



鋁合金氣缸採購指南
MA Series Pneumatic How to order (0.99Mpa)

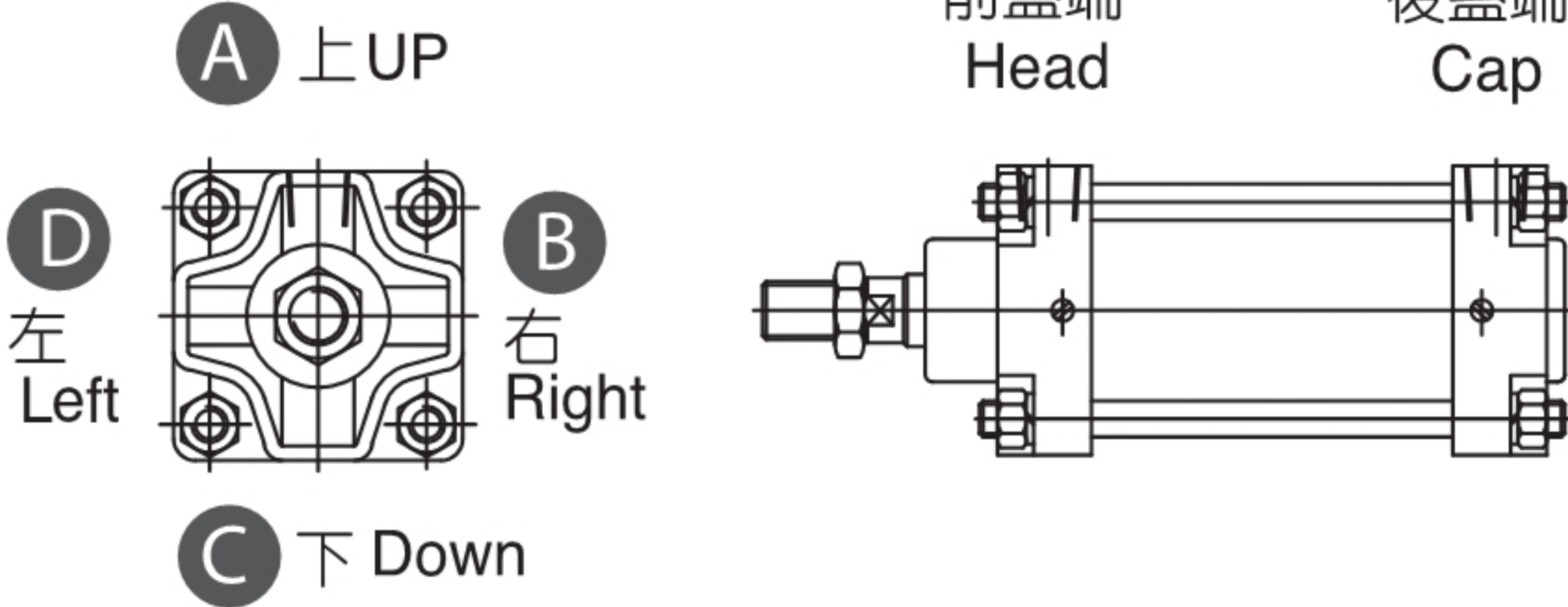
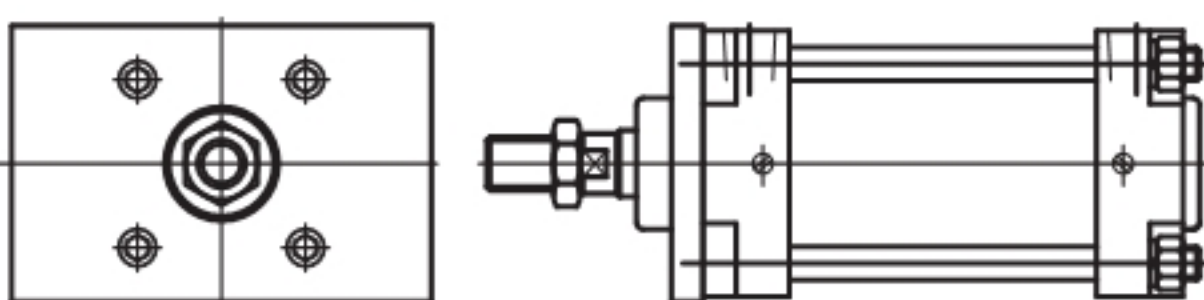
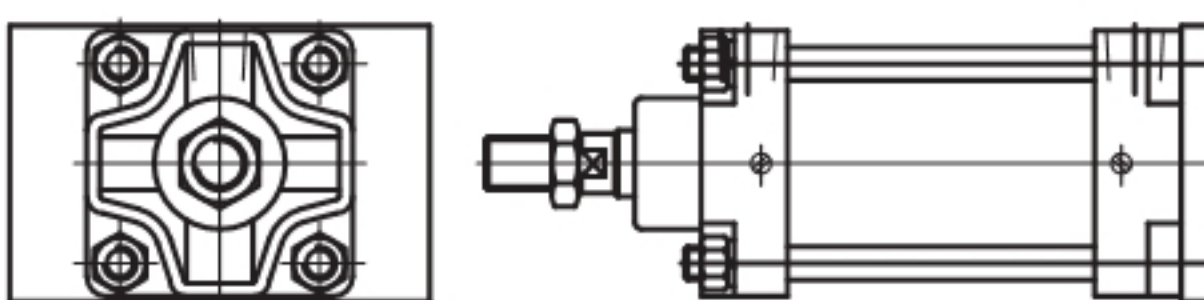


鋁合金氣缸特性資料Specification

氣壓缸內徑 Bore sizes of cylinder(mm)	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125	Ø150
缸管材質 Material of cylinder barrel	鋁合金管 Aluminum alloy tubes						
使用壓力範圍 The range of pressure(MPa)	0.3-0.99MPa (3-9.9kgf/cm²)						
使用溫度範圍 The range of temperature(c°)	NBR{-20°~+80°(C°)}/VITON{-10°~150°(C°)}						
使用速度範圍 The range of speed(mm/sec)	8~400 mm/sec						
標準衝程活塞(PM)的長度Standard stroke of the piston (PM) length	30	30	30	30	30	30	40
標準緩衝長度Standard Cushion length	17	25	25	30	30	30	35
各缸徑最大容許衝程 STROKE .mm Max.Permissible	本系列鋁管最長衝程為2000mm,如需更長衝程請來電洽詢						
衝程之容許公差/Tolerance of stroke	衝程/STROKE	100 以下	100~250	250~630	631~1000	1001~1600	1601以上
JIS B 8354 B級/Refer to Right Table	容許差/Tolerance	0~+0.8	0~+1.0	0~+1.25	0~+1.4	0~+1.6	0~+1.8
活塞桿螺紋加工精度/Accuracy of Threading at Rod End	JIS 6g/6H(相當JIS 2級)						

MA - B - N - 000 - A - A - 000 - N - 0000 - N - N - AST000 - N

1 2 3 4 5 6 7 8 9 10 11 12

1	型式 / TYPE	B: 標準型 B: Standard type				D: 雙軸型 D: Double-Rod type			
2	磁石/MAGNET	R: 內加磁石 N: 沒有 R: with magnet inside N: No symbol							
3	鋁管內徑/外徑 ALUMINUM TUBES	Ø40 / Ø45	Ø50 / Ø55	Ø63 / Ø68	Ø80 / Ø86	Ø100 / Ø106	Ø125 / Ø135	Ø150 / Ø160	
	備註:如採用鋼管時,標準處理內徑無電鍍處理,如需電鍍時請下單註明								
4	油封選用 SEAL SYMBOL 油封材質/Seal material	A		NBR 丁晴橡膠 Nitrile rubber		B		VITON 氟素橡膠 Fluoro elastomer	
5	入油口位置填入 Port position	前蓋端 Head	A:上(標準型)/B:右/C:下/D:左 A:UP(Standard)/B:Right/C:Down/D:Left						
		後蓋端 Cap	A:上(標準型)/B:右/C:下/D:左 A:UP(Standard)/B:Right/C:Down/D:Left						
		A=AA / B=BB / C=CC / D=DD E=AB / F=AC / G=AD / H=BA I=BC / J=BD / K=CA / L=CB M=CD / N=DA / O=DB / P=DC							
6	軸心/ROD	標準	Ø16	Ø20	Ø25	Ø30	Ø35	Ø40	
		最大	—	Ø25	Ø30	Ø35	Ø45	Ø50	
7	緩衝/CUSHION	A:標準緩衝 N:沒有 A: with cushion inside N: No symbol							
8	行程/STROKE	填入需要之衝程 Max Permissible stroke							
備註:本系列鋁管訂製最大衝程,內徑Ø40~Ø150衝程為2000mm,訂製衝程超過1000mm以上時,因考量活塞側向支撐力與繫緊柱子鎖固強度,建議活塞加長與追加中座,補強強度增加產品壽命,如有其他考量請參閱技術資料或敬請與我們相關人員洽詢									
	缸體 固定方式 BORE ACCESSORY	名 稱 DESCRIPTION	記號 SYMBOL	略 圖 CONFIGURATION		名 稱 DESCRIPTION	記號 SYMBOL	略 圖 CONFIGURATION	
		前蓋矩形法蘭 Rectangular flange at cylinder head	FA			後蓋矩形法蘭 Rectangular flange at cylinder cap	FB		

