

AMADA APELIO III 2610 V

Punching laser cutting machine



Year of manufacture	2001
Control	FANUC FS – 16 LCB mit PHNC
Machine number	32610021
Travels	X – 2.500 mm / Y – 1.520 mm / Z – 300 mm
Laser resonator	C 3000 D with 3 kW
Laser beam on	<i>approx. 3.000 h</i>
Cutting time	<i>approx. 23.200 h</i>
Last authorized service	<i>January 2018</i>

TECHNICAL DATA

Machine data

Max. dimension of the sheet	2.500 x 1.525 mm
Max. sheet thickness punching	6,4 mm
Max. sheet thickness laser	9,5 mm
Max. sheet weight, approx.	280 kg
Travels area (X) x (Y)	2.500 x 1.520 mm
Travels laser head (Z)	300 mm
Max. cutting speed (laser cutting)	15 m/min
Max. feed speed	
X-axis	10 m/min
Y-axis	80 m/min
Z-axis	60 m/min
T-axis	35 min ⁻¹ (rpm)
C-axis	60 min ⁻¹ (rpm)
Press power	196 kN
Press stroke	variable up to 50 mm
Turret holder	31 stations
Auto indexing device	2 stations
Air supply	1000 l/min / 250 l/min
Operating air pressure	8,5 bar / 5 bar
Power supply	200V (±10%), 50/60 Hz, 20 kVA, 3 phases
Length, approx.	5.120 mm
Width, approx.	5.089 mm
Height, approx.	2.825 mm
Weight, approx.	18.000 kg

Laser resonator

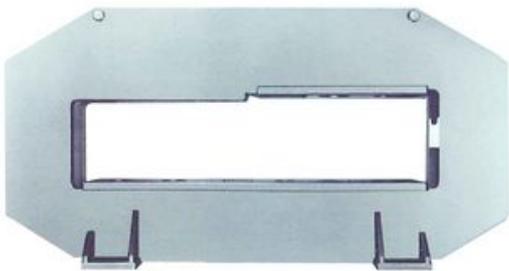
Model	Fanuc C 3000 D
Rated output	3.000 W
Stability	± 2%
Frequency range	5 to 2.000 Hz
Duty range	0 to 100 %
Laser beam	CO ₂ - Laser
Laser beam wavelength	10,6 μm
Laser beam mode	Low-order mode
Laser beam diameter	approx. 27 mm
Laser beam dispersion angle	< 2 mrad
Laser gas mixture ratio	5 ± 0,25 % CO ₂ 40 ± 2,00 % He 55 ± 2,75 % N ₂
Gas pressure	1,7 bar
Gas consumption	10 l/hour
Cooling water	3,5 ± 1 bar / > 120 l/min
Number of reflective mirrors	3
Required power supply	200 V (± 10%), AC 50/60 Hz (± 1 Hz) 44 kVA 3 phases
Dimensions (L x W x H)	2.050 x 750 x 1.055 mm

EQUIPMENT

FANUC Laser C 3000 D with 3 kW
Turret with 31 stations
Auto indexing device – 2 stations
Air Blow System V-EX
Sheet size 2.500 x 1.525 mm
Press power 20 tons
Turbo Blower – replaced in 2015
User guide / Documentation
Machine parameters

The ultimate punch laser machine

The Amada APELIO III 2610 V punch-laser machine is the ultimate sheet metal working machine. Combining the productivity of the world's fastest Turret Punch Press with the flexibility of a Laser, the APELIO punch-laser machine is the ideal machine for both high volume and small batch production. The foundations of the APELIO punch-laser machine are the legendary Bridge Frame construction for ultimate rigidity and Laser Hardened turret as found on more than 25,000 APELIO punching machines installed worldwide. Utilizing the 31 station, Multi-Track turret with a standard tool set up in conjunction with laser processing for special shapes, set up time is Virtually eliminated.



