1.1/4"-11	20	1.1/4"	32	107	10.3	44	50		
TP241-24-24	1.1/2"-11	24	1.1/2"	40	117	12.7	48	55		
TP241-32-32	2"-11	32	2"	50	143	16.3	65	73		

STANDARD PRODUCT

TP291

Female BSP Parallel Pipe Swivel
30° Cone / 90° Elbow

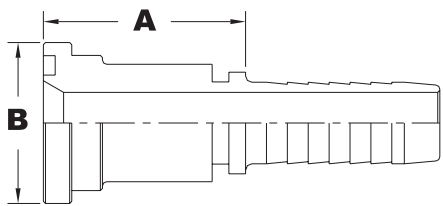


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TP291 Multi fit fitting for TS99S & TS33W										
TP291-04-04	1/4"-19	4	1/4"	6	30	4.4	28	19		
TP291-06-06	3/8"-19	6	3/8"	10	42	6.2	32	22		
TP291-08-08	1/2"-14	8	1/2"	12	37	6.7	35	27		
TP291-12-12	3/4"-14	12	3/4"	20	64	8.9	54	32		
TP291-16-16	1"-11	16	1"	25	83	10.7	65	41		
TP291-20-20	1.1/4"-11	20	1.1/4"	32	95	10.3	86	50		
TP291-24-24	1.1/2"-11	24	1.1/2"	40	90	12.7	89	55		
TP291-32-32	2"-11	32	2"	50	136	16.3	138	73		

STANDARD PRODUCT

TF201

SAE Code 61 Flange

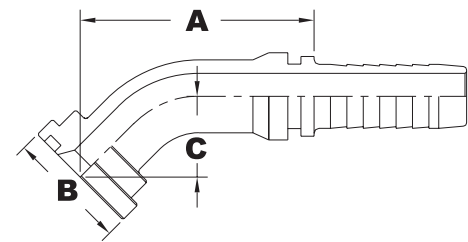


Part NO.	Flange Size	Hose Bore			Dimension					
		Size	Inch	DN	A	B				
TF201	Multi fit fitting for TS99S & TS33W									
TF201-08-08	1/2"	8	1/2"	12	45	30.1				
TF201-12-08	3/4"	8	1/2"	12	46	38.1				
TF201-12-12	3/4"	12	3/4"	20	45	38.1				
TF201-16-12	1"	12	3/4"	20	41	44.4				
TF201-16-16	1"	16	1"	25	56	44.4				
TF201-20-16	1.1/4"	16	1"	25	54	50.8				
TF201-20-20	1.1/4"	20	1.1/4"	32	63	50.8				
TF201-24-20	1.1/2"	20	1.1/4"	32	69	60.3				
TF201-24-24	1.1/2"	24	1.1/2"	40	72	60.3				
TF201-32-24	2"	24	1.1/2"	40	79	71.4				
TF201-32-32	2"	32	2"	50	79	71.4				

STANDARD PRODUCT

TF241

SAE Code 61 Flange
/ 45° Elbow

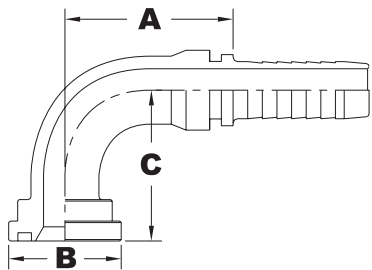


Part NO.	Flange Size	Hose Bore			Dimension[mm]					
		Size	Inch	DN	A	B	C			
TF241	Multi fit fitting for TS99S & TS33W									
TF241-08-08	1/2"	8	1/2"	12	47	30.1	19			
TF241-12-08	3/4"	8	1/2"	12	50	38.1	22			
TF241-12-12	3/4"	12	3/4"	20	79	38.1	29			
TF241-16-12	1"	12	3/4"	20	79	44.4	29			
TF241-16-16	1"	16	1"	25	79	44.4	31			
TF241-20-16	1.1/4"	16	1"	25	79	50.8	31			
TF241-20-20	1.1/4"	20	1.1/4"	32	103	50.8	38			
TF241-24-20	1.1/2"	20	1.1/4"	32	105	60.3	40			
TF241-24-24	1.1/2"	24	1.1/2"	40	112	60.3	44			
TF241-32-24	2"	24	1.1/2"	40	112	71.4	44			
TF241-32-32	2"	32	2"	50	139	71.4	60			

