

G and HD
shot blasting system



FICEP

S.p.A.

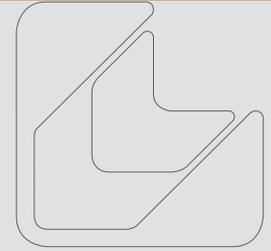
by wheelabrator
shaping industry



G

shot blasting system





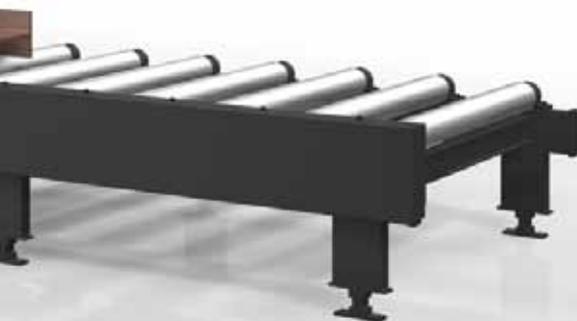
Characteristics for G

- 1 Light barrier
- 2 Shot blast wheel
- 3 Abrasive control unit
- 4 Abrasive silo
- 5 Abrasive reclaimer
- 6 Impact separator
- 7 Bucket elevator
- 8 Fan for Air-Shoc Filter
- 9 Pre-separator
- 10 Safety filter
- 11 Dust bag
- 12 Abrasive removal unit



Roller conveyors are predominantly used to clean metal plates and profiles in a continuous through feed process. Ficep offers a variety of roller conveyors for different uses and work speeds. The G range is mainly designed for the treatment of metal plates or profiles in the steel construction or steel preparation industries. The machines can be delivered as standalone units or integrated into an automatic transportation or sawing / drilling line.

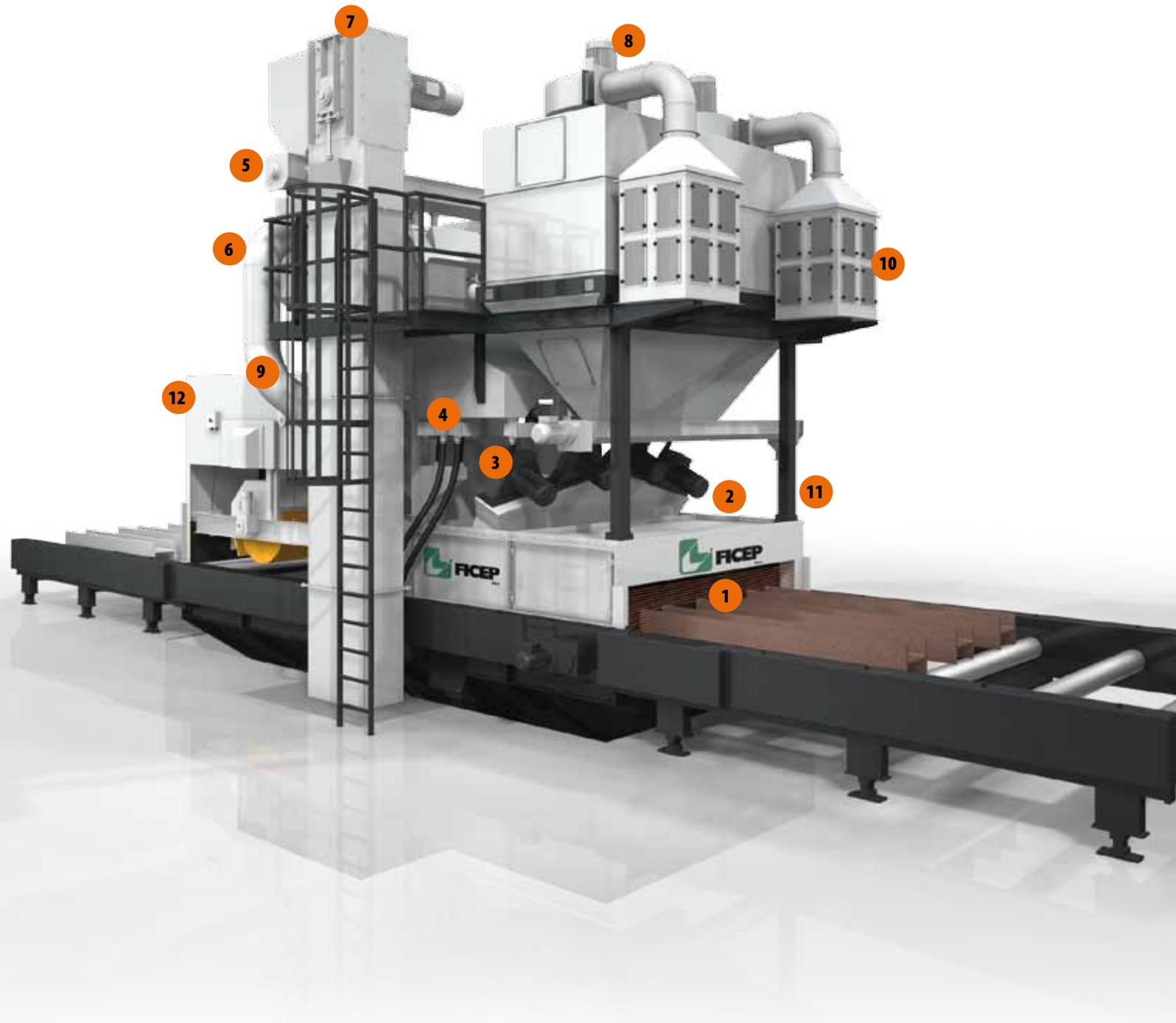
The G range is offered with through feed widths from 600mm to 3000mm. The blasting wheels are positioned perpendicularly to the flow direction of the roller conveyor. RB 1500 is fitted with 4 shot blast wheels. The RB 2000 can be fitted with either 4 or 6 wheels. The bigger machines, RB 2500 and RB 3000, can be fitted with either 6 or 8 shot blast wheels. The 6 wheel version is used for treating plates or smaller profiles, whereas the 8 wheel version is mainly recommended for blasting profiles.

