



MMC CX1 & CX2 SERIES

SINGLE & 2-POINT GAP FRAME PRESSES

45-315 METRIC TONS



Material Forming Solutions

AFFORDABLE QUALITY WITH MINSTER'S
INDUSTRY -LEADING SERVICE AND SUPPORT

MMC PRESSES

INTRODUCING MMC PRESSES

The Minster Machine Company, which has been in operation since 1896, has achieved legendary status amongst press users worldwide by providing innovative solutions backed with unmatched service and support for the life of the machine.

As a member of the Nidec Group of Companies (180+ companies as of April, 2012), Minster has the financial and technical strength of a 9-billion dollar manufacturing powerhouse behind it to ensure ongoing innovation, growth and stability well into the future.

As a result of our continuing efforts to bring affordable quality and high performance to our customers, Minster has teamed with one of our strategic partners, Ningbo CFG Machinery

(located in the port city of Ningbo, China), to introduce the new "MMC Presses" brand. With decades of experience building a wide range of presses, management has not only invested in the facilities infrastructure necessary to be a leading producer of metal stamping presses, but has also assembled a dedicated and innovative team of associates with the skills necessary to provide metal stampers with high quality, reliable, and affordable mechanical presses up to 1,200 tons capacity.

We invite you to compare the quality, support, and value of MMC Presses to the competition.

Many models of MMC Presses are available from stock for fast delivery.



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MMC PRESSES QUALITY FEATURES

All MMC Presses have been engineered to provide high levels of performance, functionality, and reliable operation under demanding conditions. Some of the many features of the MMC line of single and two-point gap machines include:

- Built to meet or exceed JIS Class 1 accuracy standards.
- Rigid, fabricated steel frame helps to maintain better accuracy and provides increased tooling life by minimizing deflection.
- Precision-machined gears, forged steel crankshafts and other drive train components are designed for smooth power transmission, quiet operation, and long life.
- Wintriss WPC2000 series control provides safe and simple operation, while allowing expansion of additional features as required (tonnage monitor, die protection, SmartPac automation control, light curtain safeguarding, etc.).
- Ross brand dual air valves meet all safety requirements, and are easily serviceable if required.
- Electrical components are name-brand, and readily sourced locally.
- T-stand mounted operator station (not depicted here) provides more flexibility for press operators.
- Yaskawa variable frequency drive allows fine-tuning the press speed to best suit the application.
- Low-inertia air actuated wet clutch & brake is responsive and long-lasting.
- Powered die height adjustment in .1 mm/.004" increments provides fast, accurate tooling setups.
- Cast connection rod and slide with 6-point gibs helps to dampen vibration (CX1-3150 and all CX2 series have fabricated steel slides).
- Fast-acting hydraulic overload protection system helps to prevent damage due to tonnage overload.
- Automatic monitored grease lubrication system helps to increase the life of bearings and slide ways.
- T-slotted slide face and bolster helps to provide easier clamping of tooling.
- Leveling mounts help dampen vibration and increase tooling life by helping maintain slide-to-bolster parallelism.
- 3-2-1 warranty and world-class Minster service for peace of mind.

AVAILABLE WITH LINK MOTION AND IN SINGLE POINT STRAIGHTSIDE CONFIGURATIONS
1, 2 & 4-POINT STRAIGHTSIDES ALSO AVAILABLE FROM 110 TO 1,200 TONS CAPACITY
CONTACT MINSTER OR YOUR LOCAL REPRESENTATIVE FOR MORE INFORMATION



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MMC PRESSES

45 THRU 315 TON CX1 PRESSES



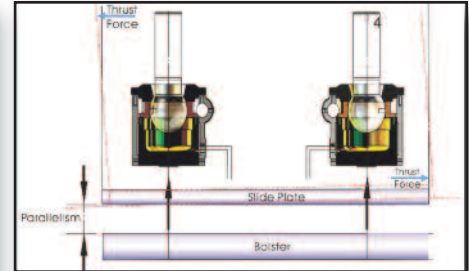
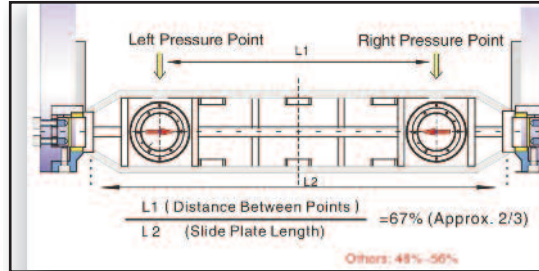
MMC Presses Quality Feature:
All 80-ton and larger CX1 series presses feature a standard extra wide (approx. 40% wider) flanged ram for easier mounting and better support of tooling, providing better part quality and longer tooling life.

