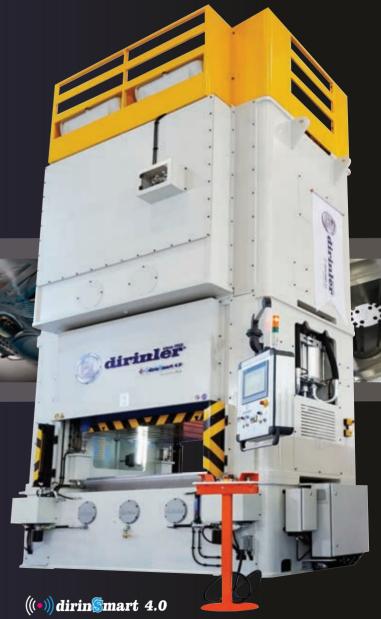


dirinler®

Our expertise comes from our experience...since 1952...

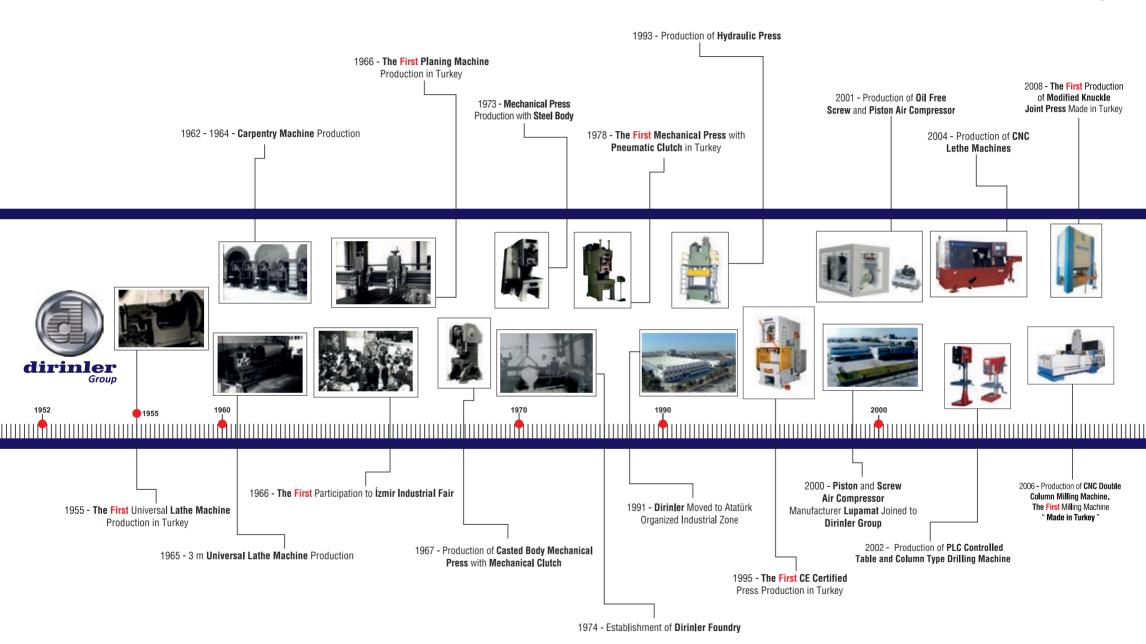




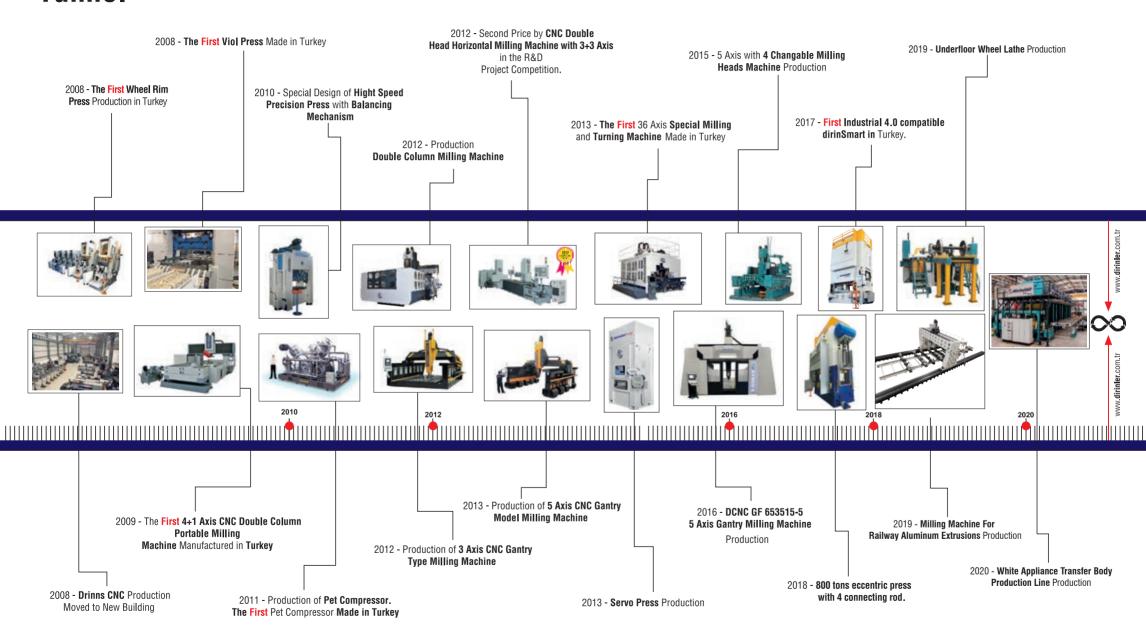
since 1952...



Time

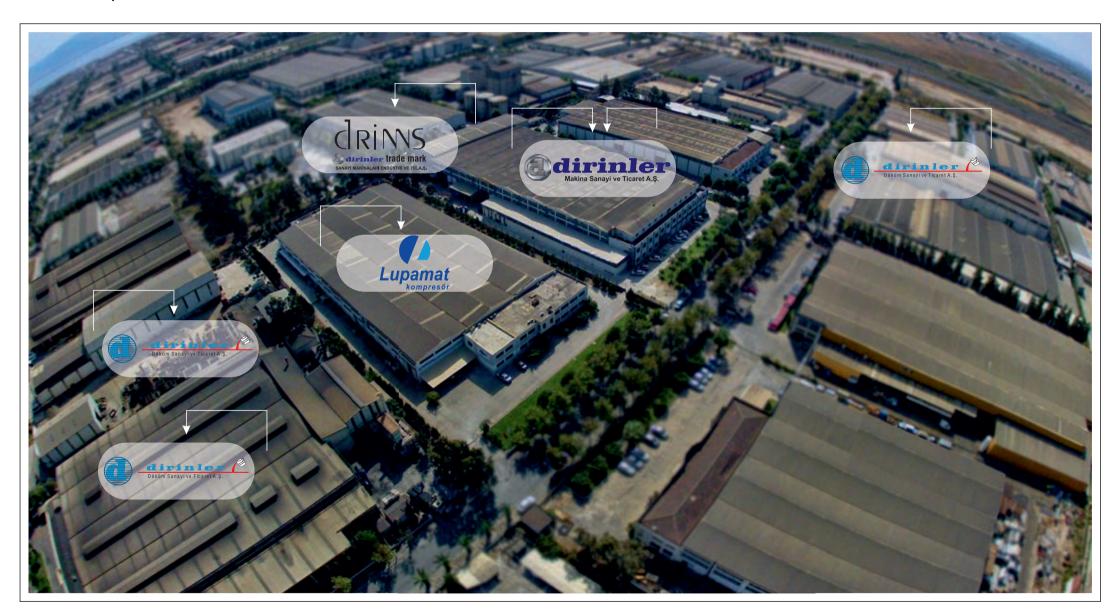


Tunnel





Dirinler Group



Group



DİRİNLER MAKİNA SANAYİ VE TİCARET A.Ş.

Dirinler Makina was founded in 1952, Dirinler Makina is making metal forming presses in various sizes and dimensions. Among our product range eccentric, knuckle joint, link drive, servo and hydraulic presses are available in C-Frame as well as H-frame construction up to 2000 tons capacity. As a highly skilled manufacturer, Dirinler is performing rigorous production activities in its 18.000 sqm indoor facility which is sitting on 24.000 sqm total area. For the sake of customer satisfaction, we offer free investment consultancy services to our esteemed customers. Our vision is unlimited customer satisfaction and we offer "Product Liability Insurance"

For more information please visit: www.dirinler.com.tr



DİRİNLER DÖKÜM SANAYİ VE TİCARET A.Ş.