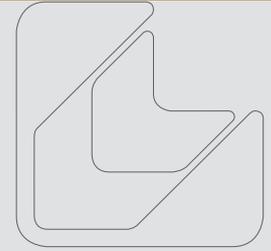




HD

shot blasting system





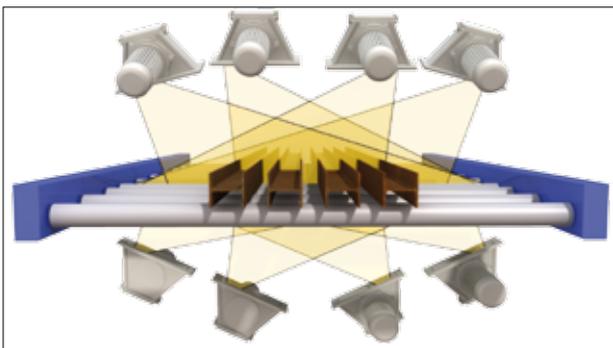
Characteristics for HD

- 1 Light barrier
- 2 Turbine wheel
- 3 Abrasive control unit
- 4 Abrasive silo
- 5 Abrasive reclaimer
- 6 Impact separator
- 7 Bucket elevator
- 8 Fan for Air-Shoc Filter
- 9 Pre-separator
- 10 Safety filter
- 11 Dust bag
- 12 Abrasive removal unit

The HD range demonstrates the highest performance variants of this machine type for blasting sheet metal and profiles. The main difference of this machine to others offered in the marketplace is the angled arrangement of the shot blast wheels on the top of the machine. This arrangement reduces the build up of abrasive on the sections of longer profiles. By using this method a significantly larger percentage of the blasting energy is used on the main task, i.e. de-rusting and scale removal from sheet metal and profiles, and avoids creating mass piles of abrasive.

In practise, the HD roller conveyor machine with angled wheels blasts between 5 and 20% quicker than a roller conveyor with shot blast wheels that are installed straight. HD roller conveyors are used where high through feed speeds and longer maintenance intervals are necessary. With these features, this machine is particularly useful for integration into fully automatic production lines. The HD roller conveyor range can be delivered with widths from 1,500 – 3,000 mm. All of the machines in this range are suitable for shot blasting sheet metal as well as profiles.