CX1 SERIES BASIC SPECIFICATIONS

All specifications are subject to change without notice. If you have critical dimensions that must be maintained, please confirm before ordering.

No.	Feature	Unit	CX1-450		CX1-600		CX1-800		CX1-1100		CX1-1600		CX1-2000		CX1-2500		CX1-3150	
1	Capacity	Metric Ton	45		60		80		110		160		200		250		315	
		US Ton	50		66		88		121		176		220		275		347	
2	Model Designation	Type L or H	L		L		L		L		L		L		L		L	
3	Tonnage Rating Above BDC	mm	3.2	1.6	4.0	2.0	4.0	2.0	6.0	3.0	6.0	3.0	6.0	3.0	6.5	3.25	8.0	4.0
		inch	0.13	0.06	0.16	0.08	0.16	0.08	0.24	0.12	0.24	0.12	0.24	0.12	0.26	0.13	0.31	0.16
4	Stroke Length	mm	80	50	120	60	150	100	180	110	200	130	200	150	250	150	250	150
		inch	3.15	1.97	4.72	2.36	5.91	3.94	7.09	4.33	7.87	5.12	7.87	5.91	9.84	5.91	9.84	5.91
5	Speed Range	SPM	40-100	100-150	35-90	80-120	45-75	50-90	35-60	45-80	30-50	35-65	25-45	35-55	20-40	30-50	20-40	30-50
6	Die height over bolster SDAU	mm	250	265	310	340	330	350	350	350	450	450	450	450	450	450	450	450
		inch	9.84	10.43	12.20	13.39	12.99	13.78	13.78	13.78	17.72	17.72	17.72	17.72	17.72	17.72	17.72	17.72
7	Slide Adjustment	mm	60		75		80		80		100		110		120		120	
		inch	2.36		2.95		3.15		3.15		3.94		4.33		4.72		4.72	
8	Max. Upper Die Weight	Kg	300		300		500		650		750		950		1300		1400	
		lb	660		660		1100		1430		1650		2090		2860		3080	
9	Bolster Area (R-L x F-B)	mm	850	440	900	500	1000	600	1150	680	1250	760	1400	840	1500	900	1600	900
		inch	33.46	17.32	35.43	19.69	39.37	23.62	45.28	26.77	49.21	29.92	55.12	33.07	59.06	35.43	62.99	35.43
10	Bolster Thickness	mm	90		90		100		120		150		170		180		180	
		inch	3.54		3.54		3.94		4.72		5.91		6.69		7.09		7.09	
11	Slide Area (R-L x F-B)	mm	400	300	500	360	770	460	960	520	980	580	1100	650	1200	700	1200	700
		inch	15.75	11.81	19.69	14.17	30.31	18.11	37.80	20.47	38.58	22.83	43.31	25.59	47.24	27.56	47.24	27.56
12	Throat Depth	mm	225		255		310		350		390		430		460		460	
		inch	8.86		10.04		12.20		13.78		15.35		16.93		18.11		18.11	
13	Die Shank Hole Diameter	mm	38.1		50.0		50.0		50.0		65.0		65.0		65.0		65.0	
		inch	1.50		1.97		1.97		1.97		2.56		2.56		2.56		2.56	
14	Main Motor (VFD)	Kw	3.7		5.5		5.5		7.5		11.0		15.0		18.5		22.0	
		hp	5.0		7.4		7.4		10.1		14.7		20.1		24.8		29.5	
15	Slide Adjust Motor	Kw	0.2		0.3		0.4		0.4		0.8		0.8		1.1		1.1	
		hp	0.3		0.4		0.5		0.5		1.0		1.0		1.5		1.5	
16	Compressed Air Requirement	Mpa	0.55		0.55		0.55		0.55		0.55		0.55		0.55		0.55	
		psi	80		80		80		80		80		80		80		80	
17	Accuracy Standard	JIS	Class 1		Class 1		Class 1		Class 1		Class 1		Class 1		Class 1		Class 1	
18	Approx. Press Weight	Kg	3,800		5,600		7,000		10,000		14,000		22,000		25,000		29,000	
		lb	8,360		12,320		15,400		22,000		30,800		48,400		55,000		63,800	
19	OPTIONAL Die Cushion																	
20	Capacity	kN	23	n/a	36	n/a	36	n/a	63	n/a	100	n/a	140	n/a	140	n/a	140	n/a
		US Ton	2.5	n/a	4.0	n/a	4.0	n/a	6.9	n/a	11.0	n/a	15.4	n/a	15.4	n/a	15.4	n/a
21	Compressed Air Requirement	Mpa	0.55	n/a	0.55	n/a	0.55	n/a	0.55	n/a	0.55	n/a	0.55	n/a	0.55	n/a	0.55	n/a
		psi	80	n/a	80	n/a	80	n/a	80	n/a	80	n/a	80	n/a	80	n/a	80	n/a
22	Stroke Length	mm	50	n/a	70	n/a	70	n/a	80	n/a	90	n/a	90	n/a	110	n/a	110	n/a
		inch	1.97	n/a	2.76	n/a	2.76	n/a	3.15	n/a	3.54	n/a	3.54	n/a	4.33	n/a	4.33	n/a
23	Pad Area (L-R x F-B)	mm	300	230	350	300	410	330	500	460	540	460	640	510	700	510	700	510
		inch	11.81	9.06	13.78	11.81	16.14	12.99	19.69	18.11	21.26	18.11	25.20	20.08	27.56	20.08	27.56	20.08