STANDARD PRODUCT

TF291

SAE Code 61 Flange
/ 90° Elbow

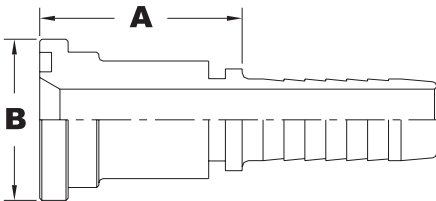


Part NO.	Flange Size	Hose Bore			Dimension[mm]					
		Size	Inch	DN	A	B	C			
TF291	Multi fit fitting for TS99S & TS33W									
TF291-08-08	1/2"	8	1/2"	12	37	30.1	34			
TF291-12-08	3/4"	8	1/2"	12	37	38.1	35			
TF291-16-08	1"	16	1"	25	37	44.4	35			
TF291-12-10	3/4	10	5/8"	16	43	38.1	42			
TF291-12-12	3/4"	12	3/4"	20	64	38.1	54			
TF291-16-12	1"	12	3/4"	20	64	44.4	54			
TF291-16-16	1"	16	1"	25	83	44.4	62			
TF291-20-16	1.1/4"	16	1"	25	83	50.8	62			
TF291-20-20	1.1/4"	20	1.1/4"	32	95	50.8	79			
TF291-24-20	1.1/2"	20	1.1/4"	32	95	60.3	81			
TF291-24-24	1.1/2"	24	1.1/2"	40	90	60.3	83			
TF291-32-24	2"	24	1.1/2"	40	90	71.4	83			
TF291-32-32	2"	32	2"	50	136	71.4	131			

STANDARD PRODUCT

TF202

SAE Code 62 Flange

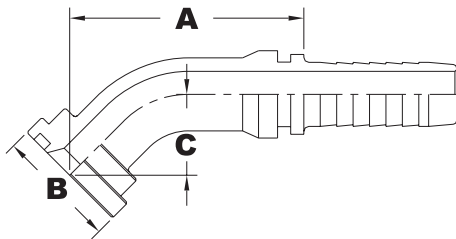


Part NO.	Flange Size	Hose Bore			Dimension[mm]					
		Size	Inch	DN	A	B				
TF202	Multi fit fitting for TS99S & TS33W									
TF202-12-12	3/4"	12	3/4"	20	52	41.2				
TF202-16-12	1"	12	3/4"	20	63	47.6				
TF202-16-16	1"	16	1"	25	63	47.6				
TF202-20-16	1.1/4"	16	1"	25	75	53.9				
TF202-20-20	1.1/4"	20	1.1/4"	32	76	53.9				
TF202-24-20	1.1/2"	20	1.1/4"	32	76	63.5				
TF202-24-24	1.1/2"	24	1.1/2"	40	82	63.5				
TF202-32-24	2"	24	1.1/2"	40	102	79.3				
TF202-32-32	2"	32	2"	50	102	79.3				

STANDARD PRODUCT

TF242

SAE Code 62 Flange
/ 45° Elbow

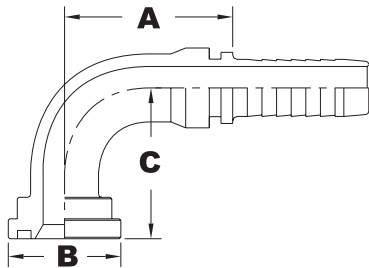


Part NO.	Flange Size	Hose Bore			Dimension[mm]					
		Size	Inch	DN	A	B	C			
TF242	Multi fit fitting for TS99S &TS33W									
TF242-12-12	3/4"	12	3/4"	20	82	41.2	32			
TF242-16-16	1"	16	1"	25	84	47.6	36			
TF242-20-20	1.1/4"	20	1.1/4"	32	111	53.9	46			
TF242-24-24	1.1/2"	24	1.1/2"	40	118	63.5	50			
TF242-32-32	2"	32	2"	50	154	79.3	75			