MA
Series

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鋁合金氣缸特性資料Specification

9	缸體 固定方式 BORE ACCESSORY	名 稱 DESCRIPTION	記號 SYMBOL	略 圖 CONFIGURATION	名 稱 DESCRIPTION	記號 SYMBOL	略 圖 CONFIGURATION
		前後端凸耳形 Foot mounting side end angles	LB		中間固定 耳軸型 Centre trunnion mounting	TC	
		後蓋可拆 單山型 Plaie clevis at cylinder cap	CA		後蓋可拆 雙山型 Clevis fork at cylinder cap	CB	
		備註:缸體固定如有其它方式,可繪製草圖或與我們營業人員洽詢 Note: If the cylinder is fixed in other ways, you can draw a sketch or contact our sales staff					
10	軸心 用配件 ROD ACCESSORY	名 稱 DESCRIPTION	記號 SYMBOL	略 圖 CONFIGURATION	名 稱 DESCRIPTION	記號 SYMBOL	略 圖 CONFIGURATION
		Y型接頭 Rod Clevis	TY		Y型接頭附 插銷 Rod Clevis With Pin	TYP	
		I型接頭 I Rod end mounting	TI		浮動接頭 Compensating Joint	KG	
		魚眼接頭 Oscillating Eye	PH		T型接頭 T Rod end mounting	MT	
		焊接接頭 H Rod end mounting	MH		可調螺帽 Adjustable nut	AST	
		備註：軸心固定如有其它方式,可繪製草圖或與我們營業人員洽詢 Note：If the axis is fixed in other ways, you can draw a sketch or contact our sales staff					
11	雙軸 可調行程	填入需要的可調行程 AST mm 無記號:沒有 / NO Symbol Adjustable Stroke					
12	近接開關 SENSOR SWITCH	無記號:無裝置(標準型)/B:兩端近接開關/X:近接在前/Y:近接在後/T:近接*3/U:近接*4 N:NO symbol /B:Double side sensor switch/X:Rod-cover side sensor switch/ Y:End-cover side sensor switch/T:sensor switch*3/U:sensor switch*4					

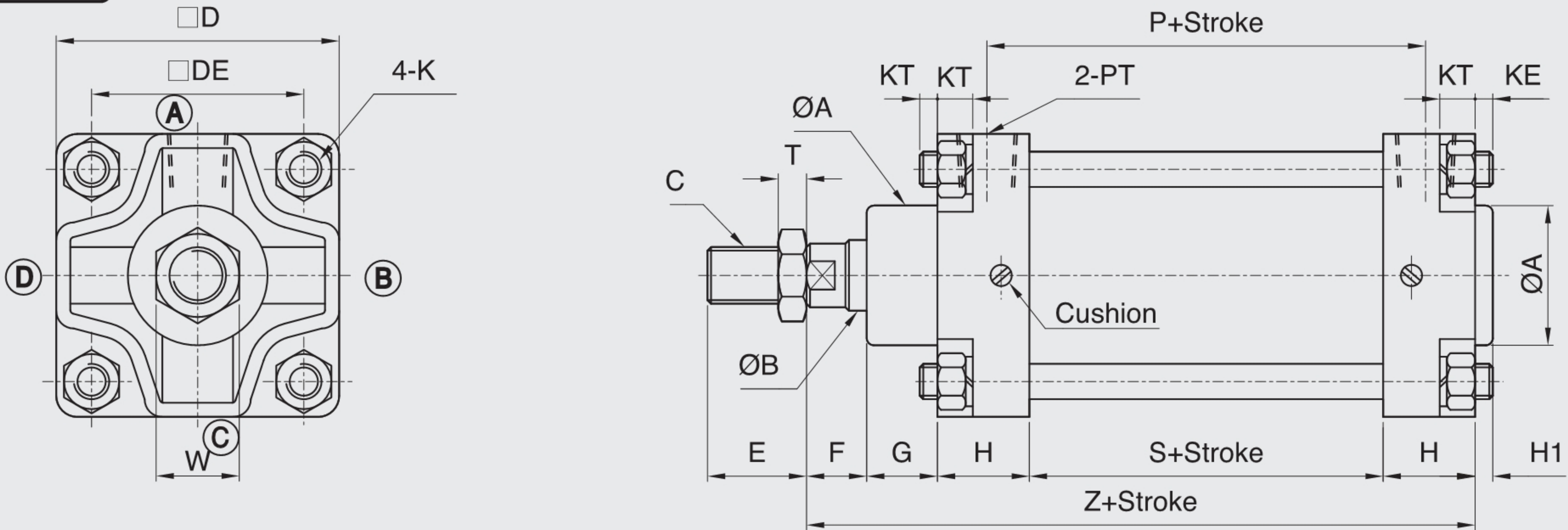
MABR
Series

鋁合金氣缸柱子型結構圖
Inside Structure and Parts List

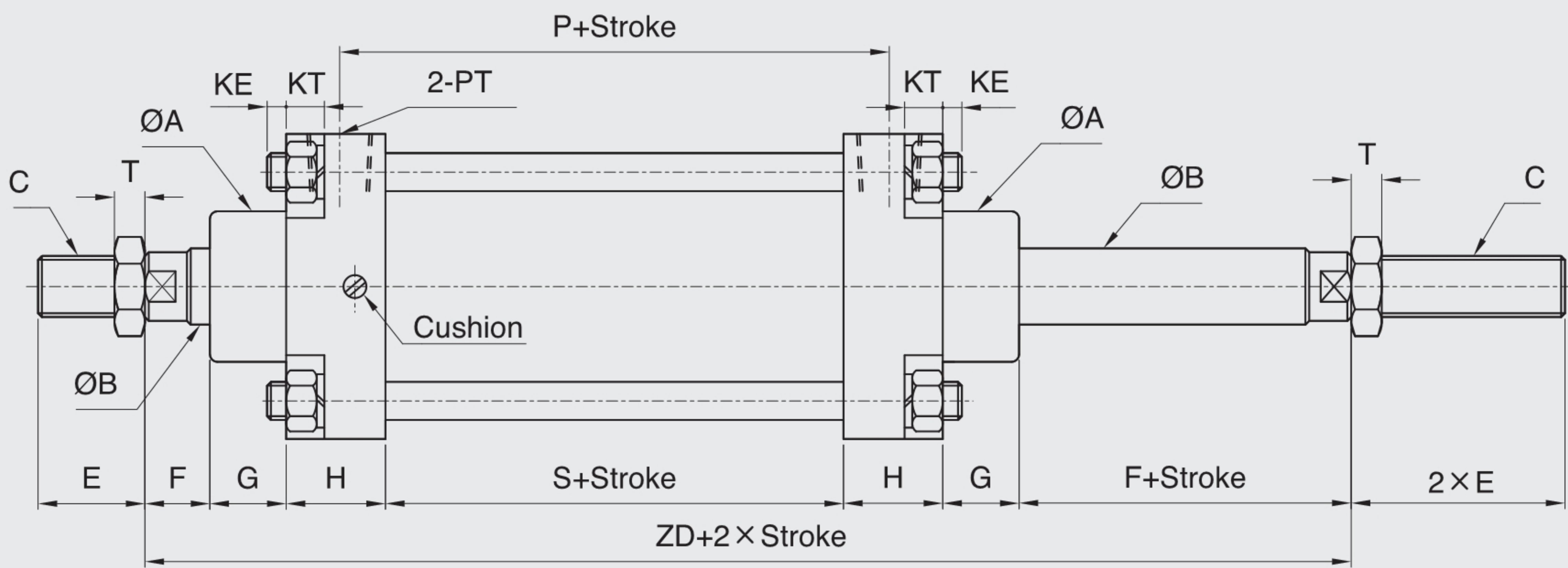
NO	零件品名 Part mane	數量Quantity	NO	零件品名 Part mane	數量Quantity	NO	零件品名 Part mane	數量Quantity
1	活塞桿 Piston rod	1	7	橡膠活塞環 Piston packing	2	13	氣缸本體 Cylinder tube	1
2	刮塵環 Dust wiper	1	8	磁石 Magnet	1	14	活塞本體 Piston	1
3	含油軸承 Oilless bearing	1	9	軸心螺帽 Rod nut	1	15	軸心螺帽 Rod nut	1
4	O型環 Cylinder gasket	2	10	前蓋 Rod cover	1	16	後蓋 End cover	1
5	緩衝橡皮 Cushion packing	2	11	繫緊螺帽 Tie nut	8	17	緩衝針 Cushion needle	2
6	O型環 Cylinder gasket	1	12	繫緊螺絲 Tie bolt	4	18	O型環 Gasket	2