MMC PRESSES 110 THRU 315 TON CX2 PRESSES



MMC Presses Quality Feature:

All CX2 series presses feature widely spaced connections (spaced at 2/3 of total slide width) and a responsive hydraulic overload which monitors and trips both valves simultaneously in the event of an overload, helping reduce the chance of press and tooling damage.

CX2 SERIES BASIC SPECIFICATIONS

All specifications are subject to change without notice. If you have critical dimensions that must be maintained, please confirm before ordering.

No.	Feature	Unit	CX2-1100		CX2-1600		CX2-2000		CX2-2500		CX2-3150	
1	Capacity	Metric Ton	110		160		200		250		315	
		US Ton	121		176		220		275		347	
2	Model Designation	Type L or H	L	H	L	H	L	H	L	H	L	H
3	Tonnage Rating Above BDC	mm	5.0	3.0	6.0	3.0	6.0	3.0	7.0	3.5	7.0	3.5
		inch	0.20	0.12	0.24	0.12	0.24	0.12	0.28	0.14	0.28	0.14
4	Stroke Length	mm	180	110	200	130	250	150	280	170	280	170
		inch	7.09	4.33	7.87	5.12	9.84	5.91	11.02	6.69	11.02	6.69
5	Speed Range	SPM	35-65	50-100	30-55	40-85	25-45	35-70	20-35	30-60	20-35	30-50
6	Die height over bolster SDAU	mm	400		450		500		550		550	
		inch	15.75		17.72		19.69		21.65		21.65	
7	Slide Adjustment	mm	100		100		120		120		120	
		inch	3.94		3.94		4.72		4.72		4.72	
8	Max. Upper Die Weight	Kg	800		1270		1470		1560		1560	
		lb	1760		2794		3234		3432		3432	
9	Bolster Area (R-L x F-B)	mm	1800	650	2000	760	2400	840	2700	900	2700	920
		inch	70.87	25.59	78.74	29.92	94.49	33.07	106.30	35.43	106.30	36.22
10	Bolster Thickness	mm	130		150		170		170		180	
		inch	5.12		5.91		6.69		6.69		7.09	
11	Slide Area (R-L x F-B)	mm	1400	500	1600	550	1850	650	2100	700	2100	700
		inch	55.12	19.69	62.99	21.65	72.83	25.59	82.68	27.56	82.68	27.56
12	Throat Depth	mm	335		390		430		460		460	
		inch	13.19		15.35		16.93		18.11		18.11	
13	Die Shank Hole Diameter & Spacing (Qty. 3)	mm	50	280	50	325	50	375	50	430	50	450
		inch	1.97	11.02	1.97	12.80	1.97	14.76	1.97	16.93	1.97	17.72
14	Main Motor (VFD)	Kw	11		11		15		19		22	
		hp	15		15		20		25		29	
15	Slide Adjust Motor	Kw	0.8		1.1		1.5		1.5		2.0	
		hp	1.0		1.5		2.0		2.0		2.7	
16	Compressed Air Requirement	Mpa	0.55		0.55		0.55		0.55		0.55	
		psi	80		80		80		80		80	
17	Accuracy Standard	JIS	Class 1		Class 1		Class 1		Class 1		Class 1	
18	Approx. Press Weight	Kg	13,500		19,500		28,000		35,000		42,000	
		lb	29,700		42,900		61,600		77,000		92,400	
19	OPTIONAL Die Cushions		1 Pad / 2 Cylinders									
20	Capacity	kN	36	n/a	63	n/a	100	n/a	140	n/a	140	n/a
		US Ton	4.0	n/a	6.9	n/a	11.0	n/a	15.4	n/a	15.4	n/a
21	Compressed Air Requirement	Mpa	0.6	n/a	0.6	n/a	0.6	n/a	0.6	n/a	0.6	n/a
		psi	87	n/a	87	n/a	87	n/a	87	n/a	87	n/a
22	Stroke Length	mm	70	n/a	70	n/a	80	n/a	100	n/a	100	n/a
		inch	2.76	n/a	2.76	n/a	3.15	n/a	3.94	n/a	3.94	n/a
23	Pad Area (L-R x F-B)	mm	1058	346	1268	470	1470	546	1680	654	1680	654
		inch	41.65	13.62	49.92	18.50	57.87	21.50	66.14	25.75	66.14	25.75
19	OPTIONAL Die Cushions		2 Pads / 2 Cylinders									
20	Capacity (Each Cylinder)	kN	36	n/a	63	n/a	100	n/a	140	n/a	140	n/a
		US Ton	4.0	n/a	6.9	n/a	11.0	n/a	15.4	n/a	15.4	n/a
21	Compressed Air Requirement	Mpa	0.6	n/a	0.6	n/a	0.6	n/a	0.6	n/a	0.6	n/a
		psi	87	n/a	87	n/a	87	n/a	87	n/a	87	n/a
22	Stroke Length	mm	70	n/a	70	n/a	80	n/a	100	n/a	100	n/a
		inch	2.76	n/a	2.76	n/a	3.15	n/a	3.94	n/a	3.94	n/a
23	Pad Area (L-R x F-B) x 2	mm	410	330	500	460	540	460	700	510	700	510
		inch	16.14	12.99	19.69	18.11	21.26	18.11	27.56	20.08	27.56	20.08

