



Made in Italy

Sistemi di foratura
di foratura
di foratura



Military Industries



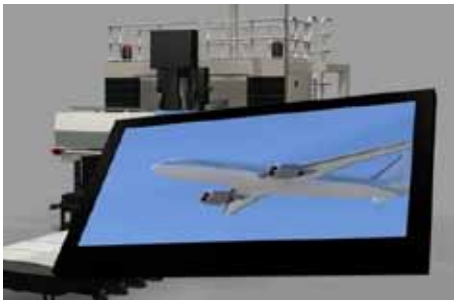
Naval Industries



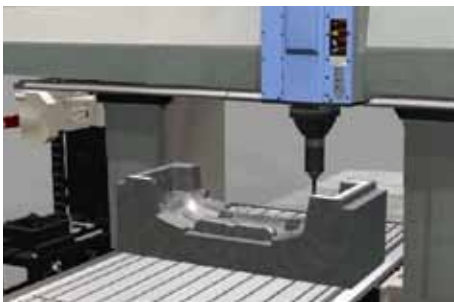
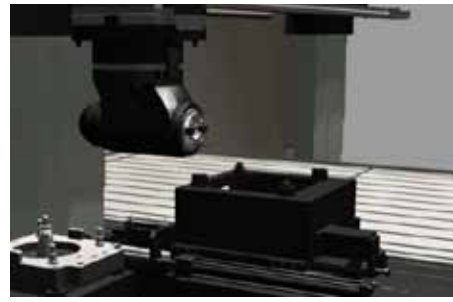
Cars Industries



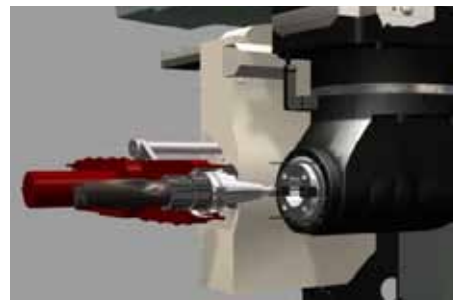
Energy Industries



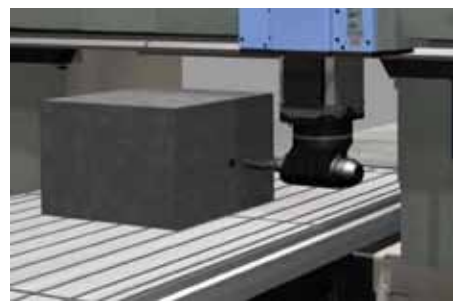
Aerospace Industries



Mold & Die Industries



Heavy Industries





The Big Technology for the Big Industry

“OPEN YOUR MIND ...a Big project for a Big product”, “estimate the power...”, “...put on the biggest one”, “... it’s really huge! But necessary”, “9 sqmq. of project... GO!” “Full metal, the best...”, “molten metal...”, “...we got the shipment! Live is really huge”, “...let’s dig it!”, “...we are not familiar with rulers”, “it will definitely... guarantee the extremely limited allowances!” “...that is the largest bearing we ever used”, “kinematic mechanism... toothing of... what power transmission is expected?” “ISO 60? ...not very common indeed!”, “ ...just removing chips will be very tiring!”, “it is not like installing the usual standard angle heads...”, “four bearings of 31 kg each...”, “what hard days... but what a pleasure!”, “pipes, sensors, cables... what a technology!”, “ ...test benches... they will return the verdict”, “OK, GOOO...!”, “anyway... where will they install it?”, “mechanics is fantastic... our component is a vital part of a project, just imagine how big will be the machine-tool”, “but... to produce what?”, **“to give a job to many people like us, and to let us live in a better world...”**

The angle heads exhibited here are designed and built to satisfy the tooling requirements of very large machines used in a variety of industries:

Heavy goods vehicles, Aeronautics, Shipping, Military, Railroad, Energy, Moulds and Automotive.

To build these types of products, one needs design expertise, thorough knowledge of the product itself and related problems, investment strength, specific machine tools and equipment as well as highly qualified personnel.

The applied technology, the materials, the parts and assembly all ensure top levels; the certified static and dynamic tests guarantee the best possible performance over time.

They are usually special products, tailor-made for the specific requirements of the manufacturer of machine tools or for retrofitting machines already at work in the specific industries.