HD roller conveyors are principally fitted with the latest version of the TITAN shot blast wheel. There are of course many options available for these roller conveyors, such as automatic blast wheel shut off for products that do not cover the full width of the machine, blasting pattern adjustment of the external blast wheels or automatic separation of drilling and sawing chips.





G and HD FEATURES

Shot Blast Wheel



Type 5.x blast wheels are fitted as standard on the Type G range. These wheels offer excellent blasting performance and unbeatable service life due to the main blast components being made of hardened tool steel. ETA wheel is fitted, for the treatment of special plates where a high grade of technical blasting is required, or as an option the TITAN wheel can be fitted.



The HD range is fitted with TITAN shot blast wheels as standard. The TITAN wheel offers excellent blasting performance and unbeatable service life for the main blast components, which are made from hardened tool steel. In addition to this, the TITAN offers even more wall strength through its wear lining, which creates an airtight and completely insulated housing as well as easing maintenance and repairs.

Shot Blast Cabinet



The shot blasting cabinet is manufactured completely from manganese. Manganese has a property which is hard enough to deal with the shot blasting from 35HRC to more than 50HRC. In the hot spot area of the blasting cabinet, additional 10mm thick manganese plates are added. They are attached from the outside and are easy to replace.



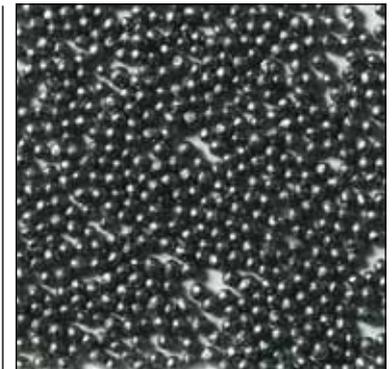
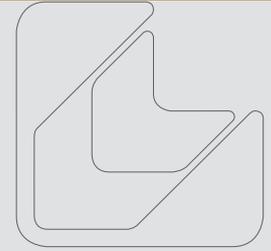
The HD machines, with their angled blast wheels on top, have a significantly bigger blast room area than those with straight blast wheels fitted. This ensures the abrasive is spread over a bigger area, which leads to longer maintenance intervals. To protect against blasting, the whole of the inside of the HD machines are fitted with interchangeable 10 mm thick manganese plates.

Abrasive Removal Unit



After the blasting process, the workpiece may still be covered in shot, which must be cleaned off. This task is carried out by a rotating brush, which is fitted with securely attached brush segments, which are interchangeable.

To avoid shot building up on long parts, the rotation brushes flick the spent abrasive from the work surface into especially designed trough which has a screw conveyor taking the media back into circulation. To keep the position between the brushes and the screw conveyor constant when blasting different sized work pieces, both are built with the same adjustable framework. The framework can be adjusted manually or automatically in intervals of less than 10 mm at each required height. Finally any remaining media on the work pieces will be removed by the blow off station, which is mounted on the same framework and uses high pressure ventilators to blow off any media remaining.



Cartridge Filter Unit

During the workpiece blasting process, rust and scale, along with broken down media dust (or fines) will start to develop. The fines are separated in the abrasive cleaner, which is adjustable to the different types and sizes of blast media. The cartridge filter that produces the necessary pressure is fitted on top of the a RB 1500 and it is situated next to the blasting machine for the bigger machines from RB 2000 upwards.

The impact separator within the cartridge filter unit not only ensures that the broken down fines are separated (which protects the filter cartridge against unnecessary wear) but it is also certified as a spark extinguishing device and is one of the elements that contributes towards fulfilment of ATEX regulations. The cartridge filters clean the cartridge automatically using an air pressure pulse. The intensity and duration of the pulse can be adjusted according to the type and amount of dust. All the cartridge filter processes are performed without ignition.

