



advanced rolling technology

Revas Technologies

Competence Flexibility Experience Passion



Revas Technologies operates in the field of design, manufacture, supply and commissioning of a wide range of machinery, equipment and plants for steelmaking industry (meltshop, continuous casting, rolling mill, forging, material handling).

Technical department

Revas Technologies Research & Development department is equipped to deal with any plant-related mechanical, electrical, automation and software issues. Engineering is developed by means of CAD and PDM systems integrated with powerful systems for the general management of the whole supply chain.

Workshop

The company's facilities comprise a surface area of 20,000 sqm, 8,000 sqm covered; the complex includes a welding shop (up to 20 ton) and a machine tools shop (equipped with modern, efficient and last-generation tool machines) as well as assembly and testing shop.

Competence, Flexibility, Experience, Passion

These factors have led Revas Technologies to play a leading role in the steelmaking-rolling field.

Our excellence is proven by well-planned services, the high quality of the supplied equipment and customized solution to satisfy all the customer's specific requirements.



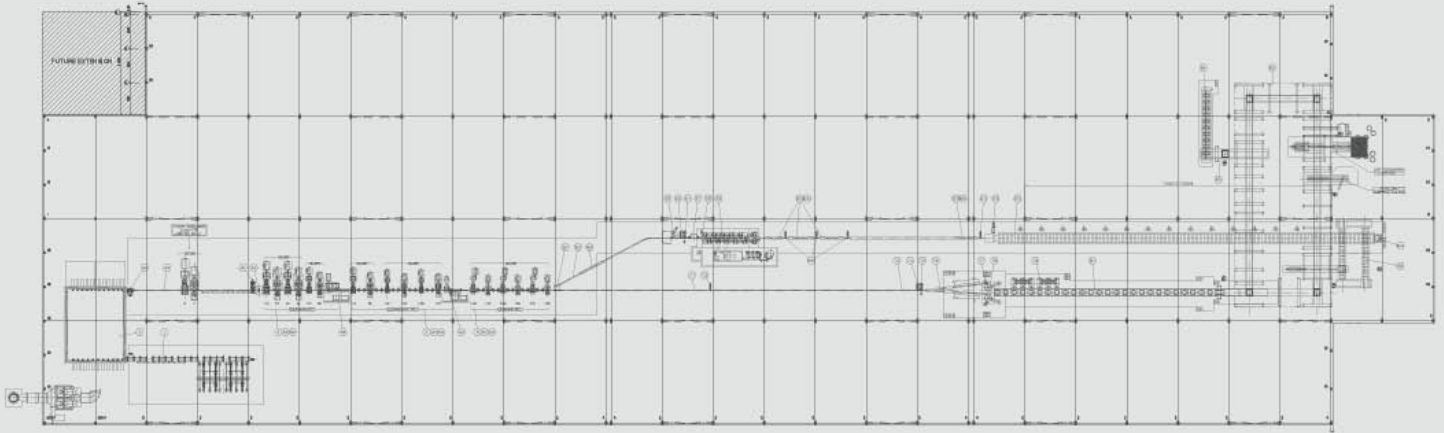
Revas experience and know-how

Covers all the possible solutions for long and plate mills.
Our production includes:

- **Plate mills**
- **Bar & wire rod mills**
- **Section mills**

continuous rolling stands
alternated rolling stands
reversing stands
universal stands
shearing systems
monoblocks
straightening systems
hi-speed braking system
finishing machines
stacking, packing and evacuation system
process automation

ROLLING MILL TAILOR-MADE SOLUTION



WIRE ROD AND GARRET LINE MILL

Supply of complete plant, Turn-key basis

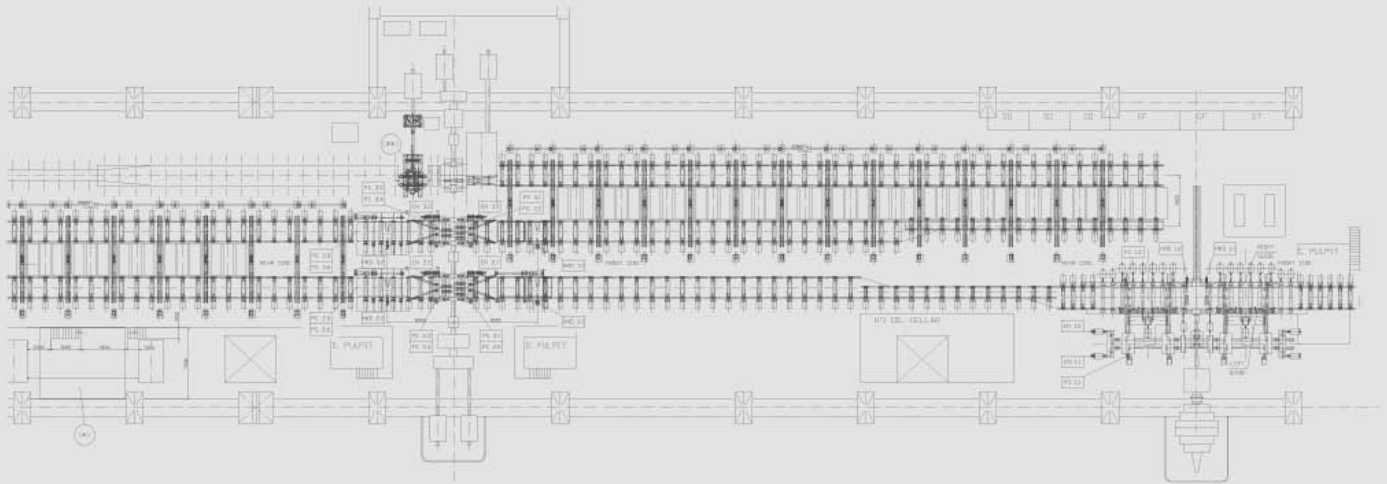
Productivity:
400.000 ton/year

Raw material:
Section from 120 mm x 120 mm sq. to 160 mm x 160 mm sq;
180 mm x 180mm (FUTURE)

Length (Nominal): 6-12 m

Production mix:
Wire Rod 5.5 – 20 mm
Round Bars 18 – 60 mm

ROLLING MILL TAILOR-MADE SOLUTION



LIGHT AND MEDIUM SECTION MILL

Supply of light and medium section mill plant

Productivity
up to 40 ton / h - 200.000 ton / year

Raw material
Billet 200x200 mm/ 150x150 mm/ 120x120mm
Length (Nominal): 3,5-6 m

Production mix
UPN 80 – 200
IPN 100 – 200
IPE 100 – 200
Angles
Plates

This is a detailed architectural floor plan of a large industrial facility, likely a food processing plant. The plan shows a long central corridor with various processing areas on either side. Key areas include 'RAW PRODUCT STORAGE' at the top left, 'FINISHED PRODUCT STORAGE' at the top right, and 'COOKING AREA' in the center. The plan is heavily annotated with dimensions, room numbers, and equipment layouts. A north arrow is located in the bottom left corner.