The APELIO punch-laser machine incorporates the unique intelligent hydraulic ram system PHNC. This system ensures that the optimum ram cycle is used for punching, forming, nibbling, slitting and marking. A dual flow hydraulic ram provides hit rates in excess of 1000 HPM while still delivering a full 20 tons punching force for thick material. To enhance the forming capability, the gap between the upper and lower turret is increased to 30 mm.

In addition to the Bridge Frame for reducing vibration, the Apelio III 2610V punch-laser machine incorporates an air cushion system to isolate the laser optics from punching vibration. This system ensures accuracy and eliminates the need for frequent optical alignment. Standard features of the laser area 900 condition cutting database, Clean / Aluminium cut technology and a self calibrating non-contact head for scratch free processing.

High Speed Punching

- Over 1000 HPM and 410 HPM on 25 mm pitch provided by unique intelligent serve-controlled hydraulic ram
- High speed table positioning of up to 128 m/min.

High Quality Forming

- Variable dwell time and position at the bottom of the stroke provides high quality, press brake like forming
- Progressive forms, flanges and embossing eliminate secondary processing

High capacity cutting

- Up to 140 holes/minute on thin materials
- Power option for cutting up to 12 mm steel
- Assist gas Pressure up to 25 kgf/cm²
- Digitally controlled shutter for instantaneous piercing

Powerful Integrated Control

The Apelio series utilizes the latest Fanuc 32 bit system. In addition to the axis control, program management, comprehensive status and diagnostic information, the system also includes Power Hydraulic Numerical Control (PHNC), Amada's unique hydraulic control system and a laser database with 900 proven cutting conditions. The control interface simplifies all operations while a PC compatible floppy drive is included for easy program loading.



With the PHNC system calculating the optimum punching cycle and pressure plus a laser database incorporating years of cutting experience, the Apelio control ensures optimum productivity.

3 Auto Index stations

- Provide maximum flexibility by simplifying tooling inventories and reducing set-up times
- 360° Rotation of 3 tools for the manufacturing of any parts
- Minimum rotation increment of 0.01°.



Tooling

The operation of the Apelio machine utilizes the shortest punch stroke to achieve the highest hit rate. This is complimented by the VIPROS Tool that keeps the punch and guide faces equal (A) to give maximum productivity, which remains unaffected even by regrinding:

- Ultimate hit rate performance
- Easy height adjustment
- Low cost upgrade
- Compatible with existing tools

AUTO INDEX SYSTEM

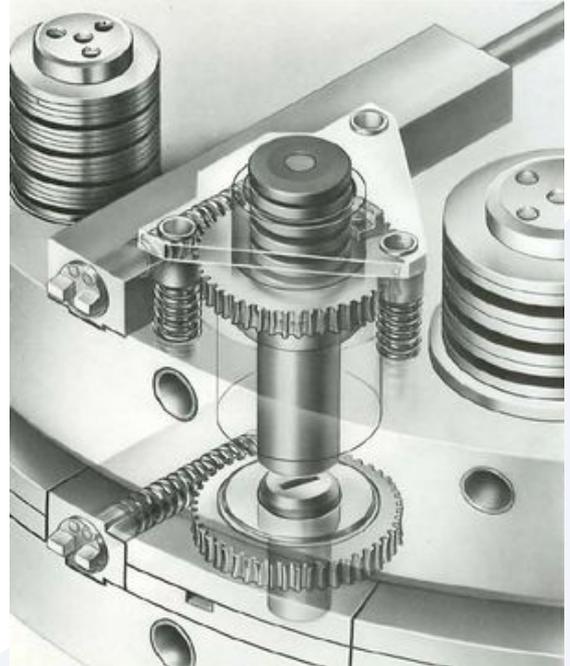
The auto-index feature enables a punch and die set to be rotated through 360° under NC control during punch press operation, enabling a large variety of complex shaped products to be made with a minimum number of punches.

Rotating a punch set so that it can be used at many angular settings has the same effect as greatly increasing the number of available punches.

Two auto-index stations per turret greatly increase the versatility of the turret punch press.

