ZF Series 方型重油油壓缸採購指南 14Mpa Hydraulic Cylinders How to Order

祖源精密 CHANG YUAN CYLINDERS

方型重油油壓缸特性資料 Specifecation

氣壓缸內徑 Bore sizes of cylinder(mm)	Ø40	Ø50	Ø63	Ø80	Ø100
缸管材質 Material of cylinder barrel	鋼管 Carbon steel STKM-13C OR ST52/白鐵管 Stainless tubes SUS 304				
使用壓力範圍 The range of pressure(MPa)	0.3-14MPa(3-140kgf/cm²) /另有高壓可特殊訂製，請來電洽詢				
使用溫度範圍 The range of temperature(c°)	NBR/PU{-25°~+80°(C°)}/VITON{-10°~150°(C°)}				
使用速度範圍 The range of speed(mm/sec)	8~300(mm/sec)/另有低摩擦高速油封選用(1000mm以上/sec),請來電洽詢				
標準衝程活塞(PM)的長度,長衝程活塞與繫緊模式請參閱註1	40	40	45	45	50

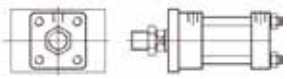
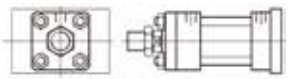
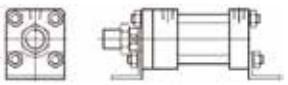
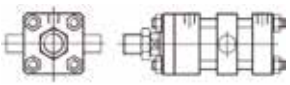
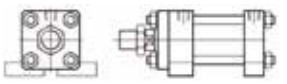
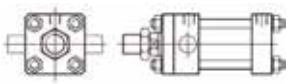
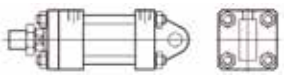
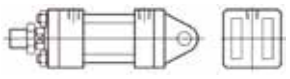
各缸徑最大容許衝程STROKE .mm Max.Permissible	參閱有關軸心挫曲與缸體固定形式技術資料						
衝程之容許公差/Tolerance of stroke	衝程 /STROKE	100以下	100~250	250~630	631~1000	1001~1600	1601以上
JIS B 8354 B級/Refer to Right Table	容許差/Tolerance	0~+0.8	0~+1.0	0~+1.25	0~+1.4	0~+1.6	0~+1.8
活塞桿螺紋加工精度/Accuracy of Threading at Rod End	JIS 6g/6H(相當JIS 2級)						

ZF - B - N - N - 063 - 0700 - A - N - 030 - N - AST000 - N

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶	型式/TYPE	B:標準型 B: Standard type		D:雙軸型 D: Double-Rod type	
❷	磁石/MAGNET	R:內加磁石 N:沒有 R: with magnet inside N:No symbol			

❸ 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	
前後端凸耳型 Foot mounting side end angles	LB		U型搖擺座 U-shaped swing seat	TC	
側端凸耳型 Foot mounting side luge	LA		前蓋端耳軸型 Trunnion mounting at cylinder head	TA	
後蓋固定 單山型 Plaie clevis at cylinders 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圖面或與我們營業人員洽詢
Note: If cylinders is fixed in other ways, you can draw a sketch or cotact our sales staff

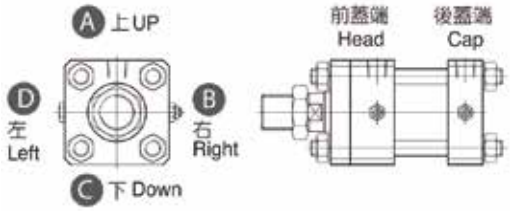
❹	鋼管內徑/外徑 CYLINDER TUBES	Ø40/Ø48	Ø50/Ø60	Ø63/Ø73	Ø80/Ø95	Ø100/Ø114
	不銹鋼缸徑/外徑 STAINLESS TUBES	Ø40/Ø46	Ø50/Ø60	Ø63/Ø73	Ø80/Ø95	Ø100/Ø114
❺	行程/STROKE	填入需要之衝程 Max Permissible stroke				

備註:標準品最大衝程，內徑Ø40~Ø100衝程為1499mm,長衝程訂製時，因考量活塞側向支撐力與繫緊柱子鎖固強度，另外因考量油壓缸固定形式與軸心撓曲度等等問題,需在計算強度或參閱技術資料或敬請與我們洽詢或參閱說明(1) (2)

❻ 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



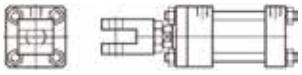
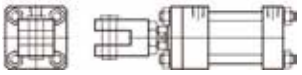
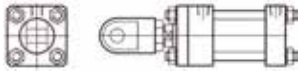
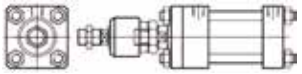
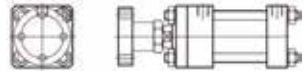
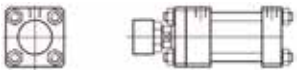
❼ 緩衝位置 Position of cushion

N:無緩衝（標準型）/B:兩端緩衝/X:前蓋緩衝/Y:後蓋緩衝
N: No symbol / B:Double side cushion / X:Rod-cover side cushion / Y:Cap-cover side cushion
緩衝型式請參閱說明2

❽ 軸心/ROD

標 準	Ø20	Ø25	Ø35	Ø40	Ø50
最 大	Ø25	Ø35	Ø40	Ø50	Ø70
緩衝軸心	Ø20	Ø25	Ø35	Ø40	Ø50

❾ 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	HY		Y型接頭附插銷 Rod Clevis With Pin	YP	
I型接頭 I Rod end mounting	HI		浮動接頭 Compensating Joint	KG	
魚眼接頭 Oscillating Eye	PH		T型接頭 T Rod end mounting	HT	
焊接接頭 H Rod end mounting	HH		可調螺帽 Adjustable nut	AST	

❿ 雙軸 可調行程

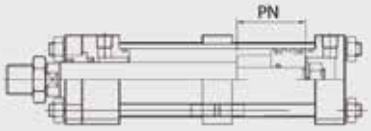
填入需要的可調行程 AST □□ mm 無記號:沒有/ NO Symbol Adjustable Stroke

