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MACHINE MODEL

XT4

Automatic bandsaws for industry application

Short description

XT Series are the latest and more advanved professional tools developed by IMET technicians for industry applcation and massive production of steel and metal solids: XT4 is am automatic double column bandsaw with straigh cut with automatic cutting parameters, touch screen display,innovative design to guarantees user safety during the entire cutting process

Scan the video

Cutting area	90°
Cutting capacity at 90°	Round: 360mm - Squared: 360mm - Rectangular: 360x360mm
Capacity with bundle cutting	350x350mm - 90x10mm (scrap-end with bundle: 210mm)
Minimum scrap-end	60mm (available in option 30mm)
Minimum cutting diameter	20mm
Blade size	5900x41x1.3mm
Blade tension	2500kgf/cm2
Blade motor power	5.5KW
Blade speed	15÷150 m/min
Sawframe motoreducer	Brushless 1/9 6Nm low backlash planetary
Feeder motoreducer	Brushless 1/25 6Nm low backlash planetary
Feeder length	500 mm
Hydraulic unit power	2.2KW
Hydraulic unit tank capacity	25l
Collant tank capacity	100l
Weight	3500kg

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Machine size .	2800x1777x2200mm
Minimun cutting lenght	10 mm
Working table height	870mm
Chips conveyor height	420mm
Blade tension	2500 kgf/cm2

Features

Innovative design

Innovative, fascinating and clean: these are the main features of the XT Series design that provided to these machineries the prestigious ADI (Italy's association dedicated to best product of the italian industrial design) Design Index selection and the publication on the renowed ADI magazine as one of the best product of the italian design. XT Series was also officially selected to be a contestant for the Golden Compass, the mos famous italian design award.

10" touch screen display

XT Series uses CNC numeric control to managed all the machine settings. The machine is also equipped with a simple and easy-to-use 10" touch screen display with user-friendly and intuitive interface that gives the operator full control on all the machine operative parameters, increasing and optimizing the user-experience, making the machine the ideal working tool in professional environment for industry application.

Automatic settings and materials library

Inside the machine it's has been uploaded a material library with more than 150 materials with preset parameters and cutting settings, fully accessible through the touch screen and the easy-to-use machine interface; the library allows to start cutting even with no expperiece, the user just need to follow the intutive instruction: just few clicks to select the material and the cutting program, then XT software will calculate cutting settings to optimize the process and start the production.

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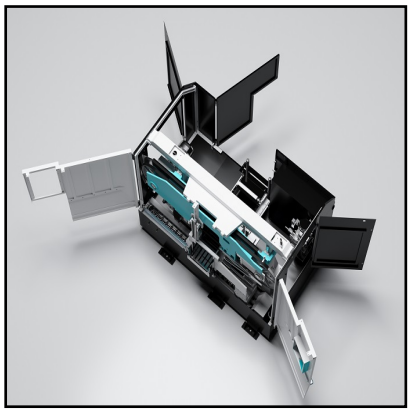
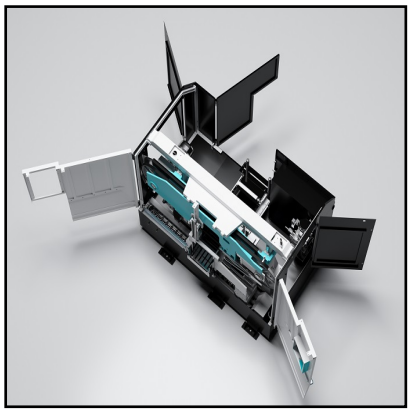


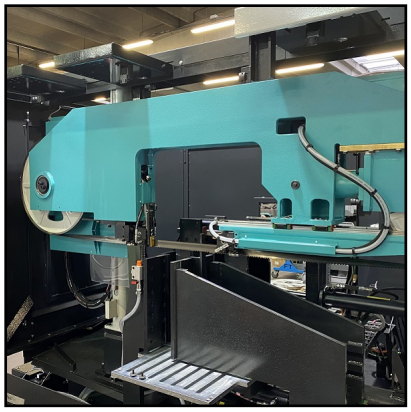
User safety

User safety is provided by the new design full carter system which cover all the machine moving parts while the machine is working so that the user cannot be in danger. In case of the opening of a carter, the machine has microswitch system that immediately stops the movements. Every working error or breakage is indicated ono the display.