The auto-index punch and die are each mounted in worm gears turned by a DC motor.

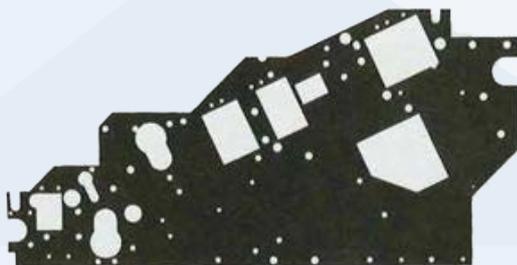
One DC motor turns both the punch and die simultaneously, assuring perfect alignment and minimum wear.



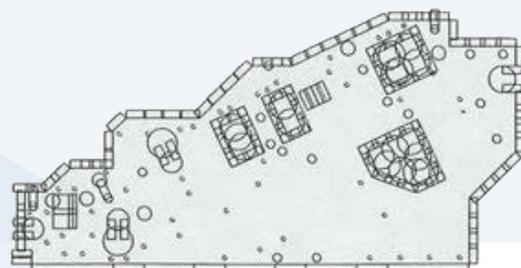
Some AUTO-INDEX punching examples

Example 1)

All angular holes are cut out by one auto-index punch / Workpiece size: 85 x 371 mm



Sheet metal



Punching technology

Example 2)

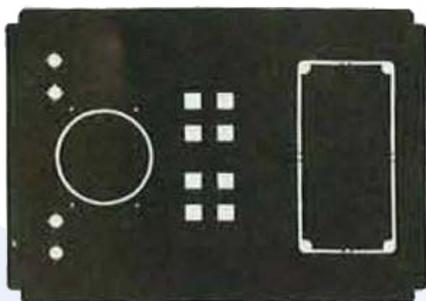
A greater variety of products may be made by using a combination of auto-index punch shapes.



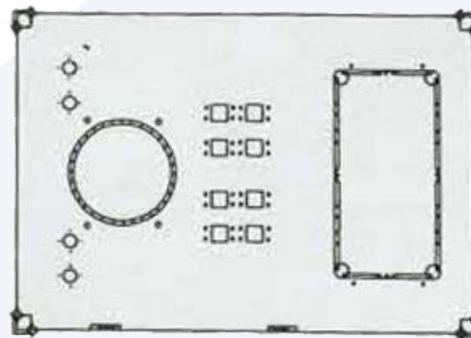
Sheet metal

Example 3)

Micro-joints can be programmed to remain even after circular punching. Therefore, it is possible to produce a large number of circular pieces automatically without stopping to remove each one individually.



Sheet metal



Punching technology

Example 4)

