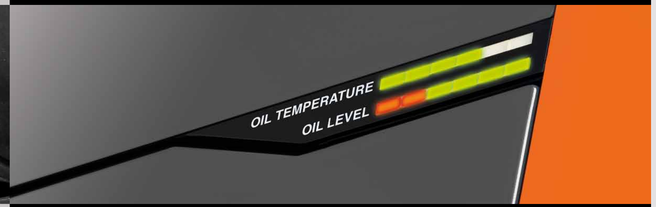
Power

Extensive studies on the materials used and their dimensioning ensure that the **ROCCIA** plate rolls **can never be thrown into crisis** even when they perform the toughest jobs. Increased structural sections, high driving torque and thrust of bending rolls and strong and efficient support of the machine yoke, these expedients guarantee a greater rigidity of the machine during cone rolling process.

Precision

All the steel parts required are produced on modern CNC machinery to ensure consistant *within* tolerance results.
Pivot points for the connection of the swing arm system, hydraulic cylinders, the *yoke*, utilize high static load bearings and (self-lubricating bushings), **being virtually maintenance free**
Encoders are attached to each end of the pinch side rolls, these encoders are used to individually monitor each pinch side rolls position and paralessism relative to the top roll.
The encoders operate in unison with the machines PLC and electro-hydraulic valving.
The PLC receives inputs from the encoders, recognising the actual position against a required position, the PLC sends a control voltage to the electro-hydraulic valve(s), the electro valving then is activated to adjust the hydraulic oil flow to the pinch side rolls to maintain or move to a desired DRO or CNC axis position.



Reliability

Reliability is achieved by attention to many details, such as:
- It is important to maintain a regulated hydraulic oil temperature, if the a hydraulic oil system overheats, it then reduces plate roll performance. **ROCCIA** plate rolls are fitted with an oil cooling heat exchanger, monitored by electronic indicators.
- Electronic indicators for low hydraulic oil level and filter failure due to excessive debris contamination [clogging].
- Every design calculation of a **ROCCIA** machine is generously increased by 20% to ensure that a **ROCCIA** plate rolling machine works below max capacity, but **has a capacity to withstand the occasional overload.**
- Thermal overlad indicators protect the electrical circuits.

Why Roccia?

Experience does matter. At **ROCCIA** we have a group of experienced engineers designers and specialized build personnel, who combine together to obtain the best out of every single project.
- **Superior quality, reliability and performance**
- **Stock parts and after sales service support**
- **ROCCIA** is aware how important it is to resolve breakdown issues & quickly resume production. Thanks to our in house technicians, stock parts & worldwide dealer organization, we offer a responsive & quick feed back to minimise any machine down time.

Your choice to superior productivity & reliability, it has to be ROCCIA Rundbiegen.