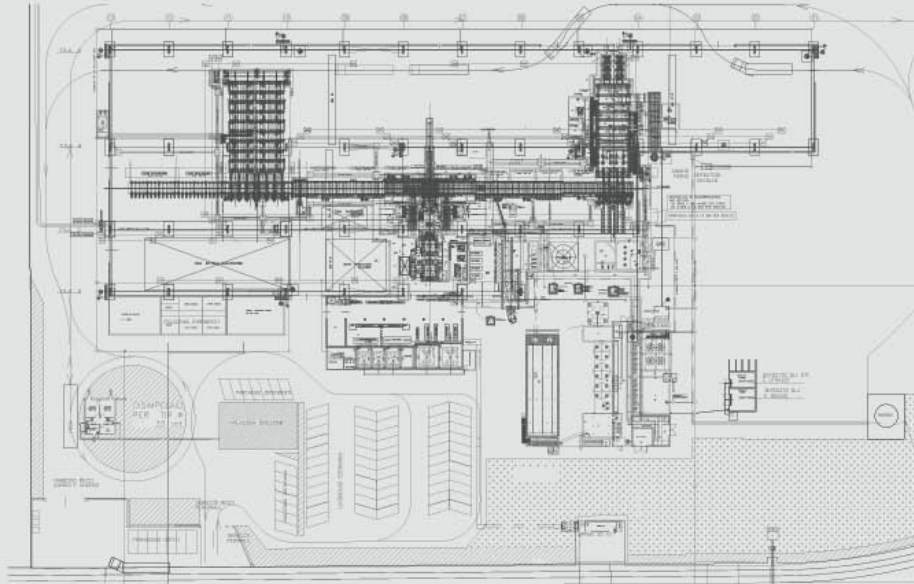
Supply of complete plant, Turn-key basis

up to 90 ton / h - 400.000 ton / year

Billet 130x130 mm/ 150x150 mm (future)
Length 6000 – 12000 mm

Rebars, diameter 7 to 36 mm

ROLLING MILL TAILOR-MADE SOLUTION



PLATE, ROUND AND SQUARE MILL

Supply of complete plant, Turn-key basis

Productivity
300.000 ton/y

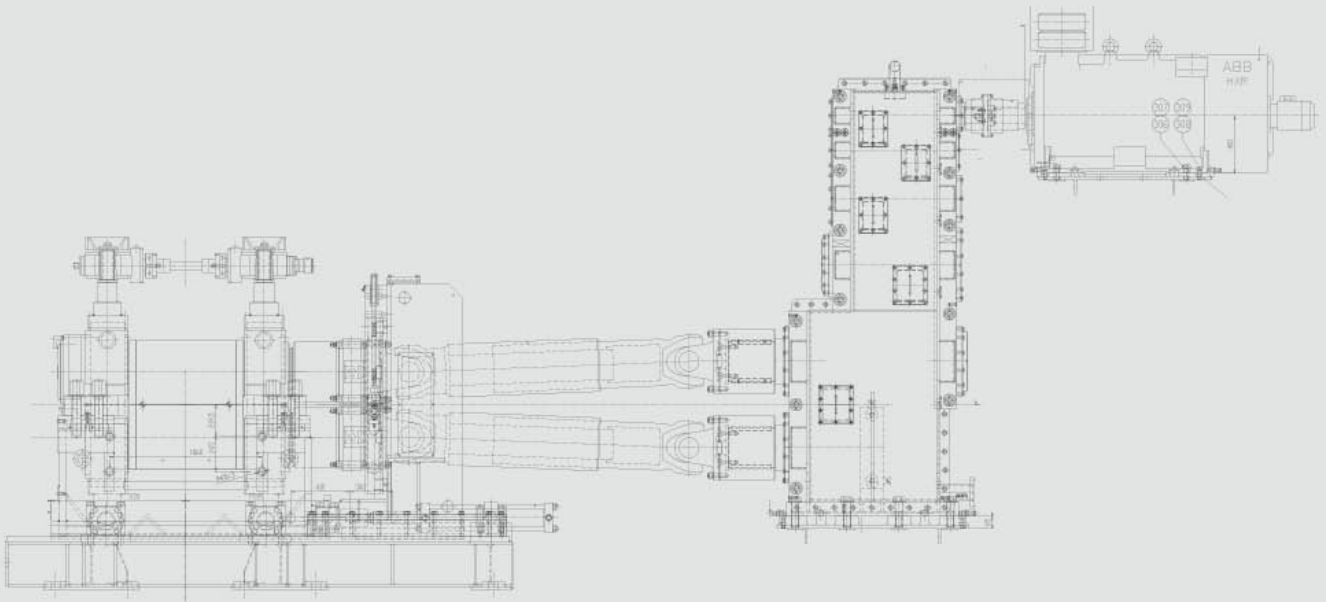
Raw material
Slab thickness up to 300 mm
Bloom 317 x 337 or 326 x 413 mm sq

Production mix
Plate Thickness 15 mm to 250 mm
Width: 1500 to 2500
Length: up to 24000 mm

