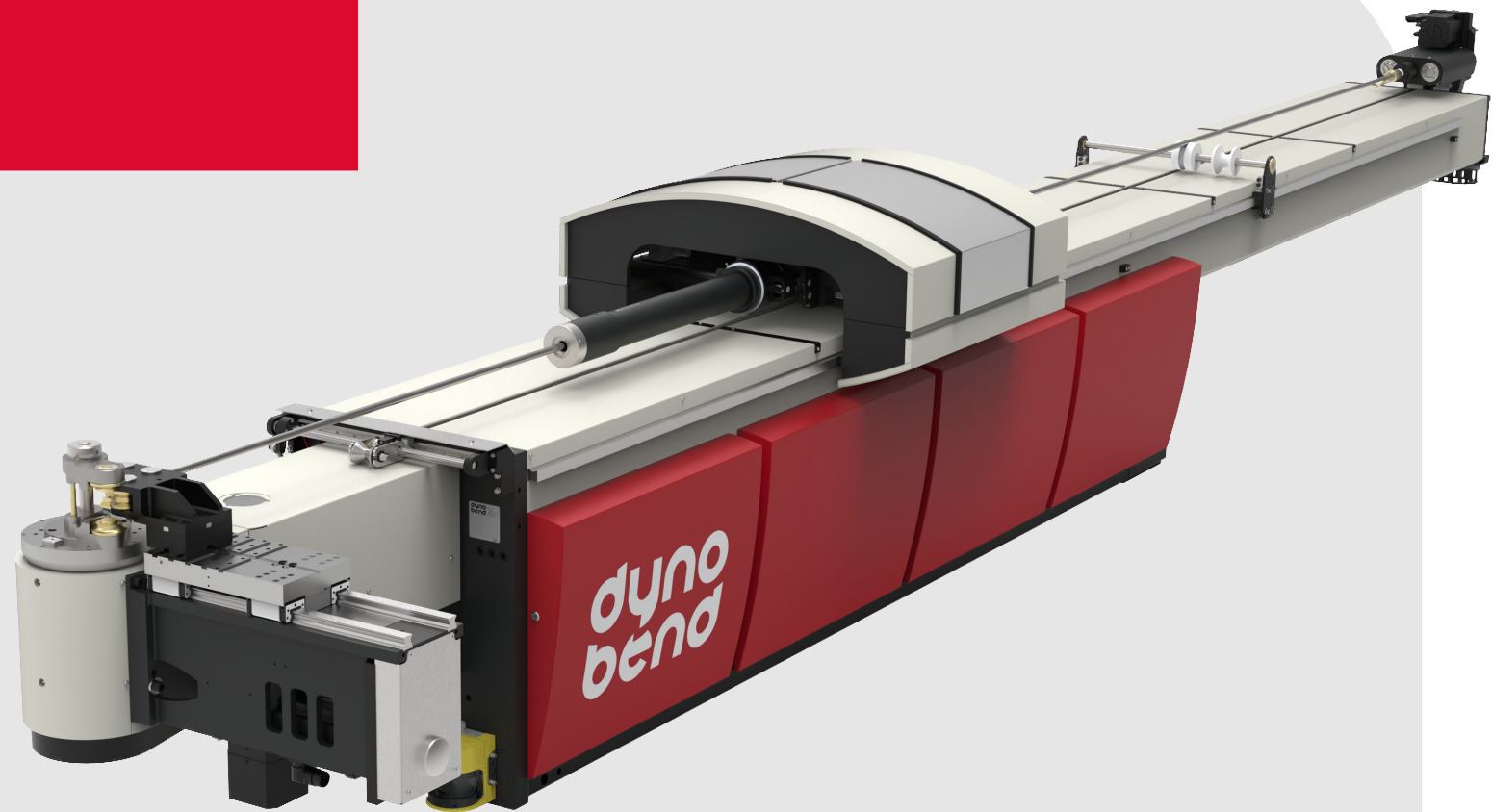


**dyno  
bend**



**Combi bending machine (C)**



## The C-line is:

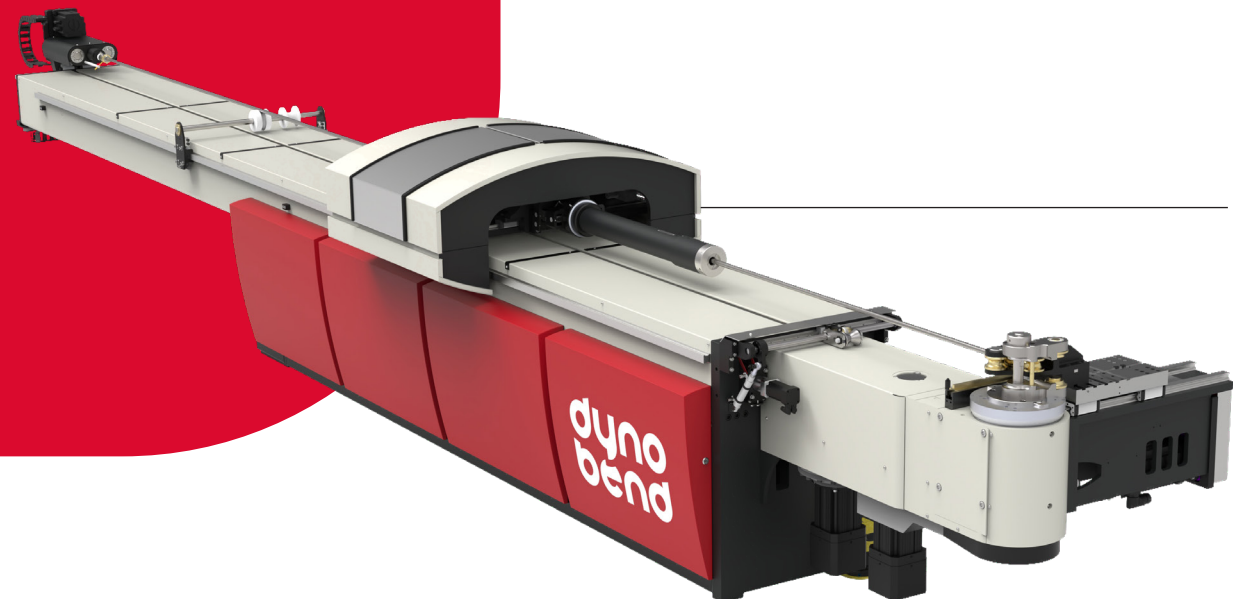
The fully servo controlled bending machine for the bending of semi-finished products, such as tubes and profiles, offers (thanks to its unique design) extreme freedom around its bending head. Thanks to the patented vertical clamping system, complex geometries can be produced effortlessly using 3D- bending.

The bending or rolling of tube can be effortlessly combined in one tool. The C-combi bending machine has proven itself many times in various different branches, both in single piece- as well as in series production.

Many different sorts of material such as steel, stainless steel and aluminum are effortlessly processed with this machine. The C-combi bending machine is suitable for bending with or without a mandrel.

## Standard version:

- Servo-driven bending head
- Servo-driven longitudinal transport
- Servo-driven bend die up and down opening
- Servo-driven clamping of bend die
- Servo-driven retainer
- Servo-driven spatial rotation clamping jaw
- Servo-driven mandrel withdrawal
- Servo-driven clamping jaw holder
- Servo-driven left/right movement
- Freestanding mobile operating console with color touch screen