鋁合金氣缸尺寸圖
MA Series Dimensional Features(0.99Mpa)

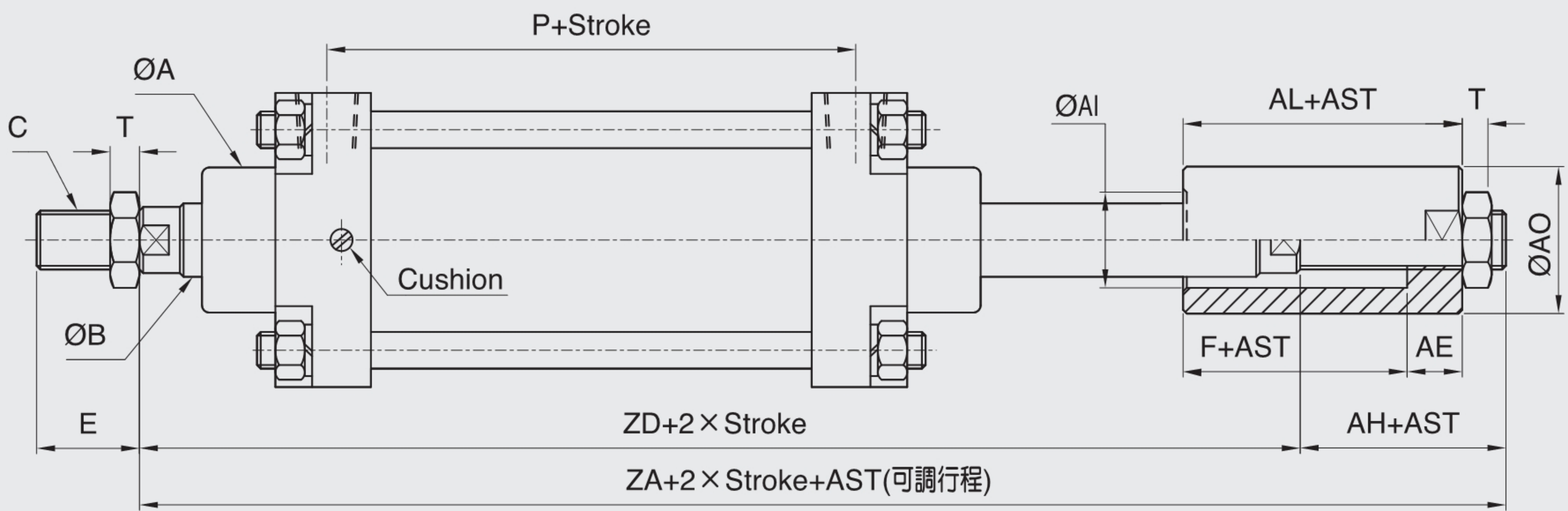
MAB MA+B (標準型) TYPE



MAD MA+D (雙軸型) TYPE



MAD MAD+AST (雙軸型附可調帽) TYPE



MAB-MAD TYPE																								A（可調帽）TYPE				
BORE	SIZE	ØA	ØB	C	□D	□DE	E	F	G	H	H1	P	PM	PT	K	KE	KT	S	T	W	Z	ZA	ZD	AH	AE	ØAI	ØAO	AL
	Ø40	30	16	M14XP1.5	59	44	28	13	15	26	5	67	30	1/4	M8XP1.25	10	8.5	45	8	22	125	178	153	25	15	20	30	30
	Ø50	39.5	20	M16XP1.5	66	48	28	17	15	28	5	72	30	1/4	M8XP1.25	10	8.5	46	8	23.5	134	191	166	25	15	25	35	35
	Ø63	39.5	20	M16XP1.5	80	60	28	17	20	26	5	74	30	3/8	M10XP1.25	10	10.5	50	8	23.5	139	201	176	25	15	25	35	35
	Ø80	44.5	25	M22XP1.5	96	74	40	20	15	34	7.5	84	30	3/8	M10XP1.25	10	10.5	50	13	32	153	223	188	35	20	30	45	40
	Ø100	54.5	30	M26XP1.5	116	89	40	20	20	36	7	82	30	1/2	M12XP1.5	12	13	50	13	35	162	237	202	35	20	35	50	40
	Ø125	60	35	M30XP1.5	148	116	45	20	23	42	10	84	30	1/2	M14XP1.5	12	14.5	50	13	41	177	260	220	40	25	40	50	45
	Ø150	70	40	M30XP1.5	172	134	50	20	27	48	5	96	40	1/2	M16XP1.5	15	17	60	13	41	203	290	250	40	25	50	60	45

備註:

- 1.本系列軸心加大如未註明長度尺寸時,依照本公司規定自行加工。
- 2.本系列MA50,MA63行程超過500mm(含)以上,軸心牙加大為M18XP1.5。
- 3.本系列行程超過1500mm(含)以上時,活塞(PM)長度須加倍長(尺寸P,S,Z,ZA,ZD須再加PM尺寸長度乙次)。
- 4.本系列行程超過2000mm(含)以上時,須加拉桿中間固定座
- 5.AST 為客戶指定之可調行程。

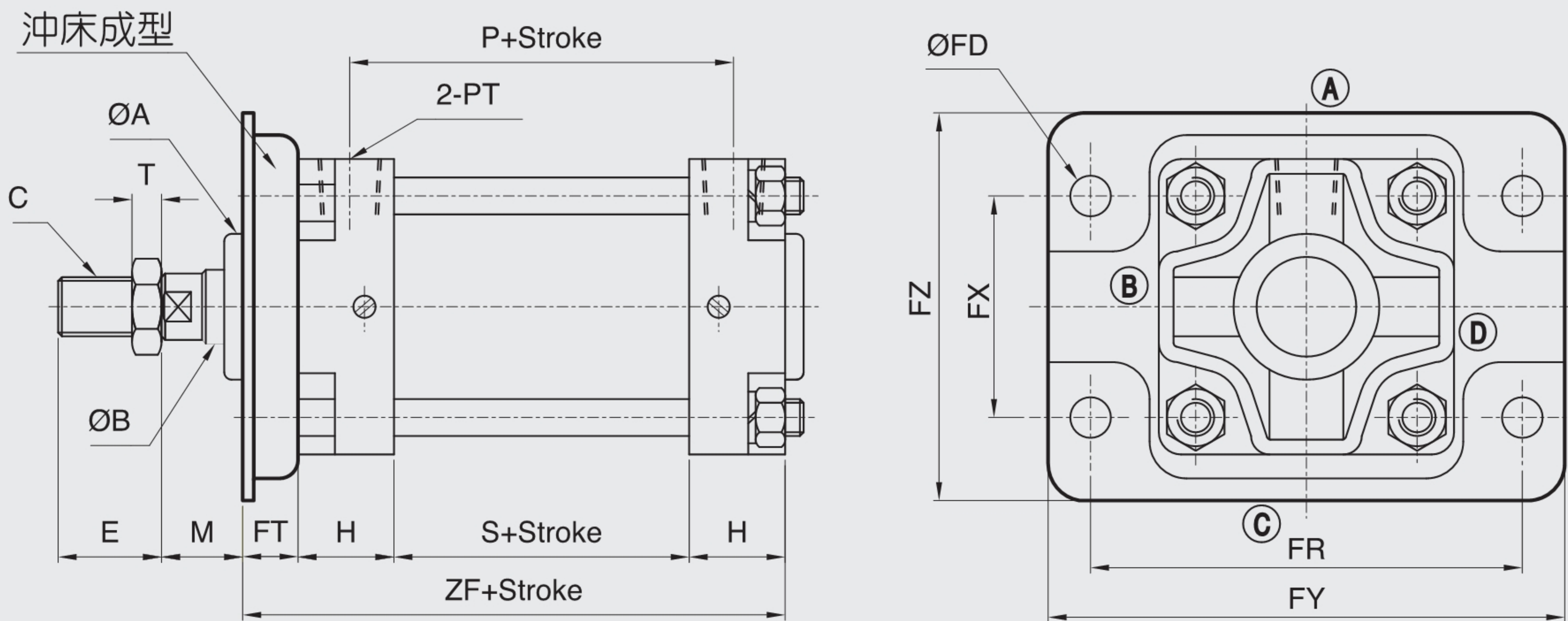
- 1.The length and size of axis were not specifide to constructed must be according to our company design's modify without prior notice.
- 2.The series stroke exceed 500mm (includes), axletree broaden be M18xP1.5.
- 3.The series stroke exceed (includes) 1500mm, should redouble length (PM) of piston. (Add twice length PM of size:P,S,Z,ZA,ZD).
- 4.When this series of stroke exceeds(includes) 2000mm,the fixed base of the pull rod must be added in the middle.
- 5.AST:Adjustable stroke by customer assignment.

