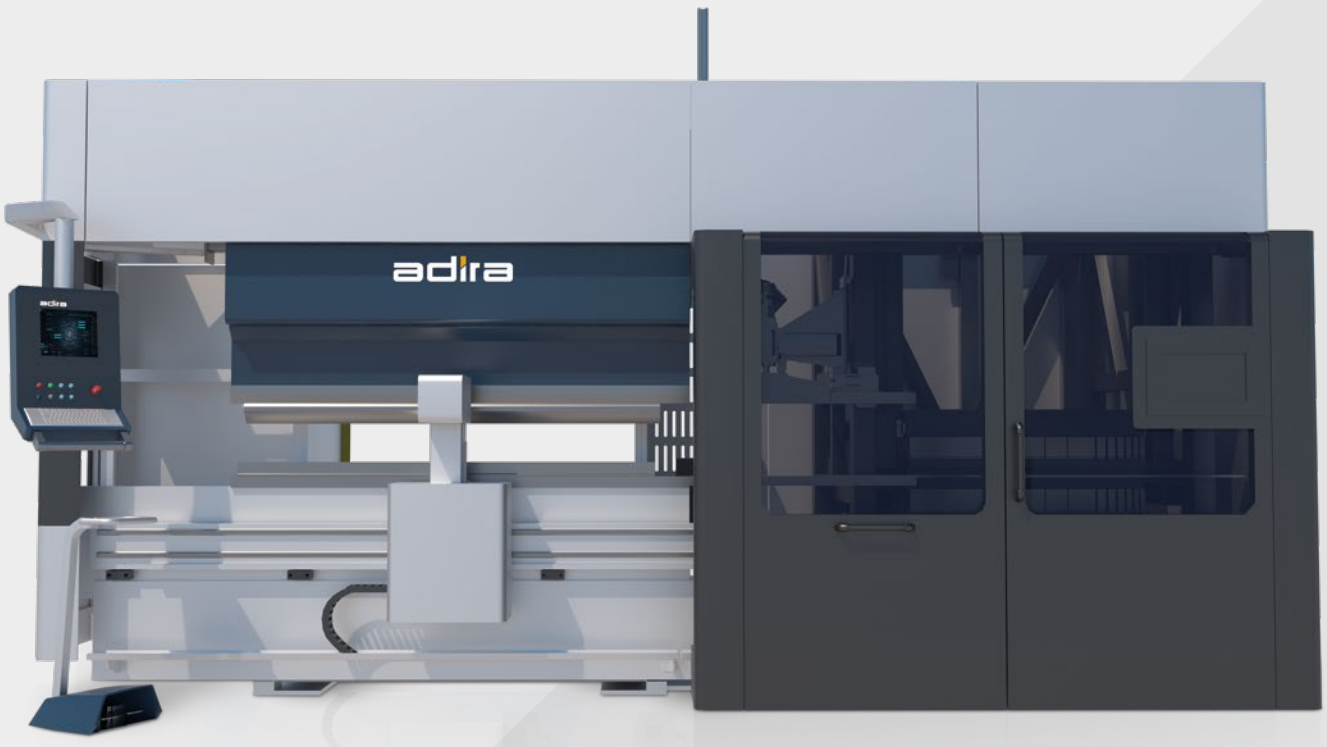
ATC

METAL FORMING SOLUTIONS



AUTOMATIC TOOL CHANGER

ENGLISH

03 AUTOMATIC TOOL CHANGER DESCRIPTION AND FUNCTION

05 AUTOMATIC TOOL CHANGER - **SINGLE**

05 AUTOMATIC TOOL CHANGER - **TWIN**

06 TECHNICAL FEATURES

08 STANDARD EQUIPMENT

09 APPLICABILITY REQUIREMENTS FOR THE BENDING MACHINE

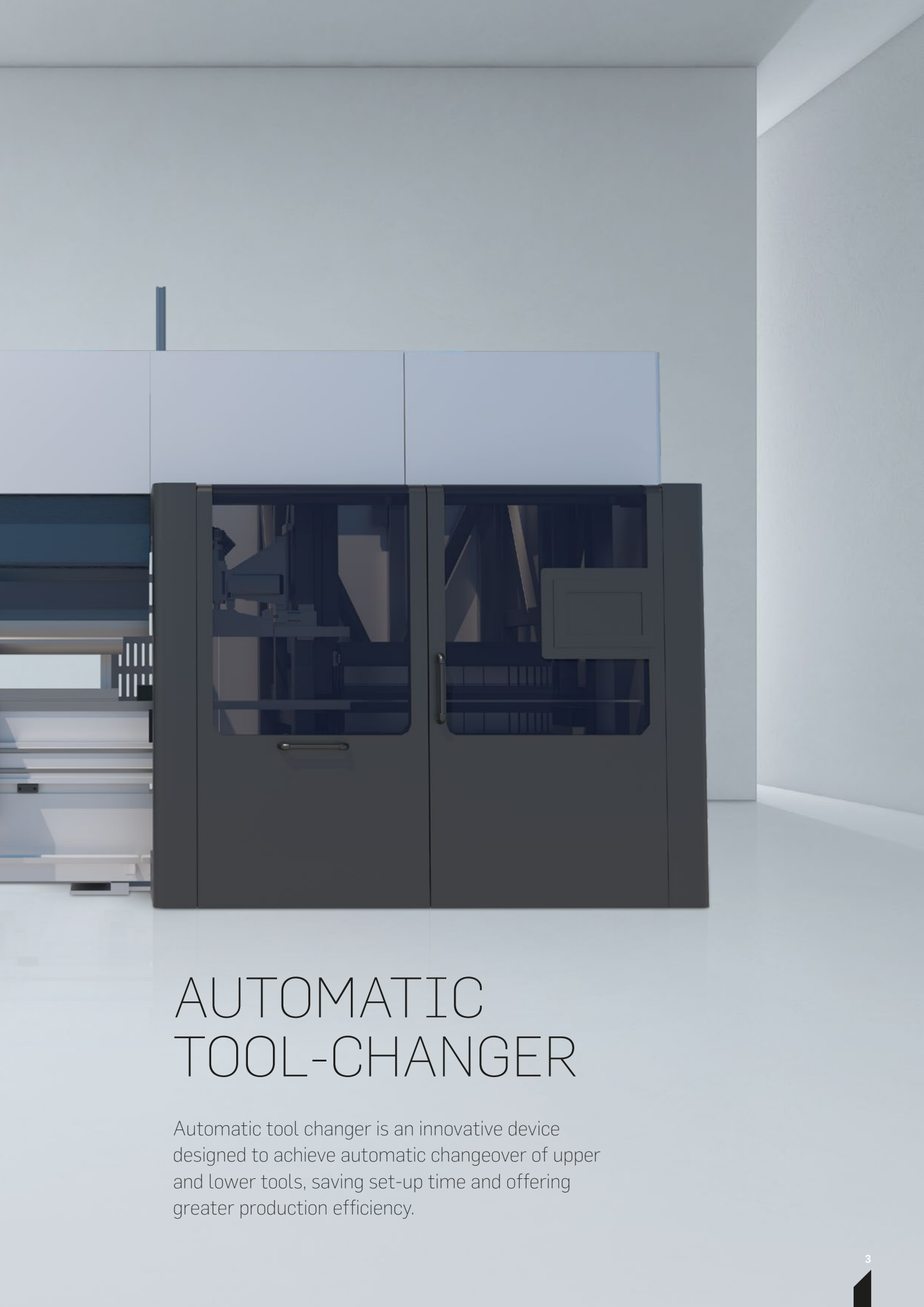
09 PRESS BRAKE FEATURES

09 INSTALLABLE OPTIONS

10 SOFTWARE REQUIREMENTS

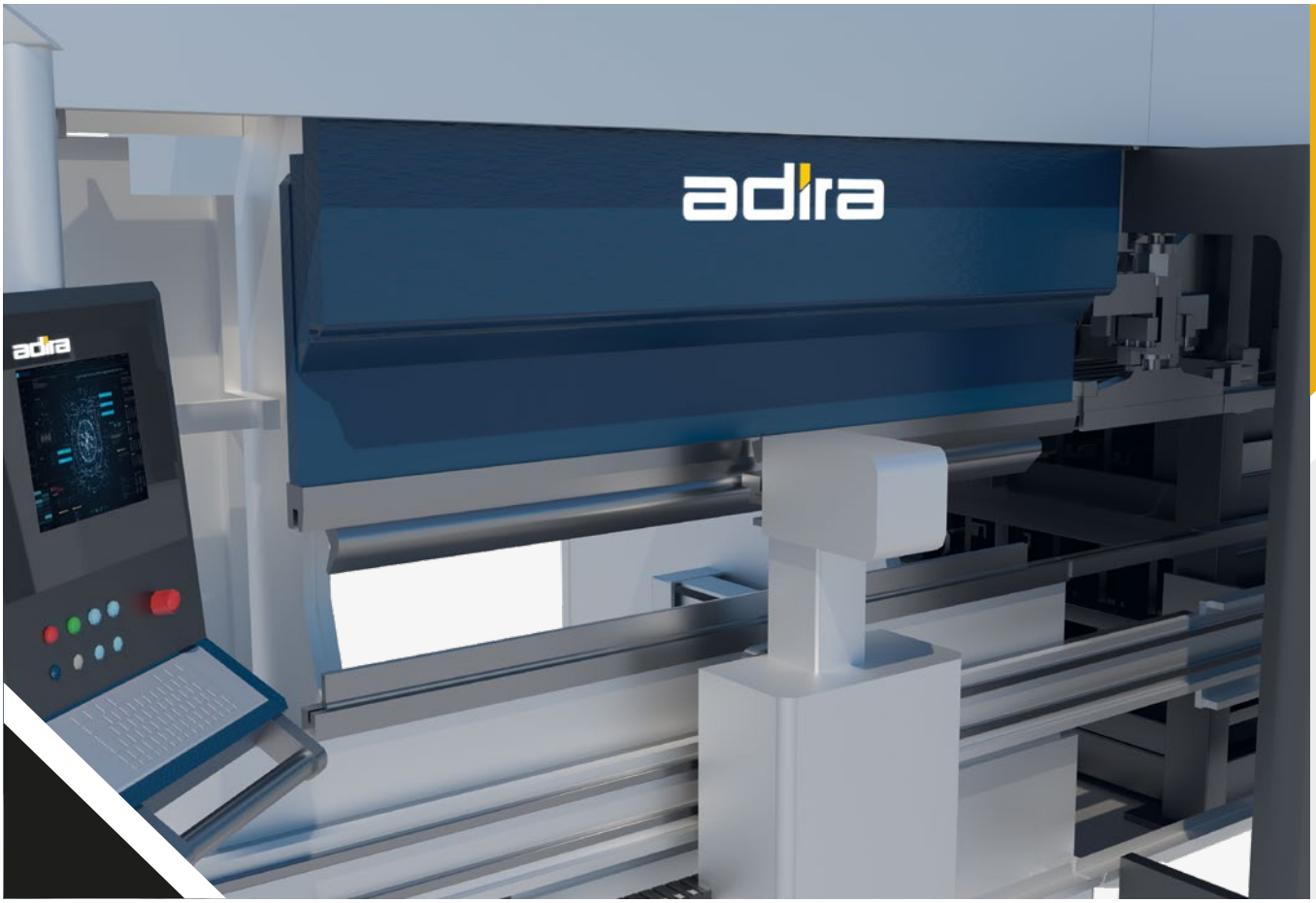
11 AVAILABLE OPTIONS





AUTOMATIC TOOL-CHANGER