The main features of these products may be summarised as follows:

- *Body made of cast iron or obtained from the full piece to ensure maximum precision and stability*
- *Motion transmitted by means of Gleason ground involute gears. The transmission ratio is normally 1:1, but it may be in both multiplication and in reduction based on torque transmission requirements*
- *Standard tool-holder couplings: DIN69871 - DIN 2080 - BT - HSK - Coromant Capto or others on request*
- *The tool holder can be locked on the spindle in two ways: manually or automatically. If automatic, it is locked mechanically and released hydraulically*
- *The coolant may be supplied in the centre of the tool holder. The pressure currently reached is 70 Bar and the tool holder is cleaned with air. Whatever the case, there are always some turning nozzles around the spindle. Furthermore, the spindle is always pressurised to avoid intrusions*
- *Spindle oblique contact precision bearings lubricated with long life grease*
- *Gears normally lubricated with grease separated from the grease of the bearings. For high speeds, the lubrication system is oil circulation*
- *The axes of the heads with automatic rotation are locked by means of Hirth crowns, with standard division of 2.5° and 1° on request*
- *All the electrical control devices on the axes and the spindles are inside the head and are easily accessed*

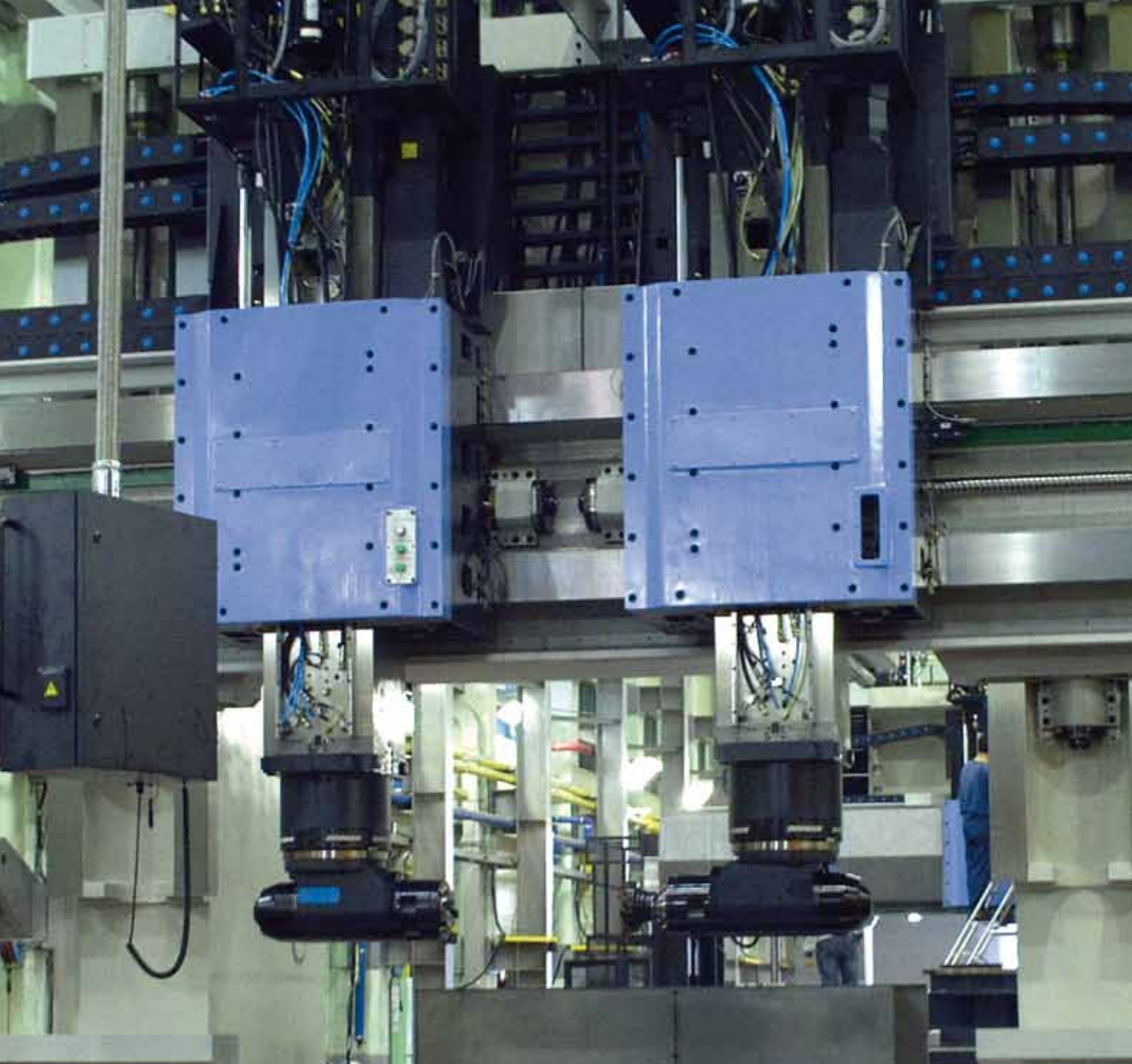
These products are tested statically on 3D measuring machines and dynamically, at the agreed rates, on our BP05 test bench that fully simulates the conditions of use in compliance with the product standards.