MA-FA

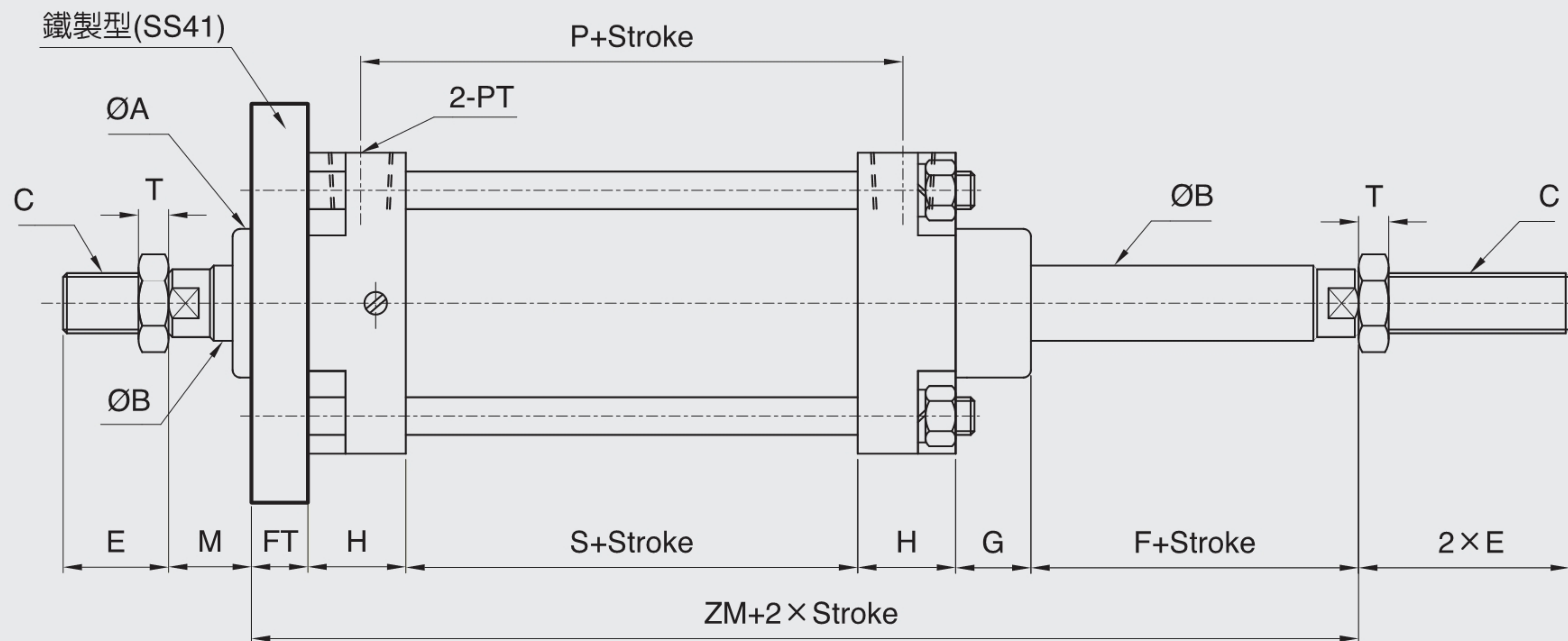
Series

鋁合金氣缸FA板尺寸圖 MA Series FA Dimensional Features(0.99Mpa)

MAB MAB+FA TYPE



MAD MAD+FA TYPE



MAB-MAD TYPE																	FA TYPE					
BORE	SIZE	ØA	ØB	C	E	F	G	H	M	P	PM	PT	S	T	ZF	ZM	ØFD	FT	FR	FX	FY	FZ
	Ø40	30	16	M14XP1.5	28	13	15	26	17	67	30	1/4	45	8	108	136	9	11	88	44	104	75
	Ø50	39.5	20	M16XP1.5	28	17	15	28	21	72	30	1/4	46	8	113	145	9	11	104	46	125	80
	Ø63	39.5	20	M16XP1.5	28	17	20	26	22	74	30	3/8	50	8	117	154	11.5	15	117	60	140	105
	Ø80	44.5	25	M22XP1.5	40	20	15	34	15	84	30	3/8	50	13	138	173	14	20	131	74	161	121
	Ø100	54.5	30	M26XP1.5	40	20	20	36	20	82	30	1/2	50	13	142	182	16	20	151	92	183	137
	Ø125	60	35	M30XP1.5	45	20	23	42	23	84	30	1/2	50	13	154	197	16	20	183	123	220	155
	Ø150	70	40	M30XP1.5	50	20	27	48	27	96	40	1/2	60	13	176	223	18	20	230	134	275	185

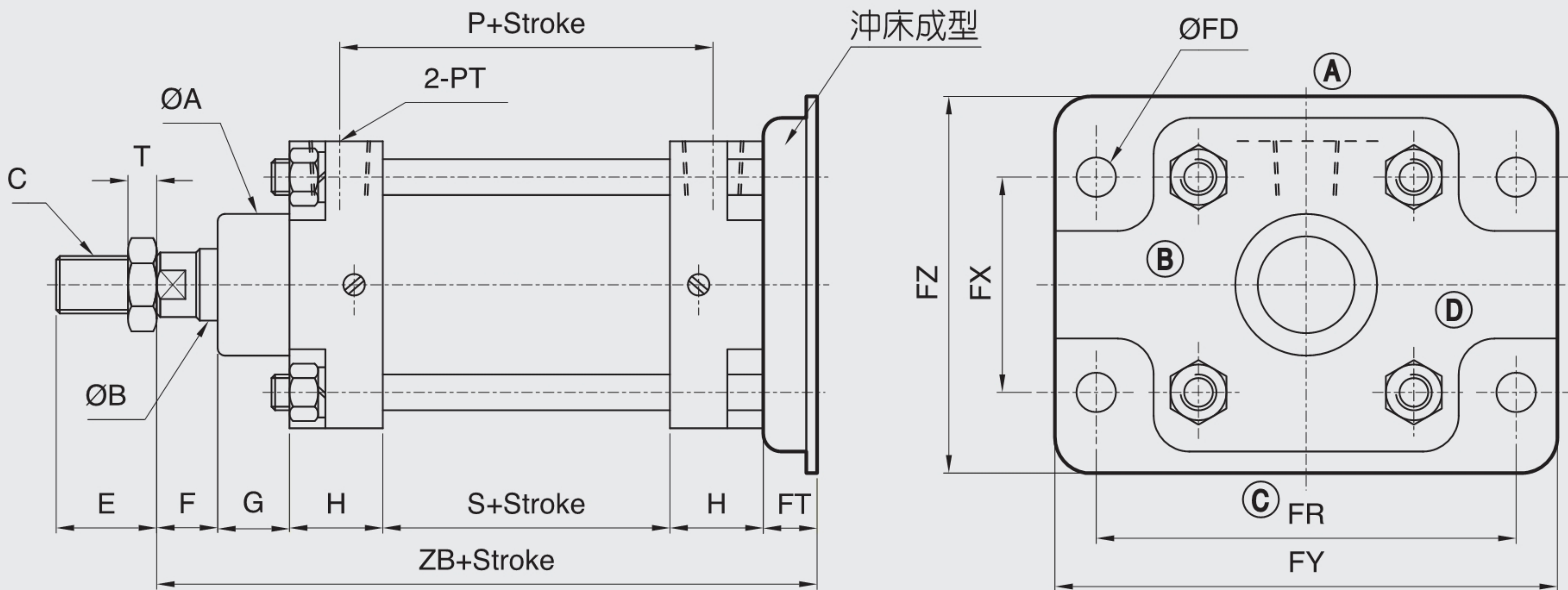
備註:

