

Parker Seal-Lok® Fittings Parflange and Assembly Guide

Bulletin 4350 - B3
OCTOBER 1999

TUBE PREPARATION

Establish the required length of tubing, allowing for the extra cut-off length using Figure 1 and Table 1 as a guide (Table 2 for metric).

Tube O.D., Inch	Tube Wall Thickness, Inch										
	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188
1/4	3/16	13/64	5/32								
3/8		9/64	9/64	5/32	5/32	5/32					
1/2		5/32	9/64	9/64	9/64	9/64					
5/8			5/32	5/32	7/64	11/64	5/32	11/64			
3/4			5/32	5/32	1/8	7/64	9/64	5/32	11/64		
1				9/64	9/64	7/64	11/64	11/64	3/16		
1 1/4					5/32	7/64	7/64	1/8	5/32	11/64	11/64
1 1/2				11/64	11/64	3/16	3/16	3/16	3/16	15/64	7/32

Table 1 — Extra tube cut-off length (use only as a guide)

Tube Wall Thickness mm	Metric Tube Outside Diameter (mm)															
	6	8	10	12	14	15	16	18	20	22	25	28	30	32	35	38
1.0	4.5	5.5	2.5	3.5	—	5.0										
1.5	5.5	5.0	4.0	4.5	4.5	4.5	3.0	6.0								
2.0			3.5	4.5	6.0	5.0	3.0	5.5	4.0	6.5	4.5	6.0	5.0	—	—	5.5
2.5				4.5	5.5	5.0	3.5	6.5	4.0	7.0	4.5	7.5	5.5	—	—	—
3.0							3.0	6.0	4.0	7.0	4.5	7.0	5.0	4.0	7.0	5.0
3.5										4.5	—	—	—	—	—	—
4.0									3.5	—	4.5	—	5.5	4.0	—	5.0
5.0										4.0	—	—	—	—	—	5.0

Table 2 — Extra tube cut-off length (use only as a guide)

For 90° pre-bent tubing, allow for the minimum straight length using Figure 2 and Table 3.

Tube O.D. Inch	Tube O.D. Metric	L		L1	
		(Inch)	(mm)	(Inch)	(mm)
1/4"	6	1 5/16	35	3 1/8	79
5/16"	8	1 5/16	35	3 5/32	80
3/8"	10	1 5/16	40	3 3/16	81
1/2"	12	1 3/8	40	3 1/4	82
	15	1 3/8	40	3 5/16	84
5/8"	16	1 1/2	41	3 5/16	84
	18	1 5/8	42	3 11/32	85
3/4"	20	1 3/4	50	3 3/8	86
	22	1 7/8	50	3 7/16	87
1"	25	1 7/8	50	3 1/2	89
	30	1 7/8	50	3 19/32	91
1 1/4"	32	1 7/8	50	3 5/8	92
	35	2	50	3 11/16	94
1 1/2"	38	2	50	3 3/4	95

Table 3 — Minimum straight length for 90° flanging

- ① Cut the tubing reasonably square ($\pm 1^\circ$) to proper length. While cutting with hacksaw use Parker "TRU-CUT" sawing vise to assure squareness of cut.
- ② Lightly debur both ID and OD of the tube end.
- ③ Remove metal chips from the tube end using a brush or compressed air.

PARFLANGE OPERATION

- ④ The following steps are used when operating the Parflange 1025 as shown. For more detailed instructions, refer to Bulletin 4390-1025A. (For instructions on the operation of the Parflange 1040, refer to Bulletin 4390-1040A).

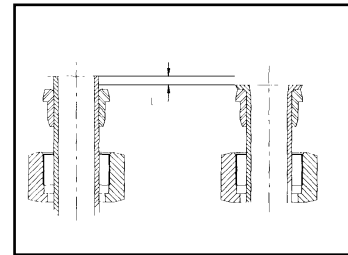


Figure 1 — Extra tube cut-off length

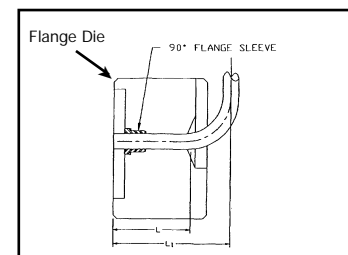
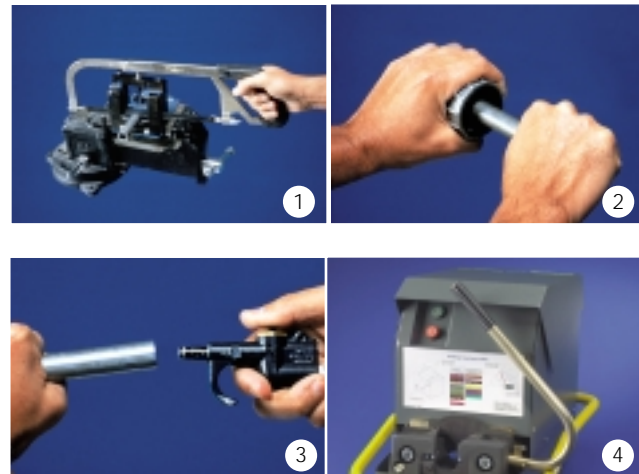


