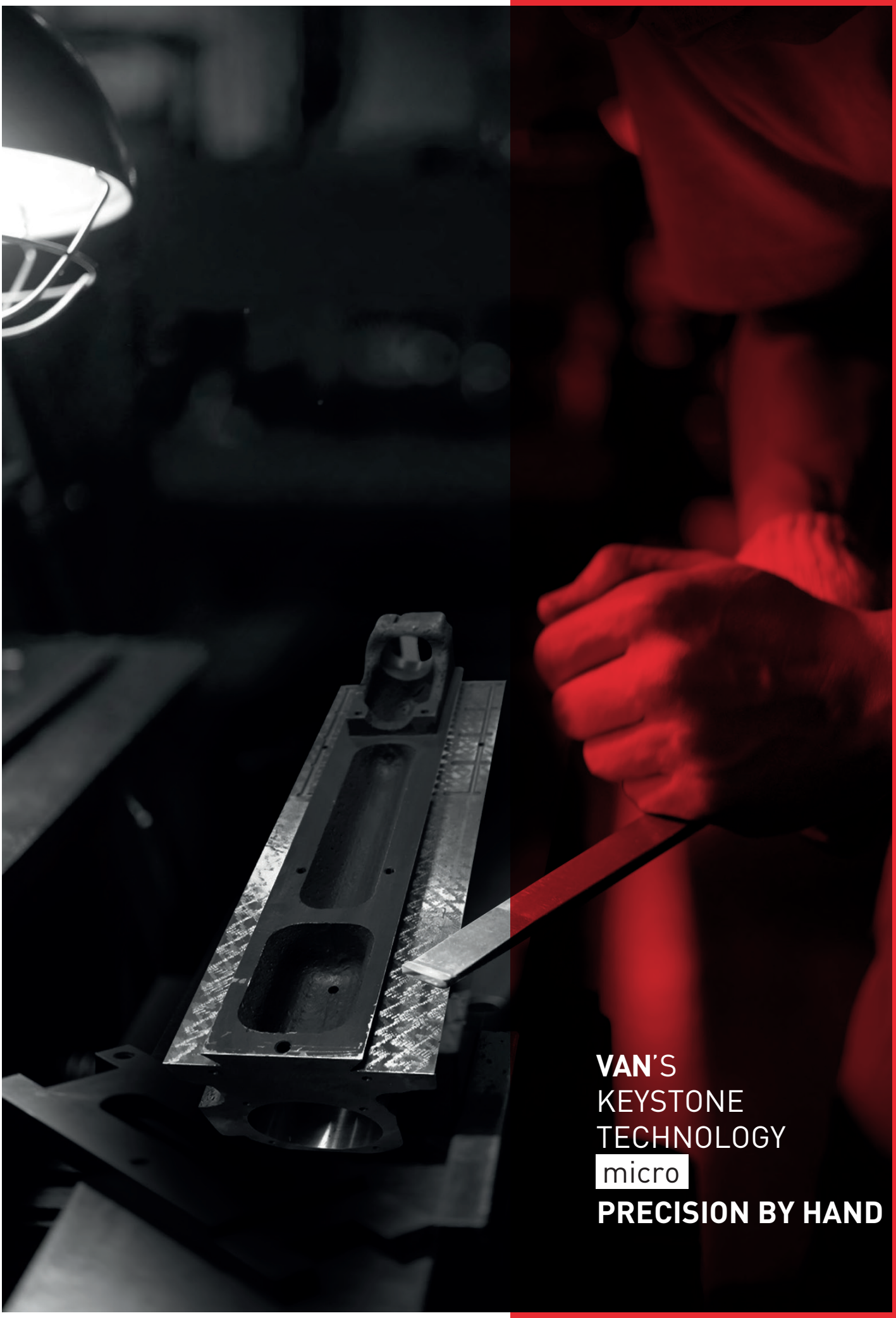
VAN
Precision Engineering



SMART

SMART 12 V7 | SMART 12 V8
SMART 16 V7 | SMART 16 V8
SMART 20 V7 | SMART 20 V8

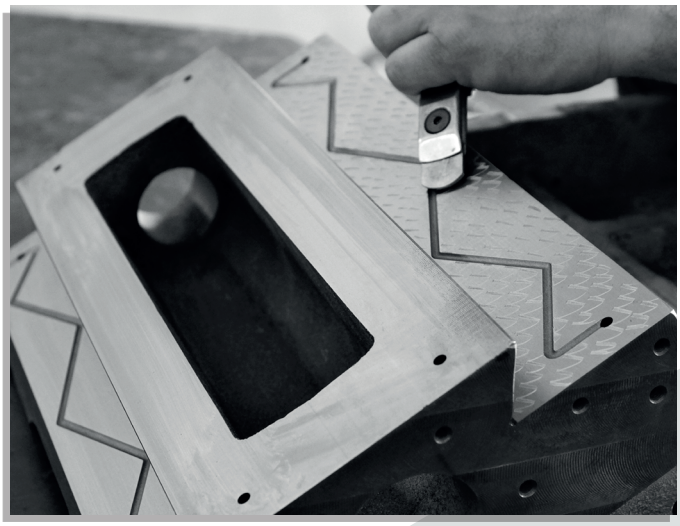
WE ARE
PRODUCING
PROUDLY.