The *Big* Techno





Technology for the **Big** Industry



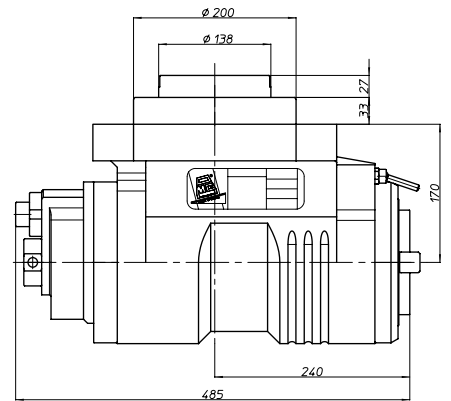
Manual Angle Head

The pictures are the customization of our standard product made for the customers



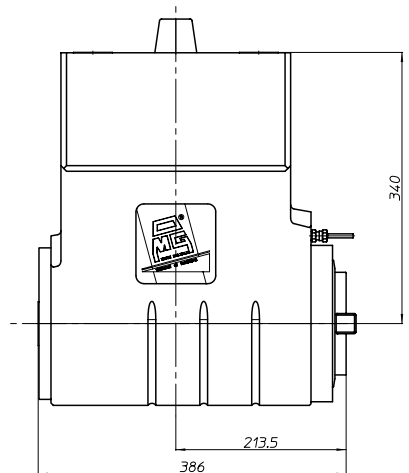
Angle head TAS12609

- Power up to 35 kW
- Torque 560 Nm
- Ratio I-O: 1-1
- Max RPM 2.000
- Standard output: DIN69871-A50
- MTC: manual tool change
- Option: BT50, DIN69893-HSK100
- Coolant through the tool centre and by nozzle
- Weight Kg 130



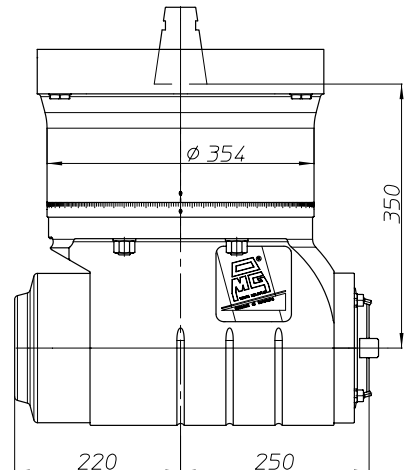
Angle head TAS18310

- Power up to 45 kW
- Torque 1.300 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- MTC: manual tool change
- Option: BT50, DIN69893-HSK100
- Coolant through the nozzle
- Weight Kg 215



Angle head BAH14813

- Power up to 45 kW
- Torque 1.100 Nm
- Ratio I-O: 1-1
- Max RPM 3.000
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Manual C axis rotation
- Coolant through the tool centre and by nozzle
- Weight kg 295



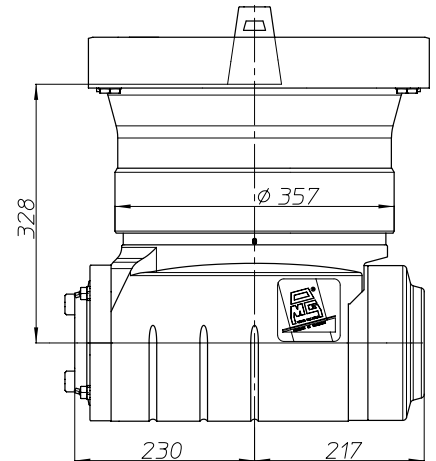
Automatic Angle Head

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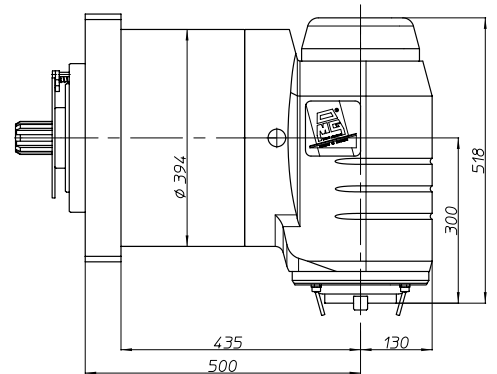
Angle head BAH24312

- Power up to 45 kW
- Torque 1.000 Nm
- Ratio I-O: 1-1
- Max RPM 4.000
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Automatic C axis rotation: standard step 2,5° (option 1°)
- Coolant through the tool centre and by nozzle
- Weight Kg 335



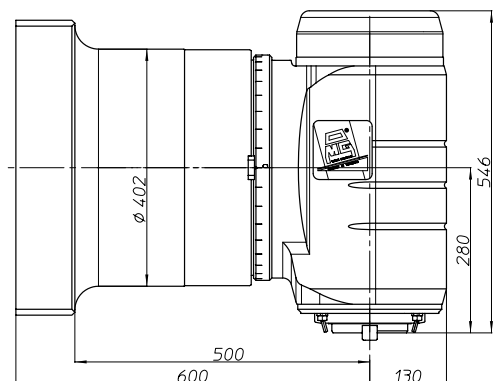
Angle head TAS07710

- Power up to 70 kW
- Torque 1.100 Nm
- Ratio I-O: 1-1
- Max RPM 5.000
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Automatic C axis rotation: standard step 1° (option 2,5°)
- All axis with cooling
- Coolant through the tool centre and by nozzle
- Weight Kg 550



