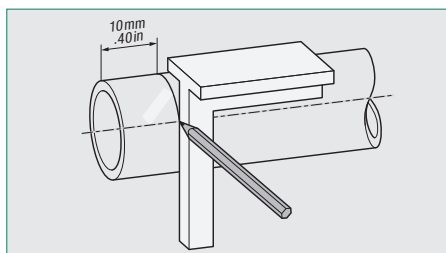


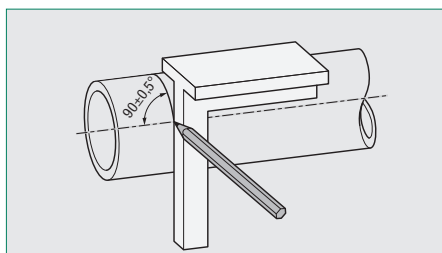
Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings

Tube Flaring with a STAUFF Press Machine and Assembly with the Fitting Body

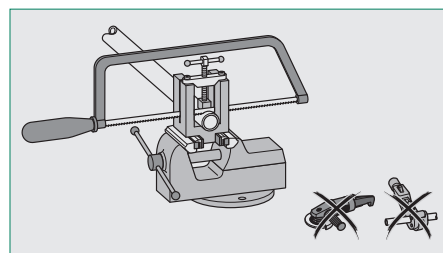
1. Tube Preparation



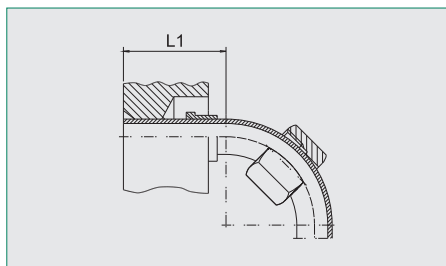
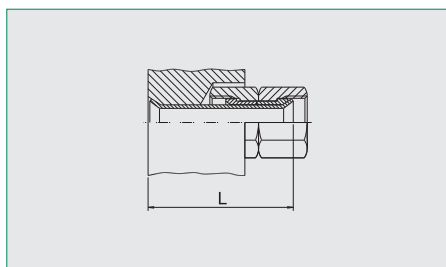
Saw off tube in right angle and at least 10 mm / .40 in from the cut made by the tube manufacturer / supplier in order to avoid failures caused during shipment.



A maximum angular deviation / tolerance of $\pm 0,5^\circ$ relative to the tube axis is permissible.

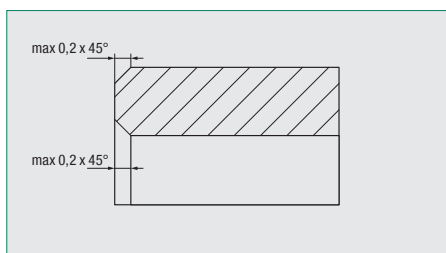


Only use proper tube sawing machinery or equipment. Do not use tube cutters or grinders as this may result in unwanted angled cuts and cause severe burring.

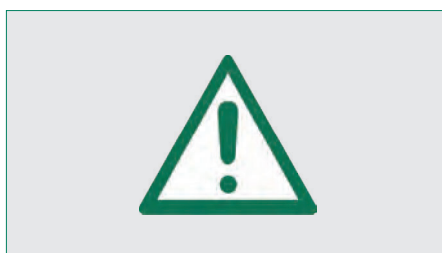


Series	Tube OD		Minimum Length L Straight Tube Sections		Minimum Length L1 Straight Tube Sections next to Tube Bends	
	(mm)	(in)	(mm)		(mm)	(in)
L	6	.24	59	2.32	43	1.69
	8	.31	62	2.44	44	1.73
	10	.39	64	2.52	46	1.81
	12	.47	67	2.64	47	1.85
	15	.59	75	2.95	50	1.97
	18	.71	76	2.99	58	2.28
	22	.87	81	3.19	60	2.36
	28	1.10	88	3.46	60	2.36
	35	1.38	92	3.62	62	2.44
	42	1.65	130	5.12	70	2.76
S	6	.24	61	2.40	43	1.69
	8	.31	64	2.52	44	1.73
	10	.39	66	2.60	46	1.81
	12	.47	68	2.68	47	1.85
	16	.63	79	3.11	52	2.05
	20	.79	82	3.23	58	2.28
	25	.98	94	3.70	60	2.36
	30	1.18	96	3.78	62	2.44
	38	1.50	136	5.35	70	2.76

Please note the minimum lengths for straight tube ends (dimension L) as well as for straight tube sections next to tube bends (dimension L1) that are listed in the table. If installation situations demand that the length of straight tube sections next to tube bends (dimension L1) has to be shorter than indicated in the table, tube bending has to be carried out after flaring.