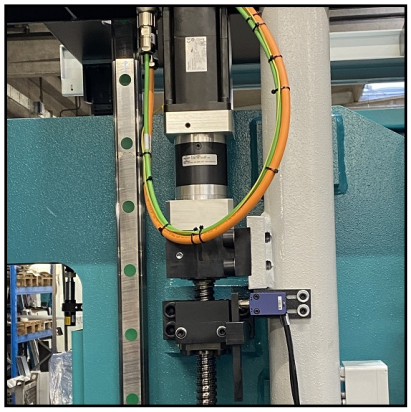
Full access

The protection system doesn't mean it's not easy to interviene in case of maintenance: all the carters can open up, providing full access to all the internal machine parts. A sump pump provides for the collecting tank cleaning.



Double structure sawframe

XT Series sawframe has a rigid double structure in electrowelded steel specifically designed to have the highest resistance even on the biggest cutting processes; this massive structrue reduces vibrations, bindings and noises while working, optimizing performances on all kind of materials and shapes.



Sawframe movement

Sawframe movement is pefectly balanced and provided by a high performance brushless low backlash planetary gearbox motor with recyrculating ballscrew and 6 Nm. Sawframe also slides on two linear guides (one for each side). Thanks to this high accurate sawframe movement, it's possibile to increase sawframe descent speed control precision with better rates even on lower rates.

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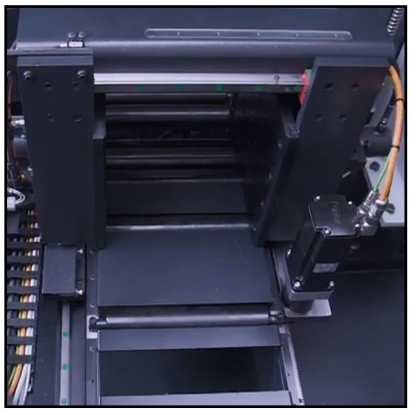
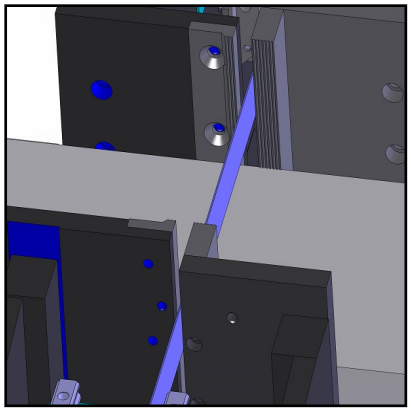


Integrated feeder

The material is placed on the integrated roller table (500mm with stroke ripetition, equipped with rack and pinion to ideal position and speed control) and locked by the vice jaws that have the unique feature to open on both sides so that feeding process is optimized even on non-rectilinear bars. The feeder has a brushless low backlash planetary gearbox and slides on rectified guides and recyrculating ballscrews runners.

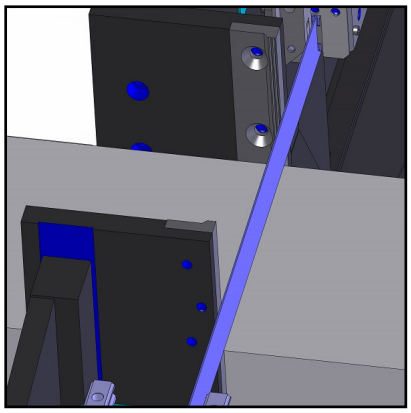
Vice

Blocking vice provides for the perfect material locking and is equipped with an innovative system that allows to open all 4 jaws independetely; this helps to load even not-rectilinear bars. The user can choose between two main configuration for the vice: 4 jaws (2 placed before the blade and 2 after) or with 2 jaws place only after the blade.



Vice: 4 jaws

This configuration presents 4 jaws: 2 lock the material before the blade and 2 after the cut. We strongly suggest this configuration in case the user wants to use hard metal blade (WIDIA) so that the stability is increased during the cutting process. Minimum scrap end: 60mm.



Vice: 2 jaws

The user can select this configuration with 2 jaws on the vice placed only after the blade so that the material is locked only after the cut line. This configuration allows to reduce the scrap end to just 30mm

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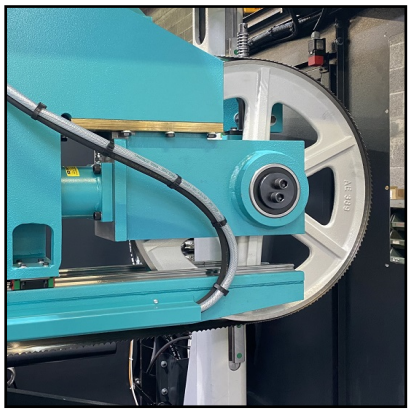
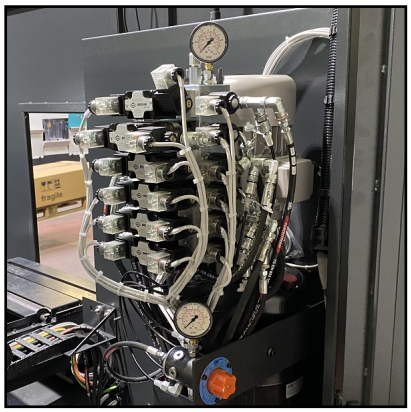