VAN'S
KEYSTONE
TECHNOLOGY
micro
PRECISION BY HAND

Precision that forms the basis of scraped sleds scraping operation and extra added to the machine abilities:

Scraped sleds, An important one that VAN is proud of technology is the field. The extraordinary vibration of these sleds thanks to its damping properties, only hard turning by providing the robust required for their operations, the cutter teams shake us in this feature to minimal values a strong body and high, which is needed by lowering it allows us to obtain precision part surfaces.



In the scraping process, the skid controls the contact areas by applying red or blue paint the scraping press on their surface takes up to 2 micron shavings per minute. Complete a single sled depending on the moving distance of the machine, it can take up to 7 to 8 hours. Dovetail sledges, single in order to create an axis, two contact surfaces are rasped on each side, which makes a total of four it means that the location must be scraped. Here are all the professional technicians in the field they assume responsibility for Scraping surfaces and eliminate any individual differences in order to lift, the required thrust and pull forces are measured by torc meters when scraping heat is performed. it is ensured to be among the desired standard tolerances. So although scraping processes are human although it is made by hand, all products come out within the established standards.



Exceptional Ease of Maintenance

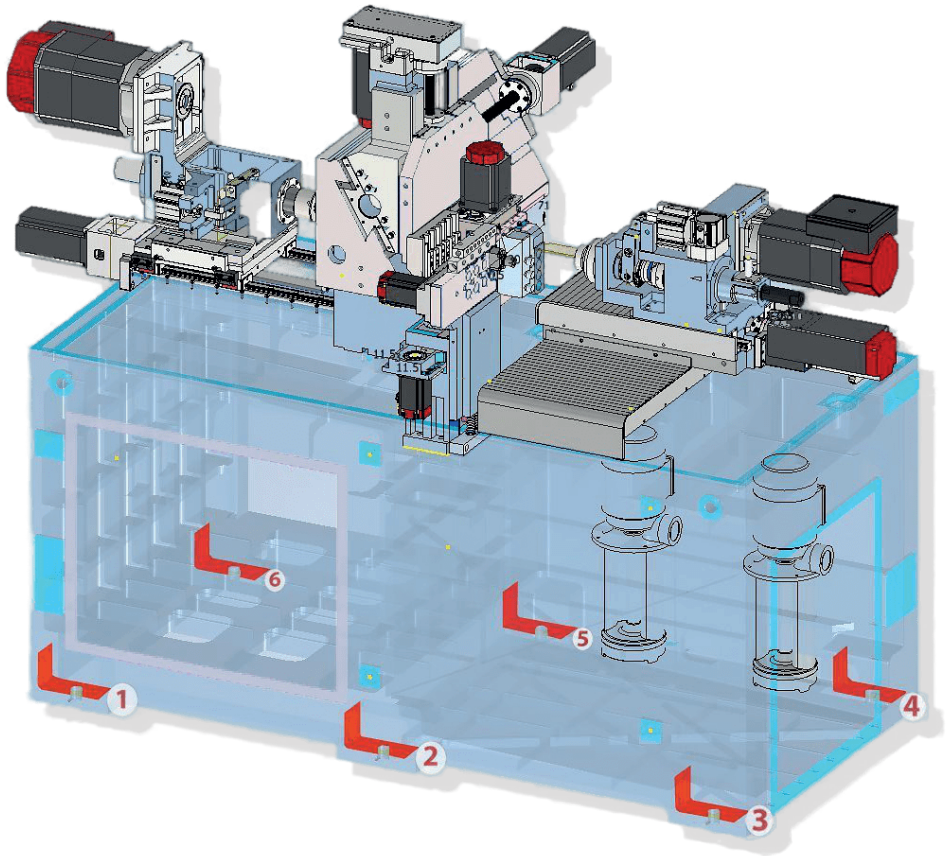
Ease of maintenance, Scraped dovetail sledges its basic feature is. Law and work in linear sleds depending on their distance, they hang up and sled and car the set must be changed. It is also expensive and repaired it's a long operation. Of course, this change the detection stage of the process until the last degradation of surface qualities in time and part cause inconsistency in geometric values on it will be. On the other hand, Aberasyon swallow type 10 by making simple adjustments, even yourself on skids high precision machining for more than years and
you can maintain rigidity levels...

SMART

HIGH RIGIDITY MACHINE STRUCTURE

It has the feature of being a rijit, special design main body that touches the ground from 6 feets and facilitates oil flow.

The main body structure is designed with best-in-class components for providing maximum rigidity and continuous high precision.



PERRFECT DESIGN

BASIC PARTNERS

1 **FANUC (Japan) Ol-MODEL F Plus, 311 / 321-MODEL B** series are used.

2 **THK (Japan) Lineer Skids and LM Gruides** are used.

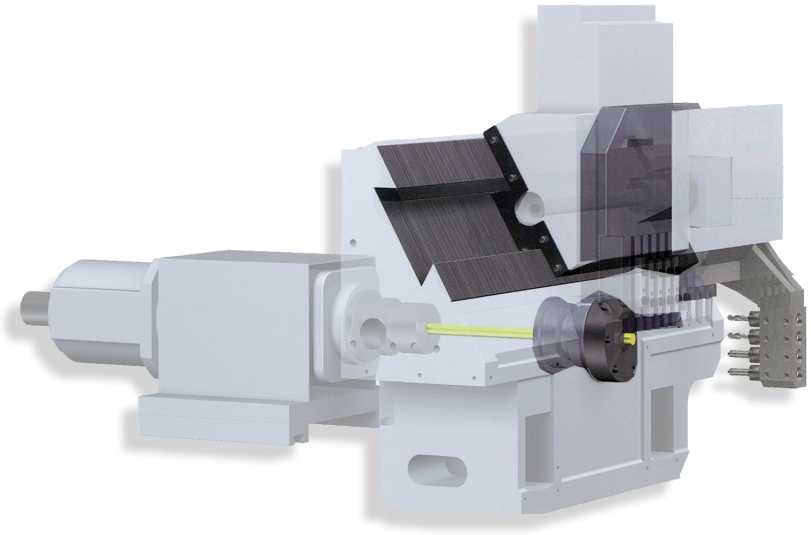
3 **NSK (Japan)** All **Ball Screws** used are precision-engineered and selected as Class C3.