Slightly deburr inside and outside of the tube end (max 0,2 x 45°). The assembly area of the tube has to be free of contamination, chips and paint.



Please note: Improperly prepared and contaminated tubes will affect the service life of the connection and may result in leakage.

2. Preparation and Machine-Assisted Tube Flaring

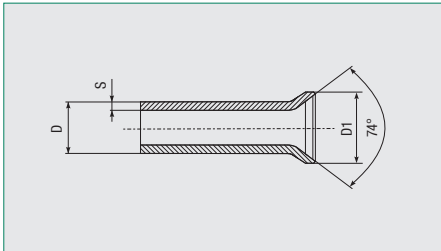
With regards to assembly preparation as well as the actual tube flaring process, please follow the detailed instructions in the operating manual of the machine.



Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings

Tube Flaring with a STAUFF Press Machine and Assembly with the Fitting Body

3. Inspection



Check the flared tube end for cracking and impurities after flaring.

Always verify the dimensional accuracy of the flare.

The checking diameter corresponds to the outside diameter D1 of the flared tube end (according to dimension table on the right). The flare must be at right angle to the tube axis and concentric with the tube.

Please note: If the flare is eccentric, too short or not wide enough, perfect function of the tube fitting cannot be guaranteed!

4. Assembly with the Fitting Body

Lubricate the o-rings of the 24°/37° flared tube adaptor (e.g. using mineral-oil based hydraulic fluid HLP32) and carefully insert it into the 24° taper of the fitting body.

It is recommended to use a bench vice to press and permanently capture the 24°/37° flared tube adaptor into the 24° taper of the tube fitting – a great help to the tube fitter during re-assembly. In this case, please make sure that all components are suitably protected against damage.

Apply the flared tube end to the 24°/37° flared tube adaptor, which is attached to the fitting body, tighten the union nut until the noticeable increase in force, and then finish the assembly with another approximately 1/2 a turn (180°) beyond this point.

Important: Always use a spanner to hold the fitting body during the assembly procedure.

Tube OD		Dimensions		D1 _{min}		D1 _{max}	
D		S		(mm)	(in)	(mm)	(in)
(mm)	(in)	(mm)	(in)				
6	.24	1	.04	9,1	.36	10	.39
		1,5	.06				
8	.31	1	.04	11,3	.44	12	.47
		1,5	.06				
		2	.08				
10	.39	1	.04	13,1	.52	14	.55
		1,5	.06				
		2	.08				
12	.47	1	.04	15,3	.60	16	.63
		1,5	.06				
		2	.08				
14	.55	1,5	.06	18,6	.73	19,6	.77
		2	.08				
		2,5	.10				
		3	.12				
15	.59	1,5	.06	19,1	.75	20	.79
		2	.08				
		2,5	.10				
16	.63	1,5	.06	20,6	.81	22	.87
		2	.08				
		2,5	.10				
		3	.12				
18	.71	1,5	.06	23,2	.91	24	.94
		2	.08				
		2,5	.10				
20	.79	2	.08	25,6	1.01	26,8	1.06
		2,5	.10				
		3	.12				
		3,5	.14				
22	.87	1,5	.06	26,5	1.04	27,5	1.08
		2	.08				
		2,5	.10				
		3	.12				
25	.98	2	.08	31,1	1.22	33	1.30
		2,5	.10				
		3	.12				
		4	.16				
28	1.10	2	.08	32,7	1.29	33,3	1.31
		2,5	.10				
		3	.12				
30	1.18	2	.08	37	1.46	38,7	1.52
		2,5	.10				
		3	.12				
		4	.16				
		5	.20				
35	1.38	2	.08	41,8	1.65	42,7	1.68
		2,5	.10				
		3	.12				
		4	.16				
38	1.50	2,5	.10	46	1.81	47,2	1.86
		3	.12				
		4	.16				
		5	.20				
42	1.65	2	.08	48,8	1.92	49,8	1.96
		3	.12				
		4	.16				