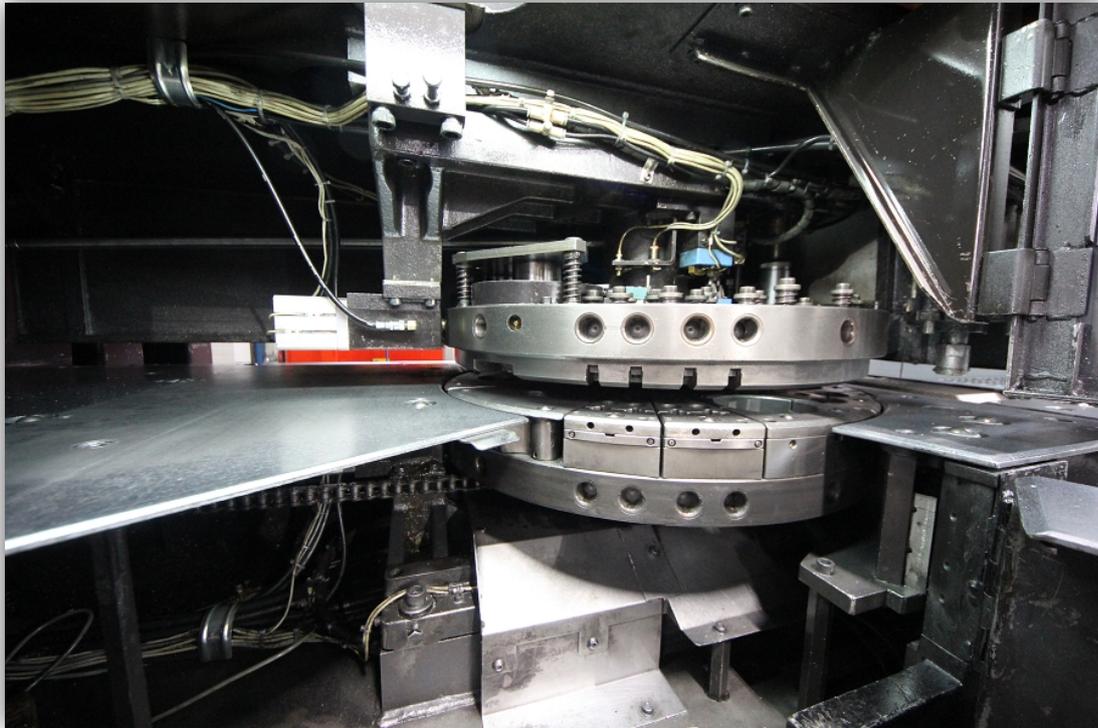
The auto-index feature makes it possible to cut complex forms from a single worksheet, considerably reducing the labor of subsequent operations.

Example 5)

Auto-index means a considerable cost saving over the standard nibbling process. Auto-index can also produce shapes that nibbling cannot.