Angle head TAS06411

- Power up to 70 kW
- Torque 3.000 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Automatic C axis rotation: standard step 2,5° (option 1°)
- Coolant through the tool centre and by nozzle
- Weight Kg 720



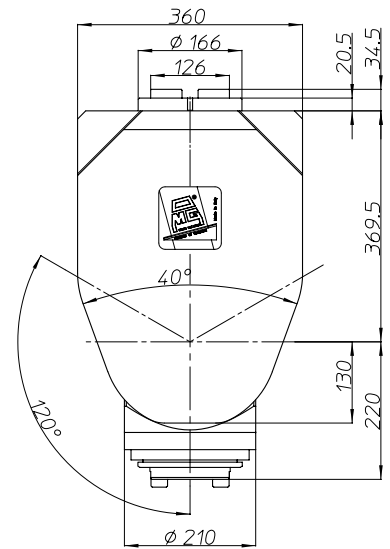
Manual Fork Angle Head

The pictures are the customization of our standard product made for the customers



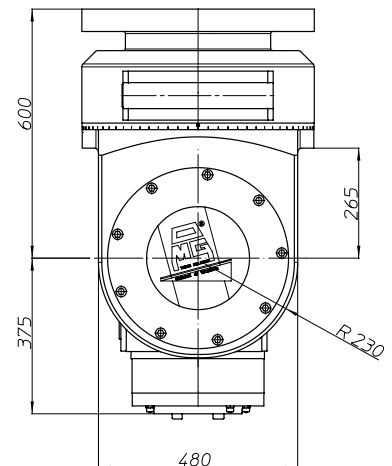
Fork angle head BAH18713

- Power up to 50 kW
- Torque 1.500 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- MTC
- Option: BT50, DIN69893-HSK100
- A axis: $\pm 120^\circ$.
- A axis rotation: manually
- Clamping axis by hirth coupling.
- Coolant through the tool centre and by nozzle
- Weight Kg 480



Fork angle head TAV28610

- Power up to 100 kW
- Torque 4.900 Nm
- Ratio I-O: 1-1
- Max RPM 2.000
- Standard Output: DIN69871-A50
- ATC: Automatic tool change
- Option: BT50, DIN69893-HSK100
- A axis: $- 2^\circ + 92^\circ$. C axis: 360°
- A and C axis rotation: manually by worm gear
- Clamping axis by brake.
- Coolant through the tool centre and by nozzle
- Weight Kg 1.700



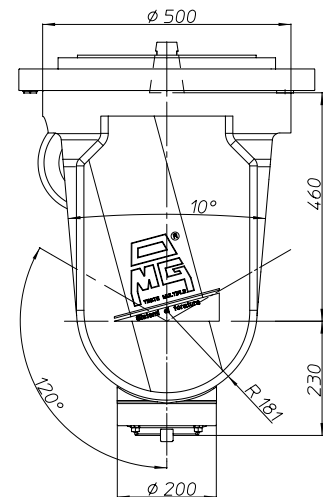
Automatic Fork Angle Head

The pictures are the customization of our standard product made for the customers



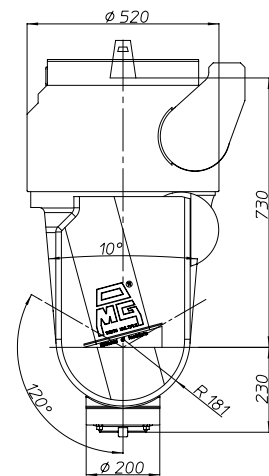
Fork angle head BAH10813

- Power up to 50 kW
- Torque 1.200 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- A axis by motor
- Clamping axis by hirth coupling.
- Coolant through the tool centre and by nozzle
- Weight Kg 710



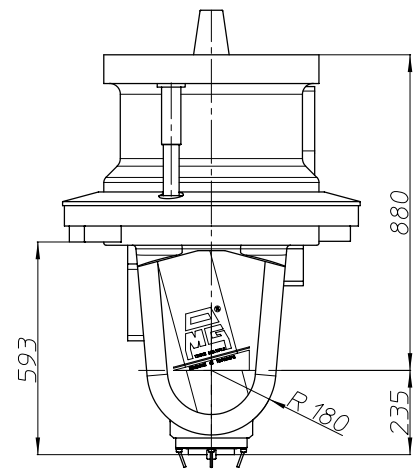
Fork angle head BAH24113

- Power up to 50 kW
- Torque 1.200 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- A axis: $\pm 120^\circ$. C axis: $\pm 185^\circ$
- A axis by motor, C axis by worm gear and axis motor
- Coolant through the tool centre and by nozzle
- Weight Kg 1.050