4 **SMC (Japan)** Class of **Phnomatic systems** used It was chosen as the best.

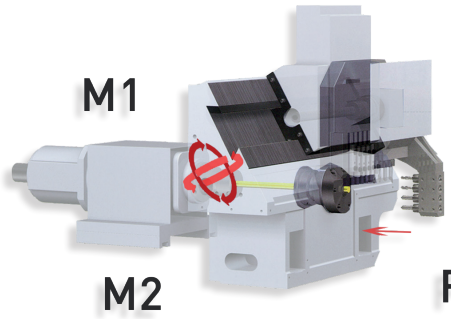
5 **SKF (Japan)** The **Skid Lubrication** systems are optimal for every skid.It is special micro-organisms that provide lubrication precision equipment.

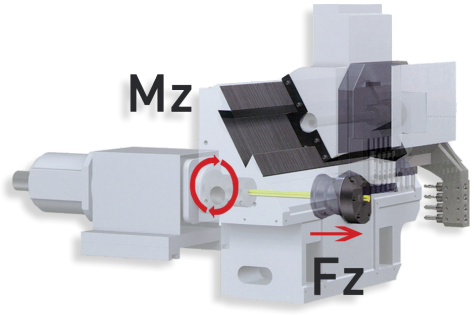
SLANT BED DOVETAIL STRUCTURE

Slant Bed DOVETAIL slide structure is used in the X1 and Y1 Axes of the Carrier that provides Maximum precision and balanced power are achieved by providing minimum vibration , loading with zero clearance and preferred by the world's best machine manufacturers;



10 YEARS
DOVETAIL SLIDE
GUARANTEE





The charge comparison of rotation force caused by cutting force

The moment load applied to the Fy by cutting force is the combined M1 and M2 load is My. The My of the slant type is the smallest when compared to that of the vertical type and horizontal type.

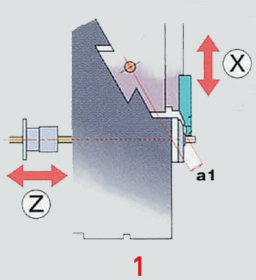
Slant type My;1
Vertical type My;1,3
Horizontal type My;1 ,9

Smart series tool posts use slant-type friction slide structure. In this way, it provides high rigidity to the machine radially at the cutting points of the x and y axes. By positioning the ball screw axes closest to the cutting point, it reduces the moment load on the tool posts in the Y and Z axes and increases the rigidity of the tool posts. Thanks to Smart's original tool structure, tool life and stable accuracy are continuously ensured during the machine working process.

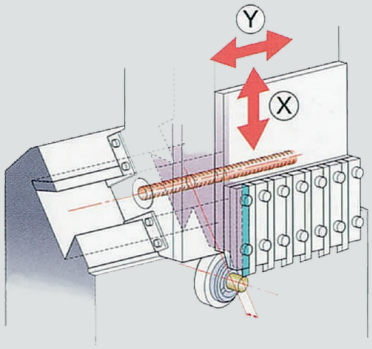
The rotational force comparison caused by push force

As for the feed force Fz, the moment load Mz of the slant type is the smallest when compared to that of the vertical type and horizontal type.

Slant type My;1
Vertical type MY;1,3
Horizontal type My;1 ,5



1



a1

SMART 20
V4

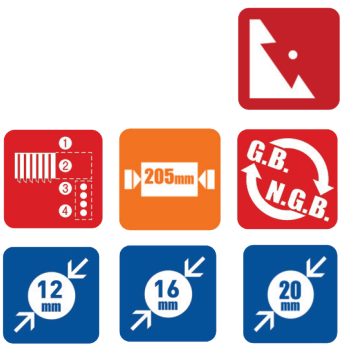


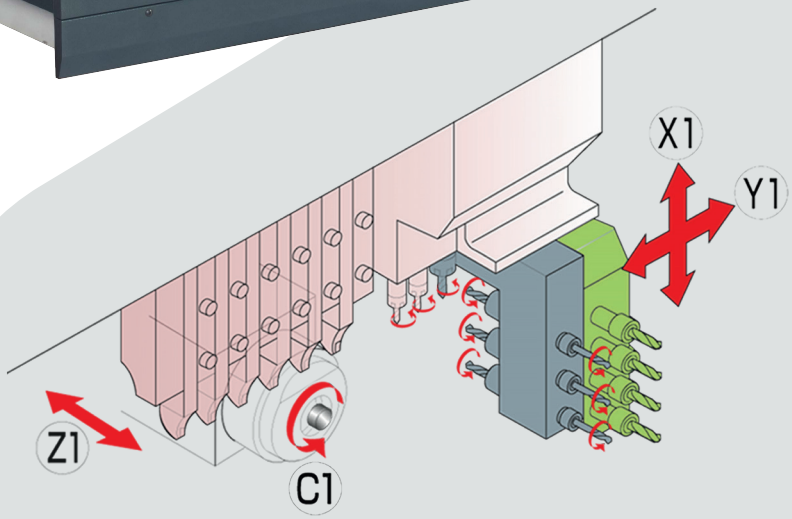


SMART V4 Model

Smart V4 series is a special series which VAN offers you a solution as a manufacturer for your single-sided, simple and serial parts that require a swiss type lathe.

