

CFC151-5500

CARPET FUSING CALENDER

The Carpet Fusing Calender (CFC) has been designed to establish a tuftlock and fibre bonding with high temperatures only. Tufted or needle punch carpets can be treated by melting the fibre itself, without the use of additives like latex or other binders. The energy consumption is a fraction of traditional processes as no water needs to be evaporated. In addition, the low VOC emissions and fogging values give a great contribution to an environmental and low cost production concept.

The carpet is guided with its back-side over a heated cylinder where the fusing takes place under a controlled temperature and contact-time. A set of guiding rollers will travel along the heating drum to guarantee a constant contact time at any given line speed. In case of a line-stop, the rollers will remove the carpet automatically from the drum. A pressure roller will equalize and bond the back-side of the fused carpet with an adjustable pressure. The heating drum, guiding and pressure rollers are covered with a special Teflon layer for easy release of the material and cleaning of the rollers.

The CFC is equipped with a PLC for controlling the process parameters, store recipes and log QA data. The calender has a small footprint and can easily be incorporated in an existing production line.

- ▶ Eco friendly fibre bonding
- ▶ Low energy consumption
- ▶ Small footprint



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Calender suitable for fusing carpet fibres or piles into the primary backing. The machine is delivered according to the following technical specifications:

- Roller width: 5500 mm
- Maximum working width: 5200 mm
- Drum diameter: 1350 mm
- Mechanical speed: 0-30 m/min.
- Maximum temperature: 250° C

The drum of the calender will be heated by means of oil from an external boiler (not included).

The calender will be executed with:

- The necessary rotary joints.
- Secondary oil-circulation system executed with oil pump and regulating valve.
- Temperature control.
- The heating cylinder has been executed for a maximum power of 360 kW.
- The infeed guiding rollers rotate in such a way around the heating cylinder, that a specified and constant contact time can be realized, independently of the line speed at a specific moment (PLC controlled).
- Compensator/accumulator at the entrance
- The calendar is executed with a pressure roller, which calibrates/compacts the fused backing of the carpet evenly over the entire width by means of an adjustable pressure.
- The pressure roller is equipped with an automatic (PLC - recipe) nip-adjustment
- The heating cylinder is covered with Teflon sheets and the seams are sealed (seal equipment included)
- The pressure roller is executed with Teflon sheets.
- In case of a breakdown or an emergency stop, the product is released from the heating cylinder.
- Main bearings executed with automatic grease system

TECHNICAL SPECIFICATIONS

DIMENSIONS / WEIGHT

Machine width	7810 mm/307,5"
Machine length	2500 mm / 98,4"
Machine height	2855 mm / 112,4"
Machine height with exhaust hood	3850 mm / 151,6"
Machine weight	± 21000 kg

DIAMETER / WIDTH

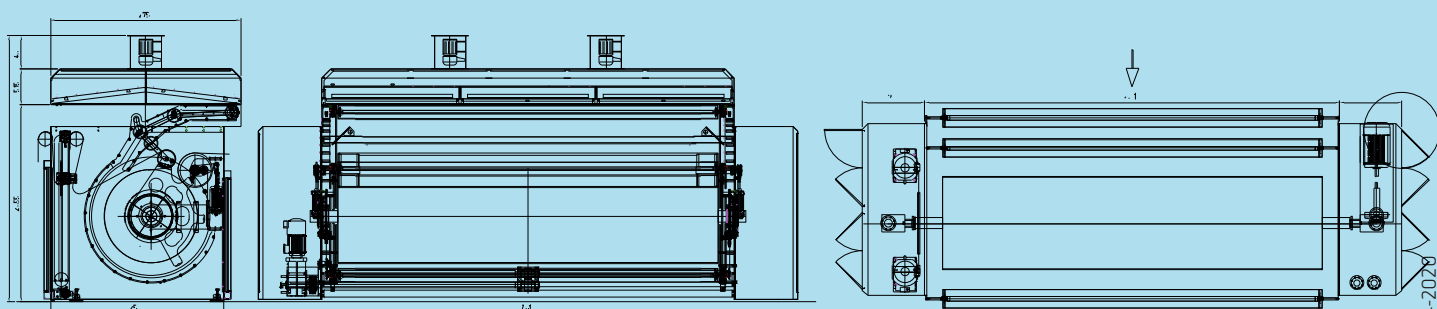
Heating cylinder diameter	
Heating cylinder width	5500mm/ 216.5"
Maximum substrate width	5200 mm/204.7"

TEMPERATURE/SPEED/AIR/PRESSURE/OIL

Maximum temperature	250°C
Mechinal speed	0-30m/min
Air consumption	0,6 Nm3/hr
Air	6 bar max./G 1/2"
Maximum linear pressure	6 N/mm
Oil capacity heating cylinder	820 l.
Thermo-oil	DN-80

ELECTRICAL INFORMATION

Total installed power kVA	47 kVA excl boiler.
Necessary external power heating	360 kW
E-consumption (estimate)	-
Power main drive	7,5kW
Voltage	400 V
Number of phases	3ph
Frequency	50 Hz



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