⓫ 近接開關 SENSOR SWITCH

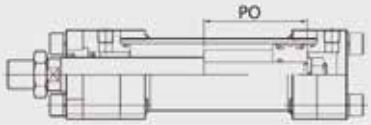
無記號:無裝置（標準型）/B:兩端近接開關/X:近接在前/Y:近接在後/T:近接*3/U:近接*4
N: No symbol/B:Double side sensor switch/X:Rod-cover side sensor switch/
Y: Cap-cover side sensor switch/T:sensor switch*3/U:sensor switch*4

方型重油油壓缸採購指南 14Mpa Hydraulic Cylinders How to Order

［說明1］長衝程活塞加長襯套尺寸與繫緊模式選用參考:



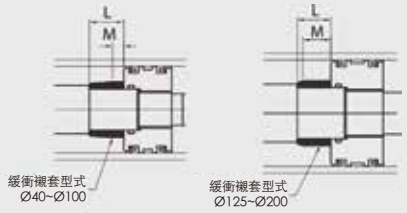
加中座模式（適用於缸徑Ø40~Ø100,行程1500以上



兩端加法蘭模式（建議用於缸徑Ø40~Ø100,行程2000mm以上

缸徑	PN	PO
Ø40	60	90
Ø50	70	100
Ø63	70	100
Ø80	100	150
Ø100	100	120

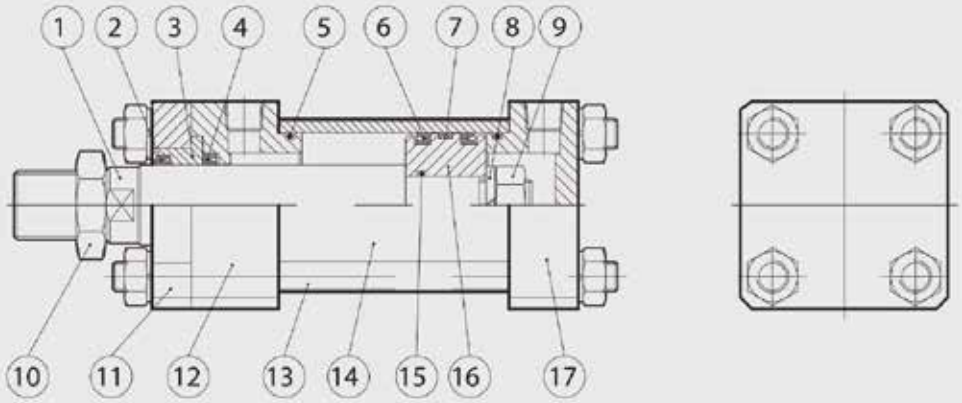
［說明2］緩衝標準距離尺寸:



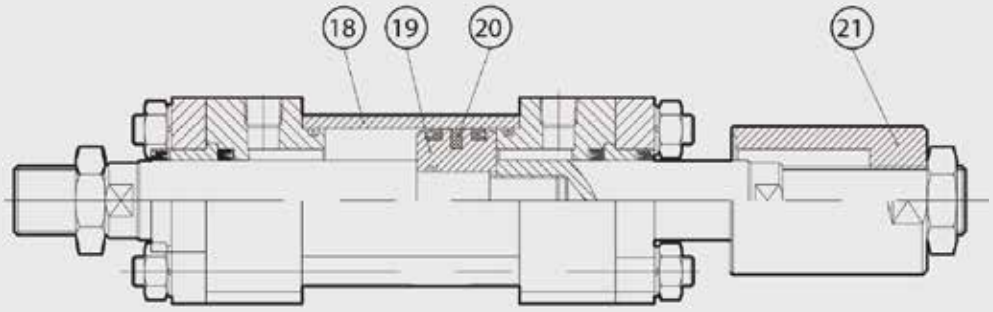
缸徑	L長度	M長度
Ø40~Ø63	20	8
Ø80~Ø100	25	8

方型重油油壓缸結構圖 14Mpa Hydraulic Cylinders Structure and Parts List

ZFB



ZFDR

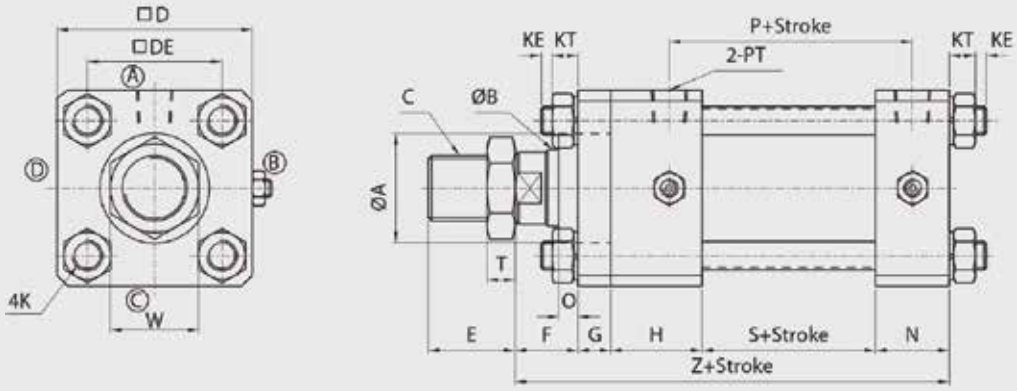


NO	零件名 Part name	數量 Quantity	NO	零件名 Part name	數量 Quantity	NO	零件名 Part name	數量 Quantity
1	活塞桿 Piston rod	1	8	彈簧華司 Spring washer	1	15	0型環 Gasket	1
2	刮油環 Dust wiper	1	9	螺帽 Nut	1	16	活塞本體 Piston	1
3	套銅 Rod bush	1	10	軸心螺帽 Rod nut	1	17	後蓋 End cover	1
4	軸用油封 Rod packiog	1	11	銅壓板 End plate	1	18	油缸本體 Cylinder tube	1
5	0型環 Gasket	2	12	前蓋 Rod cover	1	19	活塞本體 Piston	1
6	橡膠活塞環 Piston packing	2	13	固定柱子 Tie bolt	4	20	磁石 Magnet	1
7	耐磨環 Wearing ring	1	14	油缸本體 Cylinder tube	1	21	可調螺帽 Adjustble nut	1

