



Torque Chart

Flare Connector Multi Angle (FCMA)
Union Straight (UNST)
Union Reducer (UNRD)
Swage Union (SWUN)

The SmartLock Flare Connector Multi Angle, Union Straight, Union Reducer, and Swage Union Fitting designs do not require torque wrenches.

Fastening with a wrench until the nuts stop against the body (no gap between the nuts) will achieve the torque required for a metal to metal seal.

However, if you prefer to use torque wrenches, the above chart are the numbers you need to tighten the swage nut and the tube nut.

Follow the installation guide and substitute torque wrenches where we state wrenches.

Note: For Flare Connector Reducer Angle, Flare Body turns while tightening the nut.

Also, the required torque for Swage Union is lower than the required torque for tube nut.

Flare Connector Multi Angle (FCMA)

Part No.	Flare Side	Tube Side			
		Tube Outside Diameter		Torque	
		mm	inch	kgf.cm	lbf.ft
FCMA1400		Ø6.35	0.25(1/4)	250	18.2
FCMA3800		Ø9.52	0.375 (3/8)	350	25.5
FCMA1200		Ø12.7	0.5(1/2)	400	29.1
FCMA5800		Ø15.88	0.625(5/8)	550	40.1
FCMA3400		Ø19.05	0.750 (3/4)	700	51

Union Straight (UNST)

Part No.	Tube1 Side				Tube 2 Side			
	Tube Outside Diameter		Torque		Tube Outside Diameter		Torque	
	mm	inch	kgf.cm	lbf.ft	mm	inch	kgf.cm	lbf.ft
UNST1400	Ø6.35	0.25 (1/4)	250	18.2	Ø6.35	0.25(1/4)	250	18.2
UNST3800	Ø9.52	0.375 (3/8)	350	25.5	Ø9.52	0.375 (3/8)	350	25.5
UNST1200	Ø12.7	0.5 (1/2)	400	29.1	Ø12.7	0.5(1/2)	400	29.1
UNST5800	Ø15.88	0.625 (5/8)	550	40.1	Ø15.88	0.625(5/8)	550	40.1
UNST3400	Ø19.05	0.750 (3/4)	700	51	Ø19.05	0.750 (3/4)	700	51
UNST7800	Ø22.225	0.875 (7/8)	850	61.9	Ø22.225	0.875 (7/8)	850	61.9

Union Reducer (UNRD)

Part No.	Larger Tube Side				Smaller Tube Side			
	Tube Outside Diameter		Torque		Tube Outside diameter		Torque	
	mm	inch	kgf.cm	lbf.ft	mm	inch	kgf.cm	lbf.ft
UNRD3814	Ø9.52	0.375 (3/8)	350	25.5	Ø6.35	0.25(1/4)	250	18.2
UNRD1238	Ø12.7	0.5 (1/2)	400	29.1	Ø9.52	0.375 (3/8)	350	25.5
UNRD5812	Ø15.88	0.625 (5/8)	550	40.1	Ø12.7	0.5(1/2)	400	29.1
UNRD3458	Ø19.05	0.750 (3/4)	700	51	Ø15.88	0.625(5/8)	550	40.1
UNRD7834	Ø22.225	0.875 (7/8)	850	61.9	Ø19.05	0.750 (3/4)	700	51

Swage Union (SWUN)

Part No.	Swage Side				Tube Side			
	Swage Outside Diameter		Torque		Tube Outside diameter		Torque	
	mm	inch	kgf.cm	lbf.ft	mm	inch	kgf.cm	lbf.ft
SWUN3800	Ø11.5	0.453	320	23.3	Ø9.52	0.375 (3/8)	350	25.5
SWUN5800	Ø18.2	0.717	550	40.1	Ø15.88	0.625(5/8)	550	40.1
SWUN3400	Ø21.1	0.831	650	47.3	Ø19.05	0.750 (3/4)	700	51
SWUN7800	Ø24.5	0.965	800	58.2	Ø22.225	0.875 (7/8)	850	61.9