Info and contacts:
ROCCIASRL.COM

Measure are expressed in mm and inches

MACHINE MODEL	PLATE LENGTH		BENDING THICKNESS (5xTR)		PRE-BENDING THICKNESS (5xTR)		BENDING THICKNESS (1,1xTR)		PRE-BENDING THICKNESS (1,1xTR)		TOP ROLL DIAMETER	
HR4W1207	1250	*49,21"*	7	*0,28"*	4	*0,16"*	4,55	*0,179"*	2,6	*0,102"*	125	*4,92"*
HR4W1707	1750	*68,90"*	7	*0,28"*	4	*0,16"*	4,55	*0,179"*	2,6	*0,102"*	140	*5,51"*
HR4W2007	2050	*80,71"*	7	*0,28"*	4	*0,16"*	4,55	*0,179"*	2,6	*0,102"*	160	*6,30"*
HR4W2008	2050	*80,71"*	8	*0,31"*	6	*0,24"*	5,2	*0,205"*	3,9	*0,154"*	190	*7,48"*
HR4W2010	2050	*80,71"*	10	*0,39"*	8	*0,31"*	6,5	*0,256"*	5,2	*0,205"*	210	*8,27"*
HR4W2014	2050	*80,71"*	14	*0,55"*	10	*0,39"*	9,1	*0,358"*	6,5	*0,256"*	225	*8,86"*
HR4W2016	2050	*80,71"*	16	*0,63"*	12	*0,47"*	10,4	*0,409"*	7,8	*0,307"*	250	*9,84"*
HR4W2018	2050	*80,71"*	18	*0,71"*	14	*0,55"*	11,7	*0,461"*	9,1	*0,358"*	270	*10,63"*
HR4W2020	2050	*80,71"*	20	*0,79"*	16	*0,63"*	13	*0,512"*	10,4	*0,409"*	280	*11,02"*
HR4W2025	2050	*80,71"*	25	*0,98"*	20	*0,79"*	16,25	*0,640"*	13	*0,512"*	300	*11,81"*
HR4W2028	2050	*80,71"*	28	*1,10"*	22	*0,87"*	18,2	*0,717"*	14,3	*0,563"*	320	*12,60"*
HR4W2035	2050	*80,71"*	35	*1,38"*	28	*1,10"*	22,75	*0,896"*	18,2	*0,717"*	350	*13,78"*
HR4W2040	2050	*80,71"*	40	*1,57"*	30	*1,18"*	26	*1,024"*	19,5	*0,768"*	380	*14,96"*
HR4W2050	2050	*80,71"*	50	*1,97"*	40	*1,57"*	32,5	*1,280"*	26	*1,024"*	430	*16,93"*
HREW2060	2050	*80,71"*	60	*2,36"*	50	*1,97"*	39	*1,535"*	32,5	*1,280"*	500	*19,69"*
HR4W2070	2050	*80,71"*	70	*2,76"*	50	*1,97"*	45,5	*1,791"*	32,5	*1,280"*	570	*22,44"*
HR4W2080	2050	*80,71"*	80	*3,15"*	65	*2,56"*	52	*2,047"*	42,25	*1,663"*	570	*22,44"*
HR4W2506	2600	*102,36"*	6	*0,24"*	4	*0,16"*	4,55	*0,179"*	2,6	*0,102"*	180	*7,09"*
HR4W2508	2600	*102,36"*	8	*0,31"*	6	*0,24"*	5,2	*0,205"*	3,9	*0,154"*	200	*7,87"*
HR4W2510	2600	*102,36"*	10	*0,39"*	8	*0,31"*	6,5	*0,256"*	5,2	*0,205"*	220	*8,66"*
HR4W2513	2600	*102,36"*	13	*0,51"*	10	*0,39"*	8,45	*0,333"*	6,5	*0,256"*	240	*9,45"*
HR4W2516	2600	*102,36"*	16	*0,63"*	12	*0,47"*	10,4	*0,409"*	7,8	*0,307"*	270	*10,63"*
HR4W2518	2600	*102,36"*	18	*0,71"*	14	*0,55"*	11,7	*0,461"*	9,1	*0,358"*	280	*11,02"*
HR4W2522	2600	*102,36"*	22	*0,87"*	18	*0,71"*	14,3	*0,563"*	11,7	*0,461"*	330	*12,99"*
HR4W2528	2600	*102,36"*	28	*1,10"*	20	*0,79"*	18,2	*0,717"*	13	*0,512"*	340	*13,39"*
HR4W2530	2600	*102,36"*	30	*1,18"*	25	*0,98"*	19,5	*0,768"*	16,25	*0,640"*	360	*14,17"*
HR4W2532	2600	*102,36"*	32	*1,26"*	24	*0,94"*	20,8	*0,819"*	15,6	*0,614"*	370	*14,57"*
HR4W2535	2600	*102,36"*	35	*1,38"*	30	*1,18"*	22,75	*0,896"*	19,5	*0,768"*	400	*15,75"*
HR4W2545	2600	*102,36"*	45	*1,77"*	35	*1,38"*	29,25	*1,152"*	22,75	*0,896"*	450	*17,72"*