Fork angle head TAV19009

- Power up to 60 kW
- Torque 1.800 Nm
- Ratio I-O: 1-1
- Max RPM 2.200
- Standard Output: DIN69871-A50
- ATC: Automatic tool change
- Option: BT50, DIN69893-HSK100
- A axis: $\pm 120^\circ$. C axis: $\pm 185^\circ$
- A and C axis rotation: by worm gear and axis motor.
- Clamping axis by brake.
- Coolant through the tool centre and by nozzle
- Weight Kg 1.700



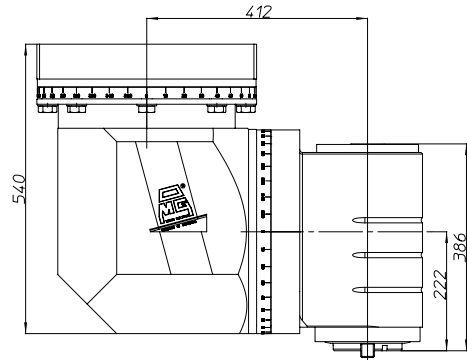
Tilting Angle Head

The pictures are the customization of our standard product made for the customers



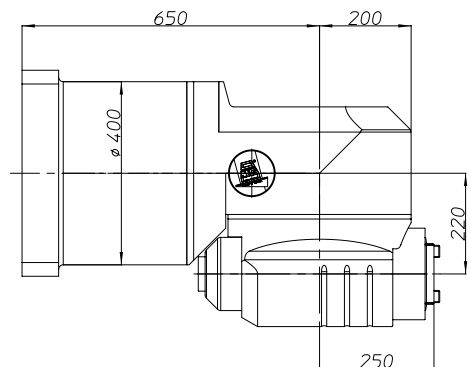
Tilting angle head **BAH.20.TMM**

- Power up to 30 kW
- Torque 950 Nm
- Ratio I-O: 1-1
- Max RPM 3.000
- Standard Output: DIN69871-A50
- MTC: manual tool change
- Option: BT50, DIN69893-HSK100
- Manual rotation of A and C axis, clamping by screws on T slot
- Weight Kg 650



Tilting angle head **BAH.21.TAA**

- Power up to 50 kW
- Torque 1500 Nm
- Ratio I-O: 1-1
- Max RPM 3.000
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Automatic A and C axis rotation: standard step 2,5° (option 1°)
- Coolant through the tool centre and by nozzle
- Weight Kg 800



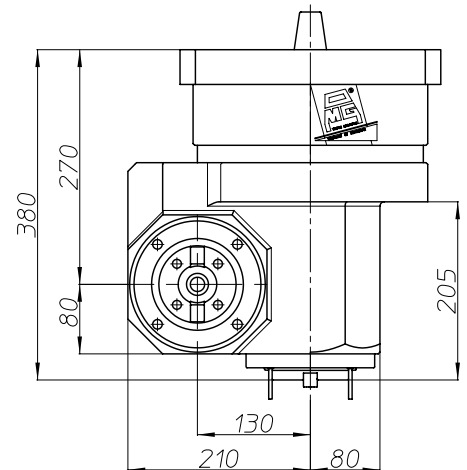
Twin Angle Head

The pictures are the customization of our standard product made for the customers



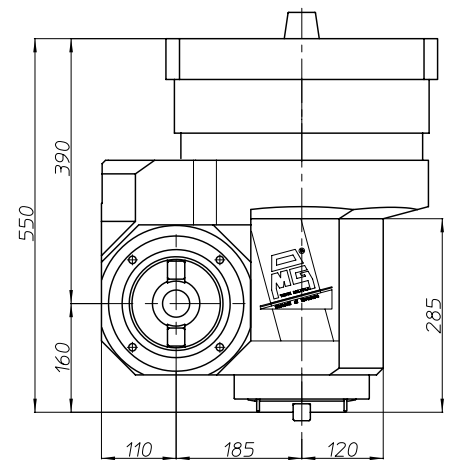
Twin spindle angle head **HV401**

- Power up to 20 kW
- Torque 300 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A40
- ATC: automatic tool change
- Option: BT40, DIN69893-HSK63.
- Coolant through the tool centre
- Weight Kg 180



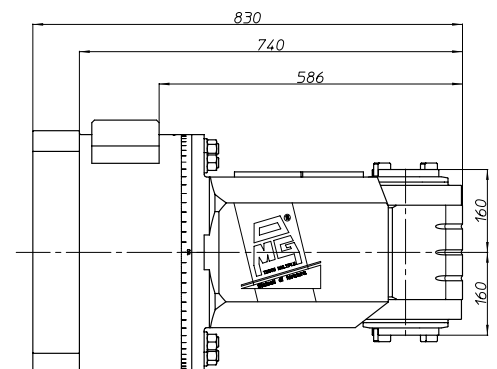
Twin spindle angle head **HW501**

- Power up to 50 kW
- Torque 1.300 Nm
- Ratio I-O: 1-1
- Max RPM 3.000
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Coolant through the tool centre and by nozzle
- All axis with cooling
- Weight Kg 500