Figure 2 — Minimum straight length



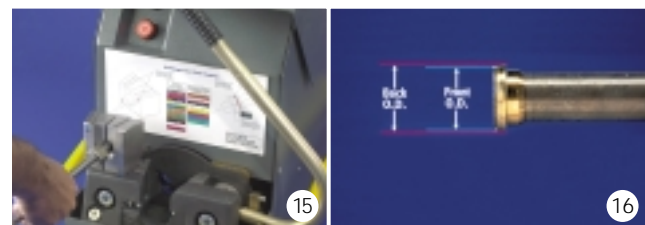
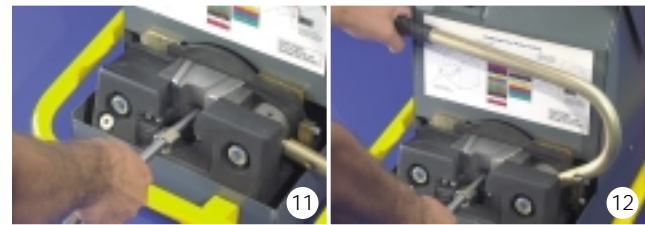
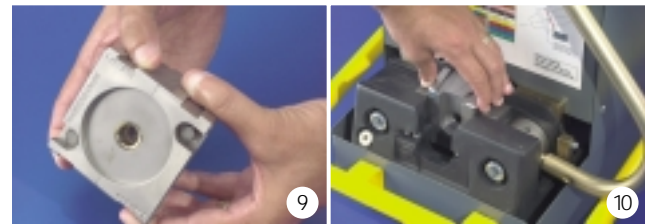
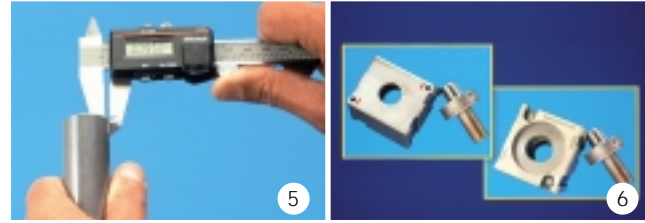
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PARFLANGE OPERATION (CONTD.)

- ⑤ Measure the tube OD and wall thickness for proper die and pin selection.
- ⑥ Select the die and pin matching the tube OD and wall thickness. Both the die and pin are stamped with the tube size and wall thickness, in addition to being color-coded. (A color-coded chart should be attached to the machine).
- ⑦ Raise the tube stop and install the pin into the head of the machine.
- ⑧ Insert the corresponding Parflange sleeve into the sleeve cavity of one half of the die set.
- ⑨ Attach the other half of the die set captivating the Parflange sleeve.
- ⑩ Place the die set with the inserted sleeve into the housing of the Parflange machine. The die set must bottom-out in the housing.
- ⑪ Insert the tube through the die until it touches the tube stop.
- ⑫ Lower the clamp lever lightly to clamp the die in place.
- ⑬ Press the green button on the front of the machine to activate flange operation. Flanging is complete when the machine automatically turns itself off.
- ⑭ Lift the clamp lever and remove the tube assembly and die set from the housing.
- ⑮ Place the die set in the die separator and move the tube side to side to separate tube assembly from die set.
- ⑯ Inspect the flange. The flange diameter can be easily inspected by comparing it to the small OD and large OD of the sleeve as shown. The sealing surface must be relatively smooth.



FINAL INSTALLATION

- ⑰ Ensure that the correct O-ring is properly placed in the face seal O-ring groove. It is recommended that a CORG assembly tool be used when installing the O-ring into Seal-Lok Captive O-ring Groove (CORG).
- ⑱ After installation of the O-ring, place the tube assembly against the fitting body so that the flat face of the flanged tube end comes in full contact with the O-ring.
- ⑲ Thread the nut to the finger tight position and tighten to the recommended torque value from the table below. (A back-up wrench may be necessary to prevent movement of the fitting).

SAE Dash Size	Tube Side Thread Size	Tube Side Assembly Torque (+10% -0%)			Flats from Wrench Resistance (F.F.W.R.)
		in-lb.	ft-lb.	N-m	Tube Nuts
-4	9/16-18	220	18	25	1/4 to 1/2
-6	11/16-16	360	30	40	1/4 to 1/2
-8	13/16-16	480	40	55	1/4 to 1/2
-10	1-14	—	60	80	1/4 to 1/2
-12	1 3/16-12	—	85	115	1/4 to 1/2
-14	1 5/16-12	—	95	130	1/4 to 1/2
-16	1 7/16-12	—	110	150	1/4 to 1/2
-20	1 11/16-12	—	140	190	1/4 to 1/2
-24	2-12	—	180	245	1/4 to 1/2
-32	2 1/2-12	—	360	490	—



Table 20A — Assembly Torque and F.F.W.R.