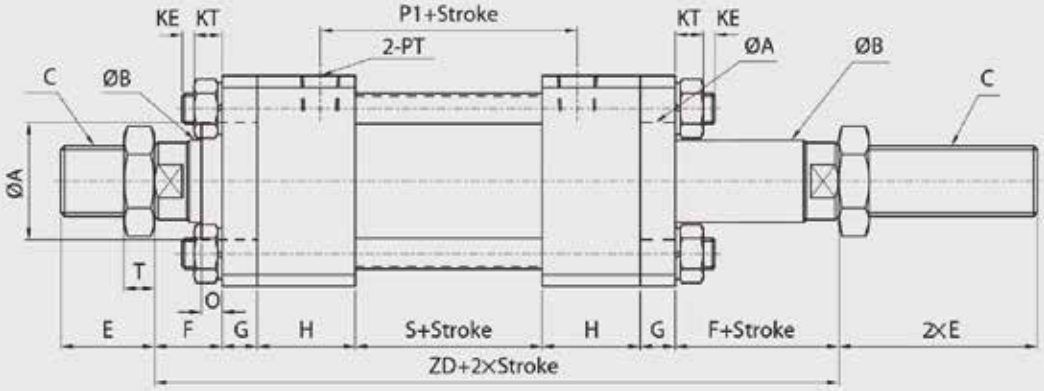
ZFB,ZFD Series

方型重油油壓缸尺寸圖
14Mpa Hydraulic Cylinders Dimensional Features

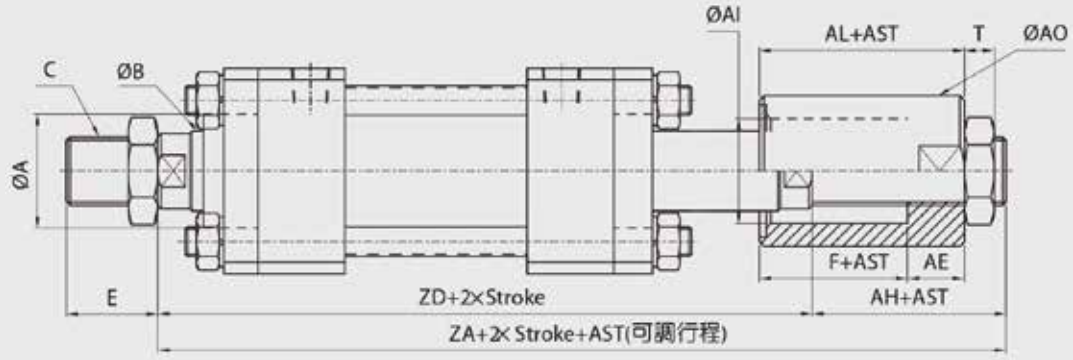
ZFB ZF+B(標準型) TYPE



ZFD ZF+D(雙軸型) TYPE



ZFD ZFD+AST(雙軸型附可調帽) TYPE



ZFB-ZFD TYPE

A(可調行程)TYPE

BORE \ SIZE	ØA	ØB	C	□D	□DE	E	F	G	H	O	N	P	P1	PM	PT	K	KE	KT	S	T	W	Z	ZD	ZA	AH	AE	ØAI	ØAO	AL
Ø40	35	20	M18XP1.5	65	45	30	25	11	36	11	26	88	90	40	1/4	M10XP1.25	10	8	60	8	26	158	204	234	30	20	25	40	45
Ø50	40	25	M22XP1.5	75	52	35	25	13	42	9	34	92	90	40	3/8	M10XP1.25	10	8	60	13	32	174	220	255	35	20	28	45	45
Ø63	45	30	M26XP1.5	90	63	40	30	15	42	9	34	97	95	45	3/8	M12XP1.5	10	10	65	13	41	186	239	279	40	25	38	55	55
Ø80	55	40	M36XP1.5	110	80	45	30	18	46	7	40	105	105	45	1/2	M16XP1.5	10	13	65	15	50	199	253	298	45	30	48	65	60
Ø100	65	50	M45XP2.0	135	102	50	40	20	50	7	40	114	114	50	1/2	M18XP1.5	10	15	74	15	65	224	294	339	45	30	60	80	70

備註：

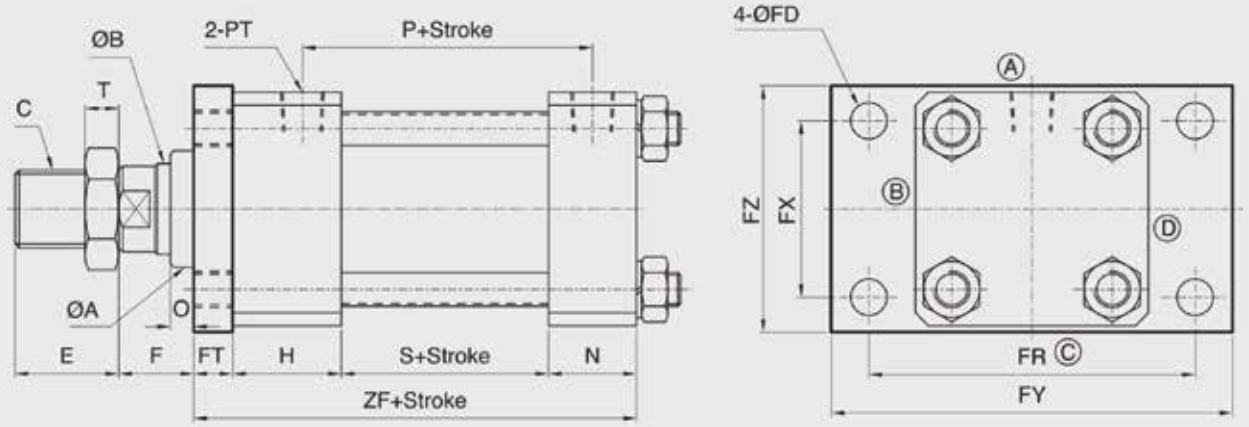
1. 本系列軸心加大或縮小時如未註明長度尺寸時，依照本公司規定自行加工。
2. ZF系列行程未超過1500mm時,活塞（PM）長度如附表,訂製行程如超過1500mm時，活塞長度請參閱特性資料表。
3. 本系列行程若超過2000mm（含）時，須加拉桿中間固定座
4. 本系列軸心螺帽規格M50mm（含）以上時，其外徑為圓形。
5. AST為客戶指定之可調行程。

1. The length and size of the axis were not specifide when being enlarged or reduced. The size of the axis will be constructed according to the specification tablet.
2. When this series of stroke exceeds(includes) 1500mm, as see the property information for the length of the piston. Within 1500mm see the (PM) length of piston.
3. When this series of stroke exceeds(includes) 2000mm,the fixed base of the pull rod must be added in the middle.
4. The screw mut specification of this series of axis over M50 is round and W stands for its external diameter.
5. AST is the custom made adjustable stroke.

