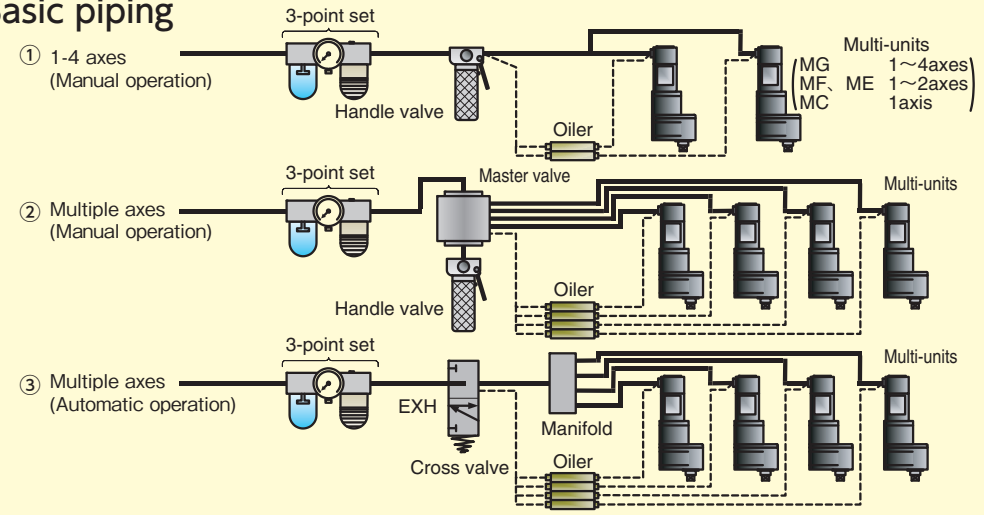
Correctly use TOHNICHI multi-spindle torque tools to facilitate precise, comfortable, and high performance screw tightening.

■Basic piping



■Cautions for handling multi-units

●Automatic machines

Air supply method

1.Use an electromagnetic or manual valve with three or more ports to stop and start the supply of compressed air.
2.The multi-unit starts rotating when air is supplied and automatically stops or reverses the direction of rotation once the set torque is obtained. If automatic reversing of the direction of rotation is carried out, close the air supply electromagnetic valve 2 to 3 seconds after the unit starts reversing by stopping the signal of the limit switch with a relay or a timer.

Method of tightening

1.Use the multi-unit with the bolts inserted 6-7 mm more after they have been contacted by the socket.
2.When you use a cylinder to move the frame of an automatic multi-unit, use a speed control valve so that the socket does not press on the bolt head too strongly.
3.Use a slide drive when tightening in the horizontal or vertical directions (ME, MC).

●Manual machines

1.The use of compressed air supply from the handle valve is limited to between 1 to 4 axes. If the multi-unit is to be used to tighten more axes, use a master valve (See figure above).
2.Use a master valve for simultaneous tightening of a large number of bolts.
3.Use a slide drive to facilitate coupling and uncoupling of bolts.

●Others

1.For oiling multi-unit, use a forced oiling apparatus, and use ISO VGA32 (turbine #90) oil.
2.TOHNICHI's unique patented system with a built-in high precision sensor allows a tightening control system to be developed.
3.Automatic stop and reverse operations are not accompanied by residual torque (ME, MC).

■Minimum distance between the spindles of multi-units

The following table gives the minimum distances that must be maintained between multi-unit axes when assembling a multi-unit.

[mm]

Number of axes / Type	2	3	4	5	6
MG60CN～250CN	16	19	23	28	33
MF6N、12N	22	26	32	38	51
ME25N	28	33	40	48	62
ME45N、ME80N	35	41	50	60	84
ME126N	50	58	71	86	100
MC220N～MC400N	64	75	91	109	129
MC700N～MC1200N	78	91	111	133	157

This table is applicable to 4 types, MG, MF, ME, and MC.

●Example of distances between axes for the MC2200N and MC4000N.

[mm]

Number of axes / Type	2	3	4	5	6
MC2200N	94	141	141	238	368
MC4000N	128	160	163	336	420

■The following table gives the dimensions of the connecting elements of TOHNICHI power torque tools.

[mm]

Air coupling thread	Rc(PT)1/4 Female screw, Auxiliary one-touch coupler	GB1/4 B(PF1/4) Male screw	R(PT)3/8 Male screw	Rc(PT)1/4 Female screw	GB1/4 B(PF1/4) Male screw
Type	U30CN～250CN	U500CN、 UR500CN U1000CN	AUR500CN AS12N ASH40N～120N ASL30N～90N MG60CN～250CN AP220N～1200N	A10N～100N AC25N～100N MF6N、12N ME25N～126N	A180N/AC180N