Loading and Unloading

In standard format, the roller conveyor inlets and outlets are powered by the central drive of the blasting machine. To increase the efficiency they can be fitted with a separate drive unit. The affiliated frequency converter is automatically synchronised. If bowed workpieces are being blasted that cannot be cleaned properly by the brush and blow stations, then a longer collection track with a reclamation conveyor is recommended to help ensure that the shot goes back into the machine.



Through the installation of a cross feeding system, many efficiencies can be achieved. Also with a cross feeding system incorporated, the blasting machine can be integrated into a cutting/drilling line.

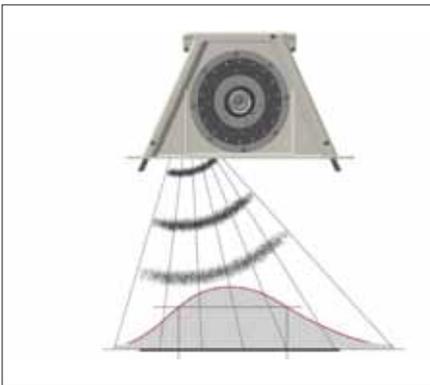
Abrasive Shot Blast

For most roller conveyor installations the blast media would normally be round (cast or rounded cut wire shot). The blast media travels around the machine in a circle and is continually cleaned of contamination. For a good blasting result a balanced mix of new and used blast media is imperative. The finer used media in this mixture is important for equal coverage of the surface being blasted and the coarser media is important to break up any scale. The use of the correct media is of particular importance for the blasting process to ensure a good blasting result. The following is a useful guide:

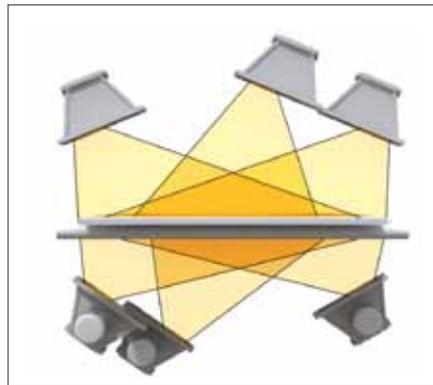
- For coarse workpieces (e.g. heavy plate profiles) a coarse abrasive media mix (steel ball shot size S390 and over)
- Delicate workpieces (e.g. thin metal plates) a fine abrasive media mix (steel ball shot size S330 and below)