V4 series: Since it is the same as the entire Smart series in terms of the control system and components used, it can also be converted to a V7 or V8 model in the future if you wish.





SMART 20
V7

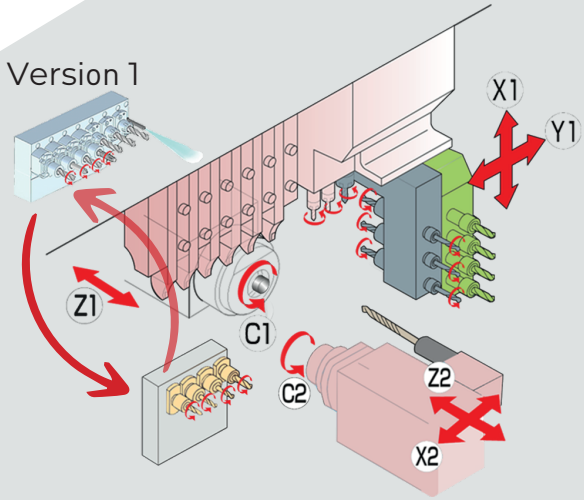


SMART V7 Model

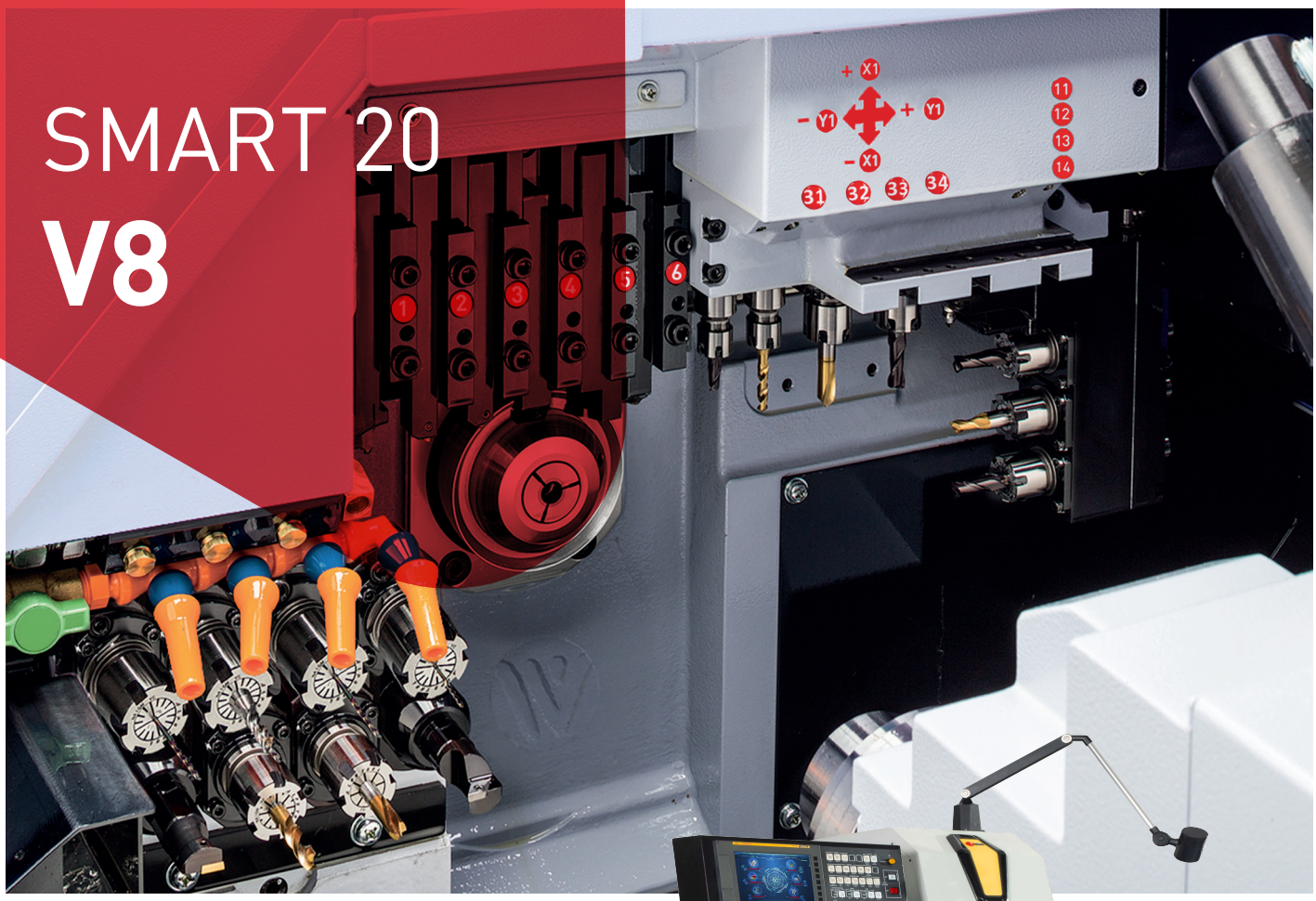
It is a popular model that combines the speed, power, precision and reshaping features of VAN SWISS TYPE LATHE according to the requirements of each sector.