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TAKE ADVANTAGE OF THE LATEST PRESS TECHNOLOGIES

INCREASE:

- MACHINE UPTIME
- TOTAL PARTS OUTPUT
- OPERATOR SAFETY
- PART QUALITY & CONSISTENCY

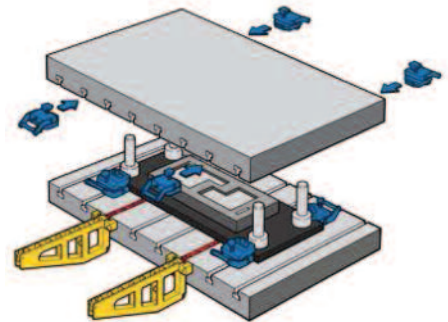
REDUCE:

- SET-UP & JOB CHANGEOVER TIME
- LABOR COSTS
- TOOLING MAINTENANCE AND REPAIR COST

FOLLOWING ARE EXAMPLES OF THE FULL RANGE OF PRODUCTION AND SAFETY-ENHANCING PRODUCTS FROM MINSTER AND OUR QUALITY SUPPLY PARTNERS.



PRESS-TO-PRESS & STANDARD TRANSFERS



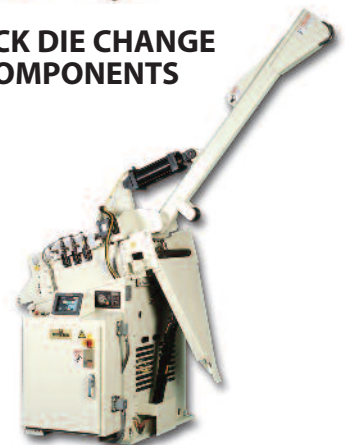
QUICK DIE CHANGE COMPONENTS



SERVO ROLL & ZIG-ZAG FEEDS



PULL-THROUGH & POWERED STRAIGHTENERS



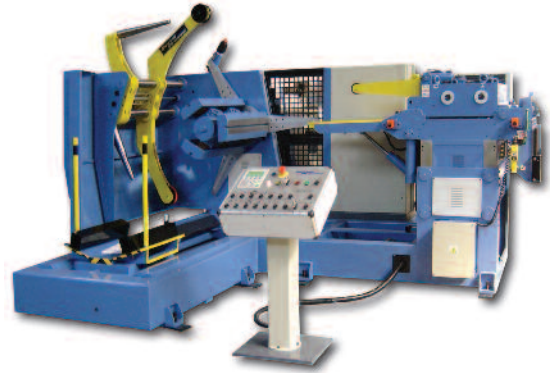
MMC PRESSES
MAXIMIZE PRODUCTIVITY