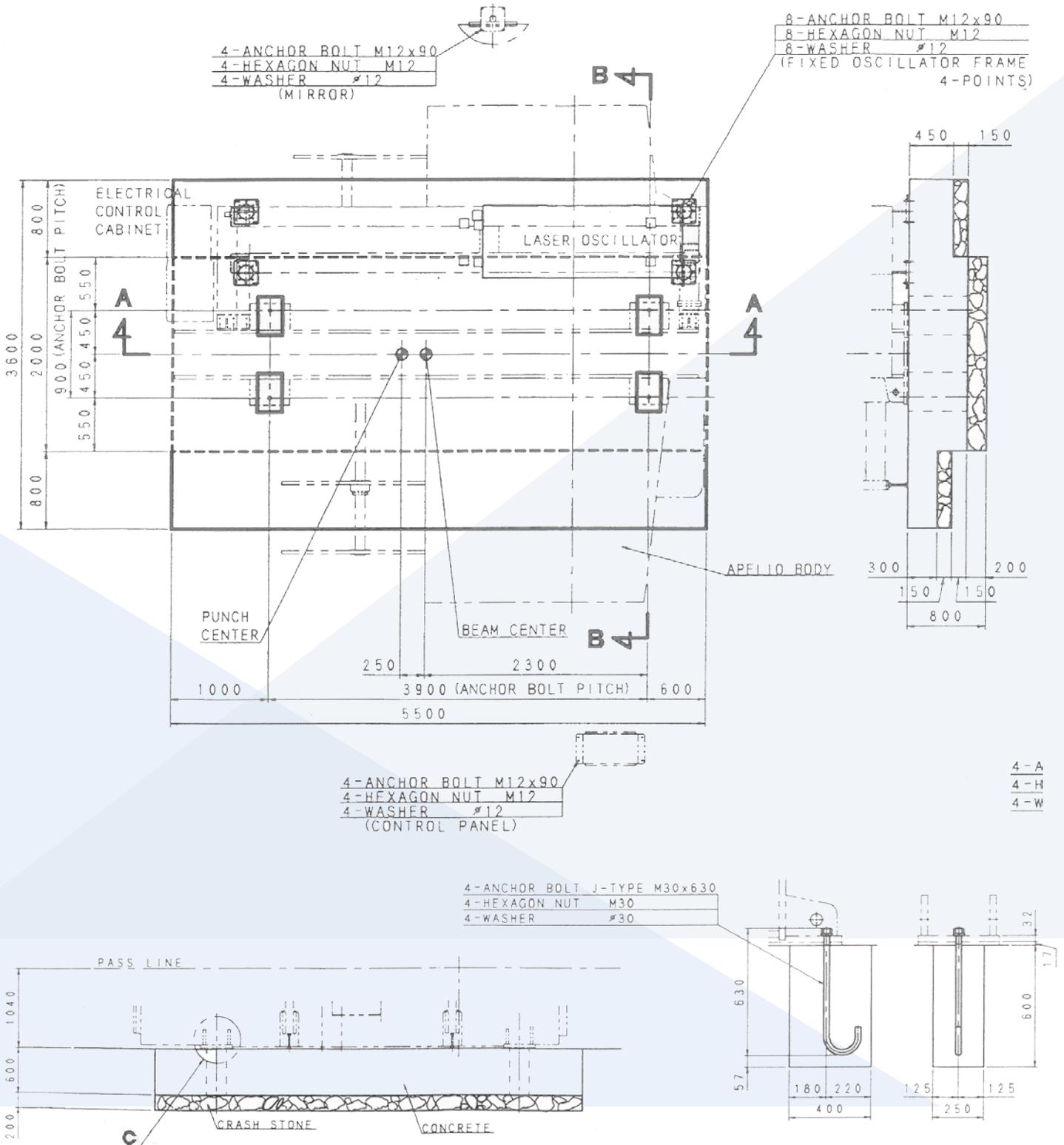
MACHINE PICTURES