With the variant options of the Smart V7 model, you can expand your production range and have flexible manufacturing conditions.





SMART 20
V8

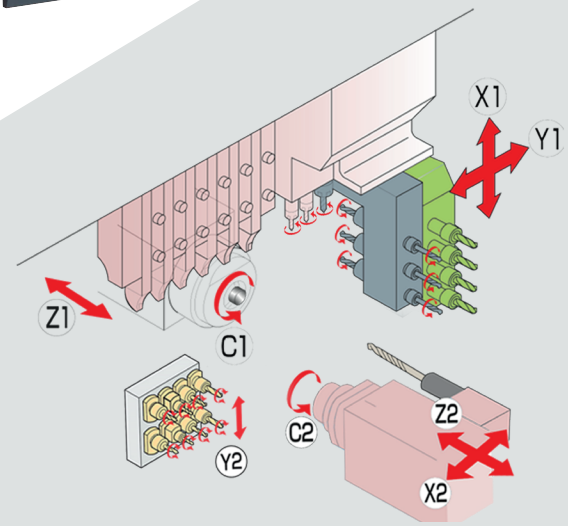


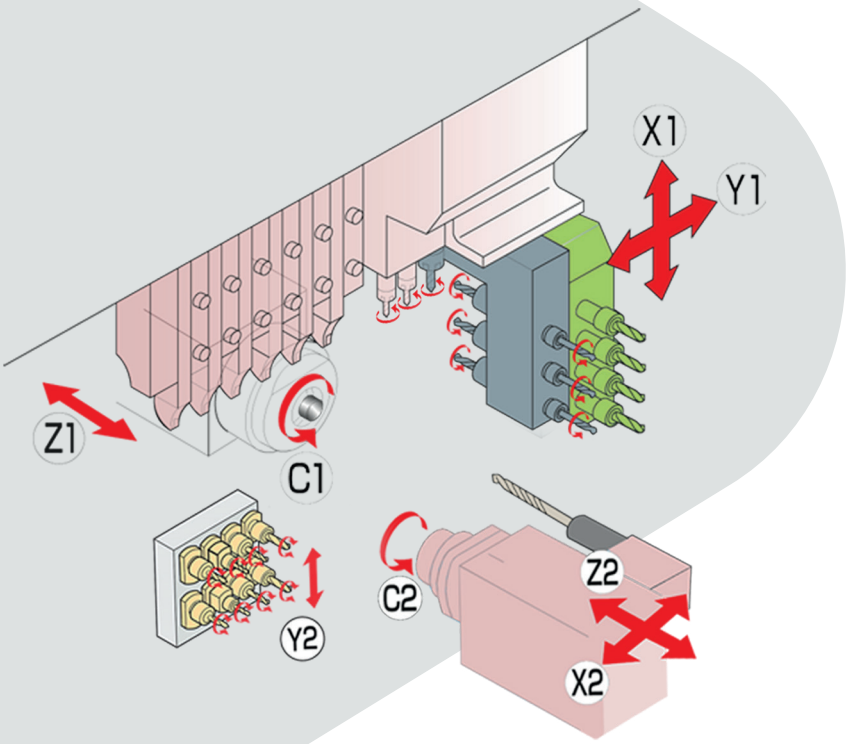


SMART V8 Model

You can reach maximum power and precision through the Dovetail Slide structure system on the Y2 Axis and the 2nd spindle with 2.2kW power. In addition, you can provide maximum machining capability and minimum machining time by using 8 live tools.







SMART 20 **V8**

Smart Series Standart Machine Accessories

- Fanuc 0I-TF PLUS CNC Control Unit
  10.4 Colored LCD Display
- 12 - 16 - 20mm Machining Capacity (23mm opt)
- Synchronised revolving guide bush unit
- Main/Sub spindle C-Axis
- Main/Sub spindle clamping device
- Main and sub collet sleeve F25
- Opposite Spindle Air Blow
- Preparation for the 5 Rotary Tool Station
  (2 pcs. ER11 standart)
- 6-Turning tool holder 12x12mm
- Front-end 4 pcs ER16 Sleeve Holder
- Deep Drilling Station (1pcs)
- Sub spindle clamping control device
- Power Driven Tool
- Back-end 4 pcs ER16 Sleeve Holder
- Air Pressure Adjusting Solenoid Valve
- Broken cut-off tool detector
- Level Showing ve Flow Controlled Cooling Oil Tank
- Automatic Oiling System
- Tool Bag
- Barfeeder Preparation
- Level Adjusting Bolt and Boot
- Standart Machine Electric System 380 Volt, 50 Hz
- USB Memory Cart Input
- CE Norm

Option Features

- HFO Function (Chip Breaking System)
- Long Piece Adaptor
- Parts Conveyor
- Chip Conveyor
- Oil Coolant
- High Pressure Pump 40/70/140 Bar
- Oil Mist Collector (Electrostatic)
- Wired Handweel
- Barfeeder
- 7 Tools Block for Sup
- Additional Driven Tool for Main spindle
- Additional Driven Tool for Sup spindle
- Thread Whirling Tool
- Polygon Unit
- Slotting Unit
- AngularDriven Tool