HR4W2550	2600	*102,36"*	50	*1,97"*	40	*1,57"*	32,5	*1,280"*	26	*1,024"*	510	*20,08"*
HR4W2560	2600	*102,36"*	60	*2,36"*	50	*1,97"*	39	*1,535"*	32,5	*1,280"*	530	*20,87"*
HR4W2570	2600	*102,36"*	70	*2,76"*	60	*2,36"*	45,5	*1,791"*	39	*1,535"*	570	*22,44"*
HR4W3006	3100	*122,05"*	6	*0,24"*	4	*0,16"*	3,9	*0,154"*	2,6	*0,102"*	210	*8,27"*
HR4W3008	3100	*122,05"*	8	*0,31"*	6	*0,24"*	5,2	*0,205"*	3,9	*0,154"*	230	*9,06"*
HR4W3010	3100	*122,05"*	10	*0,39"*	8	*0,31"*	6,5	*0,256"*	5,2	*0,205"*	250	*9,84"*
HR4W3014	3100	*122,05"*	14	*0,55"*	12	*0,47"*	9,1	*0,358"*	7,8	*0,307"*	290	*11,42"*
HR4W3016	3100	*122,05"*	16	*0,63"*	13	*0,51"*	10,4	*0,409"*	8,45	*0,333"*	310	*12,20"*
HR4W3022	3100	*122,05"*	22	*0,87"*	18	*0,71"*	14,3	*0,563"*	11,7	*0,461"*	350	*13,78"*
HR4W3025	3100	*122,05"*	25	*0,98"*	20	*0,79"*	16,25	*0,640"*	13	*0,512"*	370	*14,57"*
HR4W3028	3100	*122,05"*	28	*1,10"*	22	*0,86"*	18,2	*0,717"*	13	*0,512"*	380	*14,96"*
HR4W3032	3100	*122,05"*	32	*1,26"*	25	*0,98"*	20,8	*0,819"*	16,25	*0,640"*	400	*15,75"*
HR4W3035	3100	*122,05"*	35	*1,38"*	28	*1,10"*	22,75	*0,896"*	18,2	*0,717"*	430	*16,93"*
HR4W3040	3100	*122,05"*	40	*1,57"*	32	*1,26"*	26	*1,024"*	20,8	*0,819"*	450	*17,72"*
HR4W3045	3100	*122,05"*	45	*1,77"*	35	*1,38"*	29,25	*1,152"*	22,75	*0,896"*	480	*18,90"*
HR4W3050	3100	*122,05"*	50	*1,97"*	40	*1,57"*	32,5	*1,280"*	26	*1,024"*	530	*20,87"*
HR4W3065	3100	*122,05"*	65	*2,56"*	50	*1,97"*	42,25	*1,663"*	32,5	*1,280"*	630	*24,80"*
HR4W3085	3100	*122,05"*	85	*3,35"*	60	*2,36"*	55,25	*2,175"*	39	*1,535"*	750	*29,53"*
HR4W30100	3100	*122,05"*	100	*3,94"*	80	*3,15"*	71,5	*2,815"*	52	*2,047"*	820	*32,28"*
HR4W30125	3100	*122,05"*	125	*4,92"*	100	*3,94"*	81,25	*3,199"*	65	*2,559"*	950	*37,40"*
HR4W30150	3100	*122,05"*	150	*5,91"*	120	*4,72"*	97,5	*3,839"*	78	*3,071"*	1040	*40,94"*
HR4W4006	4100	*161,42"*	6	*0,24"*	4	*0,16"*	3,9	*0,154"*	2,6	*0,102"*	245	*9,65"*
HR4W4008	4100	*161,42"*	8	*0,31"*	6	*0,24"*	5,2	*0,205"*	3,9	*0,154"*	270	*10,63"*
HR4W4010	4100	*161,42"*	10	*0,39"*	8	*0,31"*	6,5	*0,256"*	5,2	*0,205"*	320	*12,60"*
HR4W4012	4100	*161,42"*	12	*0,47"*	10	*0,39"*	7,8	*0,307"*	6,5	*0,256"*	350	*13,78"*
HR4W4016	4100	*161,42"*	16	*0,63"*	14	*0,55"*	10,4	*0,409"*	9,1	*0,358"*	380	*14,96"*
HR4W4020	4100	*161,42"*	20	*0,79"*	16	*0,63"*	13	*0,512"*	10,4	*0,409"*	420	*16,54"*
HR4W4025	4100	*161,42"*	25	*0,98"*	20	*0,79"*	16,25	*0,640"*	13	*0,512"*	460	*18,11"*
HR4W4032	4100	*161,42"*	32	*1,26"*	25	*0,98"*	20,8	*0,819"*	16,25	*0,640"*	510	*20,08"*
HR4W4040	4100	*161,42"*	40	*1,57"*	32	*1,26"*	26	*1,024"*	20,8	*0,819"*	580	*22,83"*
HR4W4050	4100	*161,42"*	50	*1,97"*	40	*1,57"*	32,5	*1,280"*	26	*1,024"*	650	*25,59"*
HR4W4060	4100	*161,42"*	60	*2,36"*	45	*1,77"*	39	*1,535"*	29,25	*1,152"*	700	*27,56"*