Automatic tool changer is an innovative device designed to achieve automatic changeover of upper and lower tools, saving set-up time and offering greater production efficiency.



The system is able to perform

Bending stations and tool management - The system's manipulator selects and places punches and dies from the tool library — avoiding costly delays typically associated with conventional tool changes.

Automatic laser - search of the tool in the machine or in the storage.

Tool presence in the storage ATC is capable of storing 32 and 52 meters of tooling.

Software interface for storage maintenance.

Loading the storage.

Cleaning the tool system and the table.

General Function

The machine's general function is to move or replace the punches and dies of a bending press brake. The tool changer is equipped with a mobile rack storage. The tool change moves by electric motors the racks inside its storage positioning them near the shuttle that picks up the tool and drags it inside the press.

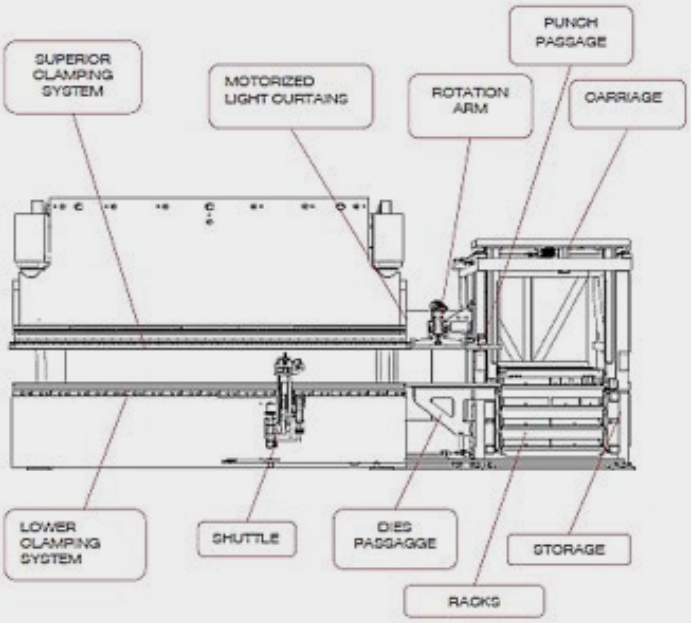
Automatic tool changer can be added to one press brake and therefore bi called “single” or can be added to two press brakes so it is called “twin”.