Oil Coolant Unit



High Pressure Pump





Wired Handweel

VAN
Precision Engineering



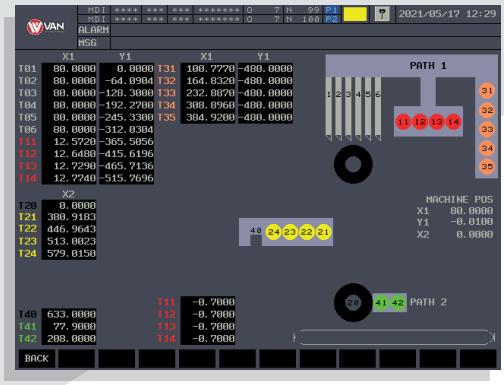
CONTROL **PANEL**

USER-FRIENDLY **COSTUMIZED INTERFACE**

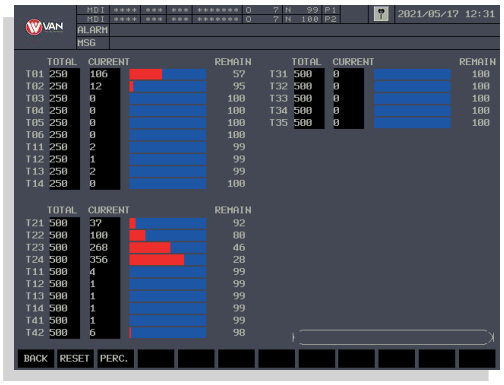


SPECIFICATIONS FEATURED IN THE CONTROL UNIT

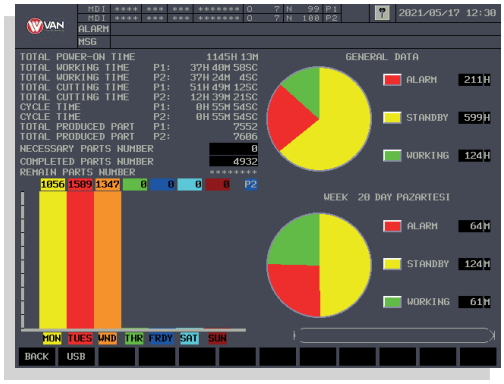
- High Precision Program Command is offered as standard (after a comma in the Program 5 piece command, such as 0.00001).
- 2 GB of program memory, ability to record 1000 programs, program in Memory Card editing feature.
- Ability to throw programs into a Memory Card via USB or ethernet.
- Automatic Cutting Control.
- At the second channel is a program control that will work on the channel. (Channel 1 checks if the correct program is called in channel 2.)
- Polygon Turning feature on both channels.



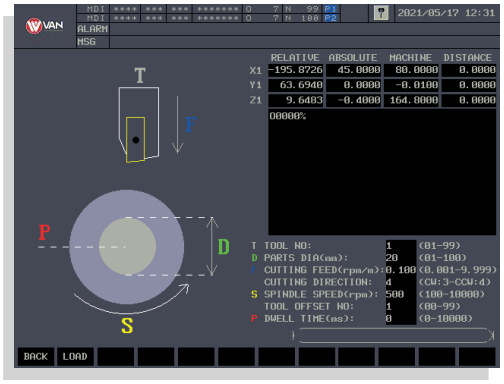
1 - Our kinematics page is the easiest way to machine zeros it allows you to reach it.
2 - No changes can be made with encryption other than "authorized personnel"
3 - This screen for easy access to machine pos values references.
4 - In order to make machine pos values easy to reach, this screen has been added.



1 - In these screen the user could see the life time in this Life Plan section.
2 - Alarm when our machine reaches a certain number sends it.
3- Alarm when our machine reaches a certain number sends it.



1 - In the graphics you have seen, the 1 week operation of the machine is our page that reports the times.
2- You can follow the daily and weekly productivity rates of the machine in this section.
3- You can save or transfer your weekly data to your computer with the help of USB memory.
4- The machine can be stopped by entering the number of parts to be processed.



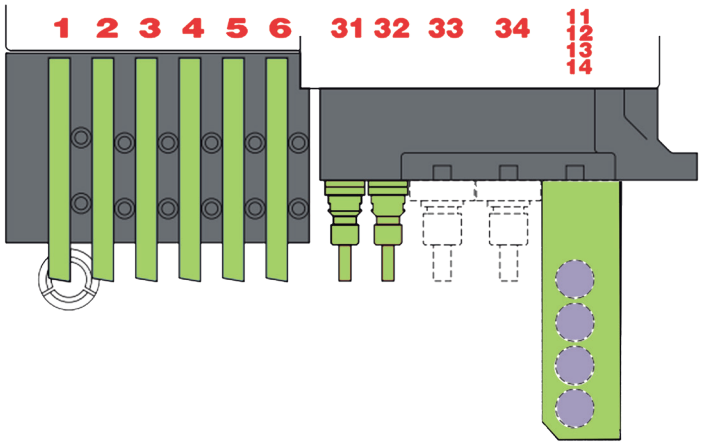
1 - In this tab, you can quickly and easily use the automatic cutting program you can run.
2- The diameter of the piece shown below is the size of the rotation direction and rotation Automatic cutting is done with one key by entering the cycle.