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ROCCIA RUNDBIEGEN

PERFECTION
DOES NOT ALLOW FOR COMPROMISE

HR4W 4 ROLL

Style

The **ROCCIA** plate rolls modern design lines subtly communicate that here is a high tech plate rolling machine that will deliver exactly what its specification states: a **high tech specification**, proven and reliable components, robustness of construction, ease of use, value for your money. From first sight the **ROCCIA** plate roll stands out from all other plate rolling machines, it is the outcome of a precison design, graphical analysis and 3D modeling, plus that all important ingredient, hands on plate rolling knowledge accumulated over many years.

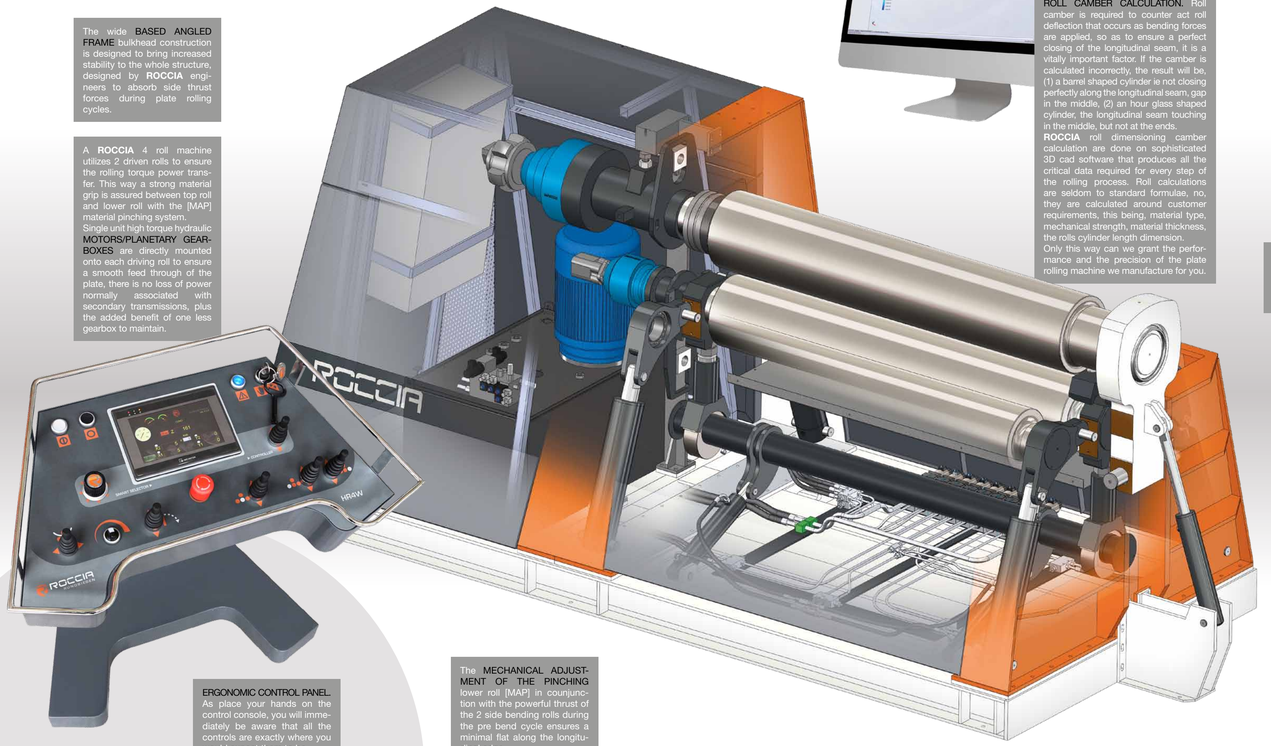
Commitment

Striving to achieve perfection requires constant attention to many details, ongoing excellence in design technology, vigilance in the fabrication and machining procedures, use of proven and reliable components, a focused team of build technicians, a sales team **listening and interacting with customers.** At **ROCCIA** we are proud to say that we have this commitment to our product in abundance, it is what makes a **ROCCIA** plate rolling machine stand out from its competitors.