Round
From 160 up to 300 mm sq
Length: up to 12000 mm

Square
From 170 up to 250 mm sq
Length: up to 12000 mm

CARTRIDGE STANDS NH TYPE



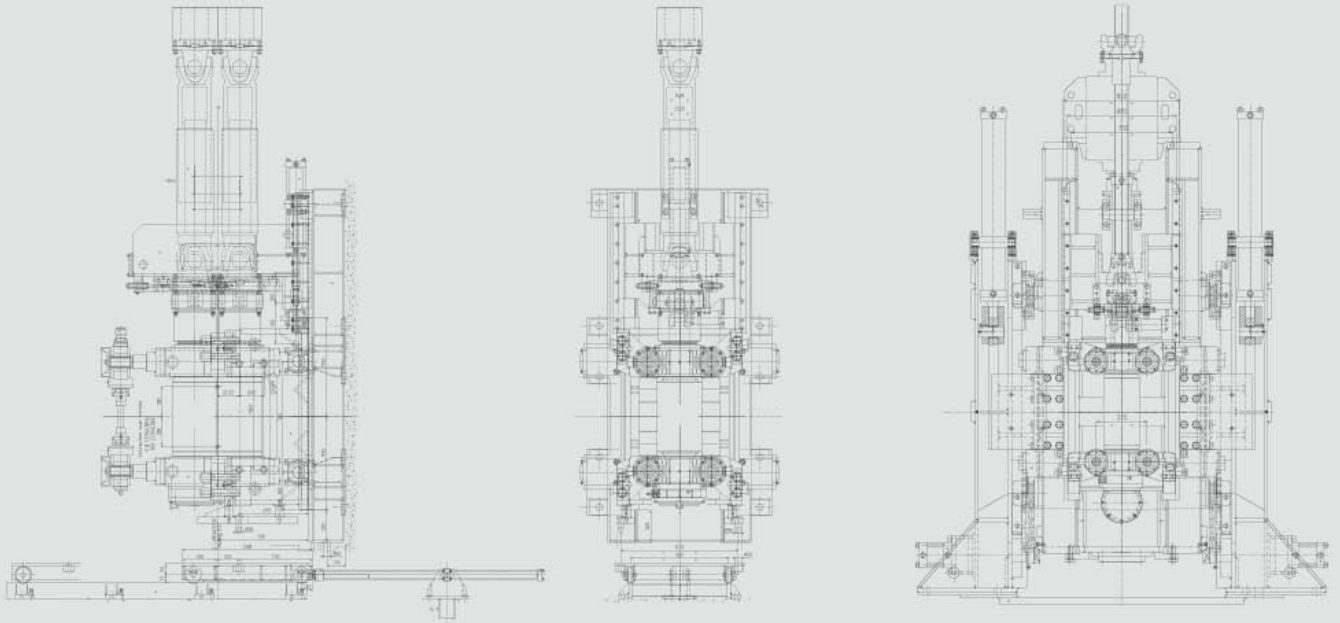
CARTRIDGE TYPE STANDS NH (NO HOUSING) TECHNICAL DATA

STAND SIZE	ROLL NECK DIAMETER	ROLL CENTER RANGE			ROLL BARREL LENGTH			AXIAL LOAD CAPACITY	STAND NUCLEOUS WEIGHT
Type	(*) special	Min. under load	(1) Max. under load	Max. no-load	Standard	Maximum	Monogroove	Percentage of Radial load	Include rolls (max. dia. standard barrel) & guides
NH	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	%	(kg)
1250	440	750	1200	1250	1800	2600	//	30	71.000
1050A	(*) 420	720	1000	1050	1500	2200	//	30	60.500
1050	410	720	1000	1050	1500	2200	//	30	54.660
950	370	620	920	950	1200	1800	//	30	39.620
850	340	560	820	850	1000	1500	600	30	27.200
750	300	510	720	750	800	1200	550	30	19.250
650	280	440	620	650	700	1200	500	30	14.370
600	(*) 260	410	580	600	700	1000	450	30	11.850
550	230	360	530	550	600	800	400	30	8.350
450	200	310	430	450	500	700	300	20	5.750
400	(*) 180	275	380	400	500	700	280	15	4.600
350	160	260	330	350	500	700	Rings No. 2 x 60	10	3.600
300	145	230	290	300	400	500	Rings No. 2 x 45	10	2.900

The shown load capacity, refers to roller bearings capacity which is the weakest mechanical part of the stand.

The shown stand weight refers to the max. weight to be handled by cranes. For special application where crane is not capable to handle such weight, stand can be designed for automatic in line roll change.

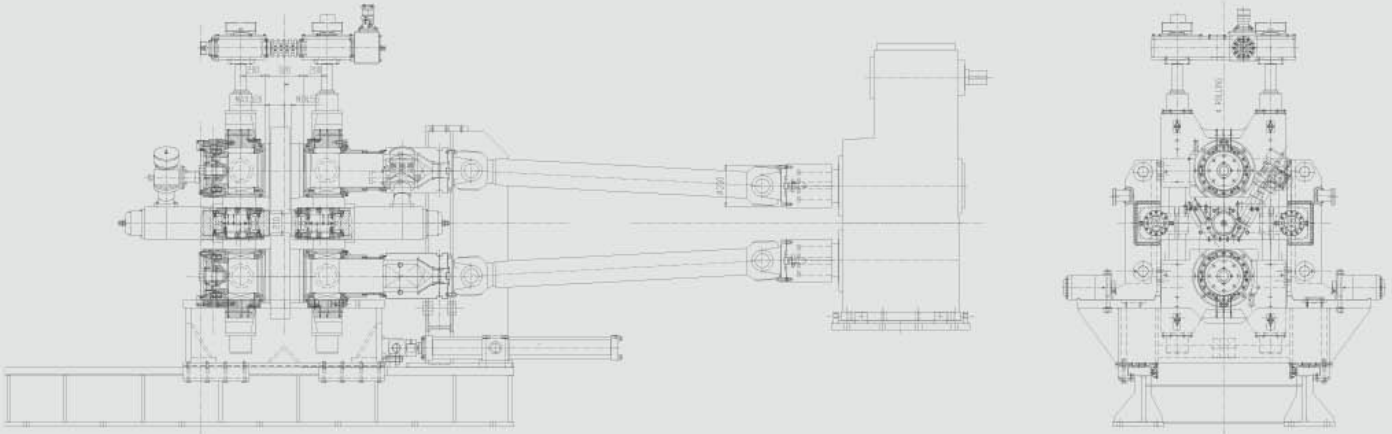
CARTRIDGE STANDS NH TYPE



INDICATIVE OPERATING FEATURES

Stand Size	MAX. STARTING SQUARE BILLET		MAX. FINISHED ROUND DIAMETER			SQUARE	MAX. FINISHED CARBON STEEL SECTIONS			
	Plain 0.5 % C max.	Special Steel	Ribbed DB	Plain 0.5 % C max.	Special Steel max.					
Type	(mm)	(mm)	(mm)	(mm)	(mm)	0.5 % C max. (mm)	(mm)	(mm)	(mm)	(mm)
NH	600	450	//	300 max.	200 max.	300 max.	600	300	600	600
1250	600	450	//	300 max.	200 max.	300 max.	600	300	600	600
1050A	(*) 530	400	//	270 max.	170 max.	300 max.	600	300	600	600
1050	500	380	//	250 max.	160 max.	300 max.	500	300	600	550
950	450	340	//	225 max.	140 max.	250 max.	500	250	500	450
850	400	300	//	200 max.	125 max.	200 max.	400	200	400	350
750	320	240	//	160 max.	110 max.	160 max.	350	160	300	270
650	250	180	//	125 max.	80 max.	140 max.	300	125	250	220
600	(*) 160	120	16 to 56	22 to 80	55 max.	22 to 100	200	100	220	180
550	180	135	16 to 56	16 to 90	60 max.	16 to 80	200	100	220	180
450	150	110	16 to 42	16 to 60	45 max.	16 to 70	150	80	140	120
400	(*) 70	50	8 to 36	8 to 45	32 max.	8 to 40	100	75	80	80
350	55	35	8 to 28	8 to 28	22 max.	8 to 25	75	50	60	//
300	35	25	6 to 22	5.5 to 22	16 max.	6 to 20	50	30	35	//