Type C

<b>TECHNICAL DATA*</b>	<b>C25</b>	<b>C40</b>	<b>C60</b>	<b>C76</b>	<b>C90</b>
Bending capacity [Ø] **	25,4	42,4	60,3	76,1	88,9
Bending angel [°]	200	200	200	200	200
Bending radius max [mm]	120	150	210	270	340
Bending direction	CW / CCW	CW / CCW	CW / CCW	CW / CCW	CW / CCW
Bending speed max / bending speed at max torque [°/sec]	540 / 270	270 / 135	110 / 55	90 / 30	70 / 30
Feed axis speed max [mm/sec]	1200	1000	1000	800	800
Profile rotation speed [°/sec]	600	450	250	250	150
Boosterforce Y-axis [kN]	10	22	22	70	70
Number of CNC axis [Nr]	10	11	11	11	11
Axis accuracy [mm]	± 0,05	± 0,05	± 0,05	± 0,05	± 0,05
Effective product length [m] ***	3 - 4 - 6	4 - 6	4 - 6	4 - 6	4 - 6

\* Other dimensions available on request

\*\* Dimensions are depending on yield strength, radius (CLR) and (wall) thickness

\*\*\* Should you require different Effective product length for your production process. Please contact us to discuss these options.

# Advantages

## ■ Completely servo-controlled up to the latest standard.

Completely up to date with current machine standards.

## ■ Easy tool set-up.

No unnecessary loss of time on nonproduction related activities.

## ■ Great freedom around the bending head. Ideal for 3D bending.

No more concessions to your product because of shape restrictions of your bending machine.

## ■ Patented vertical clamping tooling system.

Thanks to our patented vertical clamping system and unique design, it gives great freedom around the bending head. Complex geometries can be bent easily. Bending of closed frames is possible, without disassembling tooling to remove the finished product.

## ■ Unique machine design because of compact construction method with integrated cabinet.

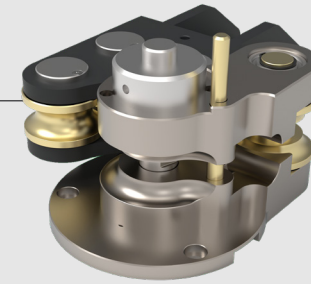
Gone are the hoses and other vulnerable components, because of the compact construction method with integrated cabinet.



## Bending and rolling

The vertically clamping combi bending tool combines rotary-draw bending with a fixed bending radius and rolling in a single bending tool.

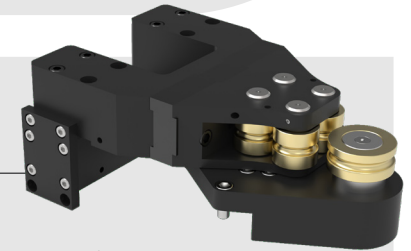
Combi bending



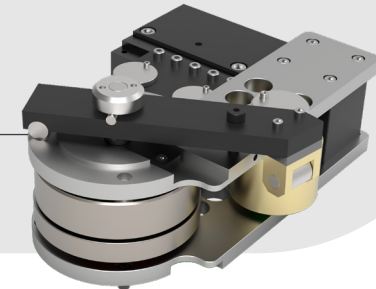
## Rolling

Depending on the bending application, various solutions are available for rolling on the Type C combi bending machine.

Central rolling



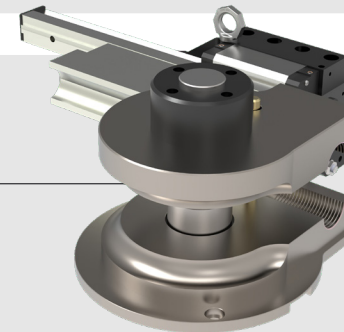
Rolling with adapter plates



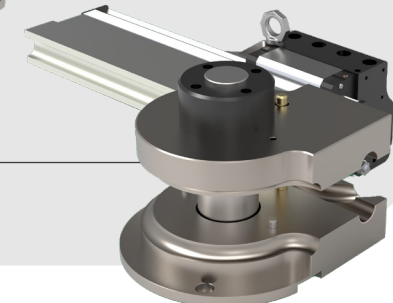
## Bending

Vertical clamping rotary draw bending tool with fixed bending radius.