Twin spindle angle head **TAS28307**

- Power up to 40 kW
- Torque 900 Nm
- Ratio I-O: 1-1
- Max RPM 2.000
- Standard Output: DIN69871-A50
- MTC: manual tool change
- Option: BT50, DIN69893-HSK100.
- Manual C axis rotation by worm gear
- Weight Kg 560



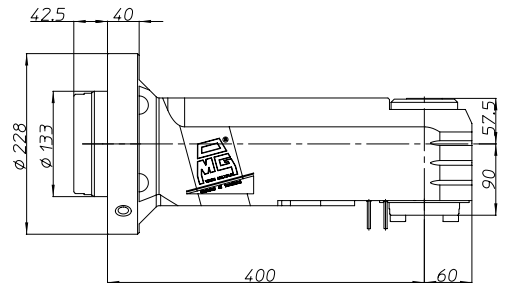
Extended Angle Head

The pictures are the customization of our standard product made for the customers



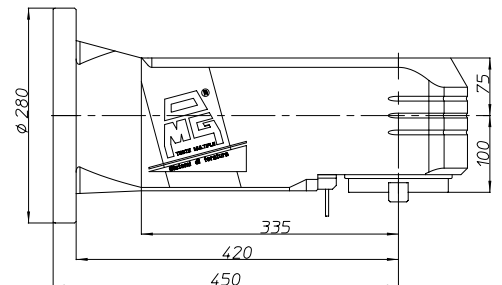
Extended angle head **BAH20913**

- Power up to 25 kW
- Torque 330 Nm
- Ratio I-O: 1-1
- Max RPM 3.000
- Standard Output: DIN69871-A40
- MTC: manual tool change
- Option: BT40, DIN69893-HSK63.
- Standard length: mm 400 - mm 600
- Weight Kg 65 - 80



Extended angle head **TAS06911**

- Power up to 35 kW
- Torque 450 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- MTC: manual tool change
- Option: BT50, DIN69893-HSK100
- Standard length: mm 450 - mm 600
- Weight Kg 100 - 120



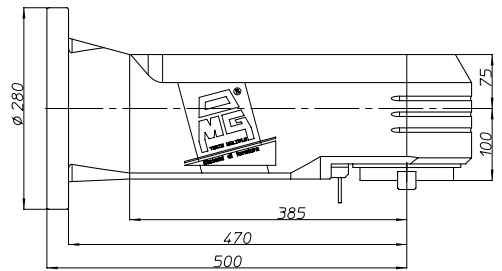
Extended Angle Head

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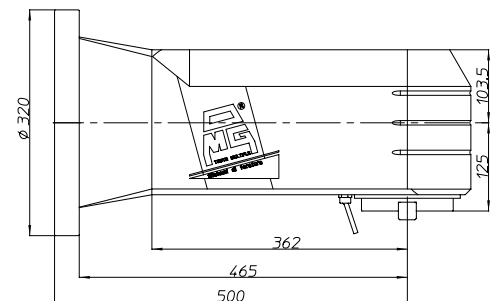
Extended angle head **TAS18708**

- Power up to 35 kW
- Torque 450 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- MTC: manual tool change
- Option: BT50, DIN69893-HSK100
- Standard length: mm 500 - mm 700
- Weight Kg 120 - 140



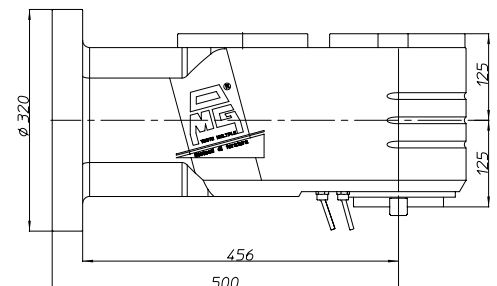
Extended angle head **TAS17312**

- Power up to 40 kW
- Torque 450 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- MTC: manual tool change by pull stud
- Option: BT50, DIN69893-HSK100
- Standard length: mm 500 - mm 700
- Weight Kg 170 - 200



Extended angle head **TAS27610**

- Power up to 50 kW
- Torque 900 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, BIG PLUS.
- Standard length: mm 500 - mm 700
- Weight Kg 150 - 210