Technology

The wide **BASED ANGLED FRAME** bulkhead construction is designed to bring increased stability to the whole structure, designed by **ROCCIA** engineers to absorb side thrust forces during plate rolling cycles.

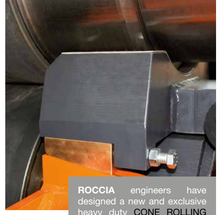
A **ROCCIA** 4 roll machine utilizes 2 driven rolls to ensure the rolling torque power transfer. This way a strong material grip is assured between top roll and lower roll with the [MAP] material pinching system.
Single unit high torque hydraulic **MOTORS/PLANETARY GEARBOXES** are directly mounted onto each driving roll to ensure a smooth feed through of the plate, there is no loss of power normally associated with secondary transmissions, plus the added benefit of one less gearbox to maintain.



ERGONOMIC CONTROL PANEL. As place your hands on the control console, you will immediately be aware that all the controls are exactly where you would expect them to be.

The **MECHANICAL ADJUSTMENT OF THE PINCHING** lower roll [MAP] in counjunction with the powerful thrust of the 2 side bending rolls during the pre bend cycle ensures a minimal flat along the longitudinal edge.

ROLL DESIGN CALCULATION. It is the *heart* of the machines performance; it's what makes a **ROCCIA** plate roll different from the competition.
ROLL CAMBER CALCULATION. Roll camber is required to counter act roll deflection that occurs as bending forces are applied, so as to ensure a perfect closing of the longitudinal seam, it is a vitally important factor. If the camber is calculated incorrectly, the result will be, (1) a barrel shaped cylinder ie not closing perfectly along the longitudinal seam, gap in the middle, (2) an hour glass shaped cylinder, the longitudinal seam touching in the middle, but not at the ends.
ROCCIA roll dimensioning camber calculation are done on sophisticated 3D cad software that produces all the critical data required for every step of the rolling process. Roll calculations are seldom to standard formulae, no, they are calculated around customer requirements, this being, material type, mechanical strength, material thickness, the rolls cylinder length dimension.
Only this way can we grant the performance and the precision of the plate rolling machine we manufacture for you.



ROCCIA engineers have designed a new and exclusive heavy duty **CONE ROLLING DEVICE** that is *mounted* or *bolted* or *positioned* into the machine hard against the bottom roll shoulder to eliminate possible movement.

CLEANLINESS AND ORDER in the hydraulic and electrical parts of our machine express the attention to detail we put into our product.

ROCCIA plate bending rolls **USE SWING ARM TECHNOLOGY** for the movement of the side bending rolls. Each swing arm is manufactured from a solid steel profile this ensures rigidity. This design solution offers a smooth friction free movement for each side roll, a friction less system has the advantages of; more pre bending power, a maintenance free longer life unit.

Smart machines

POWERED BY op.time

With the OP.TIME technology ROCCIA Rundbiegen plate rolls offer **up to 20% of energy saving**, when compared to traditional plate rolling machines. Our plate rolls use a **friction free swing arm system** to position the pre bend rolls, no friction, no power absorbed. When the machine is not in use for a period of 5 minutes an **electronic control sets the machine into a "stand by mode"**.

CNC control

GIOTTO BY ROCCIA · NEWTON BY ROCCIA · GALILEO BY ROCCIA

Three different software options for **three different levels of CNC control**. Written and then fully tested and optimized on our plate rolling machines, by our **team of engineers**, always with our customers requirements to the forefront. The layout of every operation function window is clear and **user friendly**.

Balance

Each ROCCIA machine is the result of **balance** between high precision machining, controlled assembly procedures, customized hydraulic and electronic components, in order to obtain **robust and precise plate rolls**, manufactured without compromise.

Mechanical Strength
Hydraulic Power
Electronic Precision