The twin option storage 52 meters of tools:

ATC S32 – Single automatic tool changer with 32 meters tool storage.

ATC S52 – Single automatic tool changer with 52 meters tool storage.

ATC T52 – Twin automatic tool changer with 52 meters tool storage.



AUTOMATIC TOOL CHANGER

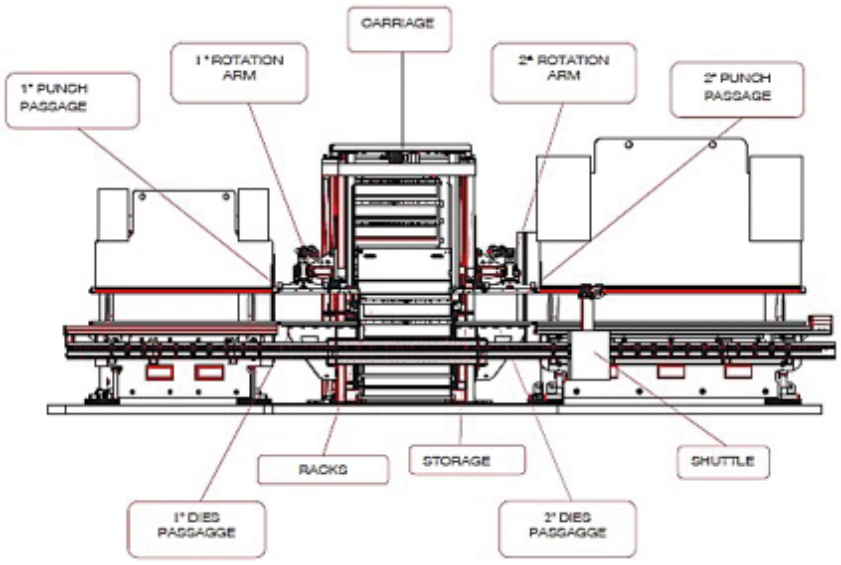
SINGLE

TECHNICAL FEATURES

The tool changer system consists of mobile units with corresponding axes (6) XC RC ZC VC X2C AC.

AUTOMATIC TOOL CHANGER

TWIN



TECHNICAL FEATURES

The tool changer system consists of mobile units with corresponding axes (7)

Correspondent XC RC ZC VC X2C AC V2C.

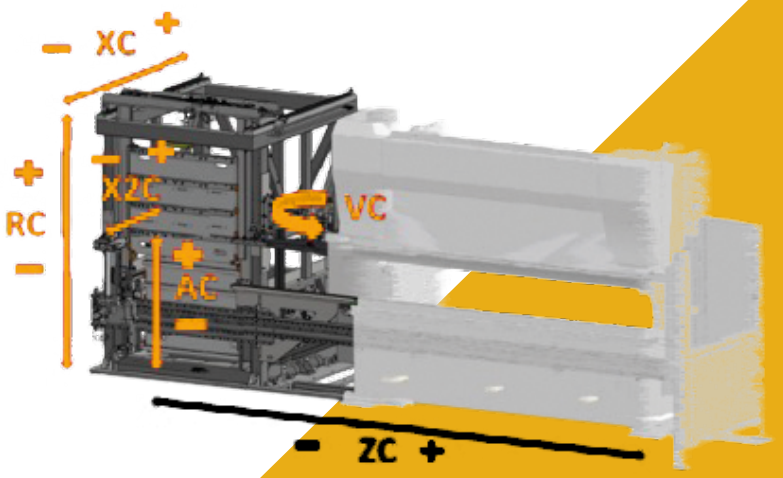
The system can equip two machines by removing the tools from a single storage.

The system has been designed to allow the same functions as a single machine system. The safety system allows you to equip the machine on the right or left and simultaneously work on the machine already equipped. The capacity suggested for the storage is 52 meters, divided into 5 sets of upper and 7 lower tools, in the case of requests for different capacities; any special requests can be evaluated.

TECHNICAL FEATURES

AXES AND DIRECTIONS

The tool changer has 6 (7 for TWIN versions) motorized axes, with a maximum of 4 axes working simultaneously.

