

Discover the max in fully automated drilling, gluing and doweling.



BS 5102

Scheer's Model BS 5102. A must in technology and innovation.

Welcome to SCHEER, a German company working hard to build a reputation in drilling, gluing and doweling. All over the world. With excellent German know how. Our engineers do not follow traditional patterns. They look for actual signs of technical progress. The latest release in this long term philosophy is the model BS 5102. And this is a machine taking up any challenge in end drilling and dowel inserting. Especially when manufacturing small batches. With great flexibility and speed the BS 5102 is 100% faster in horizontal drilling than any CNC working centre. That is what we call manufacturing progress: With a high level of rpm chip free drilling results are achieved. Boring into solid wood: the drill will not run out of centre in the timber rings. The distance of the drilling operations can be programmed at any position and offers a high flexibility. The electric glue control secures the adjusted flow of glue in every cycle.

Inserting dowels: clamping pistons positioned at a 60° angle avoid any movement of the panels. Powerful designed inserting pistons guarantee true measurement when inserting dowels into solid and hard wood. Last not least: the BS 5102 available with an option for face drilling is called 5102 V. More on the following pages.

Anyone can operate in 2 minutes.

User friendly working area with a large colour monitor

Easy programming with PC and graphical interface

Face drilling with vertical workpiece holder

Horizontal working station with drilling, gluing and inserting units

Flexible program for drill hole distances

Drill program for mirror image projection

Travel ways of working units automatically optimised

Program selection:

- drilling
- drilling, gluing, inserting
- gluing, inserting

Working depth and distance from workpiece table is adjustable

Inclined clamping pistons separate controls for tandem operation

Adjustable workpiece table with detachable stops for different piece sizes

Compact machine base designed in distortion-free welded structures

The best engineering is worth nothing if learning how to operate the machine takes forever. That was the challenge for our research and development centre: to enter a variety of panel measurements into the program of the BS 5012 fast, to finish the work cycle quickly, and to easily memorize and re-activate these work programs. The result is a showpiece for user friendly operation. You decide your drilling patterns, select the basic parameters and the computer control takes care of the rest. Production can start with an adequate knowledge of PC and programming. More technical features on the following pages.

Options:

- Pneumatically rising and falling stops
- Mitre fence attachment
- Length stop for longer pieces
- Automatic program start with sensor
- Scanner/bar code reader to activate the drilling patterns



Closed side fence

Suddenly you will see your work in a different light

into the rear side of the BS 5102: a compact horizontal working unit in action. A high precision, functional set of machines drilling, gluing and inserting. In one step. Quick. Never before have finished your work in such an effective way. Ever.

High precision star guides

Servo motor with rack and pinion drive

High travel and position speeds between the working sequences

Drill motor with infinitely variable rpm, max 18.000

Drill motor on star guides

Powerfull inserting piston

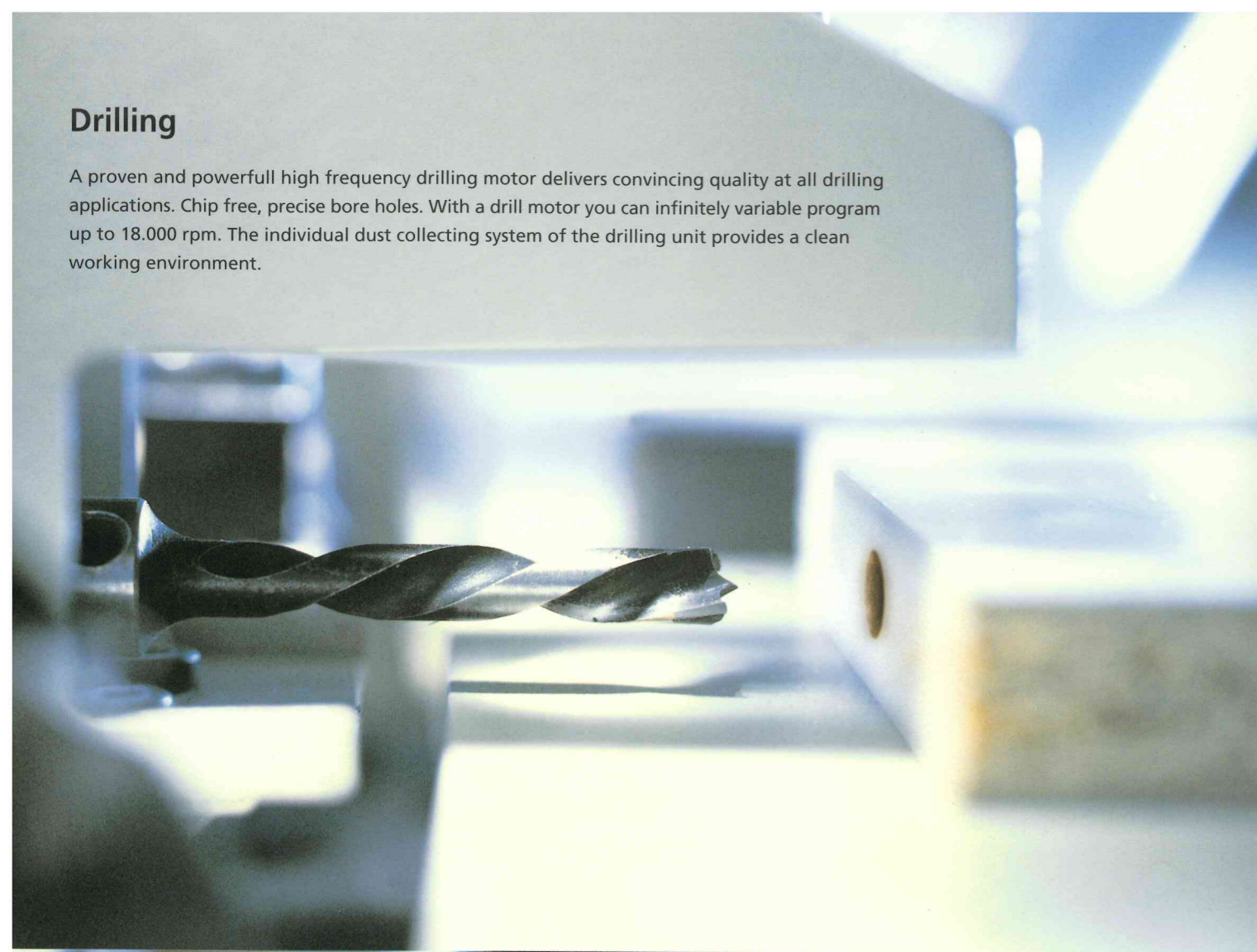
Digital read outs for drill depth and drill height adjustment