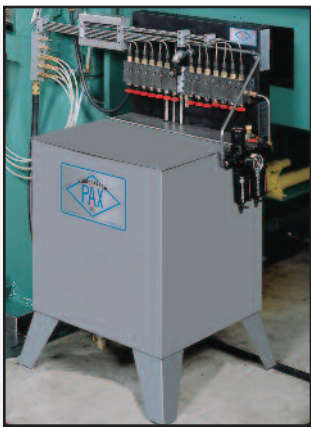
PALLET DECOILERS



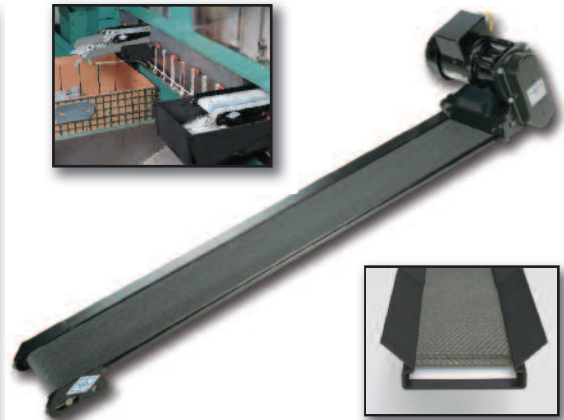
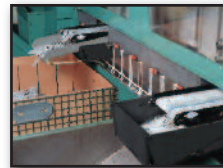
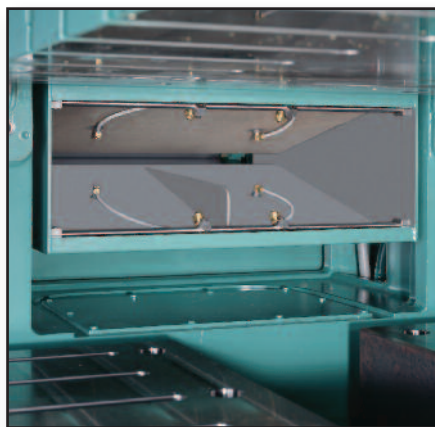
STOCK REELS



**COMBINATION
REEL/STRAIGHTENER/FEED**



STOCK & TOOLING LUBRICATION SYSTEMS



CONVEYORS

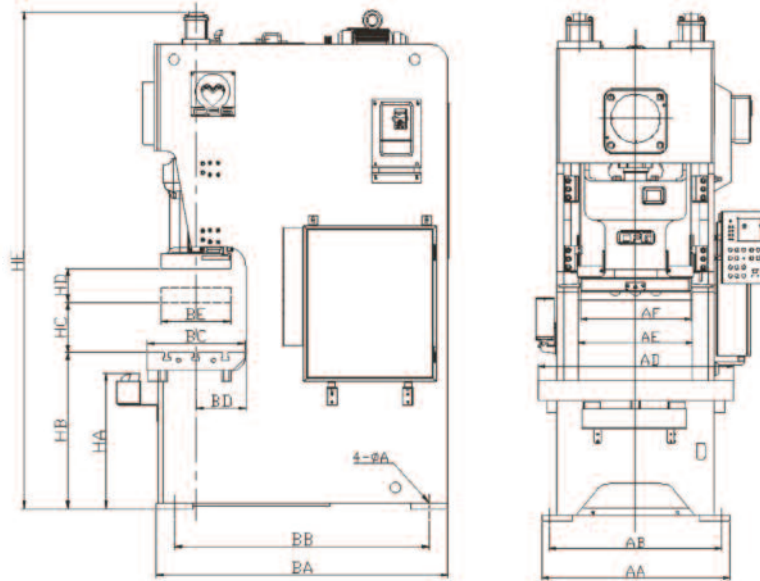


PROCESS AUTOMATION, MONITORING & SAFEGUARDING (MANY BRANDS AVAILABLE)

**WHATEVER YOUR APPLICATION, MINSTER KNOWS HOW TO HELP YOU
GET THE MOST OUT OF YOUR PRESS. LET US BE YOUR GO-TO SOURCE
FOR AUXILIARY EQUIPMENT DONE RIGHT.**

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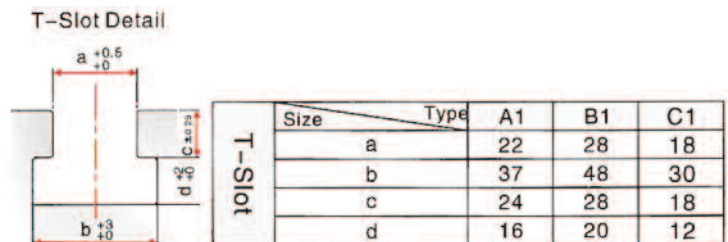
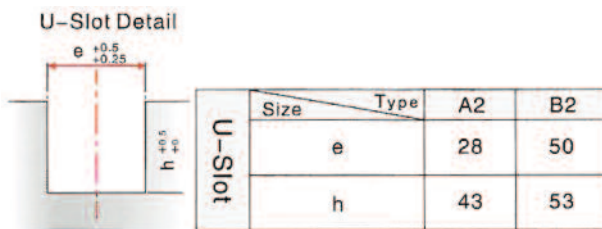
REFERENCE DIMENSIONS CX1 SERIES