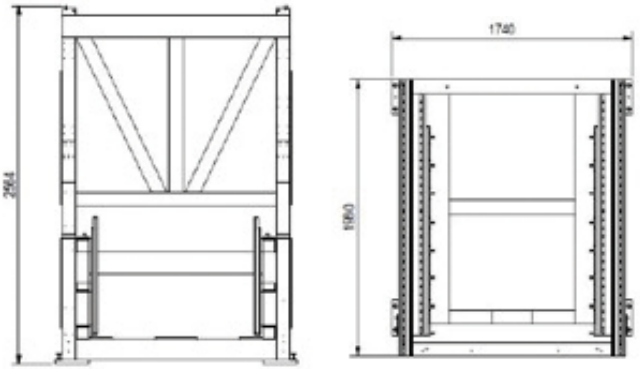


SPEED

AXES	RPM	SPEED (m/s)
ZC	5000	2,617
AC	3000	1,1304
XC	4000	0,3768
RC	3000	0,375
X2C	5000	0,208

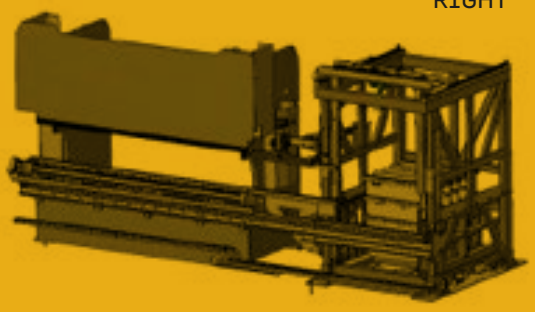
AUTOMATIC TOOL CHANGER MODEL ATC S32

Height:		2.564 mm
Lenght:		1.740 mm
Deepness:		1.980 mm
Maximum linear capacity:		32 m (with std argesystems combination)
Racks nr	7	3 punch
		4 die