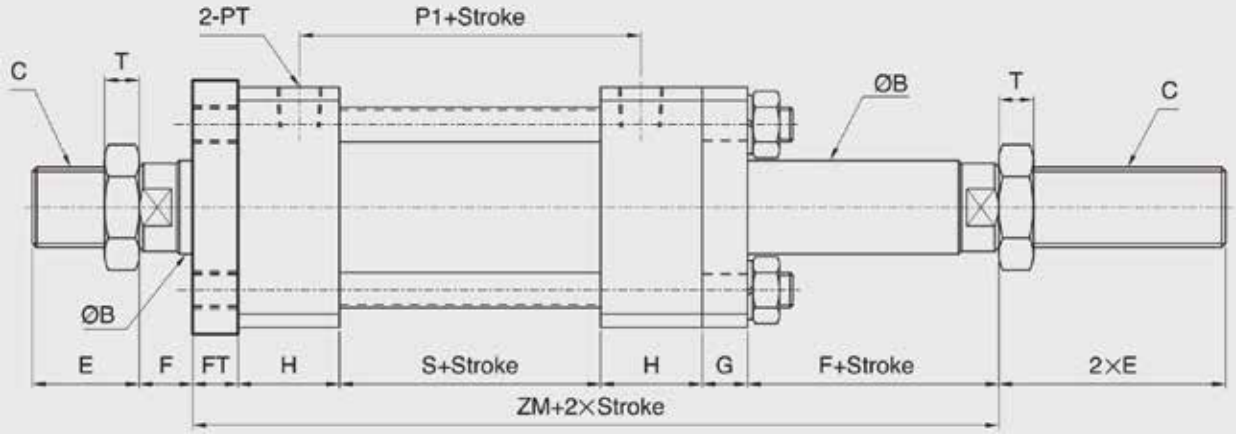
ZF-FA Series

方型重油油壓缸FA板尺寸圖
14Mpa Hydraulic Cylinders FA Dimensional Features

ZFB ZFB+FA TYPE



ZFD ZFD+FA TYPE



ZFB-ZFD TYPE																		FA TYPE					
BORE \ SIZE	ØA	ØB	C	E	F	G	H	O	N	P	P1	PM	PT	S	T	ZF	ZM	ØFD	FT	FR	FX	FY	FZ
Ø40	35	20	M18XP1.5	30	25	11	36	11	26	88	90	40	1/4	60	8	133	179	11	11	95	46	118	69
Ø50	40	25	M22XP1.5	35	25	13	42	9	34	92	90	40	3/8	60	13	149	195	11	13	115	58	145	85
Ø63	45	30	M26XP1.5	40	30	15	42	9	34	97	95	45	3/8	65	13	156	209	14	15	132	65	165	98
Ø80	55	40	M36XP1.5	45	30	18	46	7	40	105	105	45	1/2	65	15	169	223	18	18	155	87	190	118
Ø100	65	50	M45XP2.0	50	40	20	50	7	40	114	114	50	1/2	74	15	184	254	18	20	190	109	230	150

備註：

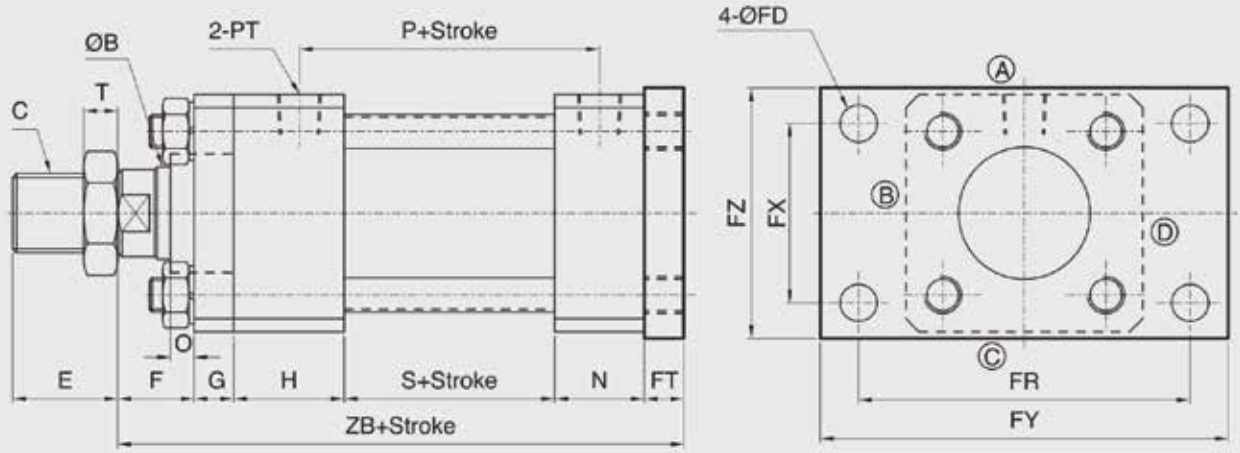
1. 本系列軸心加大或縮小時如未註明長度尺寸時，依照本公司規定自行加工。
2. ZF系列行程未超過1500mm時，活塞(PM)長度如附表,訂製行程如超過1500mm時，活塞長度請參閱特性資料表。
3. 本系列軸心螺帽規格M50mm(含)以上時，其外徑為圓形。

1. The length and size of the axis were not specifide when being enlarged or reduced. The size of the axis will be constructed according to the specification tablet.
2. When this series of stroke exceeds(includes) 1500mm, as see the property information for the length of the piston. Within 1500mm see the (PM) length of piston.
3. The screw mut specification of this series of axis over M50 is round and W stands for its external diameter.