Dirinler Döküm was founded in 1974 for the production of cast iron parts. The company produces big and heavy parts up to 20 tons grey iron and 16 tons ductile iron in one piece for wind energy, ship building and heavy machinery industries, press molds for automotive industry, valves and pumps up to 4000 mm diameter with annual capacity of 20.000 tons in total 40.000 sqm area of which 20.000 sqm is indoor. Dirinler Döküm exports to many countries especially in Europe as rough or machined parts.

For more information please visit: www.dirinlerdokum.com



LUPAMAT MAKİNA SANAYİ A.Ş.

Lupamat was founded in 1968 in order to produce air compressors. The factory having activities in an area of 12.000 sqm of which 6.000sqm indoor, is producing reciprocating, screw air compressors and pet compressors under the brand of "Lupamat" and exports to many countries in the world especially in Europe and Middle East.

For more information please visit: www.lupamat.com



DİRİNLER SANAYİ MAKİNALARI ENDÜSTRİ VE TİCARET A.Ş.

Our company was founded at 1983 and produces CNC Lathes, CNC Double Column Milling Machines, CNC Gantry type Milling Machines at 2500 sqm closed area since the year 2001. Our company also presents customized solutions with high quality products and reasonable price advantages by supplying special production with Drinns brand in line with the needs and expectations of the customers.

For more information please visit: www.drinns.com.tr

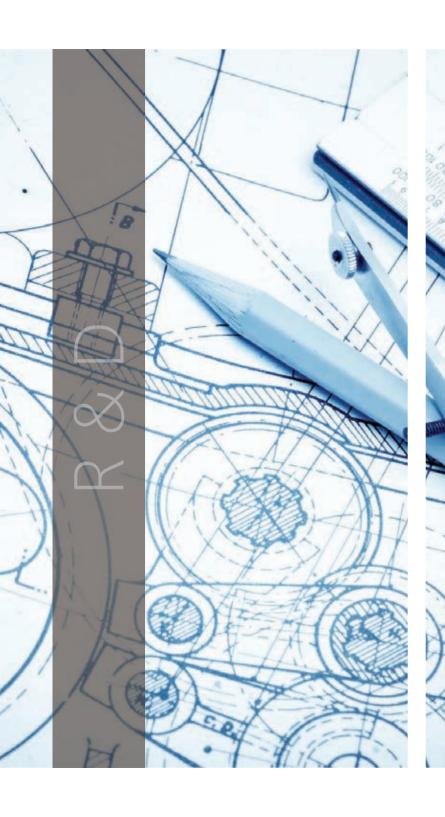


TEKENTEK MAKİNA MODEL SANAYİ TİCARET LİMİTED ŞİRKETİ

Within Dirinler Group of companies, it is a pattern-shop specialized in pattern making for the use in high quality cast iron and ductile iron production. It continues its activities within the frame-work of innovative and fast pattern making principle with the latest technology 3D design (CAD – CAM) applications in a 10,060 sqm closed area.

For more information please visit: www.tekentek.com





Design

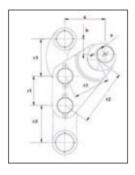
CAD Studies / Creo (Pro Engineer)

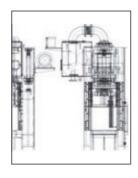
Analysis;

CAE / Finite Elements Analysis Kinematic Dynamic Analysis

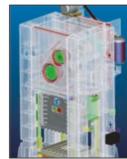
Special Programs

- Eccentric Press, Knuckle Joint Kinematic
- Dynamic Design Program
- Hydraulic Press Design Program
- 3 DOF Press Vibration Simulation Program
- Hydrodynamic Lubricated Bearing Design Program
- Gear Train Design Program











Production Process

We manufacture according to today's high-tech sheet metal processing technology.

- Quality certificated materials,
- High qualified welding workmanship,
- CNC plasma cutting and CNC oxygen cutting,
- Straightening operations,
- Welding operations with robots,
- High precision body flexing analysis

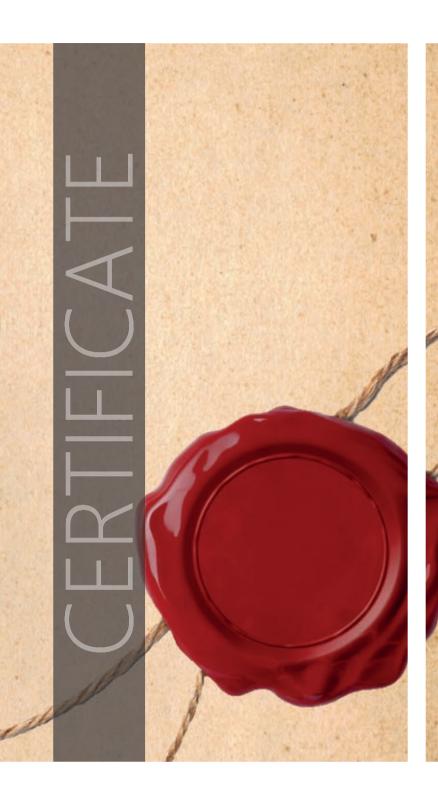
Stress Relieving by Vibration

Press bodies and components are subjected to stress relieving operations according to the method of stress relieving by vibration.