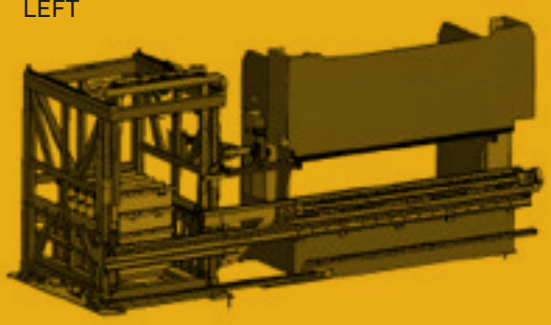


STORAGE POSITION

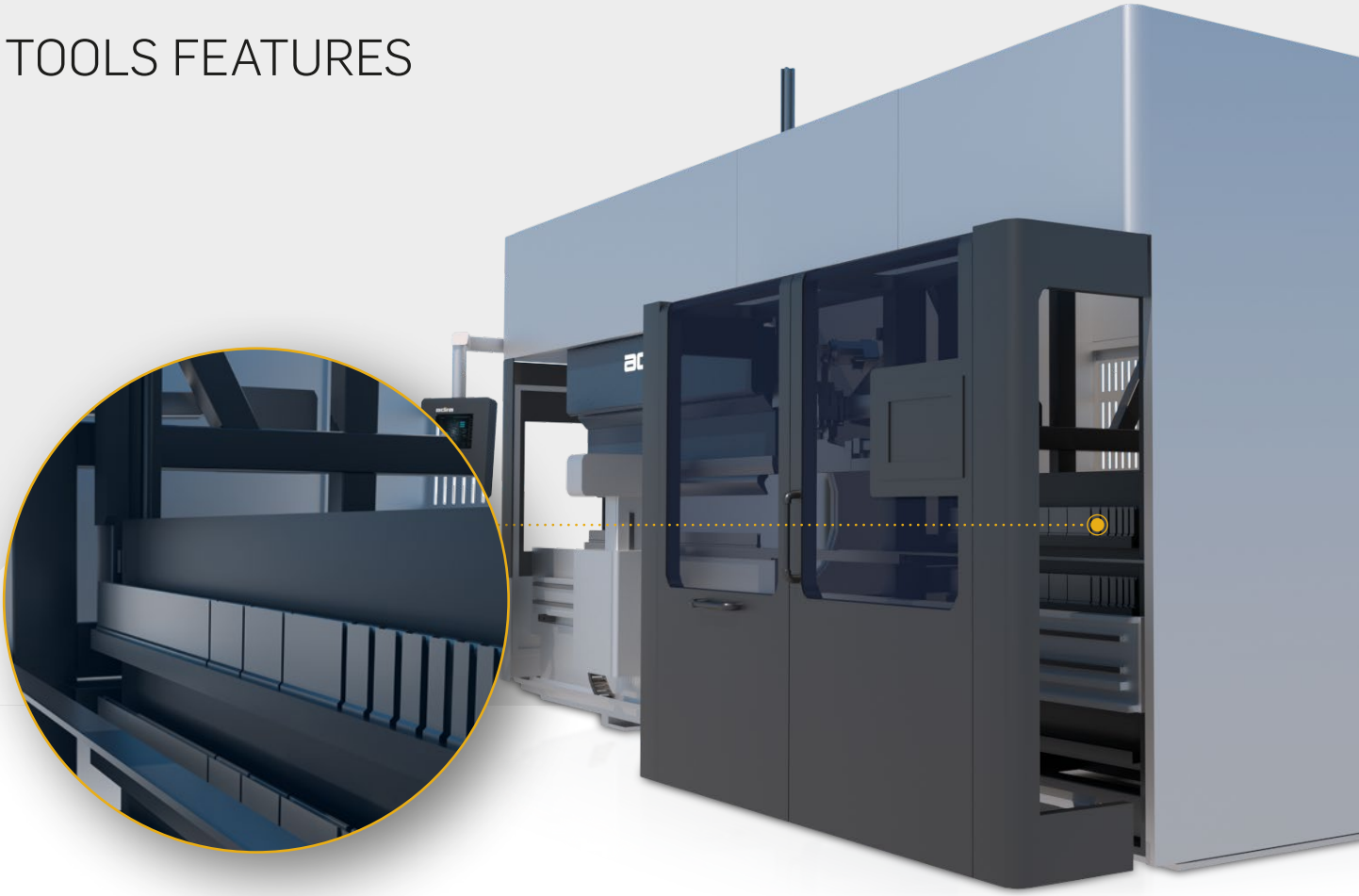
RIGHT



LEFT



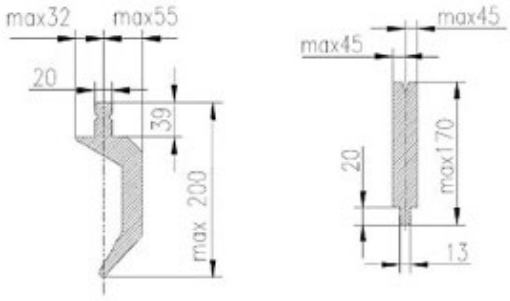
TOOLS FEATURES

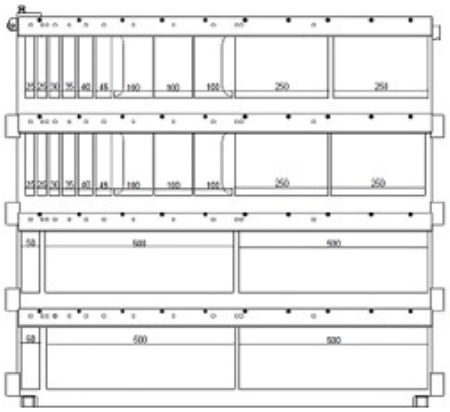


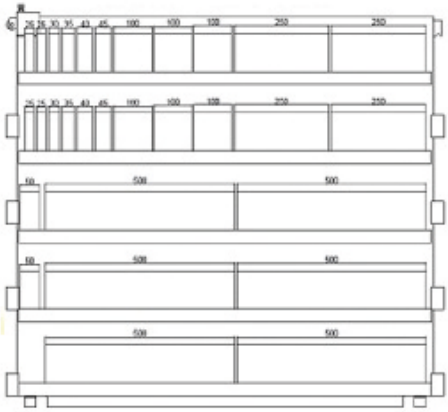
STANDARD RACK CONFIGURATION

TOOLS WILA STYLE

Maximum tool length	515 mm
Minimum tool length	20 mm
Maximum punch height	200 mm
Maximum dies height	170 mm
Type of V-shaped openings managed	4-60 mm







STANDARD EQUIPMENT

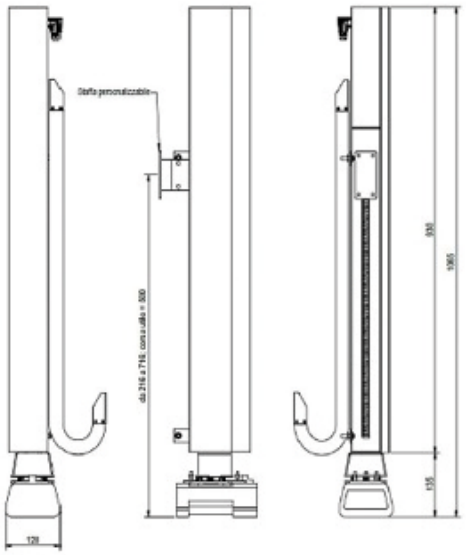
SAFETY SYSTEM

During tool change activation, a couple of light curtains located in front of the machine protects front access to the press brake.

