Simple Specials:
-XC14: Change of Trunnion Bracket Mounting Position

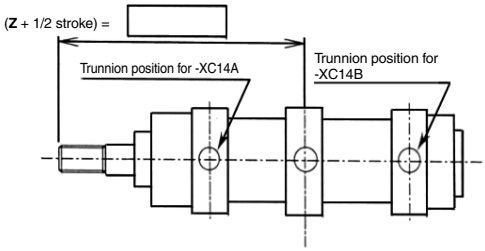
These changes are dealt with Simple Specials System. Refer to the front matter pages for details.

8 Change of Trunnion Bracket Mounting Position

Note

The position for mounting the trunnion pivot bracket on the cylinder can be moved from the standard mounting position to any desired position.

Series	Description	Model	Action	
MB	Standard type	MB-Z	Double acting, Single rod	
		MBW-Z	Double acting, Double rod	
	Non-rotating rod type	MBK-Z	Double acting, Single rod	
	End lock cylinder	MBB	Double acting, Single rod	
	Smooth cylinder	MBY-Z	Double acting, Single rod	
CA2	Standard type	CA2-Z	Double acting, Single rod	
		CA2W-Z	Double acting, Double rod	
	Non-rotating rod type	CA2K	Double acting, Single rod	Applicable to ø40 to ø63
		CA2KW	Double acting, Double rod	Applicable to ø40 to ø63
	End lock cylinder	CBA2	Double acting, Single rod	
	Air-hydro cylinder	CA2H	Double acting, Single rod	
	Smooth cylinder	CA2Y-Z	Double acting, Single rod	
CS1	Standard type	CS1	Double acting, Double rod	
		CS1W	Double acting, Single rod	
	Low friction type	CS1□Q	Double acting, Single rod	
CS2	Standard type	CS2	Double acting, Double rod	
		CS2W	Double acting, Single rod	
	Smooth cylinder	CS2Y	Double acting, Single rod	
CNA2	Cylinder with lock	CNA2	Double acting, Double rod	
		CNA2W	Double acting, Single rod	
CNS		CNS	Double acting, Single rod	
CLS		CLS	Double acting, Single rod	
CL1	Lock-up cylinder	CL1	Double acting, Single rod	Applicable to ø40 to ø100
CVS1	Valve mounted cylinder	CVS1	Double acting, Single rod	
		CVS1K	Double acting, Single rod	Applicable to ø40 to ø63



⚠ Precautions

1. Specify "Z + 1/2 stroke" in the case the trunnion bracket position is not -XC14A, B or trunnion is not a center trunnion.
2. SMC will make appropriate arrangements if no dimension, tolerance, or finish instructions are given in the diagram.
3. The possible range of trunnion bracket mounting position is indicated in the table below.
4. Some trunnion mounting positions do not allow auto switch mounting. Please consult with SMC for more information.
5. When the trunnion position is changed to somewhere close to the cover for the end lock cylinder, there is a possibility that the lock part and the trunnion pivot bracket may interfere with each other. Change the lock position (-X3) at the same time.
6. The CS2 series has a greater range of trunnion bracket mounting positions than CS1 series, so the value of "Z + 1/2 stroke" at -XC14A and -XC14B is different.

MB Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 stroke					
	For -XC14A	For -XC14B	For -XC14		Reference	Minimum stroke
			Minimum	Maximum	Standard (Center trunnion)	
32	82.5	95.5 + Stroke	84	94 + Stroke	89 + 1/2 stroke	1
40	89	97 + Stroke	90	96 + Stroke	93 + 1/2 stroke	1
50	100.5	109.5 + Stroke	102	108 + Stroke	105 + 1/2 stroke	1
63	103.5	106.5 + Stroke	105	105 + Stroke	105 + 1/2 stroke	1
80	127	131 + Stroke	128	130 + Stroke	129 + 1/2 stroke	1
100	130	128 + Stroke	131	127 + Stroke	129 + 1/2 stroke	1
125	160	154 + Stroke	160.5	153.5 + Stroke	157 + 1/2 stroke	1

CA2/CBA2/CVS1 Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 stroke					
	For -XC14A	For -XC14B	For -XC14		Reference	Minimum stroke
			Minimum	Maximum	Standard (Center trunnion)	
40	89	97 + Stroke	89.5	96.5 + Stroke	93 + 1/2 stroke	1
50	99	107 + Stroke	99.5	106.5 + Stroke	103 + 1/2 stroke	1
63	103	111 + Stroke	103.5	110.5 + Stroke	107 + 1/2 stroke	1
80	125	133 + Stroke	125.5	132.5 + Stroke	129 + 1/2 stroke	1
100	132	138 + Stroke	132.5	137.5 + Stroke	135 + 1/2 stroke	1