UNIVERSAL CARTRIDGE STAND NHU TYPE



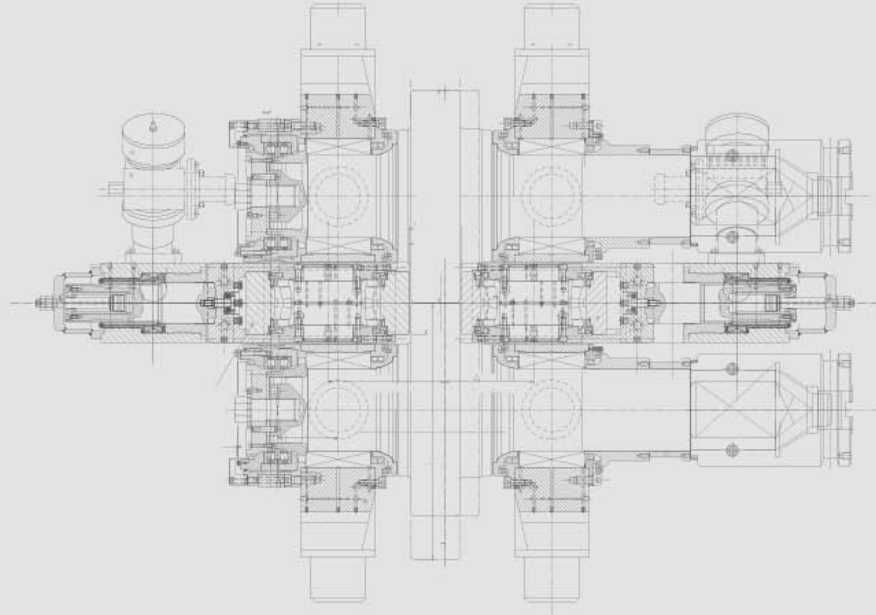
CARTRIDGE TYPE UNIVERSAL STANDS NHU (NO HOUSING UNIVERSAL) TECHNICAL DATA

Stand Size Type	Rolls Neck Dia.	HORIZONTAL ROLLERS				VERTICAL ROLLERS						Load Capacity	Max. Stand Nucleous Weight
		Radial Bearings Capacity	Tie-Rods Centre Distance	Max. Center Distance	Min. Center Distance	Max. Opening	Max. Dia.	Min. Dia.	Face Length	Max. Center Distance	Min. Center Distance		
NHU	(mm)	(KN)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(KN)	(kg)
650	440	12500	1530	1340	1260	650	880	800	400	1530	980	5500	90.600
500	410	10300	1300	1260	1180	500	780	700	400	1310	880	4400	73.200
400	370	8800	1140	1200	1130	400	720	650	400	1120	820	3880	57.650
350	340	6700	1030	1050	980	350	650	580	320	1030	730	3220	36.500
300	300	6000	940	900	820	300	620	550	280	960	670	2420	24.120
220	280	3600	820	800	750	220	500	450	220	820	550	1760	18.860
150	230	3000	700	650	600	150	480	430	160	700	520	1290	15.750
100	200	1880	580	550	500	100	420	370	120	580	450	840	11.630

The shown radial load capacity, refers to bearings capacity (weakest mechanical part of stand), since composite rolls, having the center shaft made in carbon steel, shall be considered.

The shown stand weight refers to the stand only. For max. weight to be handled by cranes, weight of rolls and guides must be added. If existing crane is not capable to handle such weight, stand can be designed for automatic in line roll change.