Quality

- High precision component and body control via 3D measuring devices,
- Dimensional control via CMM according to world standards,
- Parallelism control under load,
- Measurement and shear test,
- High precision body flexing analysis,
- Loadcell ITC capacity control.



Certificates;

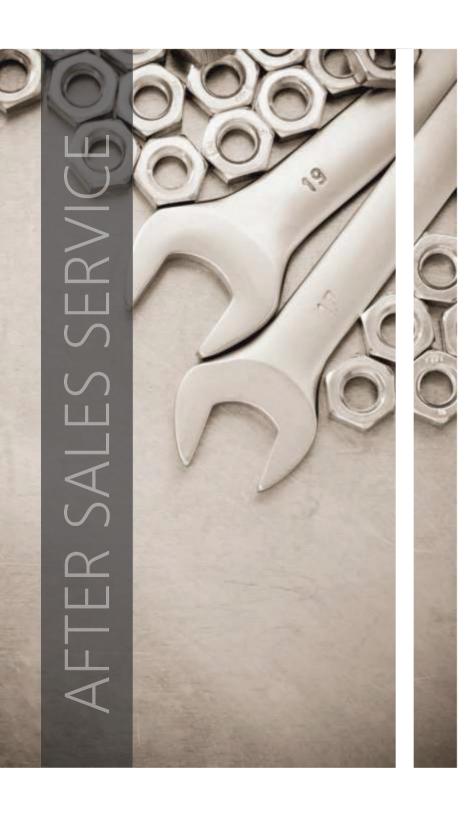
All our machines are "CE" certified.











We are always ready to serve you on



basis.

All around the world

- We produced (((•)) dirinsmart 4.0 with Industry 4.0 technology which can detect its own fault.
- We have increased our capacity up to 3000 tons.
- Our company which has the only R & D center in the sector supported by the Ministry of Science, Industry and Technology of Turkey will continue to be the Pioneer of innovations as **dirinler**









D-type Lamination Press



C-type Hydraulic Press



H-type Eccentric Press



Link Drive



Knuckle Joint Form Press

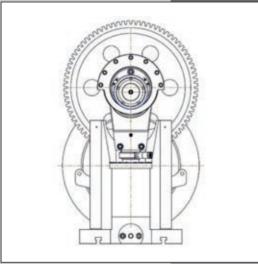


H-type Hydraulic Press



Servo Press

Back Sided **C** Frame Eccentric Press (8 Guide Ram)







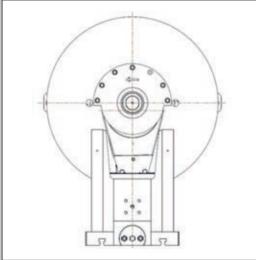
- Pneumatic clutch brake system
- Rigid body and ram
- User friendly ram adjustment
- 8 guide ram
- Helical, high quality gear system
- Spheroidal casting parts
- Mechanical or hydraulic overload safety system according to customer requests
- Automatic ram adjustment according to customer requests
- · Automatic stroke adjustment for specified tonnages
- Ergonomic design
- Compliance with 2006-42 Machinery Directives