Bending

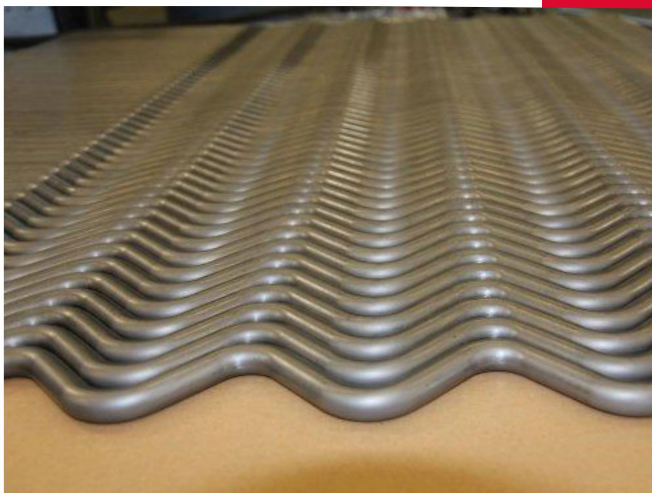


Bend in bend



## Right the first time!

Bend every part perfectly the first time with minimum waste material? Sounds unreal. But the Combi tube bending machine, in combination with our Dynobend Tube Optimizer and a measuring device (cabinet or arm) makes it possible. Spending hours of programming in 3D drawing software optimizing programs is a thing of the past. Whether you load your products from cad software or draw it at your machine, our combi bending machine predicts, while bending the spring-back of the material and corrects this immediately. The machine does this for a wide range of materials, such as steel, stainless steel, aluminum, copper. This results in exact predictions of the necessary materials and a reduction of undesired markings.



## Great repeatability

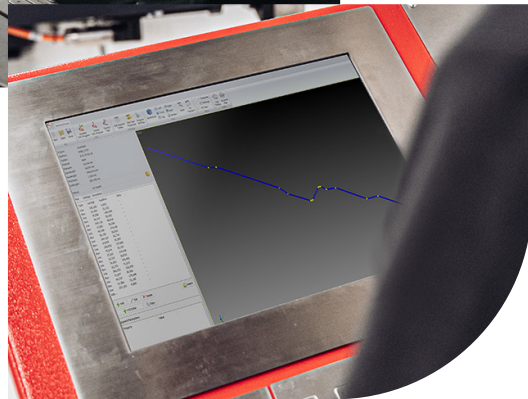
Even with a great variety of semi-finished products, adjustments can be made easily. All material specific and product dependent parameters are always available within the 3D program. This results in great repeatability, even between tool changes and independent of the skills of the operator.





# SOFTWARE

- Programmable bending angles
- Programmable longitudinal displacements
- Programmable rotation angles
- Programmable mandrel withdrawal
- Programmable speeds
- PC controller with EtherCAT system
- Hard disk for the storage of bending programs
- Automatic calculation of the spring back correction and/or radius table
- Online service preparation with Team Viewer
- Network connection for Windows



## **Free Form Manager**

Freeform Manager software offers you an automated CNC-generation, correction and feasibility analysis for e.g. free-form tubes and profiles machined on our machines.

## **Tube Optimizer freeform correction**

With the Dynobend Tube Optimizer (DTO) we have reached the highest standard of perfection for our free form bending- and rolling machines.

## **ProgramManager**

The Dynobend program manager is used to create bend and roll bending programs. The software is designed to make it easy and fast to program the standard bending operations. This control system was designed for maximum programming freedom.



**dyno  
bend**

Dynobend is an international operating manufacturer of high quality CNC tube bending systems.

Over 35 years of experience the specialist for innovative and professional tube bending solutions. Dynobend has offered bending solutions for the bending and free forming of tubes and profiles in almost every possible branch.

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