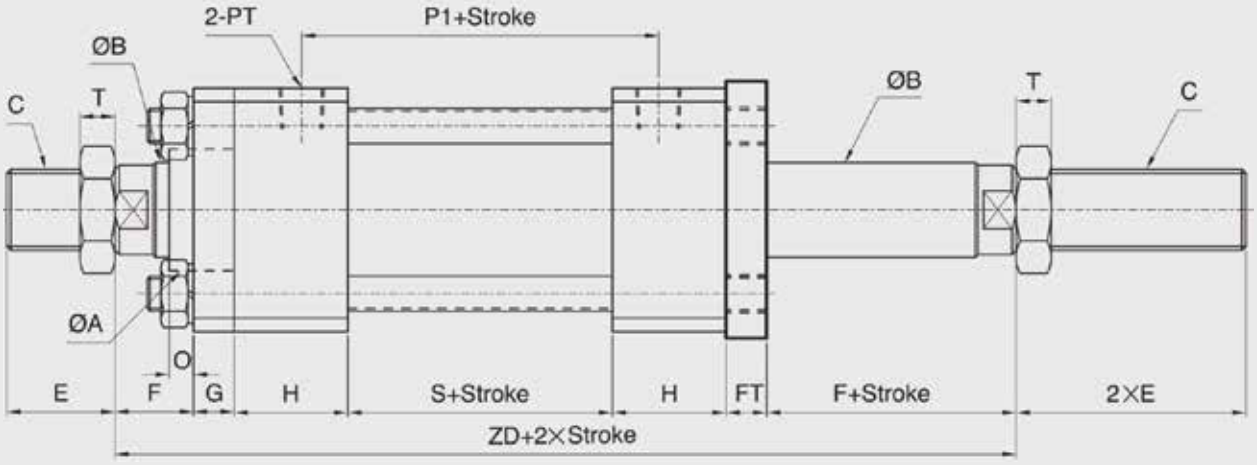
ZF-FB Series

方型重油油壓缸FB板尺寸圖
14Mpa Hydraulic Cylinders FB Dimensional Features

ZFB ZFB+FB TYPE



ZFD ZFD+FB TYPE



ZFB-ZFD TYPE																		FB TYPE					
BORE \ SIZE	ØA	ØB	C	E	F	G	H	O	N	P	P1	PM	PT	S	T	ZB	ZD	ØFD	FT	FR	FX	FY	FZ
Ø40	35	20	M18XP1.5	30	25	11	36	11	26	88	90	40	1/4	60	8	169	204	11	11	95	46	118	69
Ø50	40	25	M22XP1.5	35	25	13	42	9	34	92	90	40	3/8	60	13	187	220	11	13	115	58	145	85
Ø63	45	30	M26XP1.5	40	30	15	42	9	34	97	95	45	3/8	65	13	201	239	14	15	132	65	165	98
Ø80	55	40	M36XP1.5	45	30	18	46	7	40	105	105	45	1/2	65	15	217	253	18	18	155	87	190	118
Ø100	65	50	M45XP2.0	50	40	20	50	7	40	114	114	50	1/2	74	15	244	294	18	20	190	109	230	150

備註：

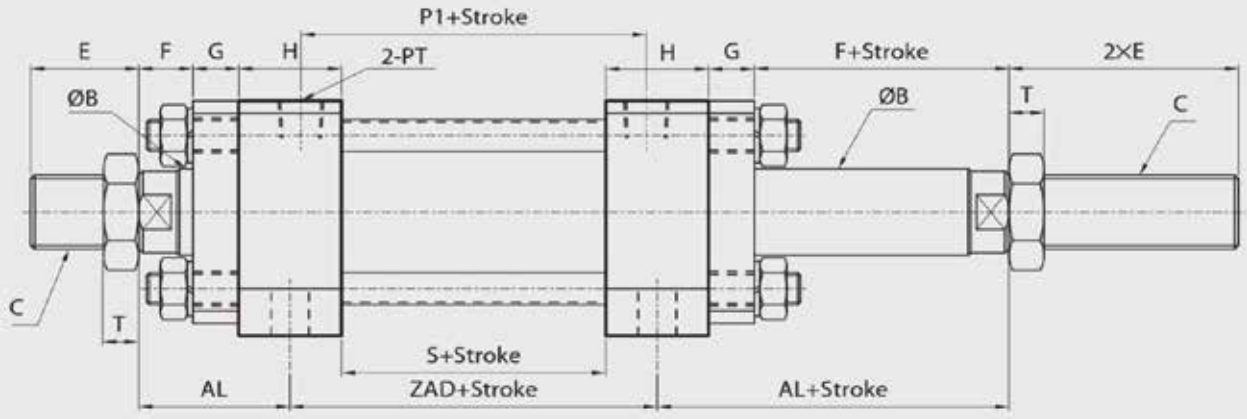
1. 本系列軸心加大或縮小時如未註明長度尺寸時，依照本公司規定自行加工。
2. ZF行程未超過1500mm時,活塞(PM)長度如附表，訂製行程如超過1500mm時,活塞長度請參閱特性資料表。
3. 本系列軸心螺帽規格M50mm(含)以上時，其外徑為圓形。

1. The length and size of the axis were not specifide when being enlarged or reduced. The size of the axis will be constructed according to the specification tablet.
2. When this series of stroke exceeds(includes) 1500mm, as see the property information for the length of the piston. Within 1500mm see the (PM) length of piston.
3. The screw mut specification of this series of axis over M50 is round and W stands for its external diameter.