STANDARD PRODUCT

TF292

SAE Code 62 Flange
/ 90° Elbow

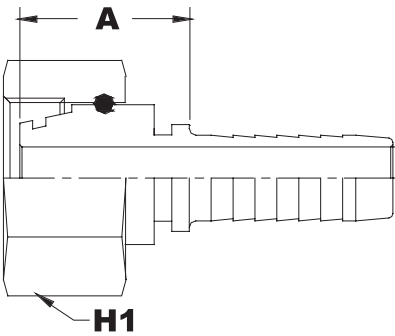


Part NO.	Flange Size	Hose Bore			Dimension[mm]					
		Size	Inch	DN	A	B	C			
TF292	Multi fit fitting for TS99S & TS33W									
TF292-12-12	3/4"	12	3/4"	20	64	41.2	58			
TF292-16-16	1"	16	1"	25	83	47.6	69			
TF292-20-20	1.1/4"	20	1.1/4"	32	95	53.9	90			
TF292-24-24	1.1/2"	24	1.1/2"	40	90	63.5	92			
TF292-32-32	2"	32	2"	50	136	79.3	153			

STANDARD PRODUCT

TN207

O-Ring Metric Female 24° Cone Swivel
L Series DIN 3865



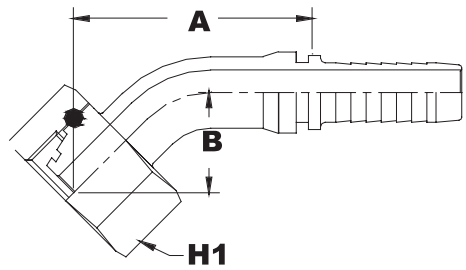
O-ring not included

Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	H1	PIPE			
TN207 Multi fit fitting for TS99S & TS33W										
TN207-12-04	M12-1.5	04	1/4"	6	28	14	6			
TN207-14-04	M14-1.5	04	1/4"	6	28	17	8			
TN207-16-04	M16-1.5	04	1/4"	6	28	19	10			
TN207-16-06	M16-1.5	06	3/8"	10	32	19	10			
TN207-18-06	M18-1.5	06	3/8"	10	30	22	12			
TN207-22-08	M22-1.5	08	1/2"	12	35	27	15			
TN207-26-10	M26-1.5	10	5/8"	16	39	32	18			
TN207-26-12	M26-1.5	12	3/4"	20	40	32	18			
TN207-30-12	M30-2.0	12	3/4"	20	41	36	22			
TN207-36-12	M36-2.0	12	3/4"	20	42	41	28			
TN207-36-16	M36-2.0	16	1"	25	46	41	28			
TN207-45-20	M45-2.0	20	1.1/4"	32	55	50	35			
TN207-52-24	M52-2.0	24	1.1/2"	40	56	60	42			

STANDARD PRODUCT

TN247

O-Ring Metric Female 24° Cone Swivel
L series DIN 3865 / 45° Elbow



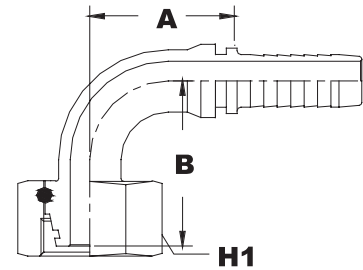
O-ring not included

Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	H1	PIPE		
TN247 Multi fit fitting for TS99S & TS33W										
TN247-12-04	M12-1.5	04	1/4"	6	36	15	14	6		
TN247-14-04	M14-1.5	04	1/4"	6	39	18	17	8		
TN247-16-04	M16-1.5	04	1/4"	6	41	19	19	10		
TN247-16-06	M16-1.5	06	3/8"	10	46	21	19	10		
TN247-18-06	M18-1.5	06	3/8"	10	46	21	22	12		
TN247-22-08	M22-1.5	08	1/2"	12	54	28	27	15		
TN247-26-10	M26-1.5	10	5/8"	16	64	30	32	18		
TN247-26-12	M26-1.5	12	3/4"	20	88	38	32	18		
TN247-30-12	M30-2.0	12	3/4"	20	86	36	36	22		
TN247-36-12	M36-2.0	12	3/4"	20	86	36	41	28		
TN247-36-16	M36-2.0	16	1"	25	86	37	41	28		
TN247-45-20	M45-2.0	20	1.1/4"	32	112	47	50	35		
TN247-52-24	M52-2.0	24	1.1/2"	40	119	63	60	42		