UNIVERSAL CARTRIDGE STAND NHU TYPE

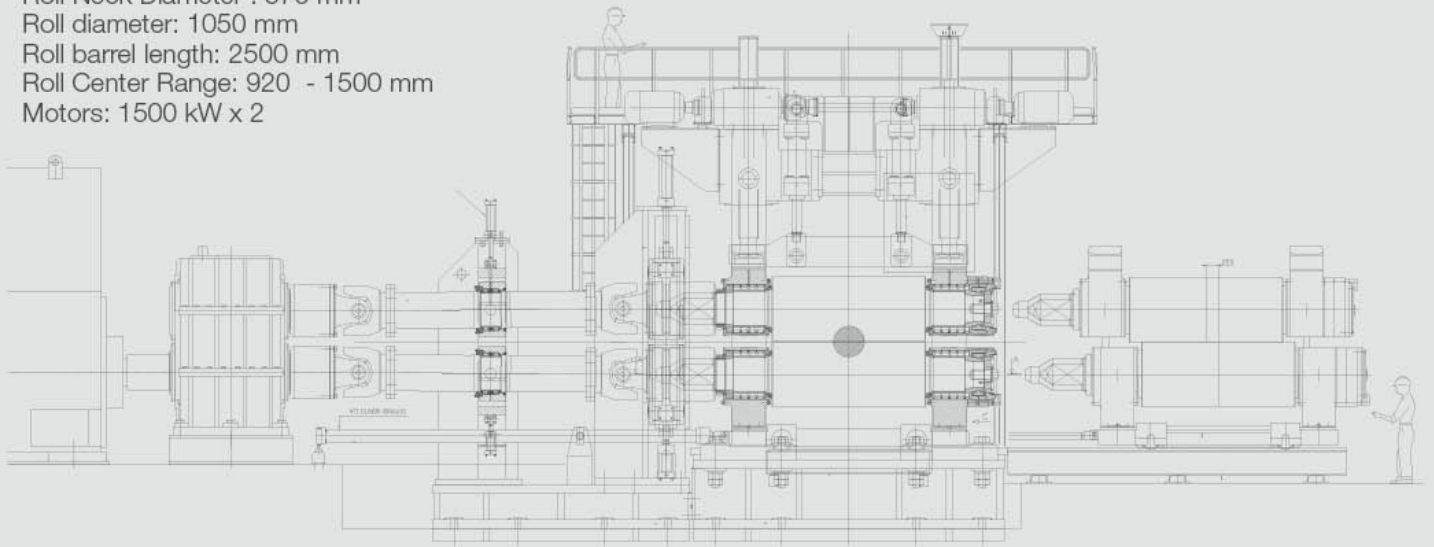


MAX. FINISHED CARBON
STEEL SECTIONS

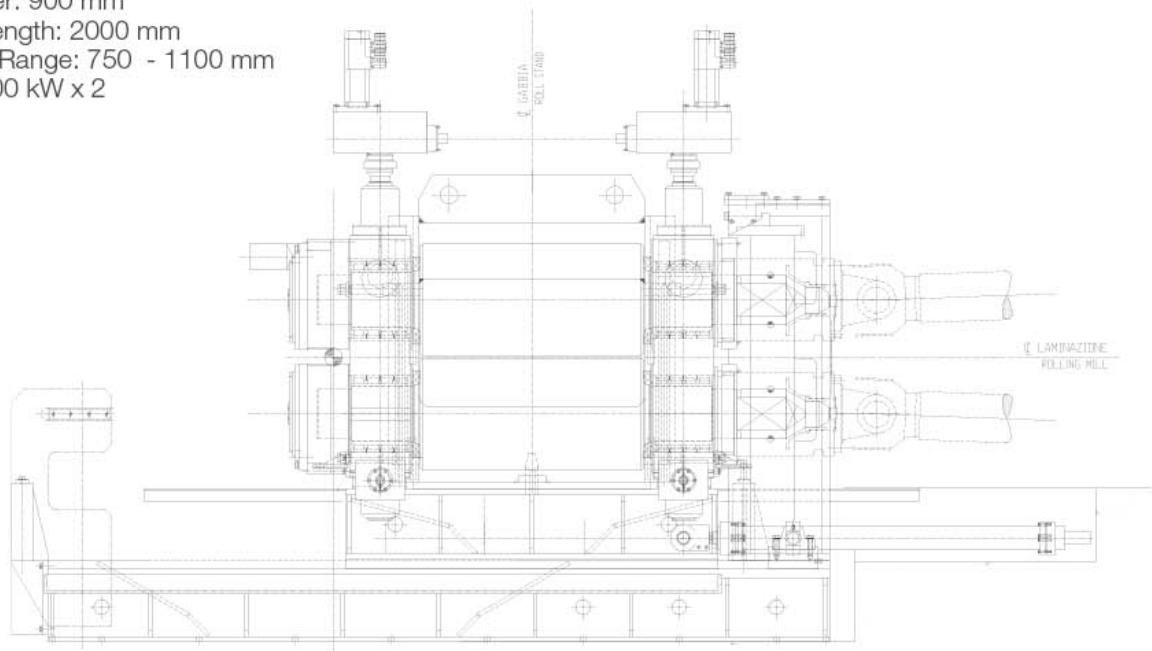
Stand Size Type													
	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	Min. (mm)	Max. (mm)	HxB-Min. (mm)	HxB-Max. (mm)
	300	100x50	400x110	100x50	600x215	100x55	600x220	120x114	640x300	120x120	650x300	120x106	650x305
500	300	100x50	400x110	100x50	475x178	100x55	500x200	120x114	490x300	120x120	500x300	120x106	478x307
400	200	100x50	400x110	100x50	360x143	100x55	360x170	120x114	360x300	120x120	400x300	120x106	395x308
350	160	80x45	320x100	100x50	320x131	100x55	300x150	120x114	310x300	120x120	260x260	120x106	290x268
300	125	50x38	280x95	100x50	260x113	100x55	270x135	120x114	250x260	120x120	220x220	120x106	200x186
220	100	50x38	200x75	80x42	200x90	80x46	200x100	100x96	152x160	120x120	180x180	120x106	200x186
150	80	40x35	140x60	80x42	140x66	80x46	140x73	100x96	114x120	100x100	120x120	//	120x126
100	60	30x33	100x50	80x42	100x50	80x46	100x55	//	96x100	//	100x100	//	//

BREAKDOWN STANDS

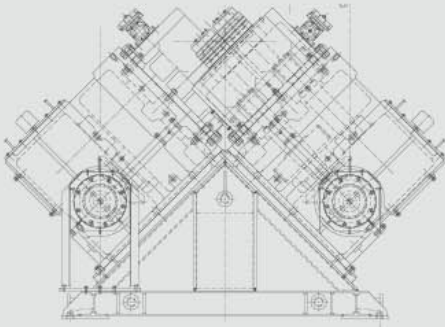
Roll Neck Diameter : 570 mm
Roll diameter: 1050 mm
Roll barrel length: 2500 mm
Roll Center Range: 920 - 1500 mm
Motors: 1500 kW x 2



Roll Neck Diameter : 440 mm
Roll diameter: 900 mm
Roll barrel length: 2000 mm
Roll Center Range: 750 - 1100 mm
Motors: 1800 kW x 2



MONOBLOCKS

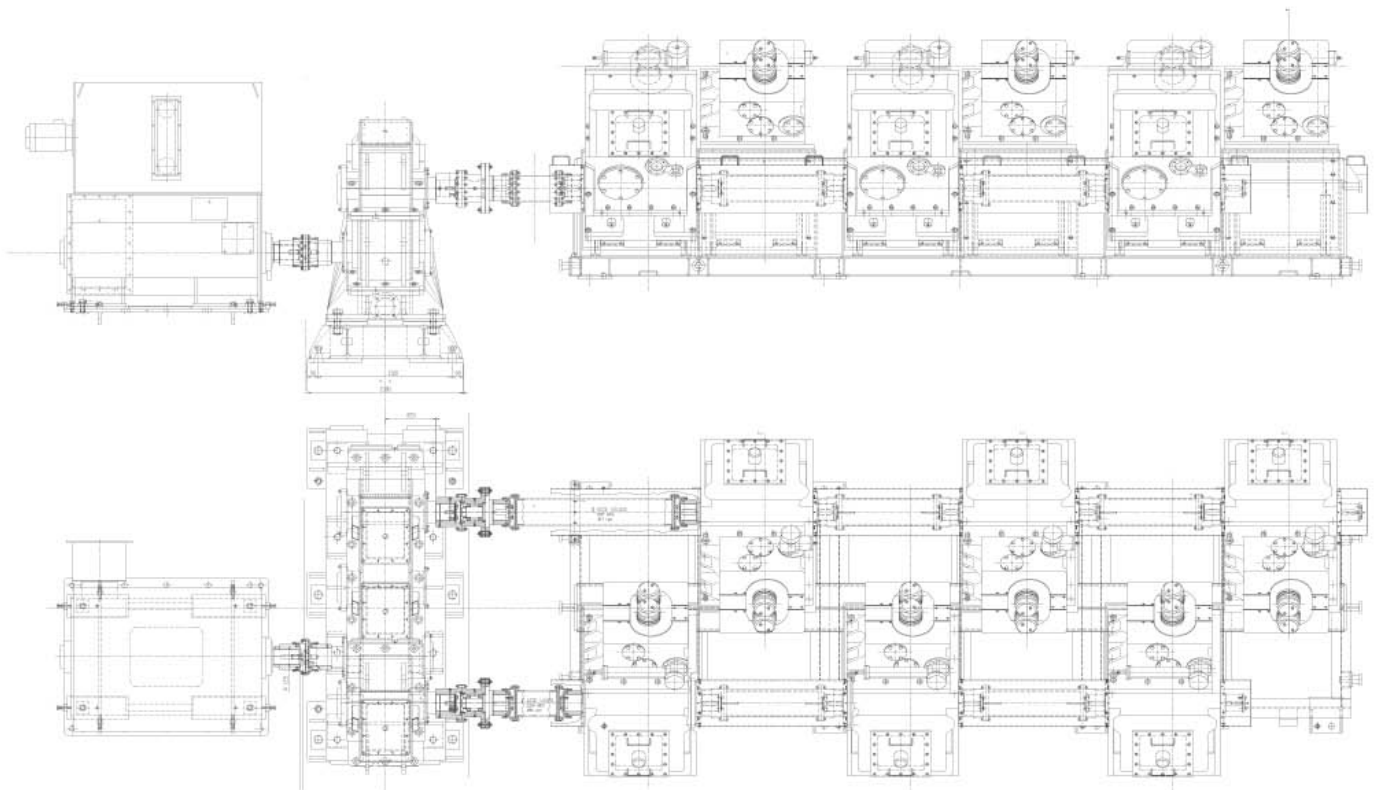


Assemblies arranged to have each pair of mill rolls inclined at 45° with axes of adjacent pairs of rolls located 90° to one another eliminates any need for twisting of the process section between mill stands.