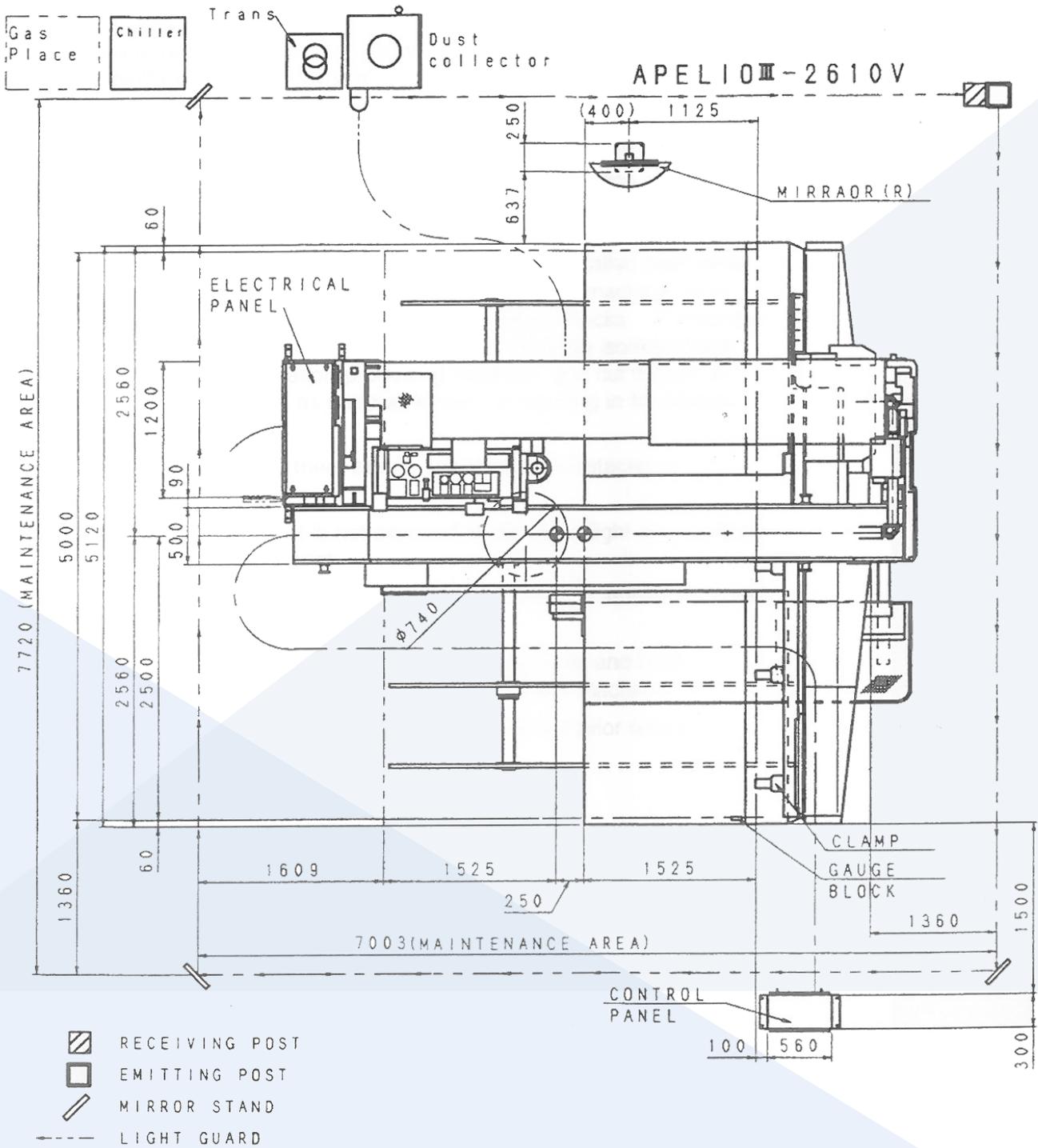


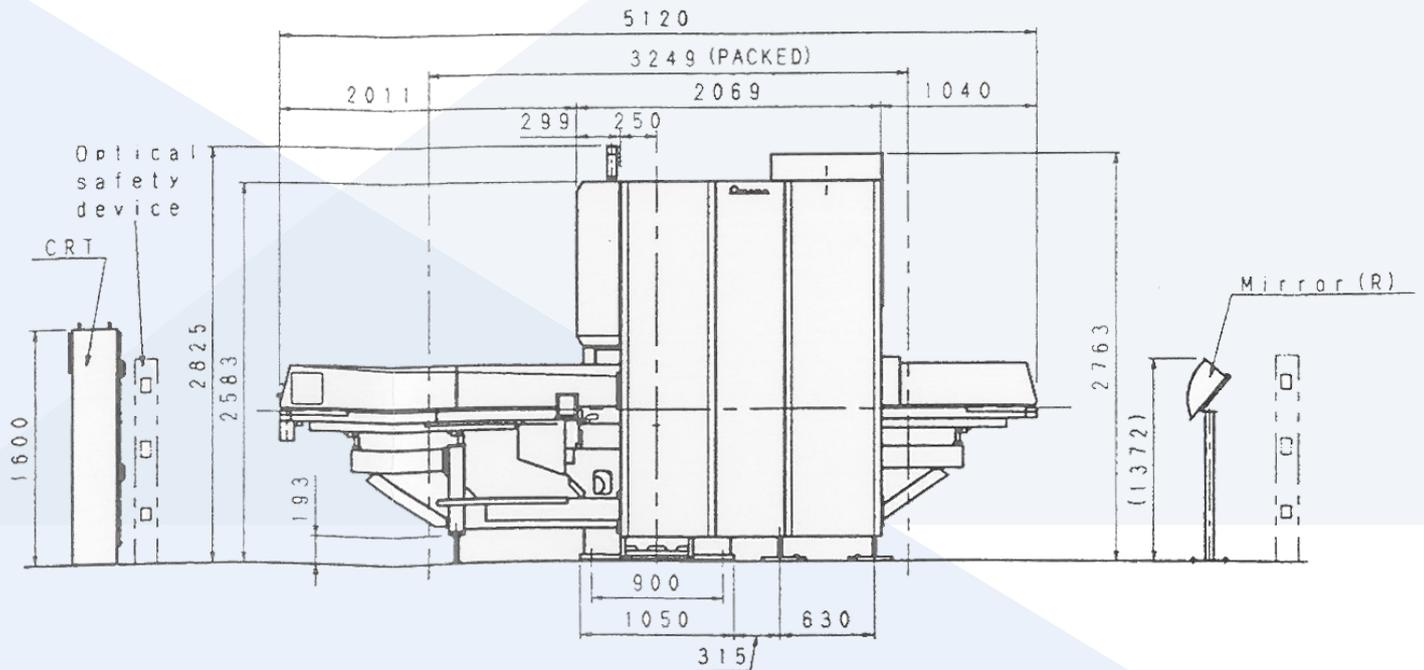