Properties	Unit	CDCS 630 P81	CDCS 800 P81	CDCS 1100 P81	CDCS 1300 P81	CDCS 1600 P81	CDCS 2000 P81	CDCS 2500 P81
Capacity	tons	63	80	110	130	160	200	250
Rated tonnage height	mm	4,5	4,5	5	6	6	6	6
Max. shut die height	mm	350	385	385	385	480	440	500
Stroke distance	mm	4/102	4/102	14/114	5/110	15 /110	24/140	24/140
Press speed	spm	54	54	60	60	60	50	50
Die hole diameter	mm	50	50	50	65	65	65	65
Throat depth	mm	270	280	280	330	350	390	430
Ram adjustment	mm	90 (manual)	90 (manual)	90 (manual)	90 (manual)	95 (motorized)	100 (motorized)	100 (motorized)
Ram dimension	mm	490 x 325	490 x 325	490 x 325	630 x 400	630 x 400	950 x 600	950 x 600
Table dimension	mm	750 x 500	900 x 540	900 x 540	1000 x 640	1100 x 700	1200 x 740	1250 x 850
Table hole diameter	mm	170	180	180	210	210	220	240
Table height from the ground	mm	765	750	790	780	810	820	825
Estimated press weight (~)	kg	4100	5400	5600	8200	9950	14900	16800
Estimated Press height (~)	mm	2750	2705	2780	2985	3200	3435	3520
Estimated Press depth (~)	mm	1845	1745	1845	2340	2400	2335	2335
Estimated Press width (~)	mm	1200	1380	1370	1420	1485	1680	1635
Motor power	kW	7,5	7,5	7,5	11	15	15	18,5
Stroke adjustment system	-	Manuel	Manuel	Manuel	Manuel	Semi-Automatic	Semi-Automatic	Semi-Automatic
Overload safety system	-	Mechanical	Mechanical	Mechanical	Mechanical	Hydraulic	Hydraulic	Hydraulic
Automatic centralized lubrication system	-	Grease	Grease	Grease	Grease	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid
Clutch brake system	-	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
Safety guard system	-	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell
Vibration pads	ı	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Speed control unit	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Additional plate	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional



Back Sided **D Frame Lamination Press (8 Guide Ram)**





- Pneumatic clutch brake system
- Rigid body and ram
- 8 guide ram
- Spheroidal casting parts
- Hydraulic overload safety system
- Automatic ram adjustment according to customer requests
- Ergonomic design
- Compliance with 2006-42 Machinery Directives

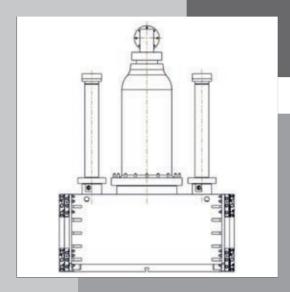




Properties	Unit	CDCS 601 P81/L	CDCS 801 P81/L	CDCS 1001 P81/L
Capacity	tons	60	80	100
Rated tonnage height	mm	2	2	2
Max closed die set height	mm	365	350	350
Stroke distance	mm	35	35	35
Press speed	spm	100-270	100-270	100-270
Die hole diameter	mm	50	45	50
Throat depth	mm	250	255	305
Ram adjustment	mm	90 (manual)	90 (manual)	95 (manual)
Ram dimension	mm	490 x 325	490 x 325	490 x 325
Table dimension	mm	750 x 500	860 x 540	860 x 540
Table hole diameter	mm	180	190	190
Table height from the ground	mm	770	810	800
Estimated press weight (~)	kg	4700	5400	7000
Estimated press height (~)	mm	2370	2370	2416
Estimated press depth (~)	mm	1920	2070	2070
Estimated press width (~)	mm	1100	1100	1210
Motor power	kW	7,5	11	15
Stroke adjustment system	-	Fixed	Fixed	Fixed
Overload safety system	-	Hydraulic	Hydraulic	Hydraulic
Automatic centralized lubrication system	-	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid
Clutch brake system	-	Pneumatic	Pneumatic	Pneumatic
Die area safety system	-	Mechanical	Mechanical	Mechanical
Vibration pads	-	Standard	Standard	Standard
Speed control unit	-	Standard	Standard	Standard
Additional plate	-	Optional	Optional	Optional



C Frame Hydraulic Press





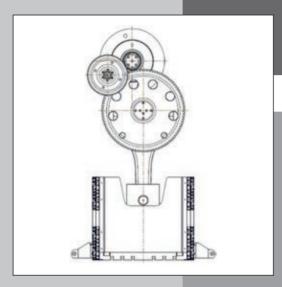
- Rigid body and ram
- Cushion unit
- User friendly ram adjustment
- Main cylinder and cushion unit pressure adjustment
- Certified hydraulic power unit
- Ergonomic design
- Compliance with 2006-42
 Machinery Directives