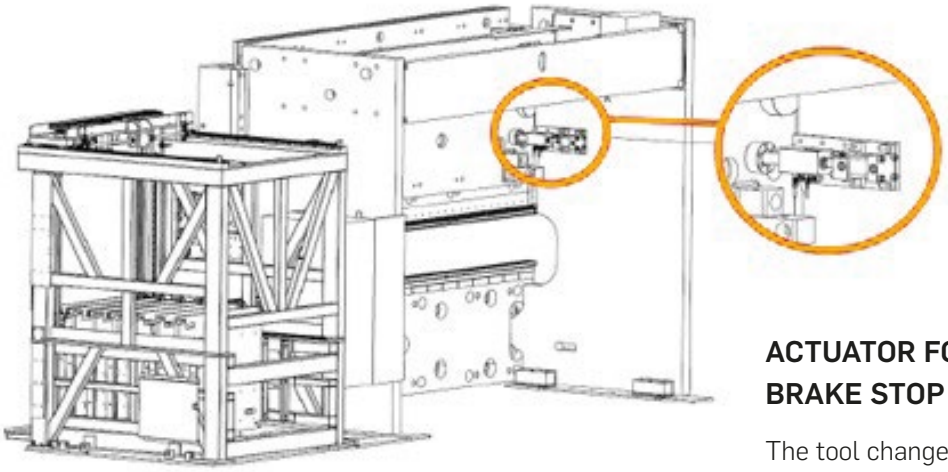
The motorized light curtains optional designed for automatic tool changing reduce setup times, as there is no need for manual adjustment.

They are also equipped with an anti-crushing system.

The applicability of the tool change to the press-bending machine is subordinate to the light curtains stroke, as they need to be out of the way when the tool change works, to avoid collisions with the rotation arm.







ACTUATOR FOR UPPER BEAM PRESS BRAKE STOP ATC T52

The tool changer works when the press brake upper beam is locked in a defined position, thus allowing the dragging of the tools from the side storage to the press.

This system allows blocking the movement of the upper beam of the bending machine and keeping it fixed in the loading position.



APPLICABILITY REQUIREMENTS FOR THE BENDING MACHINE

Supply voltage	Single-phase 230 V Three-phase 400 V
Frequency	50/60 Hz +/-0,5 Hz
Power installed	9,5 kW
Pressure available	6 bar
Safety system	Laser cells
Console	Out of overall
Pedals	Out of overall
Additional machine operations	Lower beam ATC S32/ATC S52
Upper beam positioning	Tolerance accepted +/- 0,05mm

PRESS BRAKE FEATURES

The tool changer has designed to work individually and handle punches, dies and intermediates clamps on a bench and a press brake beam.

To insert the bending machine in a continuous line production are predispose electric safety interfaces, (ex press + tool change).

The press brake has to be compliant with the Directive 2006/42 / EC and subsequent amendments and with the national implementing provisions.

Type	Servo electric Hydraulic
Press brake length	All
Ton	Max 300 ton
Upper and lower clamping system	Pneumatic Hydraulic
Tips of tooling managed	Wila Style

INSTALLABLE OPTIONS

Optional	Applicability
Bending Follower	Yes – With Parking
Front supports	Yes - With Parking
Back Gauge	Yes