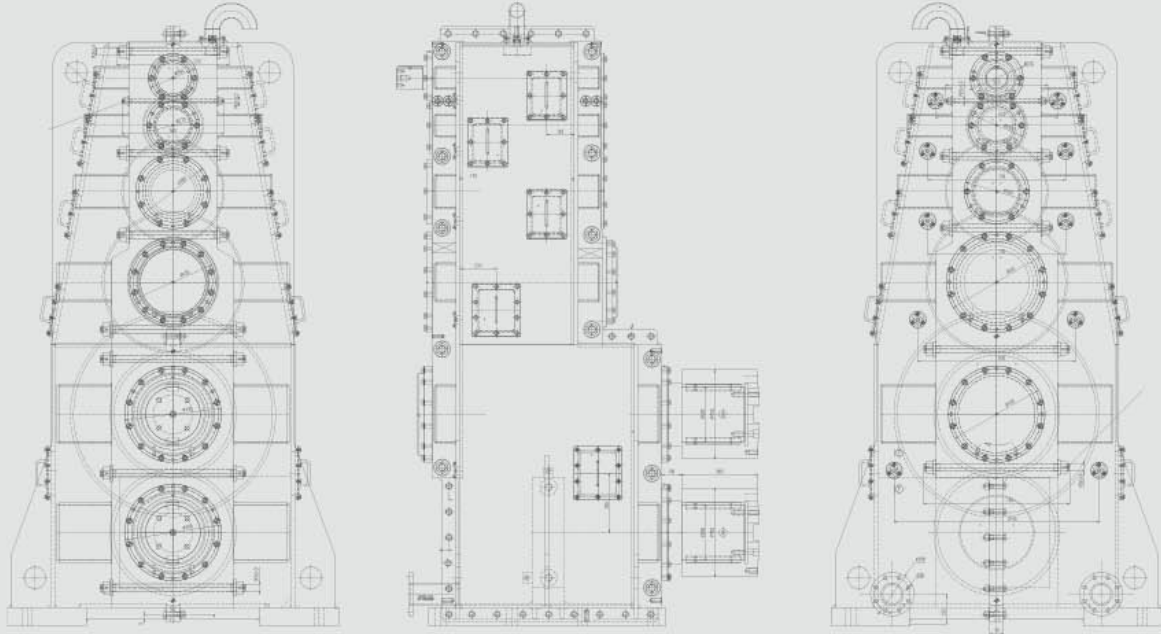
Heavy duty roll housings have Clevite oil film bearings that are used for radial support of roll shaft and duplex ball bearings for thrust loads.

Roll shaft seals:

- Special double lipped seal on each roll shaft contacts a rotating flinger to prevent water ingress into and oil loss from the roll housing.
- Concentric plate, secured to the roll shaft eccentric cartridge, used to ensure a constant flinger/lip seal contact point.

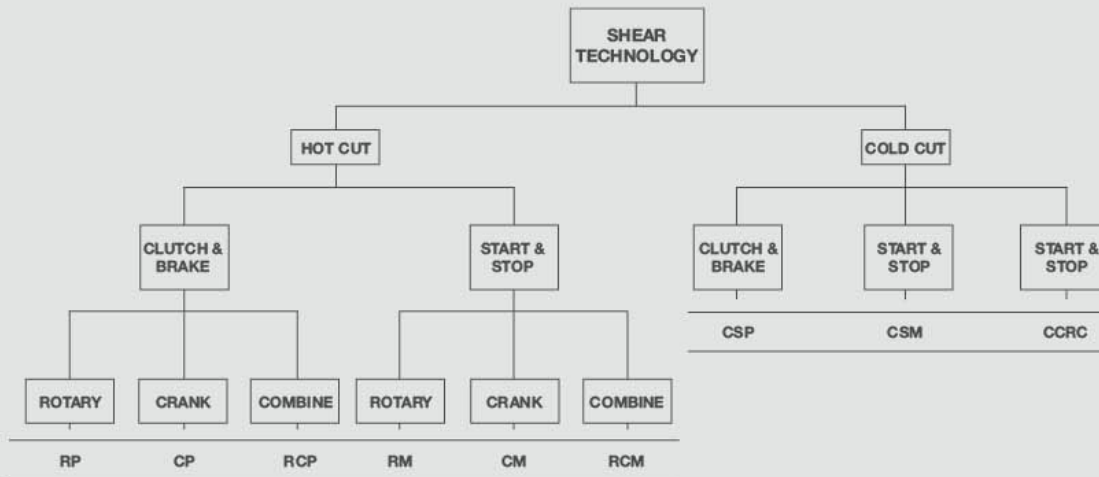


GEAR REDUCERS



DRIVE BOX OUTPUT CENTERS (mm)	MAX AVAILABLE ROLLING TORQUE (kNm)	DRIVE RATIO	WEIGHT (kg)
620	224.3	47	11890
620	176.6	37	12679
520	167	35	8756
520	112.2	23.5	8457
520	90.7	19	6880
520	32	13	8340
420	56.3	11.8	4060
420	38.7	8.1	4415
420	35.8	7.5	3801
420	24.8	5.2	3965
320	15	3.15	1730
320	11.9	2.5	3012
320	6.8	2.12	1710
320	5.4	1.7	3005

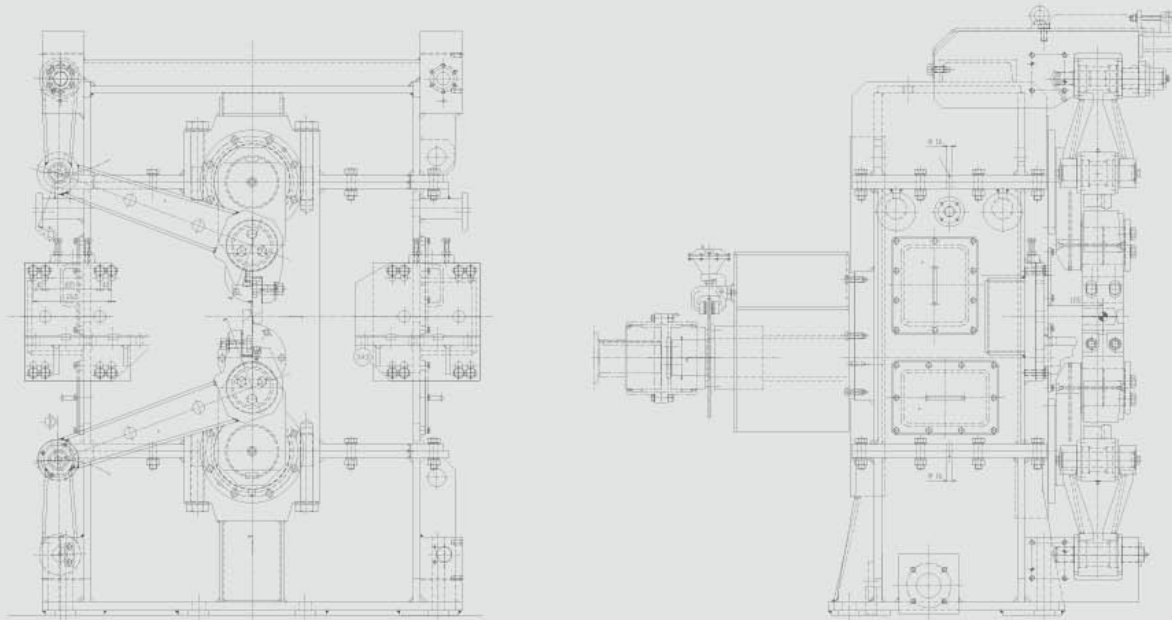
SHEARS



SHEAR TYPE LEGEND

- 1) RP: Rotary controlled by Pneumatical Clutch/Brake
- 2) CP: Crank controlled by Pneumatical Clutch/Brake
- 3) RCP: Combination Rotary/Crank controlled by Pneumatical Clutch/Brake
- 4) RM: Rotary controlled by Direct Start/Stop Electrical Motor
- 5) CM: Crank controlled by Direct Start/Stop Electrical Motor
- 6) RCM: Combination Rotary/Crank controlled by Direct Start/Stop Electrical Motor
- 7) CSP: Cold Cut Shear controlled by Pneumatical Clutch/Brake
- 8) CSM: Cold Cut Shear controlled by Direct Start/Stop Electrical Motor
- 9) CCMK: Cold Flying Crank Shear Controlled by Direct Star/Stop Electrical Motor