Properties	Unit	CDHC 630-400-250	CDHC 1000-400-400	CDHC 1600-400-630	CDHC 2000-400-630
Capacity	tons	63	100	160	200
Cushion capacity	tons	25	40	63	63
Stroke distance	mm	400	400	400	400
Cushion stroke distance	mm	150	150	150	150
Table dimension	mm	750x615	850x640	1000x740	1090x855
Ram dimension	mm	750x570	850x630	1000x680	1100x760
Max. distance between table and ram	mm	630	685	765	785
Working speed	mm/s	10-25	10-20	10-20	16
Rapid approach speed	mm/s	300	250	250	200
Estimated press weight (~)	kg	4900	7700	11400	14000
Estimated press height (~)	mm	3170	3565	3900	3910
Estimated press depth (~)	mm	1710	2030	2400	2510
Estimated press width (~)	mm	1150	1150	1525	1525
Motor power	kW	7,5	11	22	30
Automatic centralized lubrication system	-	Grease	Grease	Grease	Grease
Die area safety system	-	Photo-cell	Photo-cell	Photo-cell	Photo-cell
Additional plate	-	Optional	Optional	Optional	Optional

Single Connecting Rod **H Frame Eccentric Press**



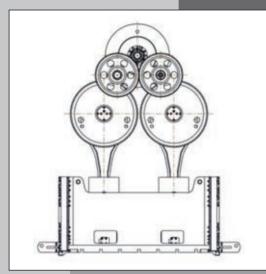


- · Rigid body and ram
- 8 guide ram
- Helical, high quality gear system
- Spheroidal casting parts
- Hydraulic overload safety system
- Quick die changing system according to customer requests
- PLC Control and Touch Screen
- Cushion system according to customer requests
- Automatic stroke adjustment according to customer requests
- Progressive die applications
- Transfer die applications
- Lubrication control via special sensors
- Slide adjustment with encoder
- Ergonomic design
- Compliance with 2006-42 Machinery Directives



Properties	Unit	CDCH 600 P	CDCH 800 P	CDCH 1100 P	CDCH 2500 P	CDCH 3000 P
Capacity	tons	60	80	110	250	300
Rated tonnage height	mm	5	4,5	4,5	3	6
Max. closed die set height	mm	520	480	480	550	650
Stroke distance	mm	120	70	70	20-160	180
Press speed	spm	50-70	50-70	50-70	35-45	25-35
Ram adjustment	mm	50 (motorized)	100 (motorized)	100 (motorized)	150 (motorized)	135 (motorized)
Table dimension	mm	800x600	1000x800	1000x800	1400x1000	1500x1000
Number of connecting rod	piece	1	1	1	1	1
Table height from the ground	mm	610	800	770	930	820
Estimated press weight (~)	kg	7000	12250	12000	20000	34000
Estimated press height (~)	mm	4070	4420	4420	4880	6110
Estimated press depth (~)	mm	1230	2200	2220	2010	1960
Estimated press width (~)	mm	2660	2380	2380	3440	3800
Motorpower	kW	11	11	15	18,5	30
Stroke adjustment system	-	Fixed	Fixed	Fixed	Automatic	Fixed
Overload safety system	-	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Automatic centralized lubrication system	-	Re-cyled liquid	Re-cyled liquid	Re-cyled liquid	Re-cyled liquid	Re-cyled liquid
Clutch brake system	-	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
Die area safety system	-	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell
Vibration pads	-	Standard	Standard	Standard	Standard	Standard
Speed control unit	-	Standard	Standard	Standard	Standard	Standard
Additional plate	-	Optional	Optional	Optional	Optional	Optional

Double Connecting Rod **H Frame Eccentric Press**



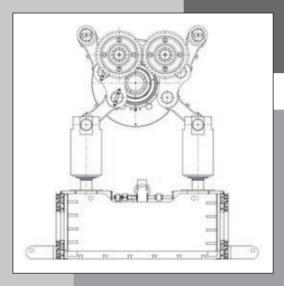


- Rigid body and ram
- 8 guide ram
- Helical, high quality gear system
- Spheroidal casting parts
- Hydraulic overload safety system
- Quick die changing system according to customer requests
- PLC Control and Touch Screen
- Cushion system according to customer requests
- Automatic stroke adjustment according to customer requests
- Progressive die applications
- Transfer die applications
- Lubrication control via special sensors
- Slide adjustment with encoder
- Ergonomic design
- Compliance with 2006-42 Machinery Directives