STANDARD PRODUCT

TN297

O-Ring Metric Female 24° Cone Swivel
L series DIN 3865 / 90° Elbow



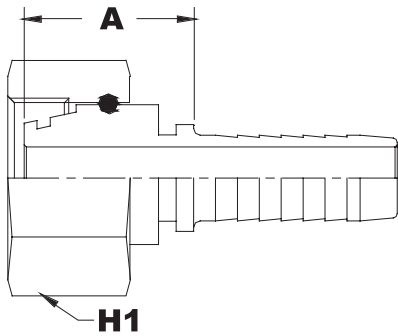
O-ring not included

Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	H1	PIPE		
TN297 Multi fit fitting for TS99S & TS33W										
TN297-12-04	M12-1.5	04	1/4"	6	30	26	14	6		
TN297-14-04	M14-1.5	04	1/4"	6	30	30	17	8		
TN297-16-04	M16-1.5	04	1/4"	6	30	31	19	10		
TN297-16-06	M16-1.5	06	3/8"	10	42	32	19	10		
TN297-18-06	M18-1.5	06	3/8"	10	42	33	22	12		
TN297-22-08	M22-1.5	08	1/2"	12	37	37	27	15		
TN297-26-10	M26-1.5	10	5/8"	16	43	51	32	18		
TN297-26-12	M26-1.5	12	3/4"	20	64	63	32	18		
TN297-30-12	M30-2.0	12	3/4"	20	64	61	36	22		
TN297-36-12	M36-2.0	12	3/4"	20	64	61	41	28		
TN297-36-16	M36-2.0	16	1"	25	83	68	41	28		
TN297-45-20	M45-2.0	20	1.1/4"	32	95	87	50	35		
TN297-52-24	M52-2.0	24	1.1/2"	40	90	91	60	42		

STANDARD PRODUCT

TN20H

O-Ring Metric Female 24° Cone Swivel
S series DIN 3865



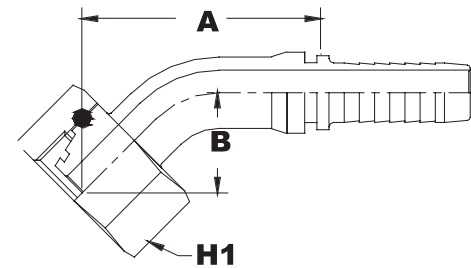
O-ring not included

Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	H1	PIPE			
TN20H Multi fit fitting for TS99S & TS33W										
TN20H-18-04	M18-1.5	4	1/4"	6	28	22	10			
TN20H-18-06	M18-1.5	6	3/8"	10	32	22	10			
TN20H-20-06	M20-1.5	6	3/8"	10	32	24	12			
TN20H-22-06	M22-1.5	6	3/8"	10	32	27	14			
TN20H-24-08	M24-1.5	8	1/2"	12	35	32	16			
TN20H-30-10	M30-2.0	10	5/8"	16	39	36	20			
TN20H-30-12	M30-2.0	12	3/4"	20	41	36	20			
TN20H-36-12	M36-2.0	12	3/4"	20	46	46	25			
TN20H-36-16	M36-2.0	16	1"	25	46	46	25			
TN20H-42-16	M42-2.0	16	1"	25	46	50	30			
TN20H-52-20	M52-2.0	20	1.1/4"	32	55	65	38			
TN20H-52-24	M52-2.0	24	1.1/2"	40	62	65	38			