5. Repeated Assembly

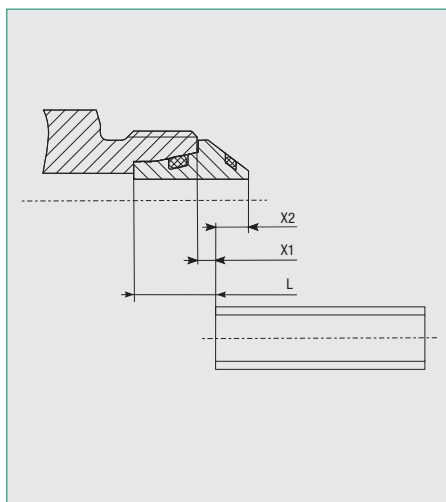
For repeated assembly, the union nut has to be tightened using exactly the same force as for the original assembly.



Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings

Tube Flaring with a STAUFF Press Machine and Assembly with the Fitting Body

Calculation Dimensions



The correct tube length can be determined by measuring the distance between the 24°/37° flared tube adaptors pressed into the fitting bodies. Dimension X2 has then to be added for each of the connections.

The correct tube length can also be determined by measuring the distance between the fitting bodies. Dimension X1 has then to be subtracted for each of the connections.

Dimension L corresponds to the difference in tube length compared to cutting ring fittings. When changing over from cutting ring fittings to flared tube fittings, the tube has to be shortened by dimension L.

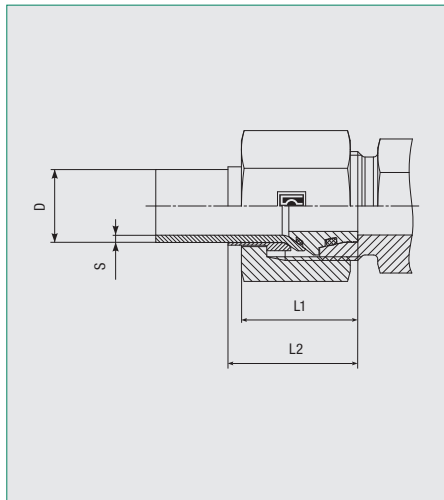
Tube OD D (mm)	(in)	Dimensions		X2 (mm)	(in)	L (mm)	(in)
		X1 (mm)	(in)				
6	.24	1	.04	3,5	.14	8	.31
		2	.08	2,5	.10	9	.35
8	.31	1	.04	4	.16	8	.31
		2	.08	3	.12	9	.35
		2,5	.10	2,5	.10	9,5	.37
10	.39	1	.04	4,5	.18	8	.31
		2	.08	3,5	.14	9	.35
		3	.12	2,5	.10	10	.39
12	.47	1	.04	4,5	.18	8	.31
		2	.08	3,5	.14	9	.35
		3	.12	2,5	.10	10	.39
14	.55	0,5	.02	5,5	.22	8,5	.33
		1	.04	5	.20	9	.35
		2	.08	4	.16	10	.39
		3	.12	3	.12	11	.43
15	.59	1	.04	4,5	.18	8	.31
		2	.08	3,5	.14	9	.35
		3	.12	2,5	.10	10	.39
16	.63	0	.00	6,5	.26	8,5	.33
		1	.04	5,5	.22	9,5	.37
		1,5	.06	5	.20	10	.39
		2,5	.10	4	.16	11	.43
18	.71	0	.00	5,5	.22	7,5	.30
		1	.04	4,5	.18	8,5	.33
		1,5	.06	4	.16	9	.35
20	.79	1	.04	7	.28	11,5	.45
		2	.08	6	.24	12,5	.49
		3	.12	5	.20	13,5	.53
		4	.16	4	.16	14,5	.57
22	.87	1	.04	5,7	.22	8,5	.33
		2	.08	4,7	.19	9,5	.37
		3	.12	3,7	.15	10,5	.41
		3,5	.14	3,2	.13	11	.43
25	.98	1	.04	7	.28	13	.51
		1,5	.06	6,5	.26	13,5	.53
		2,5	.10	5,5	.22	14,5	.57
		4	.16	4	.16	16	.63
28	1.10	1,5	.06	5,7	.22	9	.35
		2,5	.10	4,7	.19	10	.39
		3	.12	4,2	.17	10,5	.41
30	1.18	-0,5	-.02	9	.35	13	.51
		0,5	.02	8	.31	14	.55
		1	.04	7,5	.30	14,5	.57
		3	.12	5,5	.22	16,5	.65
		4,5	.18	4	.16	18	.71
35	1.38	1,5	.06	6,5	.26	12	.47
		2	.08	6	.24	12,5	.49
		3	.12	5	.20	13,5	.53
		4,5	.18	3,5	.14	15	.59
		0	.00	10	.39	16	.63
38	1.50	0,5	.02	9,5	.37	16,5	.65
		2	.08	8	.31	18	.71
		4	.16	6	.24	20	.79
		1,5	.06	7	.28	12,5	.49
42	1.65	3	.12	6,5	.26	14	.55
		4,5	.18	5	.20	15,5	.61