1 - In this tab, the main purpose of the machine is tool wear and made to detect breakage.
2 - Activate the teach me tab on the screen you see. When we bring it, our machine is powered by the servo motor during operation saves the download data it receives in its memory.
3- In each part cycle with M codes after receiving the data The wear and breakage of the tools are controlled.



VARIATIONS

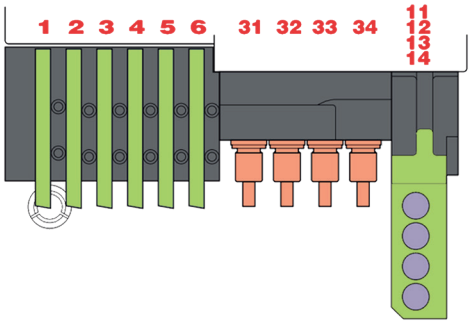


Standard

- 6-Turning tool holder 12x12mm
- 2 pcs ER11 Drilling Tool
- 4 Sleeve Holder Block

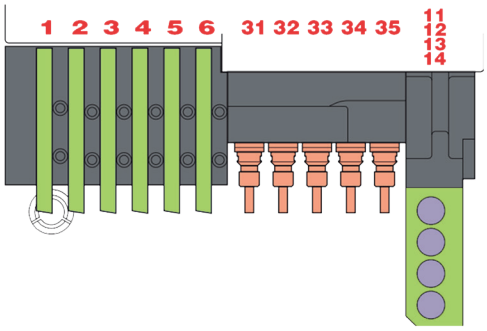
1

4 pcs ER16 Drilling Tool + 4 Sleeve Holder Block



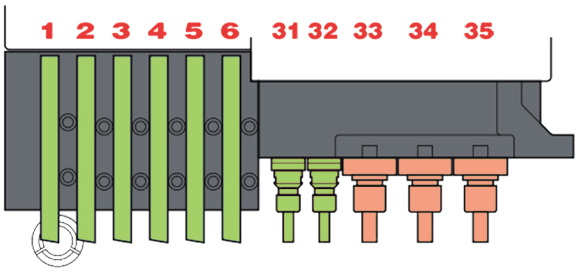
2

5 pcs ER11 Drilling Tool +4 Sleeve Holder Block



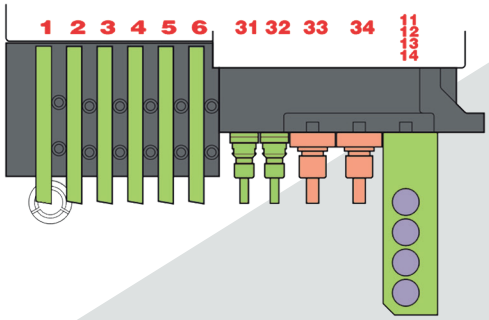
3

2 pcs ER11 Drlling Tool + 3 pcs ER16 Milling Tool



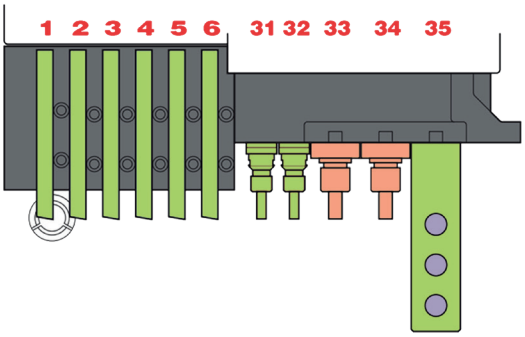
4

2 pcs ER11 Drilling + 2 pcs ER16 Milling Tool + 4 Sleeve Holder Block



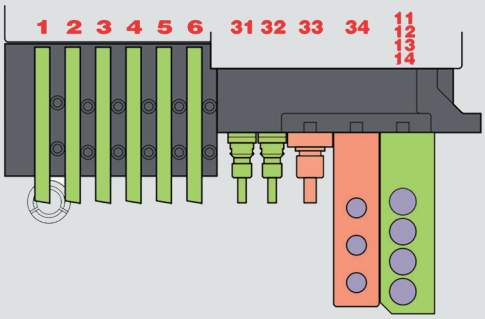
5

2 pcs ER11 Drilling Tool + 2 pcs ER16 Milling Tool +3 Sleeve Holder Block



6

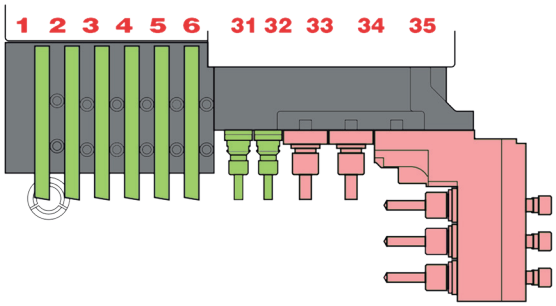
2 pcs ER11 Drilling Tool + 1 pcs ER16 Milling Tool+ 3-4 Sleeve Holder Block



VARIATIONS

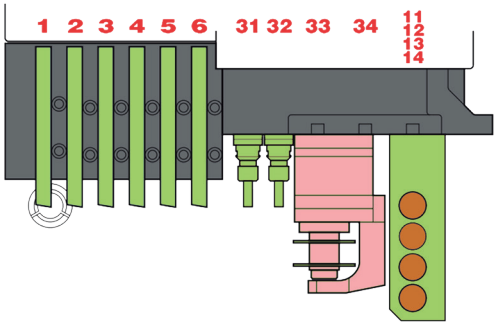
2 pcs ER11 Drilling Tool+2 pcs ER16 Milling Tool+3 Radial Tool