CX1 SERIES DIMENSIONS

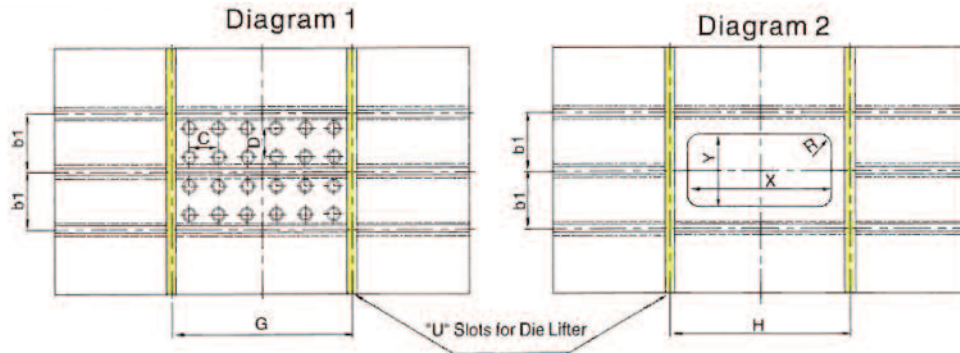
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Model	CX1-450	CX1-600	CX1-800	CX1-1100	CX1-1600	CX1-2000	CX1-2500	CX1-3150
AA	860	910	1060	1110	1250	1410	1600	1690
AB	790	840	970	1020	1150	1310	1480	1570
AD	850	900	1000	1150	1250	1400	1500	1600
AE	500	570	675	670	720	870	930	1020
AG	700	750	865	930	1030	1200	1340	1430
BA	1230	1495	1635	1790	1960	2270	2460	2715
BB	1040	1305	1435	1540	1660	1920	2040	2295
BC	440	500	600	680	760	840	900	900
BD	225	255	310	350	390	430	460	460
BE	350	360	460	520	580	650	700	700
HA	690	690	690	690	705	770	840	880
HB	800	800	835	840	900	1020	1100	1140
HC	275	310	330	240	450	450	450	450
HD	110	120	150	180	200	200	250	250
HE	2245	2550	2950	2970	3480	4000	4220	4455
HF	810	810	1380	1500	1580	1600	1635	1650
ØA	Ø28	Ø28	Ø28	Ø28	Ø45	Ø45	Ø45	Ø45

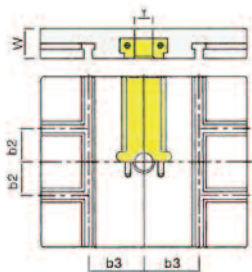


MINSTER AUXILIARY EQUIPMENT

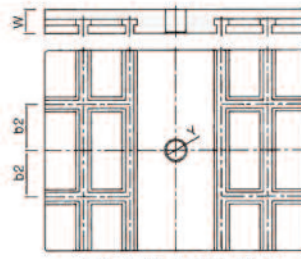
CX1 SLIDE & BOLSTER REFERENCE DIMENSIONS



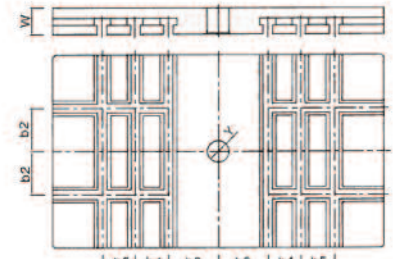
Model	CX1-450	CX1-600	CX1-800	CX1-1100	CX1-1600	CX1-2000	CX1-2500	CX1-3150
T-Slot Type	C1	A1	A1	A1	B1	B1	B1	B1
U-Slot Type	-	-	A2	A2	B2	B2	B2	B2
Bolster Area (LR x FR)	850 x 440	900 x 500	1000 x 600	1150 x 680	1250 x 760	1400 x 840	1500 x 900	1600 x 900
Shank Hole Qty x Dia.	15 x Ø20	15 x Ø20	24 x Ø20	24 x Ø20	24 x Ø28	24 x Ø28	24 x Ø28	24 x Ø28
C x D	75 x 85	75 x 100	75 x 75	80 x 80	100 x 110	115 x 110	130 x 120	130 x 120
b1	120	150	150	160	220	280	290	290
X x Y	300 x 150	320 x 160	360 x 180	400 x 200	440 x 220	480 x 240	520 x 260	520 x 260
G	360	370	480	500	580	680	730	730
H	420	420	480	500	520	550	600	600



25-110 Ton (Standard)



160-315 Ton (Standard)



110-315 Ton (Oversized)

Note: Shank blocks are provided as standard features on presses up to 110 tons capacity.