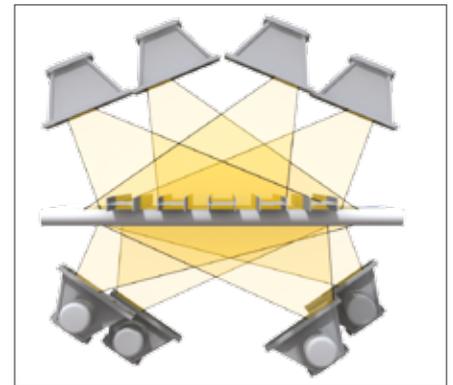
G shot blasting system



Type 5.3 ETA Shot Blast Wheel



6 Shot Blast Wheels



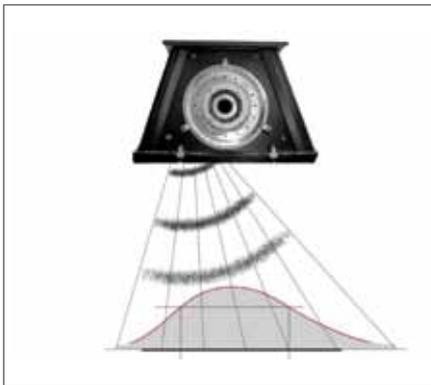
8 Shot Blast Wheels

Specification and technical data

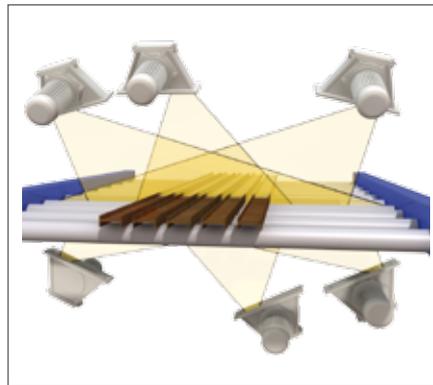
G		SMARTLINE	RB 1500G	RB 2000G	RB 2500G	RB 3000G
Machine Entrance						
Width	mm	1600	1600	2200	2600	3300
Height	mm	800	550	550	550	550
Work speed to achieve a cleaning grade of B Sa 2,5 ISO B501	m/min	1.0 - 2.3	1.0 - 2.3	0.8 - 2.5	1.0 - 3.0	0.8 - 2.5
Number of wheels x power	kW	4 x 11	4 x 11/15	4 x 11/15	6 x 11/15/18.5	6 x 11/15/18.5
Wheel options	kW	-	-	6 x 11	8 x 15	8 x 15
Roller pitch	mm	650	650	800	800	800
Alternative pitch	mm	-	400	400	400	400
Upper edge roller conveyor (variable)	mm	950	950	900	900	900
Height of the machine	mm	5400	5400	6300	6700	6850
Foundation pit		Yes	Yes	Yes	Yes	Yes



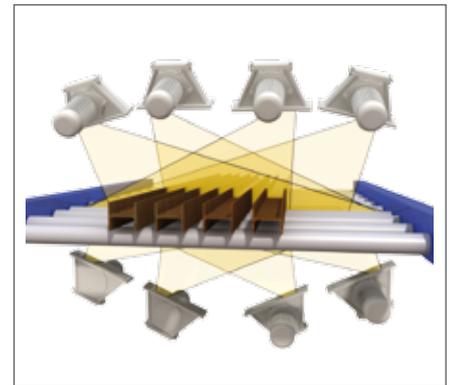
HD shot blasting system



TITAN Blast Wheel 15.3



6 Wheel Blasting



8 Wheel Blasting

Specification and technical data

HD		RB 1500HD	RB 2000HD	RB 2500HD	RB 3000HD
Entrance					
Width	mm	1600	2100	2800	3300
Height	mm	550	550	550	550
Work speed to achieve a cleaning of B Sa 2.5 ISO 8501		1.5 - 4.5	1.8 - 5.0	1.0 - 3.0	0.8 - 2.5
Number of wheels x power	kW	4 x 15/18.5	6 x 15	6 x 11/15/18.5	6 x 15/18.5
Wheel optional	kW	4 x 30	6 x 18.5	8 x 18.5/30	8 x 15/18.5/30
Roller pitch	mm	800	800	750	750
Alternative pitch	mm	400	400	500	500
Upper edge roller conveyor variable	mm	640	865	900	900
Height of machine	mm	5950	6600	7300	7300
Foundation pit required		Yes	Yes	Yes	Yes



After sales service



Great professional experience and competence, together with excellent communication skills are among the basic and essential characteristics of all human resources employed in the Technical and After-Sales

Service departments. The high quality service starts during the installation of the machines at the customer's premises, with in-depth training sessions. But not only. The service is organised so that it provides always precise information in a very short time.