Properties	Unit	CDCH 1200 P2B	CDCH 2000 P2B	CDCH 3	000 P2B	CDCH 4	000 P2B	CDCH 5000 P2B	CDCH 6300 P2B
Capacity	tons	120	200	300	300	400	400	500	630
Rated tonnage height	mm	5	4	6	8	7	10	5	7
Max. closed die set height	mm	500	600	500	640	660	650	700	850
Stroke distance	mm	120	180	180	160	200	300	350	350
Press speed	spm	50-80	35-70	26	25-40	20-30	30-40	20-30	20-35
Ram adjustment	mm	50 (motorized)	100 (motorized)	140 (motorized)	140 (motorized)	140 (motorized)	200 (motorized)	200 (motorized)	200 (motorized)
Table dimension	mm	1400x600	1600x1000	1800x1200	2000x1200	2200x1200	2500x1600	2800x1500	3000x1500
Number of connecting rod	piece	2	2	2	2	2	2	2	2
Table height from the ground	mm	840	1000	965	965	900	800	975	980
Estimated press weight (~)	kg	15000	20000	48000	48000	51000	67000	71000	85000
Estimated press height (~)	mm	4670	5125	5260	5260	5850	6150	6370	6670
Estimated press depth (~)	mm	1700	1750	2600	2550	2170	2400	2930	2880
Estimated press width (~)	mm	3560	3730	3760	4290	5100	5050	5360	5775
Motor power	kW	15	22	45	45	55	75	37	55
Stroke adjustment system	-	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Overload safety system	-	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Automatic centralized lubraction system	_	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid	Re-cycled liquid
Clutch brake system	-	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
Die area safety system	_	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell
Vibration pads	-	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Speed control unit	-	Standard	Standard	Optional	Standard	Standard	Standard	Standard	Standard
Additional plate	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional

Modified Knuckle Joint Press





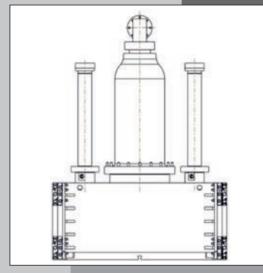
- Shock absorbing rigid body
- Compact, robust and extremely rigid structure
- Slowdown at bottom (BDC) dead center for better forming
- Longer die life
- Accelerated return speed
- Environment friendly with low impact noise and save energy
- High stroke rates even for complex formed parts
- Hydraulic overload safety system
- Ram adjustment system with encoder
- Special ram weight balancing system in accordance to press specifications
- Planet type clutch system
- Lubrication control via special sensors
- PLC Control and Touch Screen
- Die memory
- Ergonomic design
- Compliance with 2006-42 Machinery Directives





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Properties	Unit	CDCK 3150 PMU 2	CDCK 4000 PMU 2	CDCK 5000 PMU 2	CDCK 6300 PMU 2		CDCK 8000 PMU 2
Capacity	tons	315	400	500	630	630	800
Rated tonnage height	mm	6	5	6	5	10	10
Max. closed die set height	mm	600	800	750	550	700	700
Stroke distance	mm	160	180	100	80	250	250
Press speed	spm	30-50	40-60	60-80	60-80	30-50	30-50
Ram adjustment	mm	150 (motorized)	140 (motorlu)	200 (motorlu)	140 (motorized)	200 (motorized)	200 (motorized)
Table dimension	mm	1800x1200	1600x1200	1600x1500	1600x1200	2500x1400	2500x1400
Number of connecting rod	piece	2	2	2	2	2	2
Table height from the ground	mm	900	950	1010	980	1040	1100
Estimated press weight (~)	kg	35000	43000	55000	58000	62000	110000
Estimated press height (~)	mm	5750	6300	6000	6150	7500	8000
Estimated press depth (~)	mm	2300	2500	3000	2900	3100	3300
Estimated press width (~)	mm	3300	3480	4210	4500	5500	5700
Motor power	kW	45	45	55	55	75	75
Stroke adjustment system	-	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Overload safety system	-	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic
Automatic centralized lubrication system	-	Re-cyled liquid	Re-cyled liquid	Re-cyled liquid	Re-cyled liquid	Re-cyled liquid	Re-cyled liquid
Clutch brake system	_	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic
Die area safety system	-	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell
Vibration pads	-	Standard	Standard	Standard	Standard	Standard	Standard
Speed control unit	-	Standard	Standard	Standard	Standard	Standard	Standard
Additional plate	-	Optional	Optional	Optional	Optional	Optional	Optional

H Frame Hydraulic Press





- Rigid body and ram
- User friendly ram adjustment
- Cushion unit
- Main cylinder and cushion unit pressure adjustment
- Certified hydraulic power unit
- Ergonomic design
- Compliance with 2006-42
 Machinery Directives