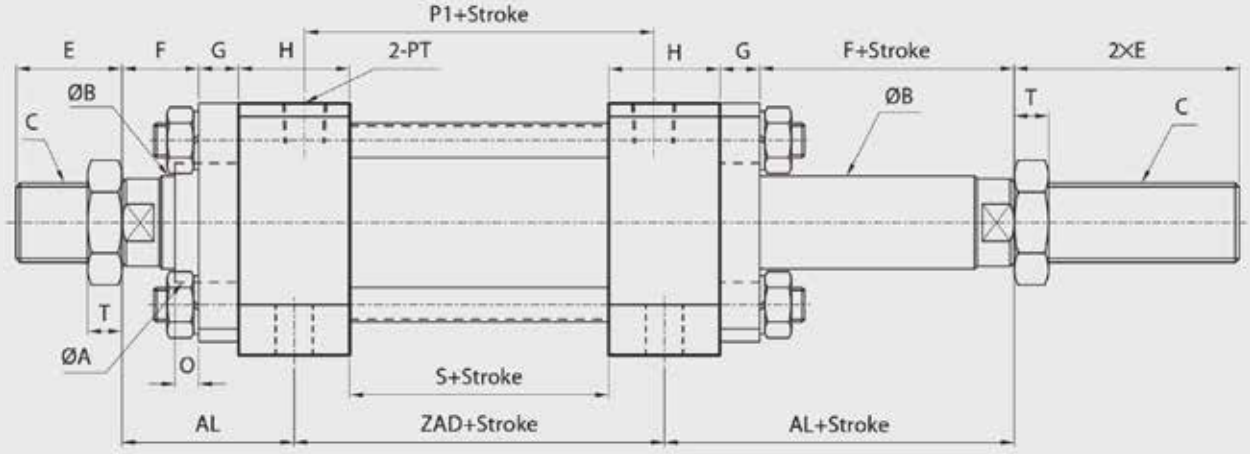
ZF-LA Series

方型重油油壓缸LA尺寸圖
14Mpa Hydraulic Cylinders LA Dimensional Features

ZFB ZFB+LA TYPE



ZFD ZFD+LA TYPE



ZFB-ZFD TYPE																						LA TYPE			
BORE \ SIZE	ØA	ØB	C	E	F	G	H	O	N	AH	AL	AN	P	P1	PM	PT	S	T	ZA	ZAD	Z	ØAD	AT	AX	AY
Ø40	35	20	M18XP1.5	30	25	11	36	11	26	70	54	37.5	88	90	40	1/4	60	13	91	96	158	11	14	95	118
Ø50	40	25	M22XP1.5	35	25	13	42	9	34	80	59	42.5	92	90	40	3/8	60	13	98	102	174	11	17	115	145
Ø63	45	30	M26XP1.5	40	30	15	42	9	34	95	66	50	97	95	45	3/8	65	13	103	107	186	14	19	132	165
Ø80	55	40	M36XP1.5	45	30	18	46	7	40	115	71	60	105	105	45	1/2	65	13	108	111	199	18	25	155	190
Ø100	65	50	M45XP2.0	50	40	20	50	7	40	140	85	72.5	114	114	50	1/2	74	15	119	124	224	18	27	190	230

備註：

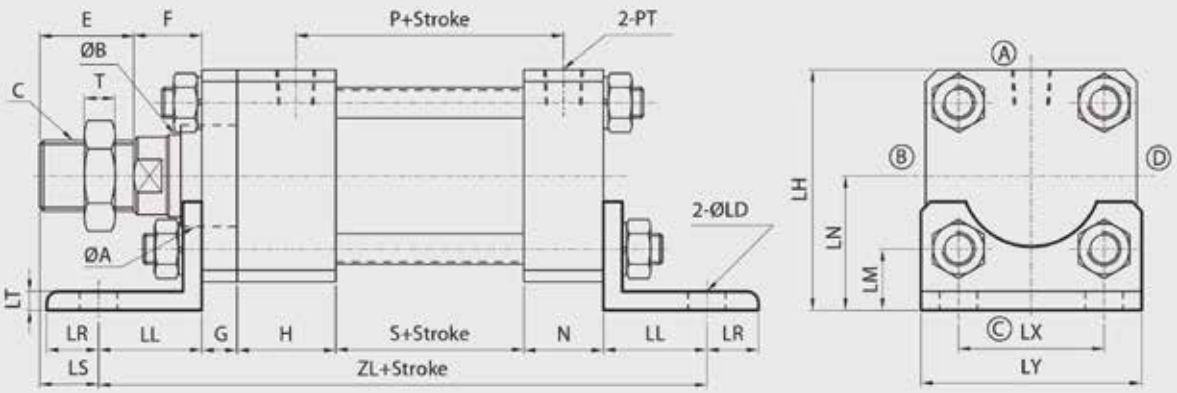
1. 本系列軸心加大或縮小時如未註明長度尺寸時依照本公司規定自行加工。
2. ZF系列行程未超過1500mm時，活塞(PM)長度如附表,訂製行程如超過1500mm時，活塞長度請參閱特性資料表。
3. 本系列行程若超過2000mm(含)時，須加拉桿中間固定座。
4. 本系列軸心螺帽規格M50mm(含)以上時其外徑為圓形。

1. The length and size ofthe axis were not specifide when being enlarged or reduced. The size ofthe axis will be constructed according to the specification tablet.
2. When this series of stroke exceeds(indudes) 1500mm, as see the property information for the length ofthe piston. Within 1500mm seethe (PM) length of piston.
3. When this series of stroke exceeds(includes) 2000mm,the fixed base ofthe pull rod must be added in the middle.
4. The screw mut specification of this series of axis over M50 is round and W stands for its external diameter.