- 1.本系列軸心加大如未註明長度尺寸時,依照本公司規定自行加工。
- 2.本系列MA50,MA63行程超過500mm(含)以上,軸心牙加大為M18XP1.5。
- 3.本系列行程超過1500mm(含)以上時,活塞(PM)長度須加倍長(尺寸P,S,ZF,ZM,須再加PM尺寸長度乙次)。
- 4.本系列MA40-MA63標準安裝FA為沖床成型之FA(五彩),平均板厚為3mm,另有鐵製(SS41) FA可供選擇。
- 5.本系列MA80-MA100標準安裝FA為鑄造成型之FA(FCD-45),另有鐵製(SS41)FA可供選擇。
- 6.MA125-MA150之FA配件標準型均為鐵製(材質SS41)

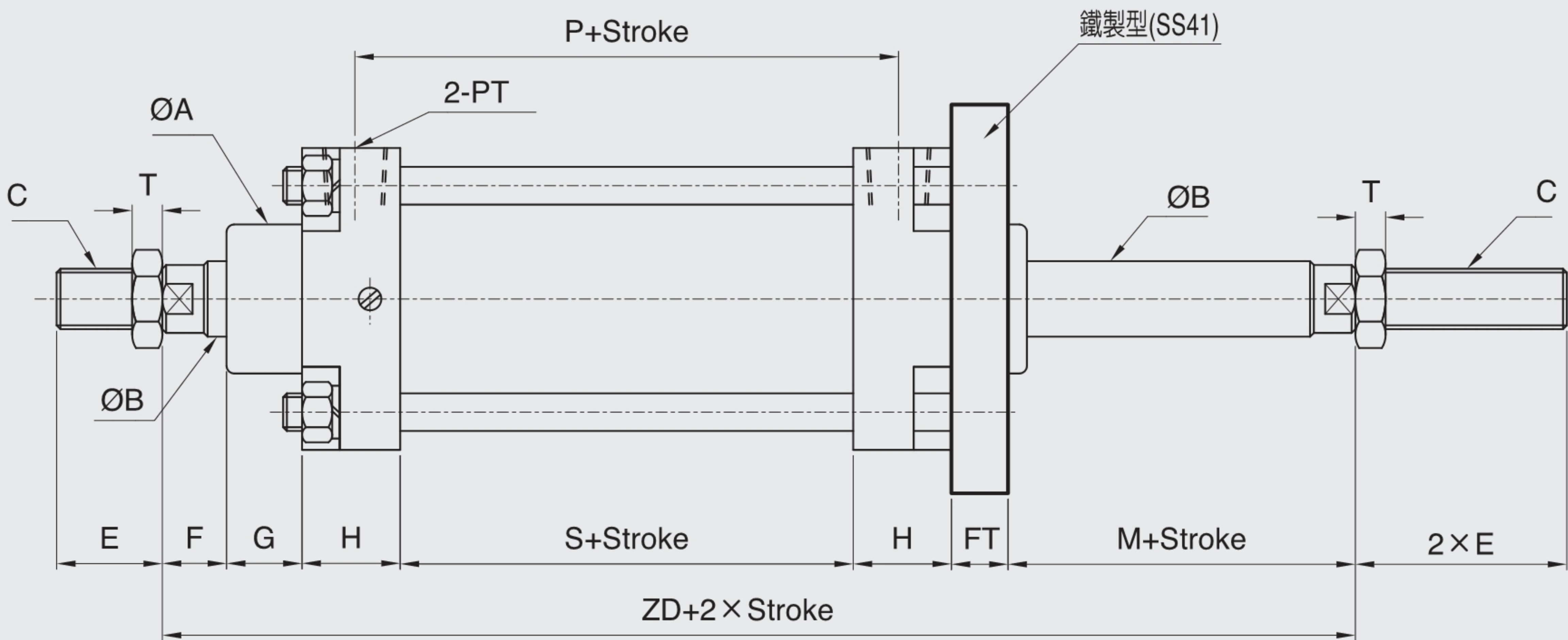
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- 2.The series stroke exceed 500mm (includes), axletree broaden be M18xP1.5.
- 3.The series stroke exceed (includes) 1500mm, should redouble length (PM) of piston. (Add twice length PM of size:P,S,ZF,ZM).
- 4.The series MA40-MA63 is standard setting by FA punching machine shape,thickness 3mm,(5 colors) and also have material is iron (SS41) of FA for optional.
- 5.The series MA80-MA100 is standard setting by FA cast type (FCD-45), material iron (SS41) for optional.
- 6.MA125-MA150 of FA for standard accessories type all is material iron (SS41).

鋁合金氣缸FB板尺寸圖
MA Series FB Dimensional Features(0.99Mpa)

MAB MAB+FB TYPE



MAD MAD+FB TYPE



MAB-MAD TYPE																FB TYPE						
BORE	SIZE	ØA	ØB	C	E	F	G	H	M	P	PM	PT	S	T	ZB	ZD	ØFD	FT	FR	FX	FY	FZ
	Ø40	30	16	M14XP1.5	28	13	15	26	17	67	30	1/4	45	8	136	153	9	11	88	44	104	75
	Ø50	39.5	20	M16XP1.5	28	17	15	28	21	72	30	1/4	46	8	145	166	9	11	104	46	125	80
	Ø63	39.5	20	M16XP1.5	28	17	20	26	22	74	30	3/8	50	8	154	176	11.5	15	117	60	140	105
	Ø80	44.5	25	M22XP1.5	40	20	15	35	15	84	30	3/8	50	13	173	188	14	20	131	74	161	121
	Ø100	54.5	30	M26XP1.5	40	20	20	36	20	82	30	1/2	50	13	182	202	16	20	151	92	183	137
	Ø125	60	35	M30XP1.5	45	20	23	42	23	84	30	1/2	50	13	197	220	16	20	183	123	220	155
	Ø150	70	40	M30XP1.5	50	20	27	48	27	96	40	1/2	60	13	223	250	18	20	230	134	275	185

備註:

- 1.本系列軸心加大如未註明長度尺寸時,依照本公司規定自行加工。
- 2.本系列MA50,MA63行程超過500mm(含)以上,軸心牙加大為M18XP1.5。
- 3.本系列行程超過1500mm(含)以上時,活塞(PM)長度須加倍長(尺寸P,S,ZB,ZD,須再加PM尺寸長度乙次)。
- 4.本系列MA40-MA63標準安裝FB為沖床成型之FB(五彩),平均板厚為3mm,另有鐵製(SS41)FA可供選擇。
- 5.本系列MA80-MA100標準安裝FB為鑄造成型之FB(FCD-45),另有鐵製(SS41)FA可供選擇。
- 6.MA125-MA150之FB配件標準型均為鐵製(材質SS41)