HOT CUT SHEARS



PNEUMATIC CLUTCH/BRAKE CONTROLLED HOT CUT SHEAR

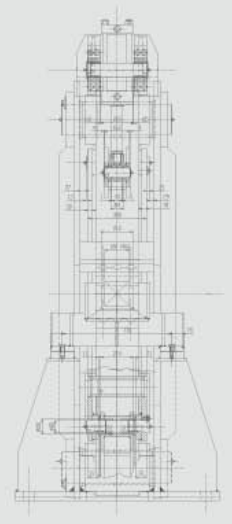
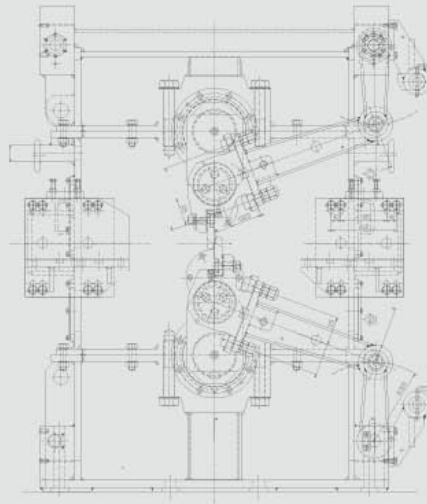
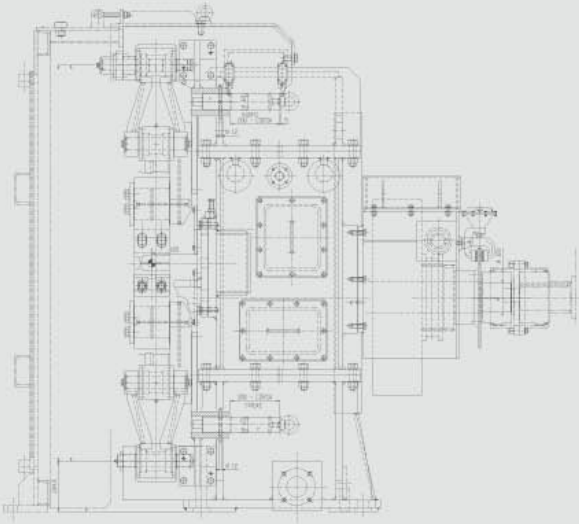
Shear Size Type	ROTARY TYPE				
	Max. Cut. Force	Blade Radius	Max. Cut. Area	Max. Bar Height	Speed Range
RP	(ton)	(mm)	(mm ²)	(mm)	(m/sec)
12	12,0	300	200	16	12 to 20
18	18,0	360	700	30	3 to 16
25	25,0	200	1000	35	5 to 12
35	35,0	420	1400	50	1.5 to 12

Shear Size Type	CRANK TYPE				
	Max. Cut. Force	Blade Radius	Max. Cut. Area	Max. Bar Height	Speed Range
CP	(ton)	(mm)	(mm ²)	(mm)	(m/sec)
10	10	130	1000	25	1.5 to 6
20	20	200	1500	30	2.5 to 6
30	30	220	2500	40	2.5 to 6
40	40	175	3500	40	2.5 to 6
50	50	210	4500	50	1 to 4

EMERGENCY SCRAPPING SHEAR

Shear Size Type	ROTARY ONLY		
	Max. Cut. Force	Blade Radius	Max. Speed
ESS	(mm)	(mm)	(m/sec)
20	20	100	22
25	25	110	22
30	30	150	18
50	50	250	12

HOT CUT SHEARS



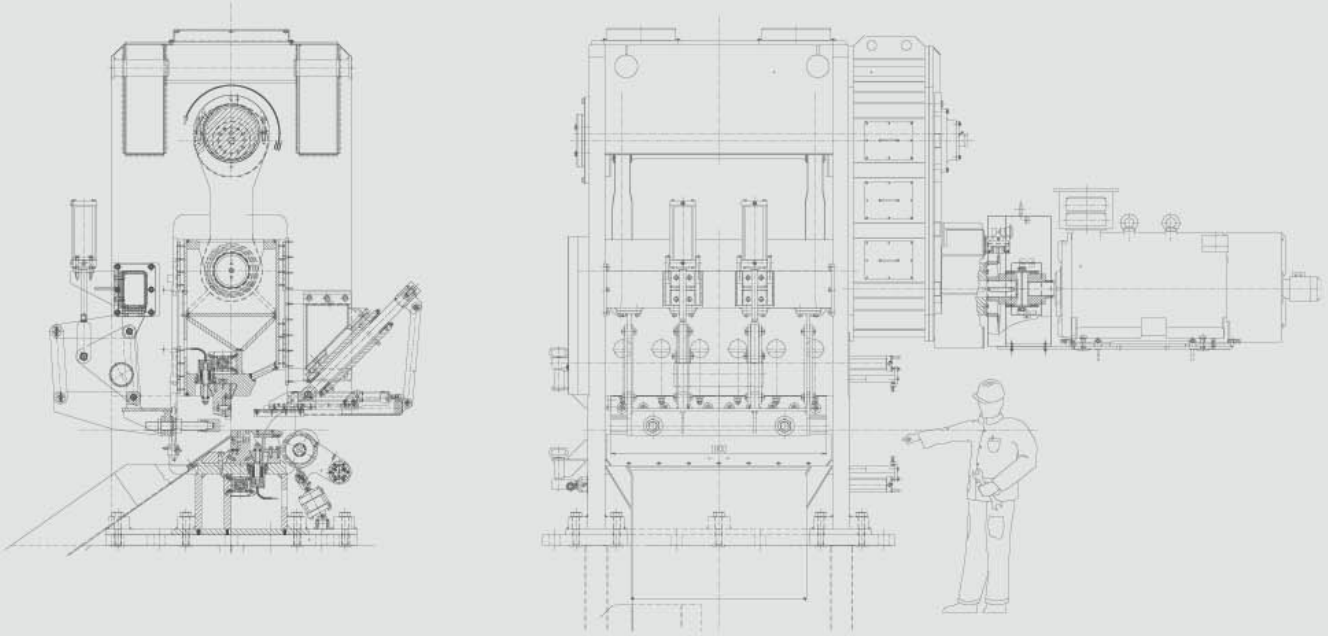
DIRECT ELECTRICAL MOTOR CONTROLLED HOT CUT SHEAR

ROTARY TYPE					
Shear Size Type	Max. Cut. Force	Blade Radius	Max. Cut. Area	Max. Bar Height	Max. Speed
RM	(ton)	(mm)	(mm ²)	(mm)	(m/sec)
3	3	540	180	Ø 15	15,0
12	12,0	250	1.200	Ø 32	7,0
30	30,0	325	3.300	Ø 55	9,2
14	47,0	300	4.800	Ø 70	1,6
13	77,0	545	7.800	Ø 90	1,8