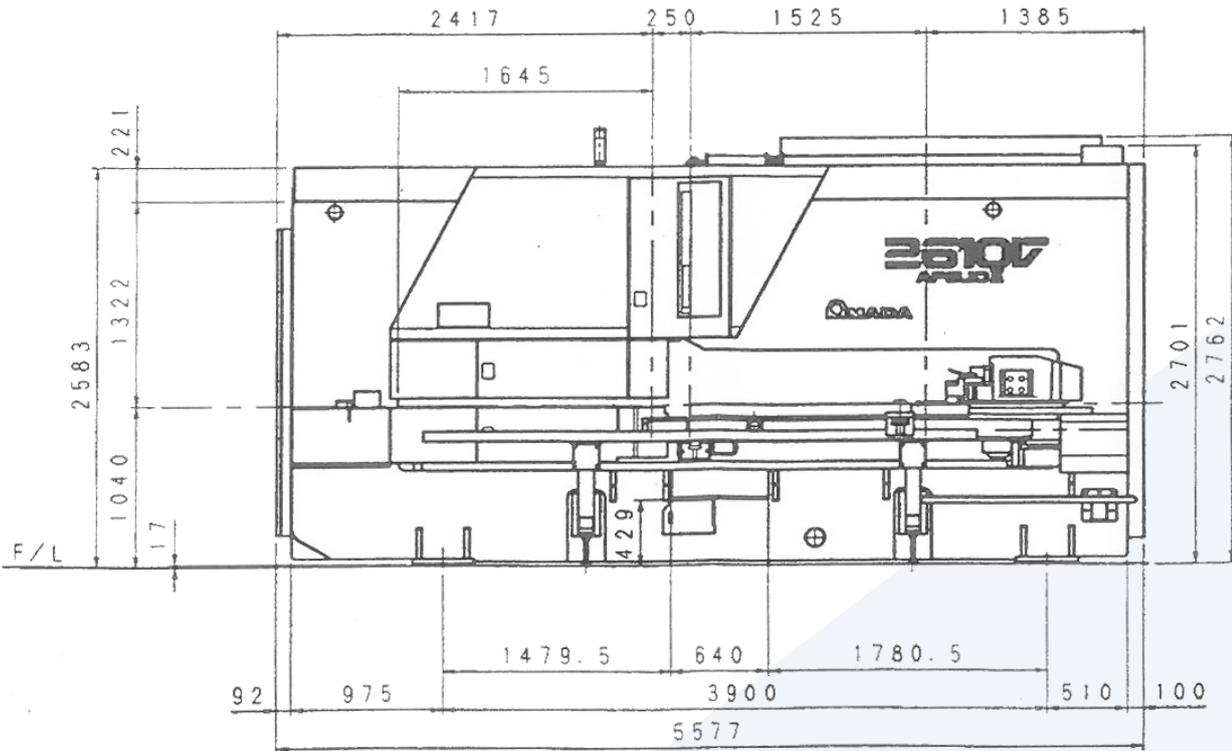