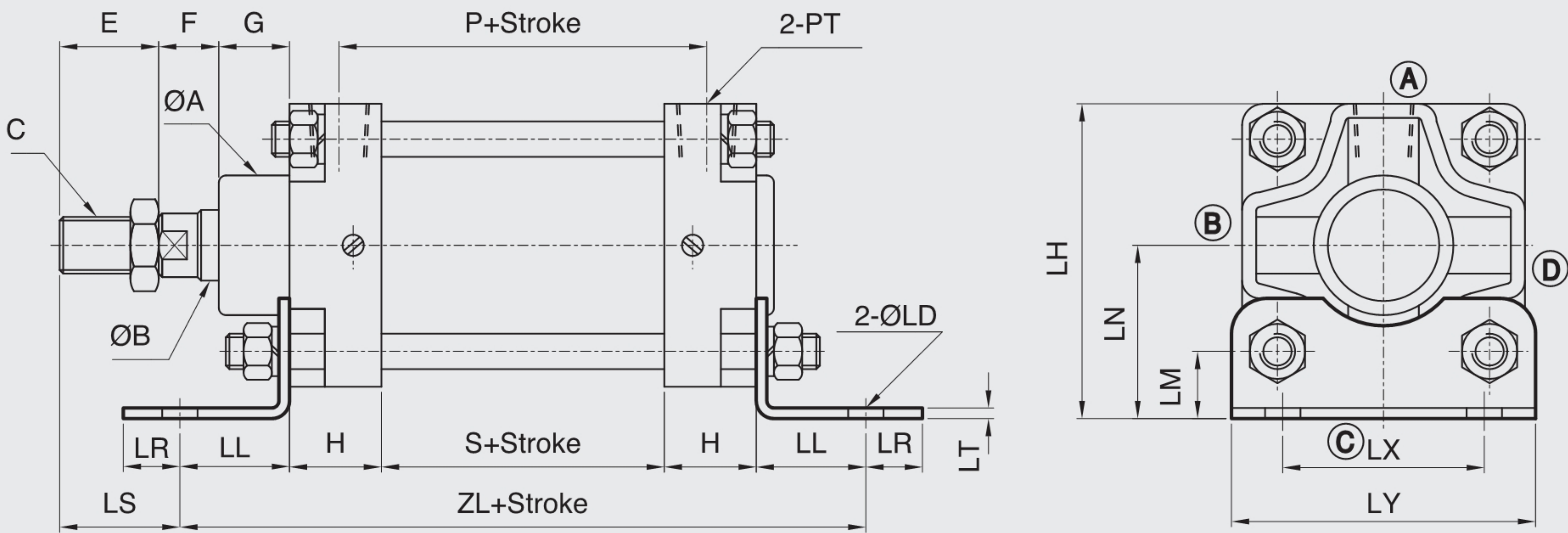
- 1.The length and size of axis were not specifice to constructed must be according to our company design's modify without prior notice.
- 2.The series stroke exceed 500mm (includes), axletree broaden be M18xP1.5.
- 3.The series stroke exceed (includes) 1500mm, should redouble length (PM) of piston. (Add twice length PM of size:P,S,ZB,ZD).
- 4.The series MA40-MA63 is standard setting by FB punching machine shape,thickness 3mm, (5 colors) and also have material is iron (SS41) of FB for optional.
- 5.The series MA80-MA100 is standard setting by FB cast type (FCD-45), material iron (SS41) for optional.
- 6.MA125-MA150 of FB for standard accessories type all is material iron (SS41).

MA-LB

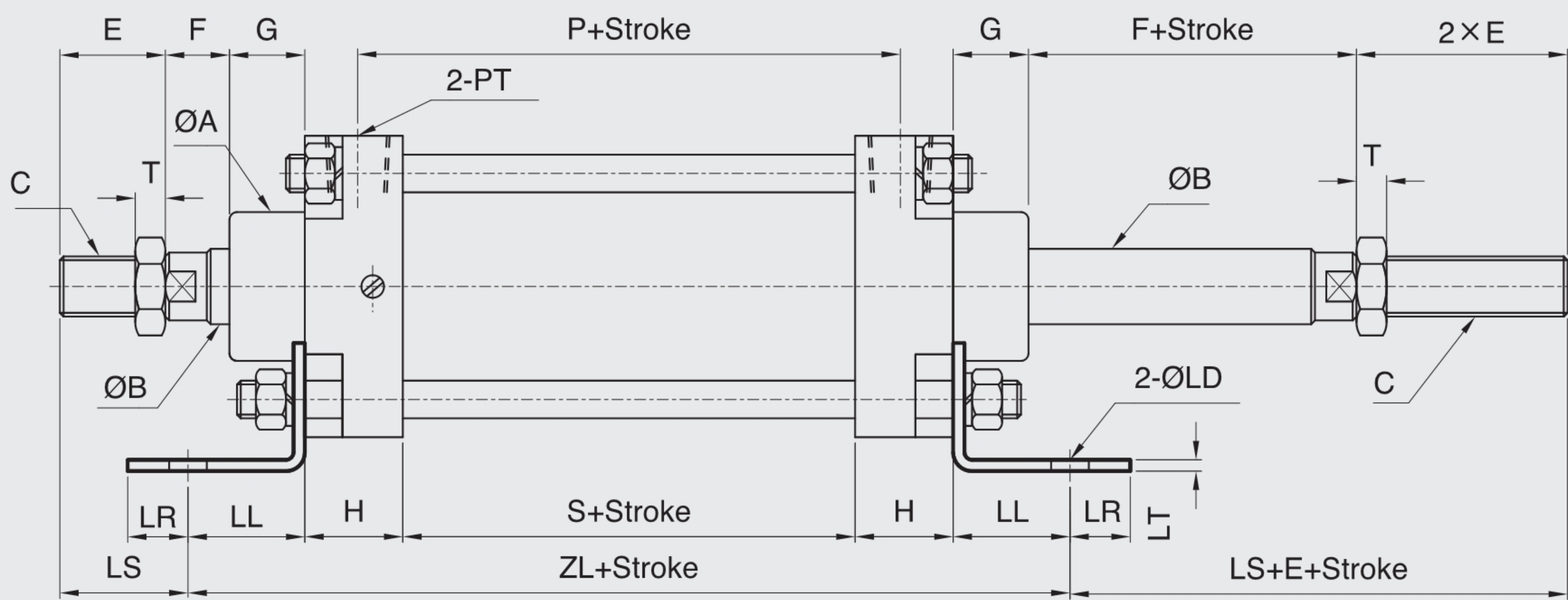
Series

鋁合金氣缸LB架尺寸圖 MA Series LB Dimensional Features(0.99Mpa)

MAB MAB+LB TYPE



MAD MAD+LB TYPE



MAB-MAD TYPE																	LB TYPE							
BORE	SIZE	ØA	ØB	C	E	F	G	H	LH	LN	LS	P	PM	PT	S	T	ZL	ØLD	LL	LM	LR	LT	LX	LY
Ø40	30	16	M14XP1.5	28	13	15	26	68	39	29	67	30	1/4	45	8	151	9	27	17	15	3	42	59	
Ø50	39.5	20	M16XP1.5	28	17	15	28	71	38	29	72	30	1/4	46	8	164	10	31	14	11	3	40	65	
Ø63	39.5	20	M16XP1.5	28	17	20	26	89	49	34	74	30	3/8	50	8	164	10	31	19	16	3	57	86	
Ø80	44.5	25	M22XP1.5	40	20	15	34	108	60	40	84	30	3/8	50	13	188	13	35	23	15	6	74	105	
Ø100	54.5	30	M26XP1.5	40	20	20	36	131	73	30	82	30	1/2	50	13	222	14	50	28.5	15	6	89	115	
Ø125	60	35	M30XP1.5	45	20	23	42	160	86	40	84	30	1/2	50	13	230	16	48	30	17	6	116	152	
Ø150	70	40	M30XP1.5	50	20	27	48	185	99	42	96	40	1/2	60	13	266	18	55	32	18	9	134	178	

備註:

- 1.本系列軸心加大如未註明長度尺寸時,依照本公司規定自行加工。

2.本系列MA50,MA63行程超過500mm(含)以上,軸心牙加大為M18XP1.5。

3.本系列行程超過1500mm(含)以上時,活塞(PM)長度須加倍長(尺寸P,S,ZL須再加PM尺寸長度乙次)。

4.本系列行程超過2000mm(含)以上時,須加拉桿中間固定座。

5.MA40-MA63 LB配件標準型安裝沖床成型之LB(五彩),MA80-MA150 LB配件標準型安裝角鐵成型之LB(烤漆)。
- 1.The length and size of axis were not specifide to constructed must be according to our company design's modify without prior notice.

2.The series stroke exceed 500mm (includes), axletree broaden be M18xP1.5.