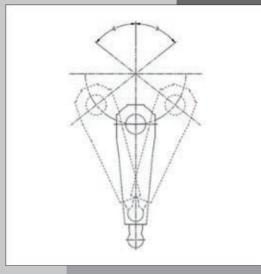




Properties	Unit	CDHH 2000-700-800	CDHH 2500-800-1600	CDHH 3000-800-1600	CDHH 4000-1000-00	CDHH 4000-700-800	CDHH 5000-140-00	CDHH 7500-600-1000	CDHH 8000-400-00	CDHH 12000-1050-3000	CDHH 15000-600-3000
Capacity	tons	200	250	300	400	400	500	750	800	1200	1500
Cushion capacity	tons	80	160	160	-	80	DA	100		300	300
Stroke distance	mm	700	800	800	1000	700	140	600	400	1050	600
Cushion stroke distance	mm	300	355	440	-	350	1577 - 111 as	360	-	400	225
Table dimension	mm	1600x1200	1200x1100	1400x1200	2000x1600	1600x1300	1400x700	1400x1400	1000x1000	1300x1300	1400x1400
Max. distance between table and ram	mm	950	1300	1300	1600	1140	340	1200	780	1500	1140
Table height from the ground	mm	900	1200	1180	1000	1200	900	1000	940	950	1000
Working speed	mm/s	10-20	35-62	35-95	10-35	10-35	10-20	10-45	10-20	10-20	10-45
Rapid approach speed	mm/s	200	540	200	200	200	200	480	200	200	480
Estimated press weight (~)	kg	25000	28600	32360	50000	42000	24000	82000	86000	93000	103000
Estimated press height (~)	mm	4650	5680	5600	6450	6049	4000	5900	4250	6490	6300
Estimated press depth	mm	2240	3000	2840	3935	2900	2950	4600	2340	4100	5400
Estimated press width (~)	mm	3240	4200	4000	4200	4340	3550	4520	2970	4300	4600
Motor power	kW	15	22	55	75	75	37	2x110	45	110	4x110
Automatic centralized lubrication system	-	Grease	Grease	Grease	Grease	Grease	Grease	Grease	Grease	Grease	Grease
Die area safety system	-	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell	Photo-cell
Additional plate	-	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional



Servo Press





- Working Like Eccentric Press
- Multi Point Work
- Pendulum Work
- Multi Point Pendulum Work
- Part or Stroke Number Identification in 4 Different Mode
- Maximum 16 Programmable Cam System
- Die Adjustment Possibility by Hand Wheel
- Maximum 40 Kw Consumption with Advanced Energy Production
- Different Speed Adjustment Possibility Upto Maximum 10 Points in a Single Cycle Rate
- Forward-Backward Work in Symmetric Field adjusted at Bottom Death Center
- Speed Possibility upto Maximum 10 Points at Pendulum Movement

OPTIONAL

- Die Protection System Against Over Load
- Tonnage Monitor System





Properties	Unit	CDSH 1500 S
Capacity	(tons)	150
Rated tonnage height	(mm)	1.4
Max. closed die set height	(mm)	500
Stroke distance	(mm)	100
Press speed	(spm)	100
Ram adjustment	(mm)	100
Table dimension	(mm)	1200x1000
Table height from the ground	(mm)	1040
Estimated press weight (~)	(kg)	~ 19200
Estimated press height (~)	(mm)	4550
Estimated press depth (~)	(mm)	3160
Estimated press width (~)	(mm)	2930
Number of connecting rod	(piece)	1
Max. energy consumption	(kW)	40
Energy Supply	-	3A ~ / N / PE 380 V 50 Hz
Servo Motor Power	(kW)	270
Servo Motor Torque	(Nm)	3300
Gear ratio	-	5,882
Automatic centralized lubrication system	-	Re-cyled liquid
Die adjustment by hand wheel	-	Standard

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GROUP COMPANIES

- DİRİNLER MAKİNA SANAYİ (Eccentric and Hydraulic Press)
- DİRİNLER SANAYİ MAKİNALARI (CNC Machinery)
- DİRİNLER DÖKÜM SANAYİ (Grey and Nodular Cast Iron Parts)

- DİRİNLER GmbH
- LUPAMAT MAKİNA SANAYİ (Reciprocating and Screw Air Compressors)
- TEKENTEK MAKİNA MODEL SAN.TİC.LTD.ŞTİ. (Pattern Production)



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