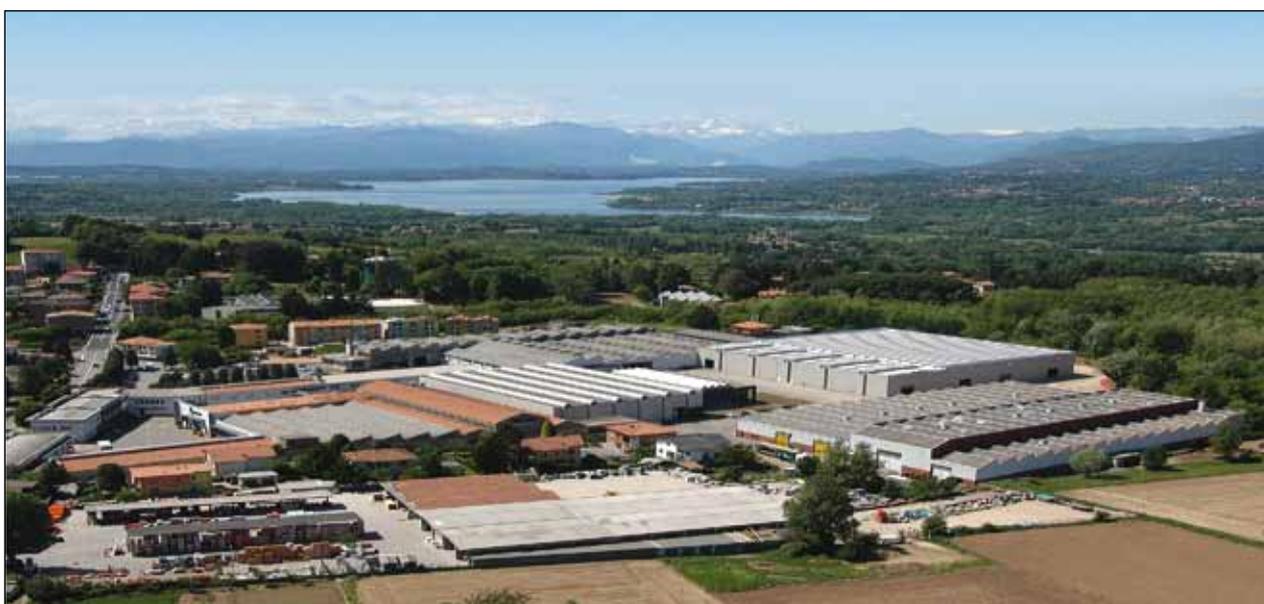
After the **START UP**, the service is developed in the following way:

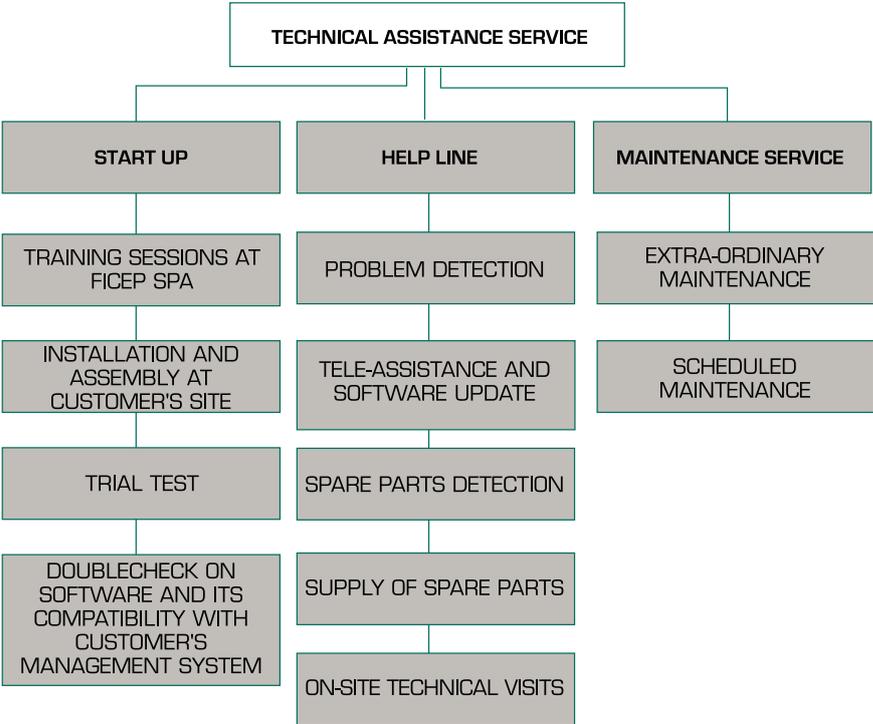
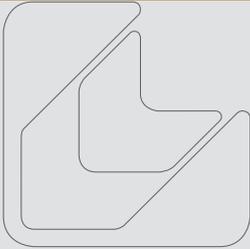
HELP LINE: according to the type of machine and complexity of the intervention, gives technical assistance through internet.

MAINTENANCE: timely and professionally scheduled and/or extra-ordinary maintenance; efficient spare part service, some of which can also be purchased on-line.

For further information, we suggest you to visit the section dedicated to the service on our website:

www.ficepgroup.com





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