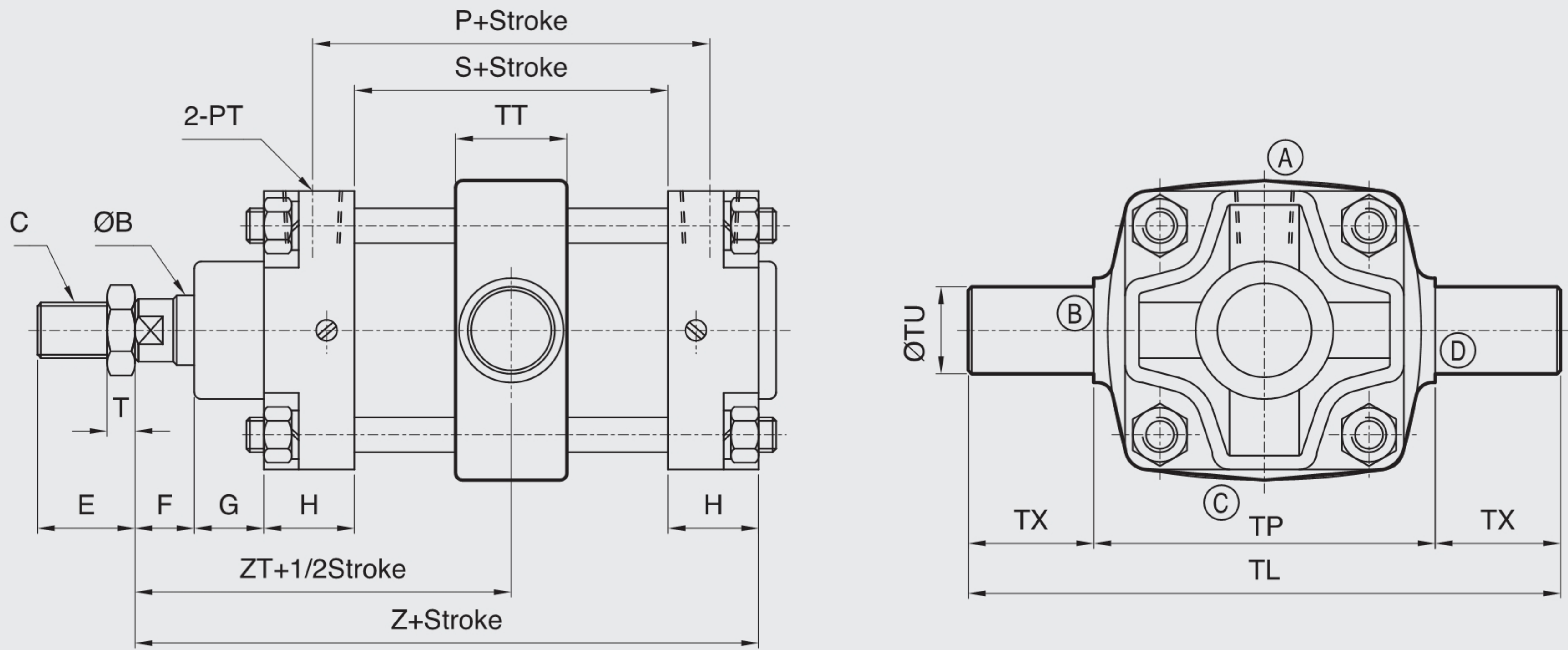
3.The series stroke exceed (includes) 1500mm, should redouble length (PM) of piston.
(Add twice length PM of size:P,S,ZL).

4.When this series of stroke exceeds(includes) 2000mm,the fixed base of the pull rod must be added in the middle.

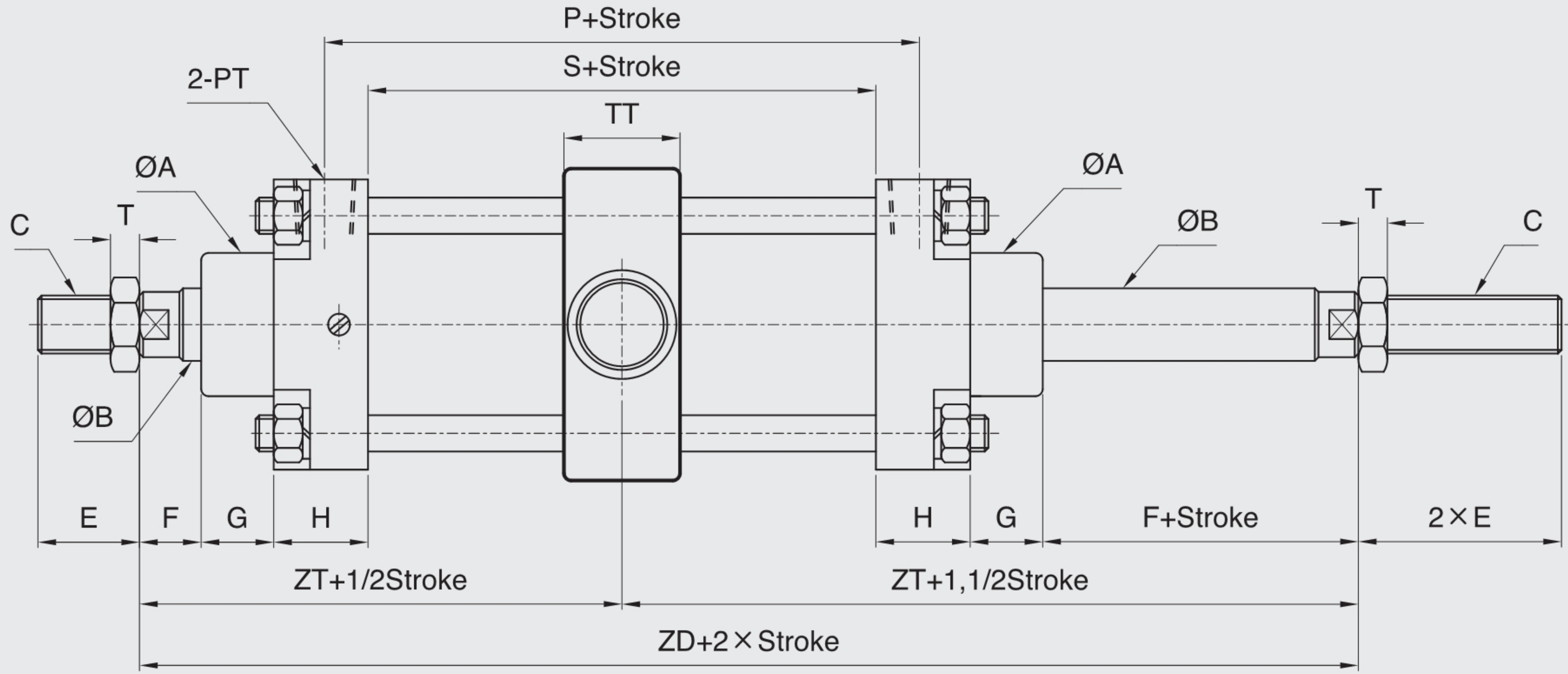
5.The series MA40-MA63 of LB is standard accessories type setting by LB punching machine shape, (5 colors) and also MA80-MA150 of LB standard accessories type setting by angle iron shape(coating).

鋁合金氣缸TC尺寸圖
MA Series TC Dimensional Features(0.99Mpa)

MAB MAB+TC TYPE



MAD MAD+TC TYPE



MAB-MAD TYPE																TC TYPE					
BORE	SIZE	ØA	ØB	C	E	F	G	H	P	PM	PT	S	T	Z	ZD	ZT	ØTU	TL	TP	TT	TX
	Ø40	30	16	M14XP1.5	28	13	15	26	67	30	1/4	45	8	125	153	76.5	18	127	69	25	29
	Ø50	39.5	20	M16XP1.5	28	17	15	28	72	30	1/4	46	8	134	166	83	20	153	83	28	35
	Ø63	39.5	20	M16XP1.5	28	17	20	26	74	30	3/8	50	8	139	176	88	25	170	98	32	36
	Ø80	44.5	25	M22XP1.5	40	20	15	34	84	30	3/8	50	13	153	188	94	28	194	124	35	35
	Ø100	54.5	30	M26XP1.5	40	20	20	36	82	30	1/2	50	13	162	202	101	30	222	142	38	40
	Ø125	60	35	M30XP1.5	45	20	23	42	84	30	1/2	50	13	177	220	110	32	255	175	40	40
	Ø150	70	40	M30XP1.5	50	20	27	48	96	40	1/2	60	13	203	250	125	35	280	200	40	40