Blade tension

Hydraulic cylinder driven blade tension is also managed by the bandsaw software. If the machine has been used for some period, the control system provides to release the band (reducing tension) to avoid strain. In case of breakage, the control commands an immediate stops to the process with alarm on display.

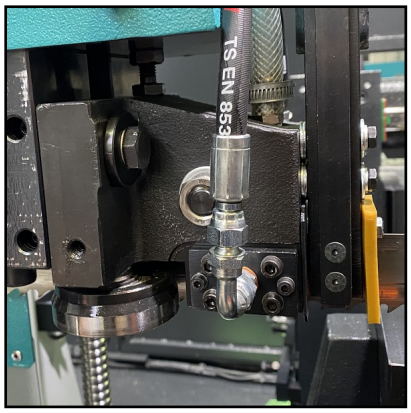


Saving energy

The XT Series innovative hydraulic unit allows to save the 80% of the energy consumption compared to traditional unit: our power unit uses 3 kW/h a day while other units consumption is 16 kW/h per day.

Detach system

Once the cut ends,the feeder backs off and the system allows to detach the blade from the material before bow rises. This prcess helps reduce the friction between blade and cut piece and increse dramaticaly the cutting efficiency of your machine helping to save blade life when using hard metal bands and/or bundle cutting device



Blade guides

Hard metal pads blade guides hydraulically kept in touch with the band; blade-guides are equipped with cemented, hardened, rectified lateral guide rolls with easy regulation. Inside the blade-guide there's a widia-ring bearing leaning on the blade back to provide the best allignment, saving the bearing life.

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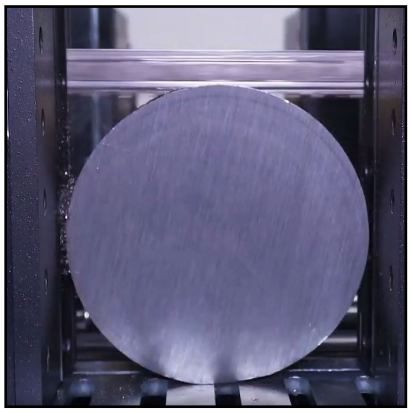
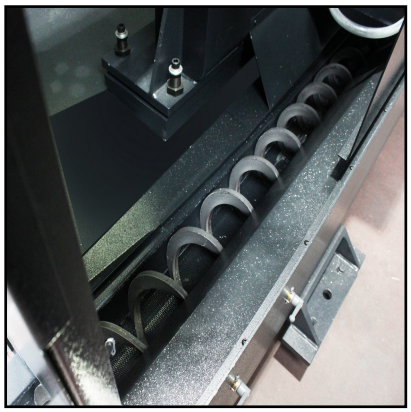


IMET SENSE

IMET Sense allows to speed-up cutting times optimizing the band fast approach to the material: once the blade comes at 10mm to the piece, the machine uses the faster cutting parameters (added in the material parameters table) that have been applied to that material.



Chip conveyor

XT Series machines are equipped with a standard chip conveyor with 420mm height evacuation

Industry 4.0 Ready - SAWfactory OPTIONAL

IMET automatic machines can be connected to the company network and be used remotely thanks SAWFACTORY and modem. SAWprovram is a dedicated software which allows to manage the cutting process from the office desk by setting cutting programs and monitoring the workflow thanks to the dedicated web app. The system also allows to also receive assistance by our technicians remotely. Discover SAWFACTORY: https://bit.ly/2RuxHuX

Industry 4.0 Ready - OneLoad Kit for MES OPTIONAL

The kit allows to load from the company office/MES to the machine software a cutting list/program to optimize the internal workflow while avoiding possible mistakes made by the machine operator. It's necessary, for the customer, to have an FTP server on te same LAN where both SAWprogram software and cutting program are installed. A "shortcut" is enabled on the machine control to load the cutting lists and start the cycle (the kit is available only if the "Industry 4.0 Ready" package is already installed).