Model	CX1-450	CX1-600	CX1-800	CX1-1100	CX1-1600	CX1-2000	CX1-2500	CX1-3150
Slide Area (LR x FR)	400 x 300	500 x 360						
Standard Slide Plate (LR x FR)	-	-	560 x 460	650 x 520	700 x 580	850 x 650	920 x 700	920 x 700
Oversize Slide Plate (LR x FR)	-	-	770 x 460	960 x 520	980 x 580	1100 x 650	1200 x 700	1200 x 700
T-Slot Type	C1	A1	A1	A1	B1	B1	B1	B1
Shank Hole Size Y	Ø38.1	Ø50	Ø50	Ø50	Ø65	Ø65	Ø65	Ø65
b2	60	80	90	110	130	150	170	170
b3	-	110	150	150	150	150	150	150
b4	-	-	-	100	100	100	150	150
b5	-	-	-	100	100	100	150	150
W	60	70	70	80	80	85	85	85

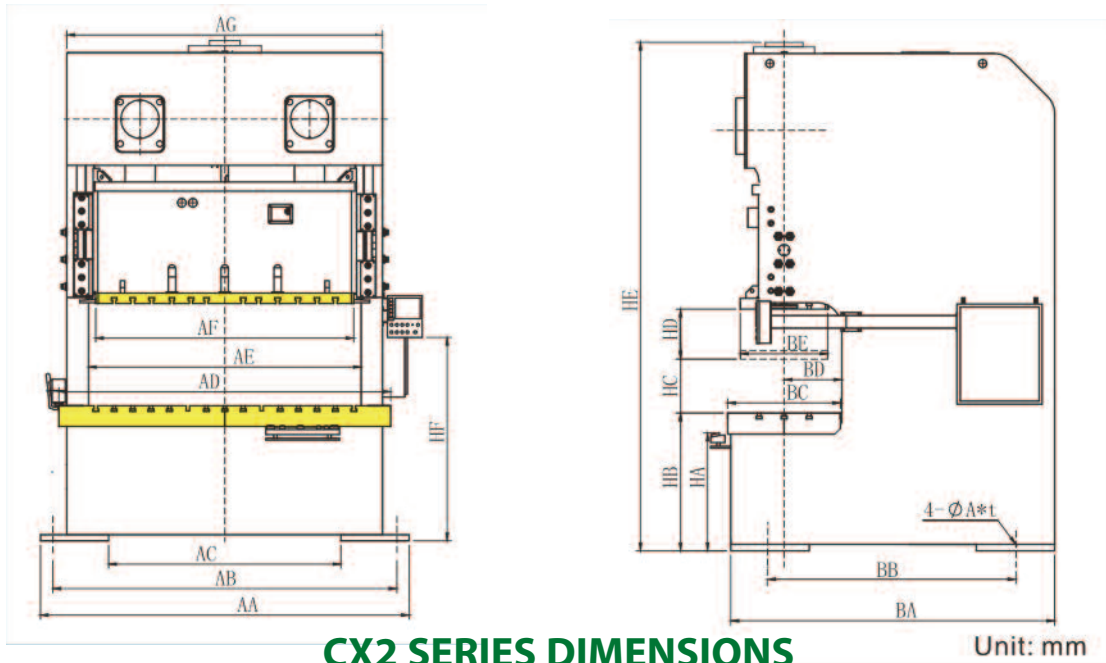
NOTE:

All specifications are subject to change without notice. If you have critical dimensions that must be maintained, please confirm before ordering. Special slide and bolster machining is available. For cost and lead time, please contact Minster.

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MMC PRESSES

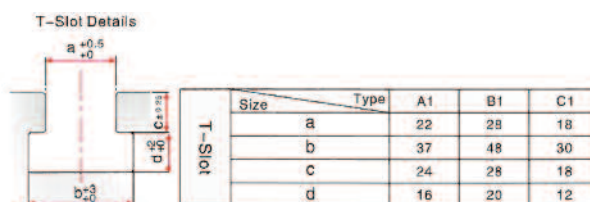
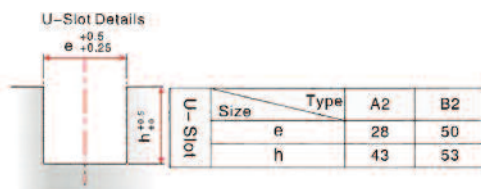
REFERENCE DIMENSIONS CX2 SERIES



CX2 SERIES DIMENSIONS

All specifications are subject to change without notice. If you have critical dimensions that must be maintained, please confirm before ordering.