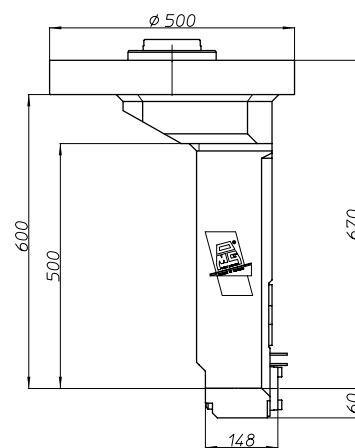
Offset Extended Angle Head

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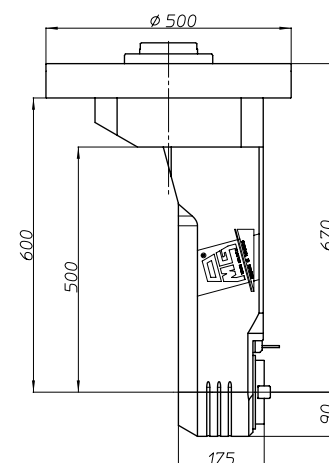
Offset Extended Angle Head TAS10411-40

- Power up to 25 kW
- Torque 330 Nm
- Ratio I-O: 1-1
- Max RPM 3.000
- Standard Output: DIN69871-A40
- MTC: manual tool change
- Option: BT40, DIN69893-HSK63.
- Weight Kg 250



Offset Extended Angle Head TAS10411-50

- Power up to 35 kW
- Torque 700 Nm
- Ratio I-O: 1-1
- Max RPM 2.500
- Standard Output: DIN69871-A50
- MTC: manual tool change
- Option: BT50, DIN69893-HSK100
- Weight Kg 350



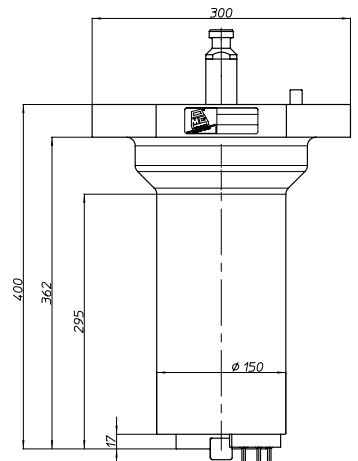
Extension

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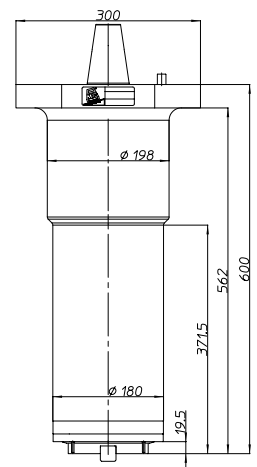
Extension head TFS11807

- Power up to 30 kW
- Torque 800 Nm
- Ratio I-O: 1-1
- Max RPM 3.000
- Standard Output: DIN69871-A50
- ATC: automatic tool changer
- Option: BT50, DIN69893-HSK100.
- Standard Length: mm 400 - mm 600
- Coolant by nozzle
- Weight Kg 150



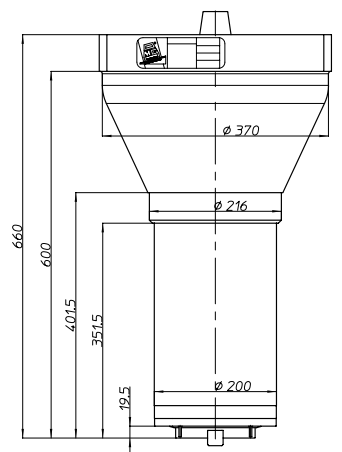
Extension head TFS07308

- Power up to 40 kW
- Torque 1.400 Nm
- Ratio I-O: 1-1
- Max RPM 4.000
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Standard Length: mm 400-mm 600-mm 800
- Coolant through the tool centre and by nozzle
- Weight Kg 175



Extension head TFS33708

- Power up to 50 kW
- Torque 1.800 Nm
- Ratio I-O: 1-1
- Max RPM 6.000
- Standard Output: DIN69871-A50
- ATC: automatic tool change
- Option: BT50, DIN69893-HSK100
- Cooling spindle bearings
- Standard Length: mm 600 - mm 800
- Coolant through the tool centre and by nozzle
- Weight Kg 225



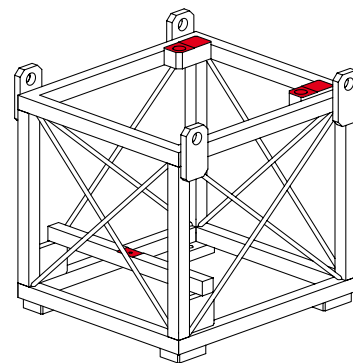
Pickup

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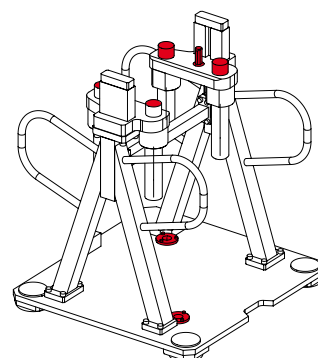
PickUp BASIC

- PickUp basic
- Steel Welding steel frame
- Reference point to positioning the angle head
- To be convenient when moving or store the BAH angle head