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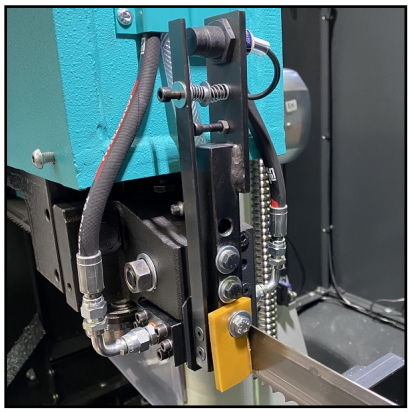
Industry 4.0 Ready - RealTime kit for MES OPTIONAL

The kit allows to send directly from the machine to the MES information in real time about: machine status, cut pieces situation, automatic cycle progession. The connection is provided via a Web service made available by the user on his own LAN; the webservice will act as a filter between the bandsaw and the internal MES (the kit is available only if the "Industry 4.0 Ready" package is already installed). 2



Deluxe kit: blade deviation control OPTIONAL

Deluxe kit includes in one option both the blade deviation control and the Smart Start device. Blade deviation control allows to alway cut with perfect tollerance up to the end of band life; the machine tries to correctly allign the blade, allowings to start cutting always with the right settings (automatic regulation of the cutting parameters). If an error is detected, the cut doesn't start.

Deluxe Kit: SMART START OPTIONAL

Together with blade deviation control, SMART START device allows to choose between two options to set up the first cut: the user can set the first cut length and the material is automatically positioned by the machine; if the first cut is not needed, the machine automatically start with the set cutting program.

Supplmentary chip conveyor OPTIONAL

It's possibile to have a supplmentary chip conveyor with incresed height at 930mm.

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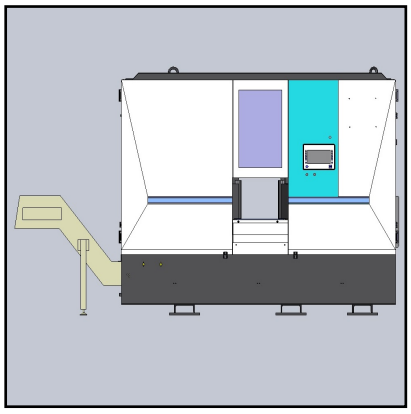
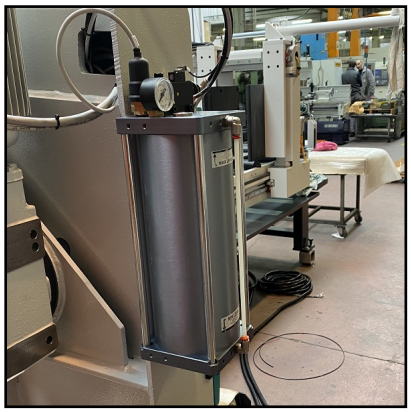


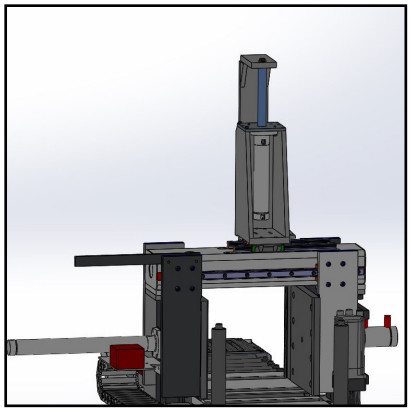
Carpet chip conveyor OPTIONAL

Automatic XT Series machine have the possibility to use a carpet chip conveyor instead of the standard one. It's possibile to install it on both side of the machine depends on the customer needs.



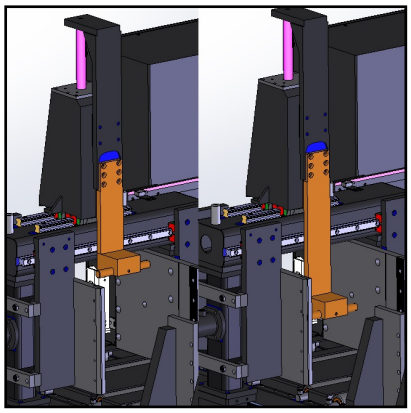
Minimal lubrification system OPTIONAL

It is possible to require, for all Imet machines, the minimal lubrication system, it avoids the dispersionor of refrigerant liquid typical in the use of emulsifiable oil, the life of the blade is not in any way affected. Minimal lubrification system has a 3 liters capacity.