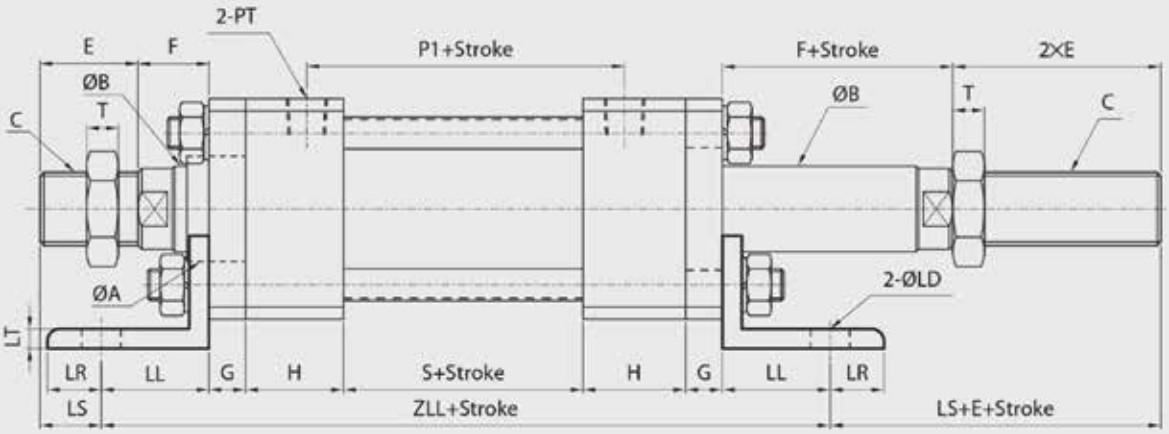
ZF-LB Series

方型重油油壓缸LB架尺寸圖
14Mpa Hydraulic Cylinders LB Dimensional Features

ZFB ZFB+LB(架) TYPE



ZFD ZFD+LB TYPE



ZFB-ZFD TYPE																				LB TYPE						
BORE \ SIZE	ØA	ØB	C	E	F	G	H	N	LH	LN	LS	P	P1	PM	PT	S	T	ZL	ZLL	ØLD	LL	LM	LR	LT	LX	LY
Ø40	35	20	M18XP1.5	30	25	11	36	26	75.5	43	23	88	90	40	1/4	60	8	197	218	11	32	20.5	13	8	45	65
Ø50	40	25	M22XP1.5	35	25	13	42	34	87.5	50	25	92	90	40	3/8	60	13	219	240	11	35	24	15	8	50	75
Ø63	45	30	M26XP1.5	40	30	15	42	34	105	60	28	97	95	45	3/8	65	13	240	263	14	42	28.5	18	10	58	90
Ø80	55	40	M36XP1.5	45	30	18	46	40	127	72	25	105	105	45	1/2	65	15	269	293	18	50	32	20	12	78	110
Ø100	65	50	M45XP2.0	50	40	20	50	40	127	85	35	114	114	50	1/2	74	15	294	324	18	55	34	23	12	96	135

備註：

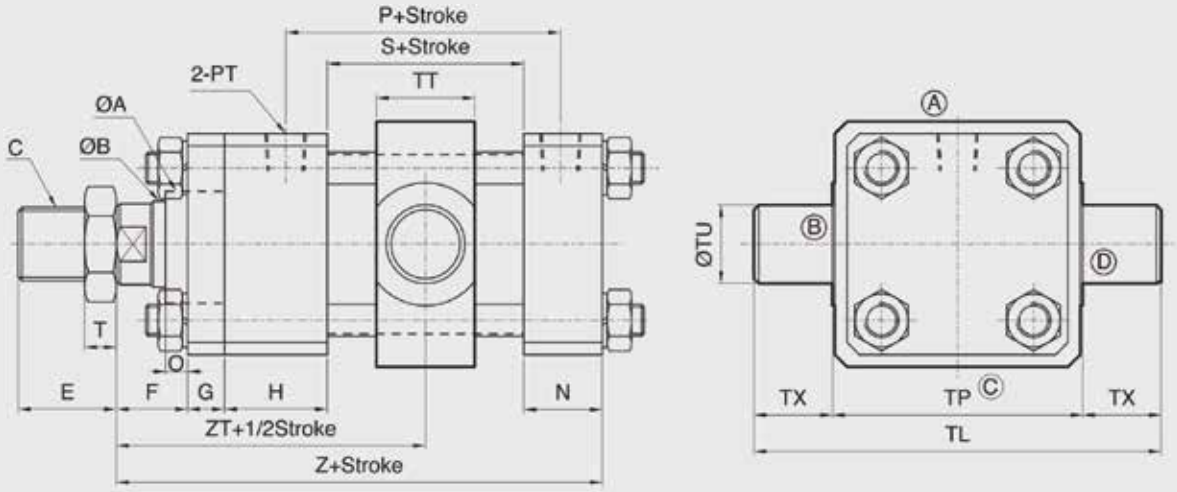
1. 本系列軸心加大或縮小時如未註明長度尺寸時，依照本公司規定自行加工。
2. ZF系列行程未超過1500mm時，活塞(PM)長度如附表,訂製行程如超過1500mm時，活塞長度請參閱特性資料表。
3. 本系列行程若超過2000mm(含)時，需加拉桿中間固定座。
4. 本系列軸心螺帽規格M50mm(含)以上時，其外徑為圓形。

1. The length and size ofthe axis were not specifide when being enlarged or reduced. The size ofthe axis will be constructed according to the specification tablet.
2. When this series of stroke exceeds(includes) 1500mm, as seethe property information for the length ofthe piston. Within 1500mm see the (PM) length of piston.
3. When this series of stroke exceeds(includes) 2000mm,the fixed base ofthe pull rod must be added in the middle.
4. The screw mut specification of this series of axis over M50 is round and W stands for its external diameter.

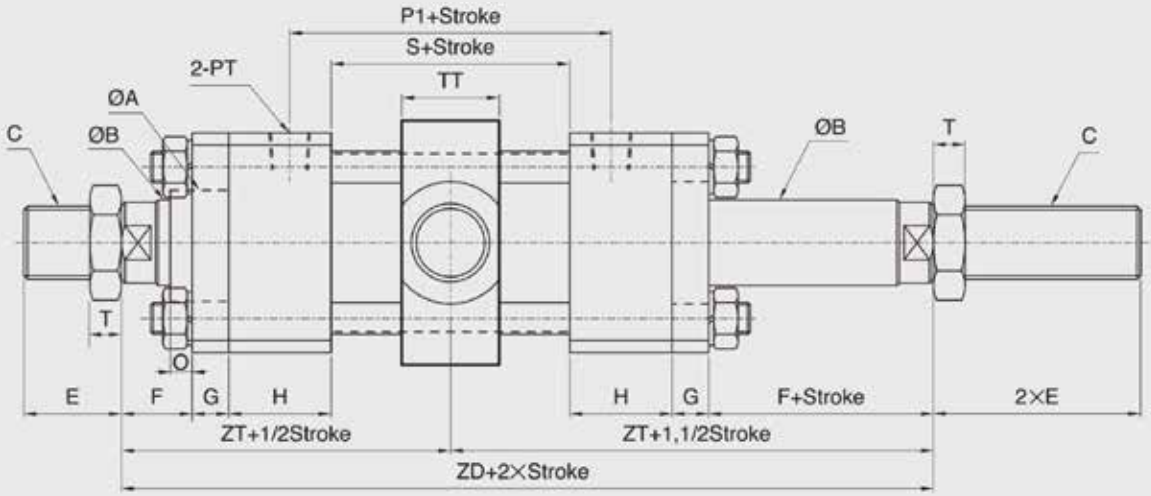
ZF-TC Series

方型重油油壓缸TC尺寸圖
14Mpa Hydraulic Cylinders TC Dimensional Features

ZFB ZFB+TC TYPE



ZFD ZFD+TC TYPE



ZFB-ZFD TYPE																			TC TYPE				
BORE \ SIZE	ØA	ØB	C	E	F	G	H	O	N	P	P1	PM	PT	S	T	Z	ZD	ZT	ØTU	TL	TP	TT	TX
Ø40	35	20	M18XP1.5	30	25	11	36	11	26	88	90	40	1/4	60	8	158	204	102	20	109	69	25	20
Ø50	40	25	M22XP1.5	35	25	13	42	9	34	92	90	40	3/8	60	13	174	220	110	25	135	85	33	25
Ø63	45	30	M26XP1.5	40	30	15	42	9	34	97	95	45	3/8	65	13	186	239	119.5	30	160	100	40	30
Ø80	55	40	M36XP1.5	45	30	18	46	7	40	105	105	45	1/2	65	15	199	253	126.5	30	180	120	40	30
Ø100	65	50	M45XP2.0	50	40	20	50	7	40	114	114	50	1/2	74	15	224	294	147	40	225	145	50	40