STANDARD PRODUCT

TN24H

O-Ring Metric Female 24° Cone Swivel
S series DIN 3865 / 45° Elbow



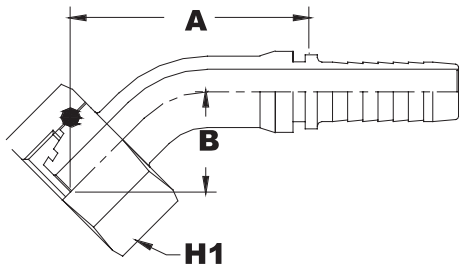
O-ring not included

Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	H1	PIPE		
TN24H Multi fit fitting for TS99S & TS33W										
TN24H-18-04	M18-1.5	4	1/4"	6	43	21	22	10		
TN24H-18-06	M18-1.5	6	3/8"	10	48	23	22	10		
TN24H-20-06	M20-1.5	6	3/8"	10	48	23	24	12		
TN24H-22-06	M22-1.5	6	3/8"	10	48	23	27	14		
TN24H-24-08	M24-1.5	8	1/2"	12	56	30	30	16		
TN24H-30-10	M30-2.0	10	5/8"	16	62	28	36	20		
TN24H-30-12	M30-2.0	12	3/4"	20	86	36	36	20		
TN24H-36-12	M36-2.0	12	3/4"	20	87	37	41	25		
TN24H-36-16	M36-2.0	16	1"	25	87	38	41	25		
TN24H-42-16	M42-2.0	16	1"	25	87	38	50	30		
TN24H-52-20	M52-2.0	20	1.1/4"	32	113	48	60	38		
TN24H-52-24	M52-2.0	24	1.1/2"	40	118	62	60	38		

STANDARD PRODUCT

TN29H

O-Ring Metric Female 24° Cone Swivel
S series DIN 3865 / 90° Elbow



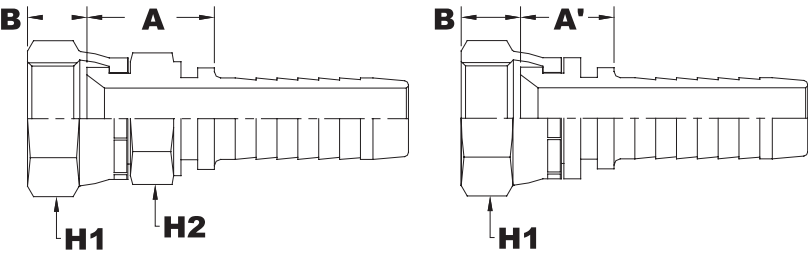
O-ring not included

Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	H1	PIPE		
TN29H Multi fit fitting for TS99S & TS33W										
TN29H-18-04	M18-1.5	4	1/4"	6	30	34	22	10		
TN29H-18-06	M18-1.5	6	3/8"	10	42	35	22	10		
TN29H-20-06	M20-1.5	6	3/8"	10	42	35	24	12		
TN29H-22-06	M22-1.5	6	3/8"	10	42	36	27	14		
TN29H-24-08	M24-1.5	8	1/2"	12	37	40	30	16		
TN29H-30-10	M30-2.0	10	5/8"	16	43	49	36	20		
TN29H-30-12	M30-2.0	12	3/4"	20	64	61	36	20		
TN29H-36-12	M36 X 2.0	12	3/4"	20	64	62	41	25		
TN29H-36-16	M36 X 2.0	16	1"	25	83	69	41	25		
TN29H-42-16	M42 X 2.0	16	1"	25	83	70	50	30		
TN29H-52-20	M52 X 2.0	20	1.1/4"	32	95	86	60	38		
TN29H-52-24	M52 X 2.0	24	1.1/2"	40	90	90	60	38		

STANDARD PRODUCT

TS202

Female JIS Parallel Pipe
30° Flared Swivel



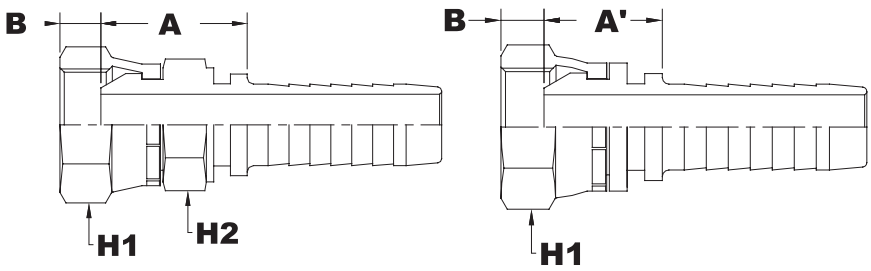
Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	A'	B	H1	H2	
TS202 Multi fit fitting for TS99S & TS33W										
TS202-04-04	1/4"-19	4	1/4"	6	21	16	9	19	19	
TS202-06-06	3/8"-19	6	3/8"	10	22	17	10	22	22	
TS202-08-08	1/2"-14	8	1/2"	12	24	19	12	27	27	
TS202-12-12	3/4"-14	12	3/4"	20	27	20	13	36	32	
TS202-16-16	1"-11	16	1"	25	32	25	15	41	36	
TS202-20-20	1.1/4"-11	20	1.1/4"	32	38	31	15.5	50	46	
TS202-24-24	1.1/2"-11	24	1.1/2"	40	43	33	16.5	55	55	
TS202-32-32	2"-11	32	2"	50	48	27	18	73	60	