7



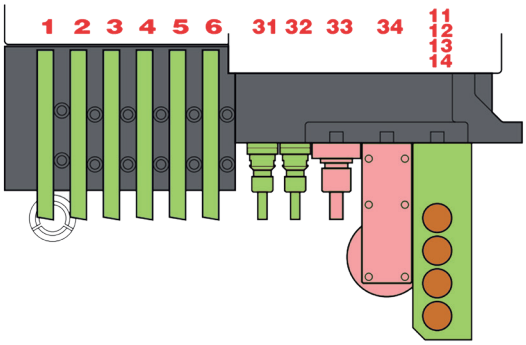
2 pcs ER11 Drilling Tools+Slotting Unit+4 Sleeve Holder Block

8



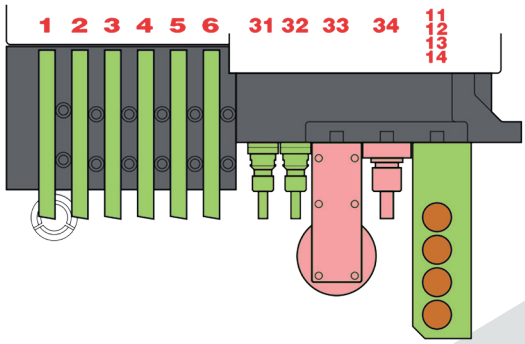
2 pcs ER11 Drilling Tool+1 pcs ER16 MillingTool +Polygon Unit+4 Sleeve Holder Block

9



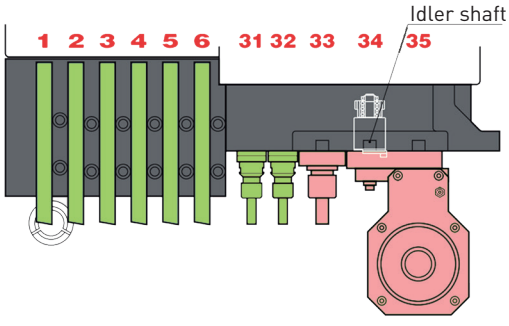
2 pcs ER11 Drilling Tool+1 pcs Polygon Unit+1 pcs ER16 Milling Tool +4 Sleeve Holder Block

10



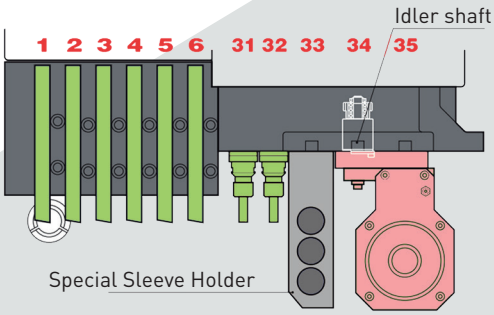
2 pcs ER11 Drilling Tool +1 pcs ER16 Milling Tool+Whirling Unit

11



2 pcs ER11 Drilling Tool+ 3'lü Sleeve Holder+Whirling Unit

12



VAN
Precision Engineering

SMART SERIES
TECHNICAL SPECIFICATIONS

MAIN SPINDLE SPECIFICATIONS:		SMART 12 V4/V7/V8	SMART 16 V4/V7/V8	SMART 20 V4/V7/V8
Max. Turning Diameter		Ø12	Ø16	Ø20mm(230ps)
Max. Turning Length	Guide Bush	205mm		
	Non-Guide Bush	Material Diameter x 3 (Max.55mm)		
Main Spindle Speed		15.000 rpm	10.000 rpm	
Main Spindle Motor		3.7 kW		
Rapid Feed Rate		35.000 rpm		

SLEEVE HOLDERS		
Number of Turning Tools		6 pcs (12x12mm)
Max Drilling Capacity		10mm
Max. Tapping Capacity		M8 P1.25
Deep Hole Drilling Capacity		170mm
POWER DRIVEN TOOL		5 Tools (2 ER11/3 ER16)
Cartridge Type x5 Tool Unit	ER11	2 Tools (Std)
	ER16	2 Tools(opt) + 1 Tools 4+4 Holder Block Std.
Max. Drilling Capacity	ER11	6mm
	ER16	7mm
Max. Tapping Capacity	ER11	M5 Px0.8
	ER16	M6 Px1.0
Driven Tools Speed	ER11	8.000 rpm
	ER16	6.000 rpm
Driven Tool Power		2Nm

2. SUB SPINDLE SPECIFICATIONS	V7/V8	
Sub Spindle Speed	15.000 rpm	10.000 rpm
Sub Spindle Motor	2.2 kW	

SLEEVE HOLDERS		4 tool V7(Block With 7 opt) / 8 tool V8
Max. Drilling Capacity		10mm
Max. Tapping Capacity		M8xP1.25
POWER DRIVEN	Tool Post	4 tools V7/ 8 tool V8 (Block With 7 opt)
Max. Drilling Capacity		6mm
Max. Tapping Capacity		M5xP0.8
Driven Tools Speed		8.000 rpm
Driven Tools Power		1Nm

Coolant Tank Capacity		160 lt
Electric Requirement		13,2 Kva
Machine Size	Lenght x Width x Height	2.070mm x 1 .070mm x 1 .760mm
Machine Weight		2.900 kg

VAN
Precision Engineering

Merkez Ofis /Head Office

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