備註：

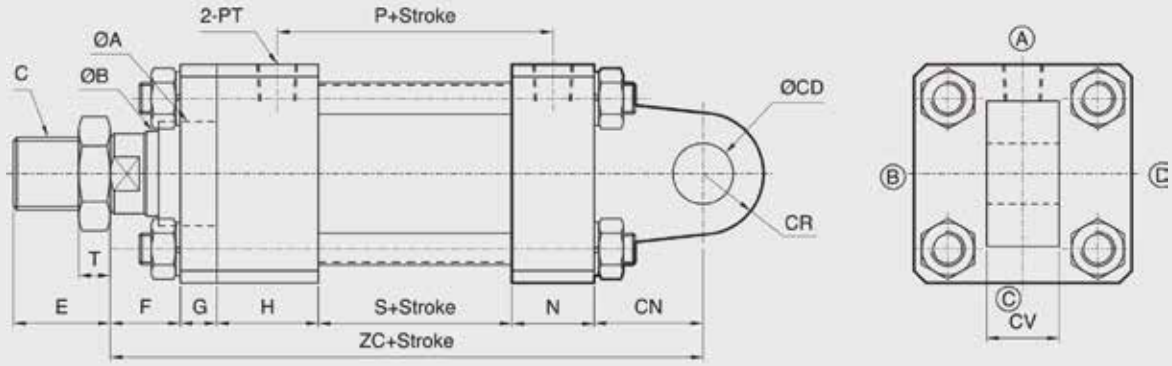
1. 本系列軸心加大或縮小時如未註明長度尺寸時，依照本公司規定自行加工。
2. ZF行程未超過1500mm時，活塞(PM)長度如附表，訂製行程如超過1500mm時，活塞長度請參閱特性資料表。
3. 本系列軸心螺帽規格M50mm(含)以上時，其外徑為圓形。

1. The length and size of the axis were not specifide when being enlarged or reduced. The size of the axis will be constructed according to the specification tablet.
2. When this series of stroke exceeds(includes) 1500mm, as see the property information for the length of the piston. Within 1500mm see the (PM) length of piston.
3. The screw mut specification of this series of axis over M50 is round and W stands for its external diameter.

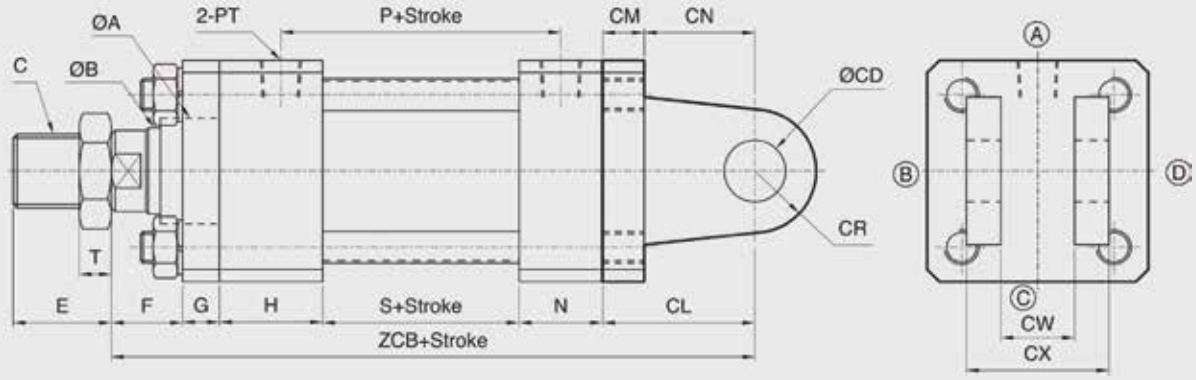
ZF-CA,CBA,CB Series

方型重油油壓缸CA,CB尺寸圖
14Mpa Hydraulic Cylinders CA,CB Dimensional Features

ZFB ZFB+CA TYPE



ZFB ZFB+CB TYPE



BORE \ SIZE	ØA	ØB	C	E	F	G	H	O	N	P	PM	PT	S	T	ZC	ZCB	ØCD	CL	CM	CN	CR	CV	CW	CX
	ZFB TYPE																CA-CB TYPE							
Ø40	35	20	M18XP1.5	30	25	11	36	11	26	88	40	1/4	60	8	183	194	16	36	11	25	15	18	19	43
Ø50	40	25	M22XP1.5	35	25	13	42	9	34	92	40	3/8	60	13	209	222	20	48	13	35	20	20	21	45
Ø63	45	30	M26XP1.5	40	30	15	42	9	34	97	45	3/8	65	13	226	241	25	55	15	40	25	25	26	54
Ø80	55	40	M36XP1.5	45	30	18	46	7	40	105	45	1/2	65	15	239	257	30	58	18	40	30	30	31	71
Ø100	65	50	M45XP2.0	50	40	20	50	7	40	114	50	1/2	74	15	274	294	35	70	20	50	35	40	41	81

備註：

1 .本系列軸心加大或縮小時如未註明長度尺寸時，依照本公司規定自行加工。
2. ZF行程未超過1500mm時活塞（PM）長度如附表，訂製行程如超過1500mm時，活塞長度請參閱特性資料表。
3. 本系列CA型行程若超過2000mm（含）時，須加拉桿中間固定座。
4. 本系列軸心螺帽規格M50mm（含）以上時，其外徑為圓形。

1. The length and size of the axis were not specifide when being enlarged or reduced. The size of the axis will be constructed according to the specification tablet.
2. When this series of stroke exceeds(includes) 1500mm, as see the property information or the length of the piston. Within 1500mm see the (PM) length of piston.
3. When this series of stroke exceeds(includes) 2000mm,the fixed base of the pull rod must be added in the middle.
4. The screw mut specification of this series of axis over M50 is round and W stands for its external diameter.