STANDARD PRODUCT

Double Hex Product is Option

TS201

Female JIS Parallel Pipe
30° Cone Swivel



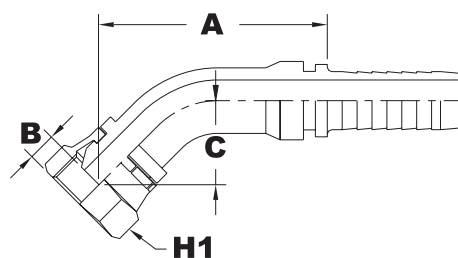
Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	A'	B	H1	H2	
TS201 Multi fit fitting for TS99S & TS33W										
TS201-04-04	1/4"-19	4	1/4"	6	24	19	6	19	19	
TS201-06-06	3/8"-19	6	3/8"	10	25	20	7	22	22	
TS201-08-08	1/2"-14	8	1/2"	12	26	21	9	27	27	
TS201-12-12	3/4"-14	12	3/4"	20	31	24	10	36	32	
TS201-16-16	1"-11	16	1"	25	35	28	12	41	36	
TS201-20-20	1.1/4"-11	20	1.1/4"	32	42	32	12.5	50	46	
TS201-24-24	1.1/2"-11	24	1.1/2"	40	45	35	12.5	55	55	
TS201-32-32	2"-11	32	2"	50	59	38	15	73	60	

STANDARD PRODUCT

Double Hex Product is Option

TS241

Female JIS Parallel Pipe Swivel
30° Cone Swivel / 45° Elbow

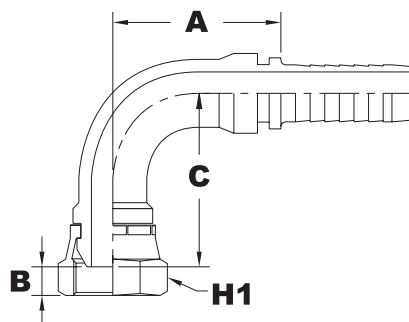


Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TS241 For Use Spiral Wire Hose										
TS241-04-04	1/4"-19	4	1/4"	6	37	6	16	19		
TS241-06-06	3/8"-19	6	3/8"	10	44	7	18	22		
TS241-08-08	1/2"-14	8	1/2"	12	50	9	20	27		
TS241-12-12	3/4"-14	12	3/4"	20	82	10	30	36		
TS241-16-16	1"-11	16	1"	25	81	12	33	41		
TS241-20-20	1.1/4"-11	20	1.1/4"	32	108	12.5	42	50		
TS241-24-24	1.1/2"-11	24	1.1/2"	40	115	12.5	48	55		
TS241-32-32	2"-11	32	2"	50	145	15	66	73		

STANDARD PRODUCT

TS291

Female JIS Parallel Pipe
30° Cone Swivel / 90° Elbow



Part NO.	Thread	Hose Bore			Dimension[mm]					
	T	Size	Inch	DN	A	B	C	H1		
TS291 For Use 4 Spiral Wire Hose										
TS291-04-04	1/4"-19	4	1/4"	6	30	6	27	19		
TS291-06-06	3/8"-19	6	3/8"	10	42	7	31	22		
TS291-08-08	1/2"-14	8	1/2"	12	37	9	33	27		
TS291-12-12	3/4"-14	12	3/4"	20	64	10	53	36		
TS291-16-16	1"-11	16	1"	25	83	12	63	41		
TS291-20-20	1.1/4"-11	20	1.1/4"	32	95	12.5	85	50		
TS291-24-24	1.1/2"-11	24	1.1/2"	40	90	12.5	88	55		
TS291-32-32	2"-11	32	2"	50	136	15	140	73		

STANDARD PRODUCT