CRANK TYPE					
Shear Size Type	Max. Cut. Force	Blade Radius	Max. Cut. Area	Max. Bar Height	Max. Speed
CM	(ton)	(mm)	(mm ²)	(mm)	(m/sec)
3	10	250	400	12	6,0
35	35	455	3.500	35	6,5
45	45	500	4.600	40	6,5
55	55	460	5.600	45	5,5
75	75	610	7.600	55	4,5
105	105	640	10.700	65	2,0
130	130	640	13.000	75	1,7
170	170	645	18.000	90	1,5

COMBINATION ROTARY/CRANK TYPE					
Shear Size Type	Max. Cut. Force	Blade Radius	Max. Cut. Area	Max. Bar Height	Max. Speed
RM	(ton)	(mm)	(mm ²)	(mm)	(m/sec)
3	10	250	400	Ø 15	5 to 16
35	35	455	3500	35	6,5 : 18
45	45	500	4600	40	6,5 : 18
55	55	460	5600	45	5,5 : 14
65	65	480	6200	50	4,5 : 12
75	75	610	7600	55	4,5 : 12

COLD CUT SHEARS



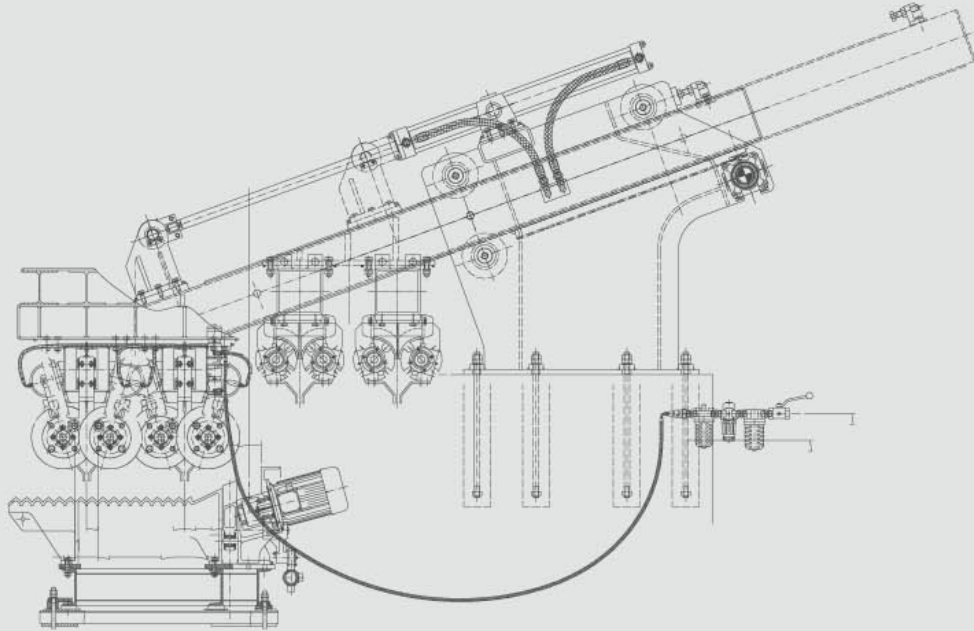
PNEUMATIC CLUTCH/BRAKE CONTROLLED COLD CUT SHEAR

Shear Size Type	EXCENTRIC SHAFT/VERTICAL ROD TYPE					
	Max.Cut. Force (ton)	Blade Radius (mm)	Blade Opening (mm)	Typical Product Range (mm)	Shear Productivity (ton/hour)	Shear Weight (kg)
CCSP						
250/1000	250	1000	130	Ø 8 to 32	35	15.900
360/1000	360	1000	130	Ø 8 to 36	50	30.800
400/1000	360	1000	130	Ø 12 to 40 Sp.Steel	50	53.450
500/1250	500	1250	140	Ø 8 to 36 Angle 30 to 100	80	55.780
650/1250	650	1250	140	Ø 15 to 60 Sp.Steel	70	70.300
1000/1250	1000	1250	150	Ø 25 to 90 Sp.Steel	90	23.000

DIRECT START/STOP ELECTRICAL MOTOR CONTROLLED COLD CUT SHEAR

Shear Size Type	EXCENTRIC SHAFT/VERTICAL ROD TYPE					
	Max.Cut. Force (ton)	Blade Radius (mm)	Max. Cut. Area (mm ²)	Max. Bar Height (mm)	Speed Range (m/sec)	Shear Weight (kg)
CCSM						
350/1000	350	1000	140	Ø 8 to 32	1.5 to 6	48.000
500/1800	500	1800	140	Ø 8 to 36	2.5 to 6	74.000
700/2600	700	2600	140	Ø 8 to 36	155	115.000
1000/1500	1000	1500	160	Ø 16 to 90 sp. Steel	2.5 to 6	78.000
1000/2000	1000	2000	160	Ø 8 to 60 Angle 50 to 100	200	75.000

REVAS HI-SPEED ROTATING BRAKING SYSTEM (RHSRB)



The ultimate advanced system in Rolling Mill Technology.

Among the braking systems for straight bar to be delivered to Cooling Bed some of them are exclusively utilized for Quenched Rebar Product.

Revas system, consisting in a double rotating channel, each controlled by direct start/stop electrical motor, is the fastest equipment actually tested worldwide. This solution can be considered the most efficient and profitable thanks to the reliability, efficiency and possible highest yield and speed.

The peculiarity of our system, in conjunction with the reliability and efficiency, is the highest achievable speed, thanks to the rotary drum used to slow the bar to a stop from the exit of the bar braking pinch roll and discharging the bar on to the straightening grids one by one.

Small product such as round 8 to 16 mm, today rolled at a max speed of 16 m/sec by standard cooling bed or max 24/26 m/sec by dual shall type "canaletta", can be rolled up to 40 m/sec. Revas has also developed one system capable to process round 6.5 mm at 35 m/sec., the only in the world for such small product and relating rolling speed.

PLUS OF RHSRB

Highest production

Better yield

Higher reliability and utilization

Lower maintenance works and cost

Lowest product cost

Reduce return of investment period



Revas Technologies



Revas Technologies SpA
Viale dei Platani 15/2
33050 S. Maria la Longa (UD) ITALY
tel. +39 0432 675430 | 0432 675820
fax +39 0432 675550
info@revastechnologies.it

www.revastechnologies.it