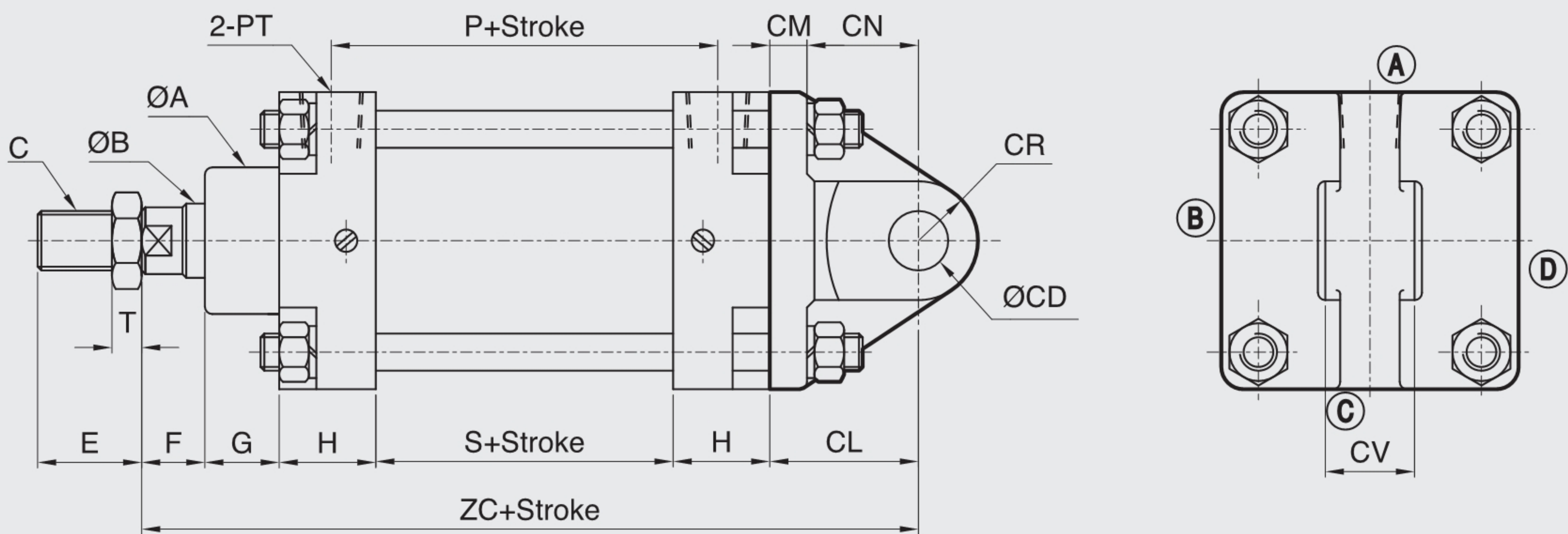
- 備註:
- 1.本系列軸心加大如未註明長度尺寸時,依照本公司規定自行加工。
 - 2.本系列MA50,MA63行程超過500mm(含)以上,軸心牙加大為M18XP1.5。
 - 3.本系列行程超過1500mm(含)以上時,活塞(PM)長度須加倍長(尺寸P,S,Z,ZD須再加PM尺寸長度乙次,ZT加1/2PM尺寸長度)。
 - 4.本系列TC配件材質為FCD-45。
 - 5.本系列TC配件位置(ZT尺寸),可依據客戶指定尺寸裝配。
- 1.The length and size of axis were not specifide to constructed must be according to our company design's modify without prior notice.
 - 2.The series stroke exceed 500mm (includes), axletree broaden be M18xP1.5.
 - 3.The series stroke exceed (includes) 1500mm, should redouble length (PM) of piston. (Add twice and ZT 1/2 length PM of size:P,S,Z,ZD).
 - 4.The series TC accessories material is FCD-45.
 - 5.The series TC accessories position(ZT size) could be adjustable for customer require.

MA-CA, CB

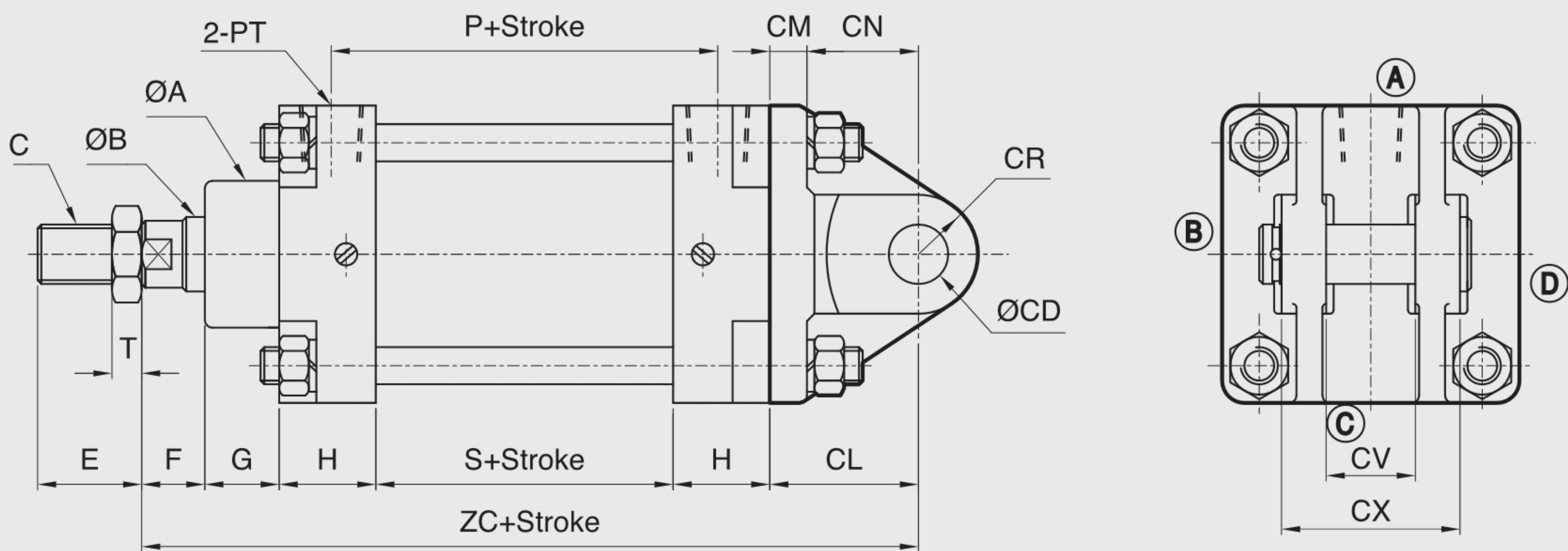
Series

鋁合金氣缸CA, CB尺寸圖 MA Series CA, CB Dimensional Features(0.99Mpa)

MAB MAB+CA TYPE



MAB MAB+CB TYPE



MAB TYPE														CA-CB TYPE							
BORE	SIZE	ØA	ØB	C	E	F	G	H	P	PM	PT	S	T	ZC	CL	CM	CN	ØCD	CR	CV	CX
	Ø40	30	16	M14XP1.5	28	13	15	26	67	30	1/4	45	8	155	30	10	20	12	12	14	32
	Ø50	39.5	20	M16XP1.5	28	17	15	28	72	30	1/4	46	8	169	35	10	25	12	12	16	44
	Ø63	39.5	20	M16XP1.5	28	17	20	26	74	30	3/8	50	8	179	40	10	30	16	16	24	48
	Ø80	44.5	25	M22XP1.5	40	20	15	34	84	30	3/8	50	13	203	50	15	35	20	22	32	62
	Ø100	54.5	30	M26XP1.5	40	20	20	36	82	30	1/2	50	13	224	62	18	44	25	26	35	73
	Ø125	60	35	M30XP1.5	45	20	23	42	84	30	1/2	50	13	244	67	20	47	25	27	43	83
	Ø150	70	40	M30XP1.5	50	20	27	48	96	40	1/2	60	13	283	80	20	60	30	35	40	80

備註:

- 1.本系列軸心加大如未註明長度尺寸時,依照本公司規定自行加工。
 - 2.本系列MA50,MA63行程超過500mm(含)以上,軸心牙加大為M18XP1.5。
 - 3.本系列行程超過1500mm(含)以上時,活塞(PM)長度須加倍長(尺寸P, S,ZC,須再加PM尺寸長度乙次)。
 - 4.本系列行程超過2000mm(含)以上時,須加拉桿中間固定座。
 - 5.MA40-MA125CA與MA40-MA100CB配件標準安裝為鑄造型(材質 FCD-45)之CA與CB,另有鐵製(材質SS41)焊接式之CA與CB可供選擇。
 - 6.MA150之CA與MA125-MA150CB為鐵製(材質SS41)CA,CB焊接型。
- 1.The length and size of axis were not specifide to constructed must be according to our company design's modify without prior notice.
 - 2.The series stroke exceed 500mm (includes), axletree broaden be M18xP1.5.
 - 3.The series stroke exceed (includes) 1500mm, should redouble length (PM) of piston. (Add twice and ZT 1/2 length PM of size:P,S,ZC,).
 - 4.When this series of stroke exceeds(includes) 2000mm,the fixed base of the pull rod must be added in the middle.
 - 5.MA40-MA125 of CA & MA40-MA100 of CB standard accessories is cast type (material FCD-45) and also material iron SS41 of welding type for optional.
 - 6.MA150 of CA & MA125-MA150 of CB accessories is iron welding type. (material SS41).