Model	CX2-1100		CX2-1600		CX2-2000		CX2-2500		CX2-3150	
	L	H	L	H	L	H	L	H	L	H
AA	1900		2200		2550		3000		3000	
AB	1800		2080		2400		2700		2700	
AD	1800		2000		2400		2700		2700	
AE	1440		1660		1920		2220		2220	
AF	1400		1600		1850		2100		2100	
AG	1700		1970		2275		2585		2585	
BA	1745		1970		2275		2585		2585	
BB	1365		1580		1885		2195		2195	
BC	650		760		840		900		920	
BD	335		390		430		460		460	
BE	500		550		650		700		700	
HA	630		680		770		870		870	
HB	830	860	905	1025	1000	860	1100	860	1100	860
HC	400		450		500		550		550	
HD	830	860	905	1025	1000	860	1100	860	1100	860
HE	2765		3185		3660		4070		4070	
HF	1400		1570		1670		1670		1670	
ØA*T (Plate Thickness)	Ø35 x 40		Ø41 x 45		Ø41 x 45		Ø47 x 50		Ø47 x 50	



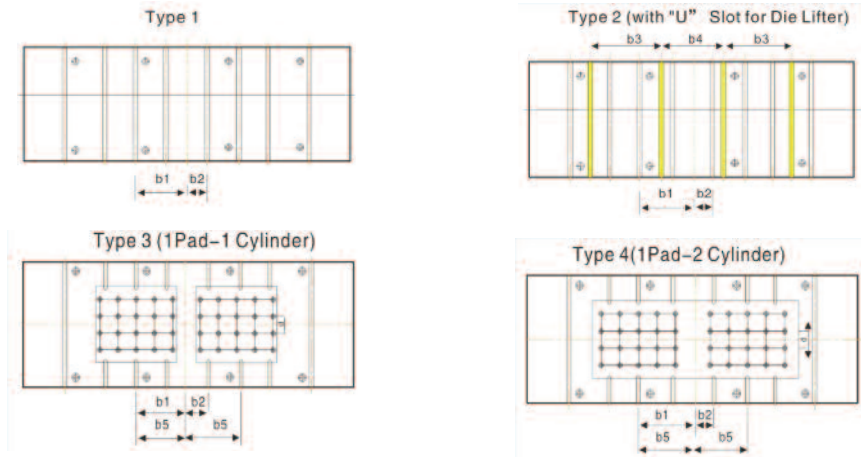
NOTE:

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CX2 SLIDE & BOLSTER REFERENCE DIMENSIONS



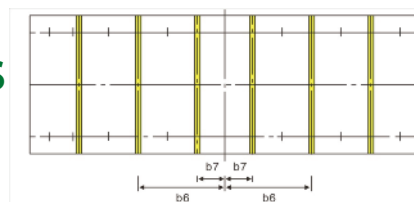
CX2 SERIES BASIC SPECIFICATIONS

All specifications are subject to change without notice. If you have critical dimensions that must be maintained, please confirm before ordering.
Special slide and bolster machining is available. For cost and lead time, please contact Minster.

Model		Units	CX2-1100	CX2-1600	CX2-2000	CX2-2500	CX2-3150
Die Cushion Pad Area	1 Pad-1 Cylinder	mm	360x346	480x470	560x546	660 x 654	660 x 654
		inch	14.17 x 13.62	18.90 x 18.50	22.05 x 21.50	25.98 x 25.75	25.98 x 25.75
	1 Pad-2 Cylinder	mm	1058 x 346	1268 x 470	1470 x 546	1680 x 654	1680 x 654
		inch	41.65 x 13.62	49.92 x 18.50	57.87 x 21.50	66.14 x 25.75	66.14 x 25.75
T-Slot Type			A1	A1	B1	B1	B1
Number of T-Slot			6	8	8	8	8
b1		mm	375	375	375	450	450
		inch	14.76	14.76	14.76		
b2		mm	125	125	125	150	150
		inch	4.92	4.92	4.92	5.91	5.91
b3		mm	320	520	710	680	680
		inch	12.60	20.47	27.95	26.77	26.77
b4		mm	430	520	520	540	540
		inch	16.93	20.47	20.47	21.26	21.26
b5		mm	255	415	455	510	510
		inch	10.04	16.34	17.91	20.08	20.08
Type 3 & 4	Shank Hole Qty x Dia.		30 x Φ20	48 x Φ20	48 x Φ28	70 x Φ28	70 x Φ28
	Shank Hole Distance (c x d)	mm	75 x 100	75 x 75	100 x 100	100 x 100	100 x 100
		inch	2.95 x 3.94	2.95 x 2.95	3.94 x 3.94	3.94 x 3.94	3.94 x 3.94

Model	Units	CX2-1100	CX2-1600	CX2-2000	CX2-2500	CX2-3150
Slide Area (LRxFR)	mm	1400 x 500	1600 x 550	1850 x 650	2100 x 700	2100 x 700
	inch	55.12 x 19.69	62.99 x 21.65	72.83 x 25.59	82.68 x 27.56	82.68 x 27.56
T-Slot Type		A1	A1	B1	B1	B1
T-Slot Qty		4	6	6	6	6
b6	mm	375	375	375	450	450
	inch	14.76	14.76	14.76	17.72	17.72
b7	mm	125	125	125	150	150
	inch	4.92	4.92	4.92	5.91	5.91

SLIDE PLATE T-SLOTTING DETAILS



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