FOUNDATION PLAN

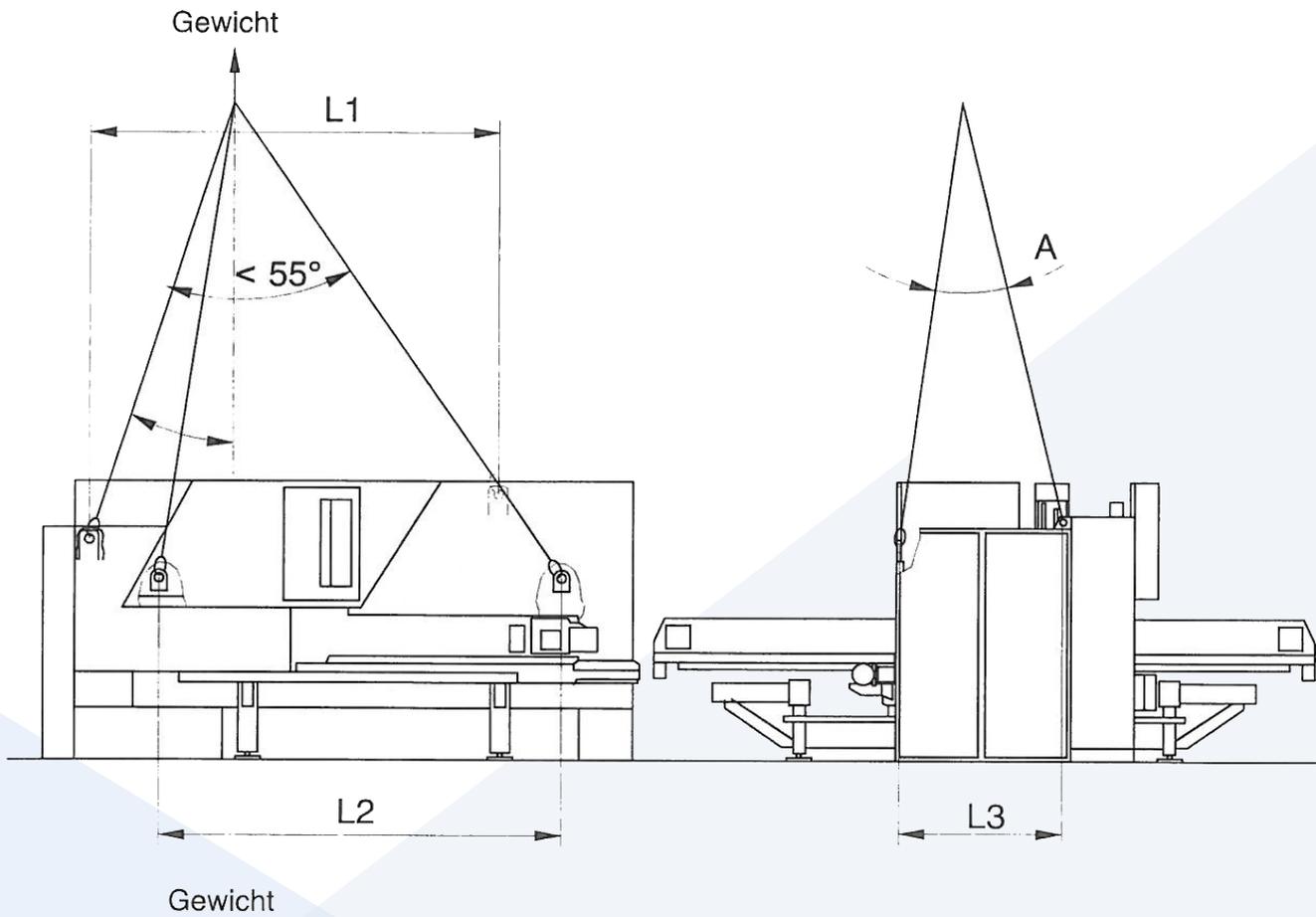


FLOOR PLAN





TRANSPORT DATA



Modell	APELIO III – 2610 V
Gewicht	18900 kg (C 3000D)
L1	3240 mm
L2	3145 mm
L3	355mm
A	4,7°

Thank you very much for your interest



We do not guarantee the accuracy and completeness of these documents. We further do not assure any characteristics and qualities. The named machine, which is up for sale, is used.