CS1 Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 stroke					
	For -XC14A	For -XC14B	For -XC14		Reference	Minimum stroke
			Minimum	Maximum	Standard (Center trunnion)	
125	170	148 + Stroke	170.5	147.5 + Stroke	159 + 1/2 stroke	25
140	172.5	145.5 + Stroke	173	145 + Stroke	159 + 1/2 stroke	30
160	189	157 + Stroke	189.5	156.5 + Stroke	173 + 1/2 stroke	35
180	203.5	177.5 + Stroke	204	177 + Stroke	190.5 + 1/2 stroke	30
200	203.5	177.5 + Stroke	204	177 + Stroke	190.5 + 1/2 stroke	30
250	243.5	217.5 + Stroke	244	217 + Stroke	230.5 + 1/2 stroke	30
300	263.5	232.5 + Stroke	264	232 + Stroke	248 + 1/2 stroke	35

Symbol
-XC14

CS2 Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 x Stroke					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
125	165.5	152.5 + Stroke	166	152 + Stroke	159 + 1/2 x Stroke	25
140	168	150 + Stroke	168.5	149.5 + Stroke	159 + 1/2 x Stroke	30
160	186	160 + Stroke	186.5	159.5 + Stroke	173 + 1/2 x Stroke	35

CNA2 Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 stroke Without rod boot					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
40	158	166 + Stroke	158.5	165.5 + Stroke	162 + 0.5 stroke	25
50	177	185 + Stroke	177.5	184.5 + Stroke	181 + 0.5 stroke	25
63	187	195 + Stroke	187.5	194.5 + Stroke	191 + 0.5 stroke	32
80	227	235 + Stroke	227.5	234.5 + Stroke	231 + 0.5 stroke	41
100	252	258 + Stroke	252.5	257.5 + Stroke	255 + 0.5 stroke	45

CNS Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 stroke Without rod boot					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
125	375	353 + Stroke	375.5	352.5 + Stroke	364 + 0.5 stroke	25
140	417.5	390.5 + Stroke	418	390 + Stroke	404 + 0.5 stroke	30
160	479	447 + Stroke	479.5	446.5 + Stroke	463 + 0.5 stroke	35
Symbol / Bore size (mm)	Z + ℓ + 1/2 stroke With rod boot					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
125	398 + ℓ	376 + ℓ + Stroke	398.5 + ℓ	375.5+ℓ + Stroke	387 + ℓ + 1/2 stroke	30
140	440.5 + ℓ	413.5 + ℓ + Stroke	441 + ℓ	413+ℓ + Stroke	427 + ℓ + 1/2 stroke	30
160	500 + ℓ	468 + ℓ + Stroke	500.5 + ℓ	467.5+ℓ + Stroke	484 + ℓ + 1/2 stroke	35

CLS Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 stroke Without rod boot					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
125	280	258 + Stroke	280.5	257.5 + Stroke	269 + 0.5 stroke	25
140	282.5	255.5 + Stroke	283	255 + Stroke	269 + 0.5 stroke	30
160	321	289 + Stroke	321.5	288.5 + Stroke	305 + 0.5 stroke	35
Symbol / Bore size (mm)	With rod boot					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
125	303 + 0.2 stroke	281+1.2 stroke	303.5 + 0.2 stroke	280.5 + 1.2 stroke	292 + 0.7 stroke	25
140	305.5 + 0.2 stroke	278.5+1.2 stroke	306 + 0.2 stroke	278 + 1.2 stroke	292 + 0.7 stroke	30
160	345 + 0.2 stroke	310+1.2 stroke	345.5 + 0.2 stroke	309.5 + 1.2 stroke	326 + 0.7 stroke	35

CL1 Series

(mm)

Symbol / Bore size (mm)	Z + 1/2 stroke Without rod boot					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
40	158	166 + Stroke	158.5	165.5 + Stroke	162 + 1/2 stroke	—
50	177	185 + Stroke	177.5	184.5 + Stroke	181 + 1/2 stroke	—
63	187	195 + Stroke	187.5	194.5 + Stroke	191 + 1/2 stroke	—
80	217	225 + Stroke	217.5	224.5 + Stroke	221 + 1/2 stroke	—
100	232	238 + Stroke	232.5	237.5 + Stroke	235 + 1/2 stroke	—
Symbol / Bore size (mm)	Z + ℓ + 1/2 stroke With rod boot					
	For -XC14A	For -XC14B	For -XC14		Reference Standard (Center trunnion)	Minimum stroke
			Minimum	Maximum		
40	166 + ℓ	174 + ℓ + Stroke	166.5 + ℓ	173.5 + ℓ + Stroke	170 + ℓ+1/2 stroke	20
50	185 + ℓ	193 + ℓ + Stroke	185.5 + ℓ	192.5 + ℓ + Stroke	189 + ℓ+1/2 stroke	20
63	195 + ℓ	203 + ℓ + Stroke	195.5 + ℓ	202.5 + ℓ + Stroke	199 + ℓ+1/2 stroke	20
80	226 + ℓ	234 + ℓ + Stroke	226.5 + ℓ	233.5 + ℓ + Stroke	230 + ℓ+1/2 stroke	20
100	241 + ℓ	247 + ℓ + Stroke	241.5 + ℓ	246.5 + ℓ + Stroke	244 + ℓ+1/2 stroke	20