Assembly Instructions for STAUFF Connect 37° Flared Tube Fittings

Tube Flaring with a STAUFF Press Machine and Assembly with the Fitting Body

Calculation Dimensions



Series	Tube OD x Wall Thickness (mm/in) D x S	Dimensions (mm/in) L1 L2		Corrected Tube Lengths for Different Wall Thicknesses (mm/in)									
		L1	L2	1	1,5	2	2,5	3	3,5	4	5		
L	6 x 1	17,5	20,5	•	1	1							
	.24 x .04	.69	.81		.04	.04							
	8 x 1	18,5	21,5	•	1	1,5							
	.31 x .04	.73	.85		.04	.06							
	10 x 1,5	19,5	24	-1	•	1							
	.39 x .06	.77	.94	-.04		.04							
	12 x 1,5	20	24,5	-1	•	1							
	.47 x .06	.79	.96	-.04		.04							
	15 x 1,5	21,5	25,5		•	1	2						
	.59 x .06	.85	1.00			.04	.08						
	18 x 2	23	27		-1	•	1						
	.71 x .08	.91	1.06		-.04		.04						
	22 x 2	24	30,5		-1	•	1	1,5					
	.87 x .08	.94	1.20		-.04		.04	.06					
	28 x 3	26	31,5			-1,5	-0,5	•					
	1.10 x .12	1.02	1.24			-.06	-.02						
	35 x 3	30	36			-1,5	-1	•			1,5		
	1.38 x .12	1.18	1.42			-.06	-.04				.06		
	42 x 3	34	40			-1,5		•			1,5		
	1.65 x .12	1.34	1.57			-.06					.06		
S	6 x 1	17,5	20,5	•	1	1							
	.24 x .04	.69	.81		.04	.04							
	8 x 1	18,5	21,5	•	1	1,5							
	.31 x .04	.73	.85		.04	.06							
	10 x 1,5	20	24,5	-1	•	1							
	.39 x .06	.79	.96	-.04		.04							
	12 x 1,5	20,5	25	-1	•	1							
	.47 x .06	.81	.98	-.04		.04							
	14 x 2	23	27,5		-0,5	•	1	2					
	.55 x .08	.91	1.08		-.02		.04	.08					
	16 x 2	25	31		-1	•	0,5	1,5					
	.63 x .08	.98	1.22		-.04		.02	.06					
	20 x 2	27,5	33			•	1	2	3				
	.79 x .08	1.08	1.30				.04	.08	.12				
	25 x 3	32	38,5			-1,5	-1	•			1,5		
	.98 x .12	1.26	1.52			-.06	-.04				.06		
	30 x 3	33	41,5			-2	-1	•			2	3,5	
	1.18 x .12	1.30	1.63			-.08	-.04				.08	.14	
	38 x 3	37,5	48				-0,5	•			1,5	3,5	
	1.50 x .12	1.48	1.89				-.02				.06	.14	