PickUp EVOLUTION

- PickUp Evolution
- Welding steel frame
- Reference pin from PickUp to angle head
- Reference pin from PickUp to machine tool
- Shock absorber for angle head
- Clamping system angle head-PickUp
- Moving the PickUp by four wheels
- Can be use to move, store and to take the BAH angle head from the machine spindle nose



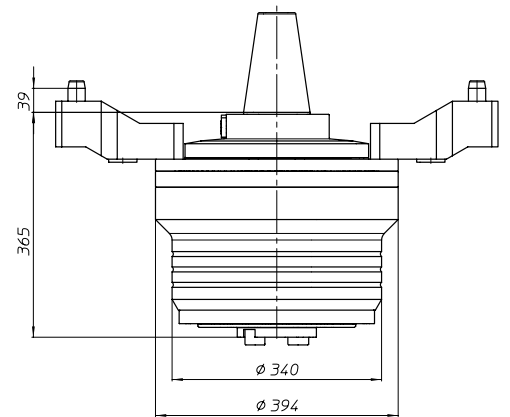
Big Spindle Speeders

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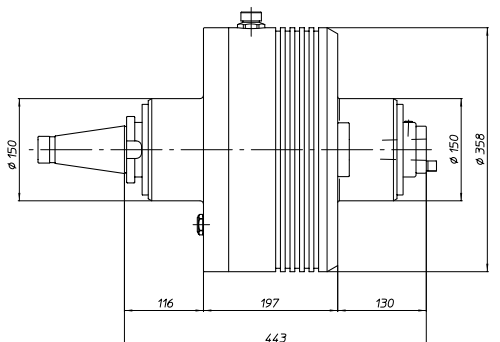
Spindle speeder **MO12110**

- Power up to 50 kW
- Torque 1.150 Nm
- Ratio I-O: 1-4
- Output max RPM 4.500
- Input shank: DIN69871-A60
- Standard Output: DIN69871-A50
- MTC: manual tool change
- Weight Kg 240



Spindle speeder **TFS31908**

- Power up to 30 kW
- Torque 500 Nm
- Ratio I-O: 1-3
- Output max RPM 2.400
- Input shank: DIN2080-A50
- Standard Output: Weldon
- MTC: manual tool change
- Weight Kg 120



Special executions



Our standard products range



Series TA



Series BAH



Series M0



Series VH

Special executions



Our standard products range



Series HT



Series TSI/TSX



Series T



Series MT-TC-TC3



Special executions



Our standard products range



Series TA



Series BAH



Series M0



Series VH

Special executions



Our standard products range



Series HT



Series TSI/TSX



Series T



Series MT-TC-TC3

Special executions

Twin milling angle head.
Angle head length mm 1.750.
Weight kg 840.



1.750

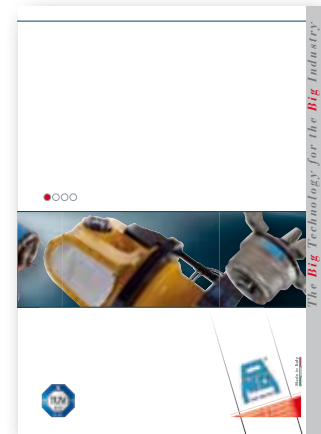


For more technical information, ask for

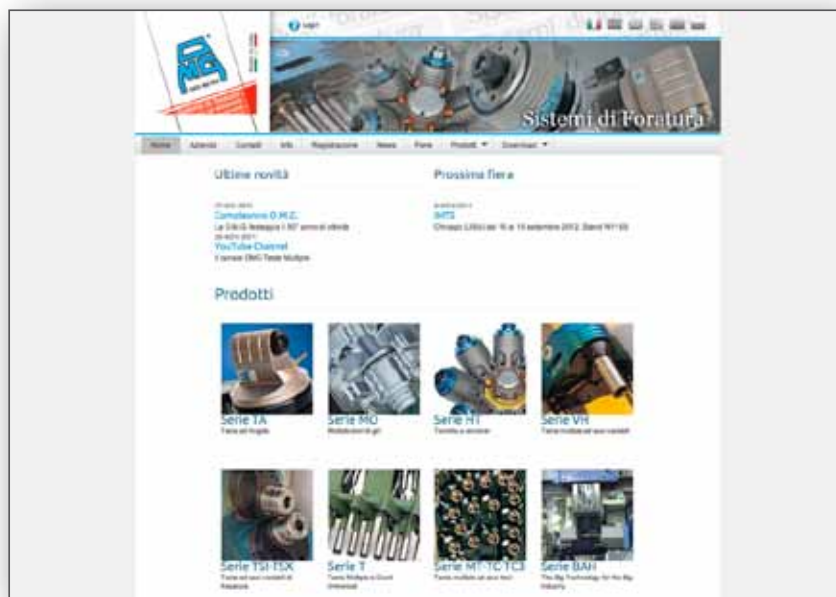


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- Brochure "Big Head for Big Industries"



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- Instruction Manuals





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