Bundle cutting device OPTIONAL

The machine is compatible with the device for bundle cutting. The system is made by two separate parts: one mounted on the feeder vice, the second on the fixed vice. With the standard configuration of the device and the full system assembled, cutting capacity is: max. 350x350mm, min. 90x10mm, scrap-end 210. It's possibile to reduce scrap-end to 100mm by removing the device mounted on the fixed vice.



Bundle device - Feeder OPTIONAL

The vertical pressor mounted on the feeder vice can be installed in two different configuration upon customer request and based on the bundle size. In case of bundles height between 180mm and 350mm the vertical cylinder is short (like in the left side of the picture); when working with smaller bundles, 10mm to 200mm, the vertical cyclinder will be much longer. The width can be adjusted by removing the orizontal cylinder (d. 25mm) to adapt to the material size and perfectly block the bar.

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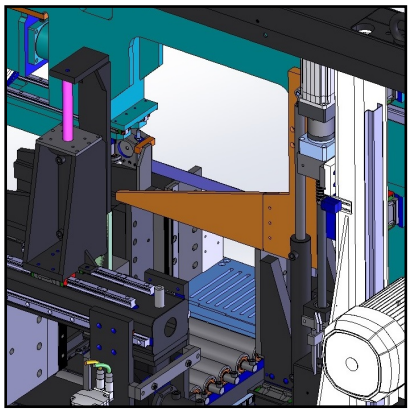
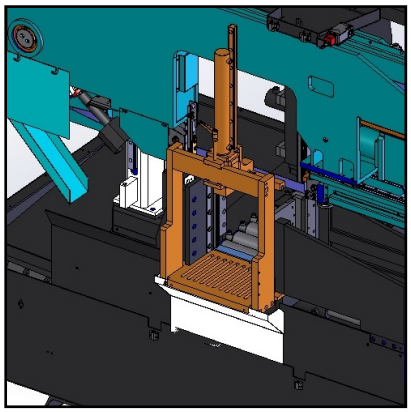


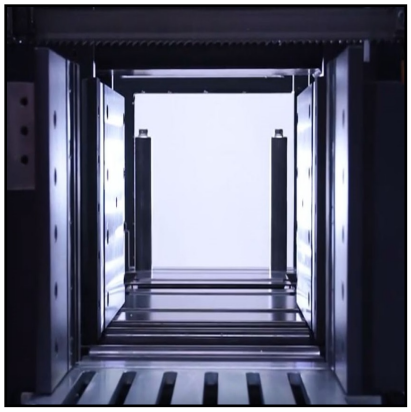
Bundle device - Fixed vice - Option 1 OPTIONAL

Together with the pressor on the feeder, the device also has a second pressor positioned in the fixed vice area (before or after the blade). In this first configuration the pressor is installed outside the jaws vice before the blade and is fixed for all cutting dimensions; with this option, the final scrap end is the one standard for the machine with bundle device: 210mm.



Bundle device - Fixed vice - Option 2 OPTIONAL

In this second configuration the vertical pressor is mounted outside the jaws vice after the blade: the option allows to reduce the final scrap end to a minimum of 100mm. The horizontal bar of the device can be changed based on the user's needs to adapt to the material width.



Supplementary feeder length OPTIONAL

It's possibile to require a feeder with supplementary length compared to the standard 500mm

Loadin/unloading roller table OPTIONAL

Loading and unloading roller table for XT5 with free rolls and 2 vertical rolls. Single module length 2m. with max. loading capacity of 2500kg (each module).

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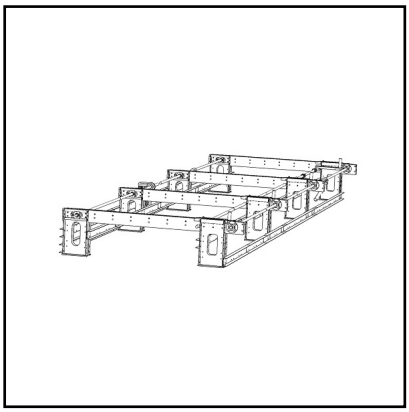
Roller table for bundle cutting OPTIONAL

Loading and unloading roller table with containment vertical roll with adjustable width. Single module length is 2m. This model is compatible with bundle cutting, also equipped with trail to collect remainging and liquid Max. loading capacity 2500kg for each module.



Automatic warehouse system OPTIONAL

Automatic bar warehouse driven by the saw control software where the bars are automatically fed, consisting of supporting surfaces with a drag chain and loading stations (from 5 to 15). The supporting surfaces can be easily moved thanks to a modular structure. The feeder is provided with a system of blockage of the bar and with vertical aligning rollers and gearboxes to move the drag chains. The system is driven by the software.