SOFTWARE REQUIREMENTS



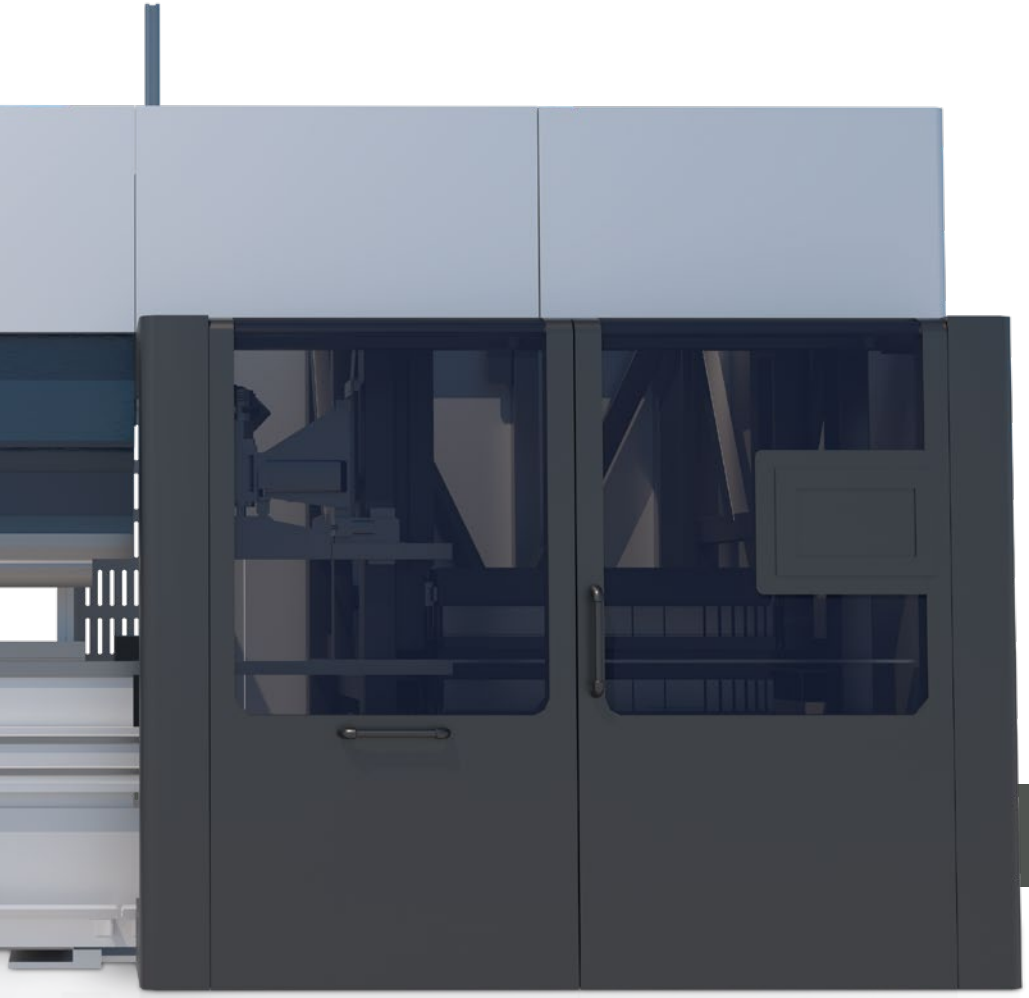
Smart Came is the tool changer software.

Communication	Via Ethernet
Protocol	FTP
Input availability	32
Output availability	32

From each page of the software application, it is possible to access the drop-down menu containing the following functions:

MAIN FEATURES SOFTWARE SMART CAME

PLC Menu: it is possible to load the PLC or display some errors
Channel Monitor: it is possible to display the positions of the axes, speed, voltages
Archives Management: allows files to be copied between different units
Alarm History: access to the alarm history
Shared Editor: access to all the NC parameters, usually used to change axis parameters
Password: entering the password is accessed with a user with higher privileges
Language: it is possible to select the language of the interface
Reset CN
Switch off
Minimize
Exit
TksScope
Calibration Touch



AVALIABLE OPTIONS

		ATC	Single S32 / S52	Twin T52
			STD	STD
PRESS BREAK SETUP	COMPATIBLE MACHINES	PA	OP	OP
		Movable Beam Adaptation (mandatory in PA Range)	OP	OP
		PF	OP	OP
		Movable Beam Adaptation (mandatory in PF Range)	OP	OP
		BB	OP	OP
	CONTROLS	Esa AD75	STD	STD
	TABLES	Pneumatic Table w/ Wila Clamping (L=1500mm)	OP	OP
		Pneumatic Table w/ Wila Clamping (L=2000mm)	OP	OP
		Pneumatic Table w/ Wila Clamping (L=3000mm)	OP	OP
		Pneumatic Table w/ Wila Clamping (L=4000mm)	OP	OP
	PUNCH CLAMPING	Pneumatic Clamping w/ Wila Clamping (L=1500mm)	OP	OP
		Pneumatic Clamping w/ Wila Clamping (L=2000mm)	OP	OP
		Punch Clamping w/ Wila Clamping (L=3000mm)	OP	OP
		Pneumatic Clamping w/ Wila Clamping (L=4000mm)	OP	OP
	SAFETY	Laser Safety Cells	STD	STD
ATC SETUP	TOOL LENGHT	32 meters	STD	X
		52 meters	OP	STD
	SAFETY	CE	STD	STD

Rua das Lages 67 . 4410-272 Vila Nova de Gaia
T.: +351 226 192 700 . adira@adira.pt