Options:

- Y-axis for motorised vertical drilling height adjustment of the complete working unit
- Z-axis for motorised horizontal drilling depth adjustment
- Additional horizontal drill motor
- Additional horizontal dowel inserting unit
- Motorised adjustment of dowel inserting unit for different dowel projections
- Electronic glue control

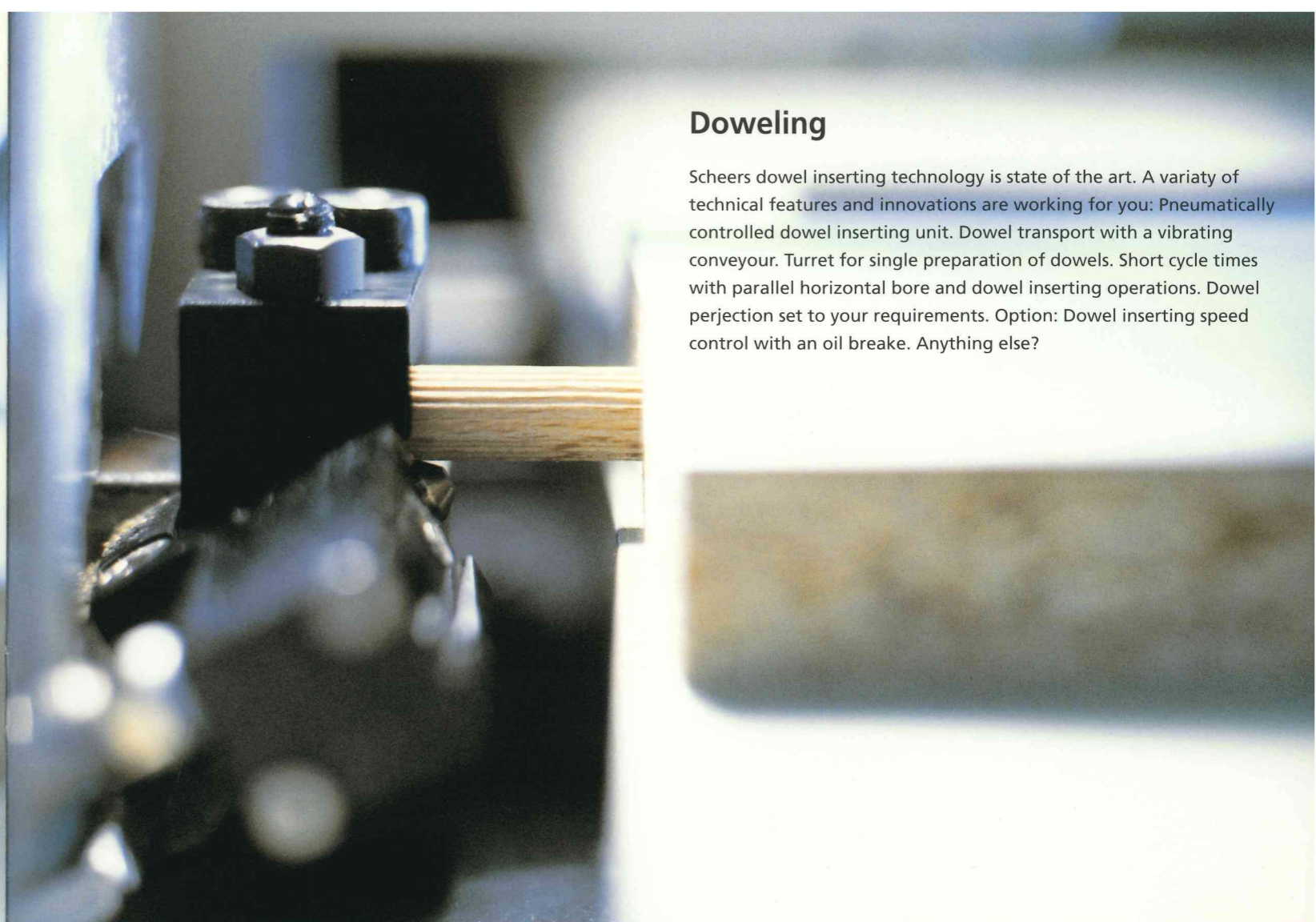
Drilling

A proven and powerful high frequency drilling motor delivers convincing quality at all drilling applications. Chip free, precise bore holes. With a drill motor you can infinitely variable program up to 18.000 rpm. The individual dust collecting system of the drilling unit provides a clean working environment.



Doweling

Scheers dowel inserting technology is state of the art. A variety of technical features and innovations are working for you: Pneumatically controlled dowel inserting unit. Dowel transport with a vibrating conveyour. Turret for single preparation of dowels. Short cycle times with parallel horizontal bore and dowel inserting operations. Dowel perfection set to your requirements. Option: Dowel inserting speed control with an oil break. Anything else?

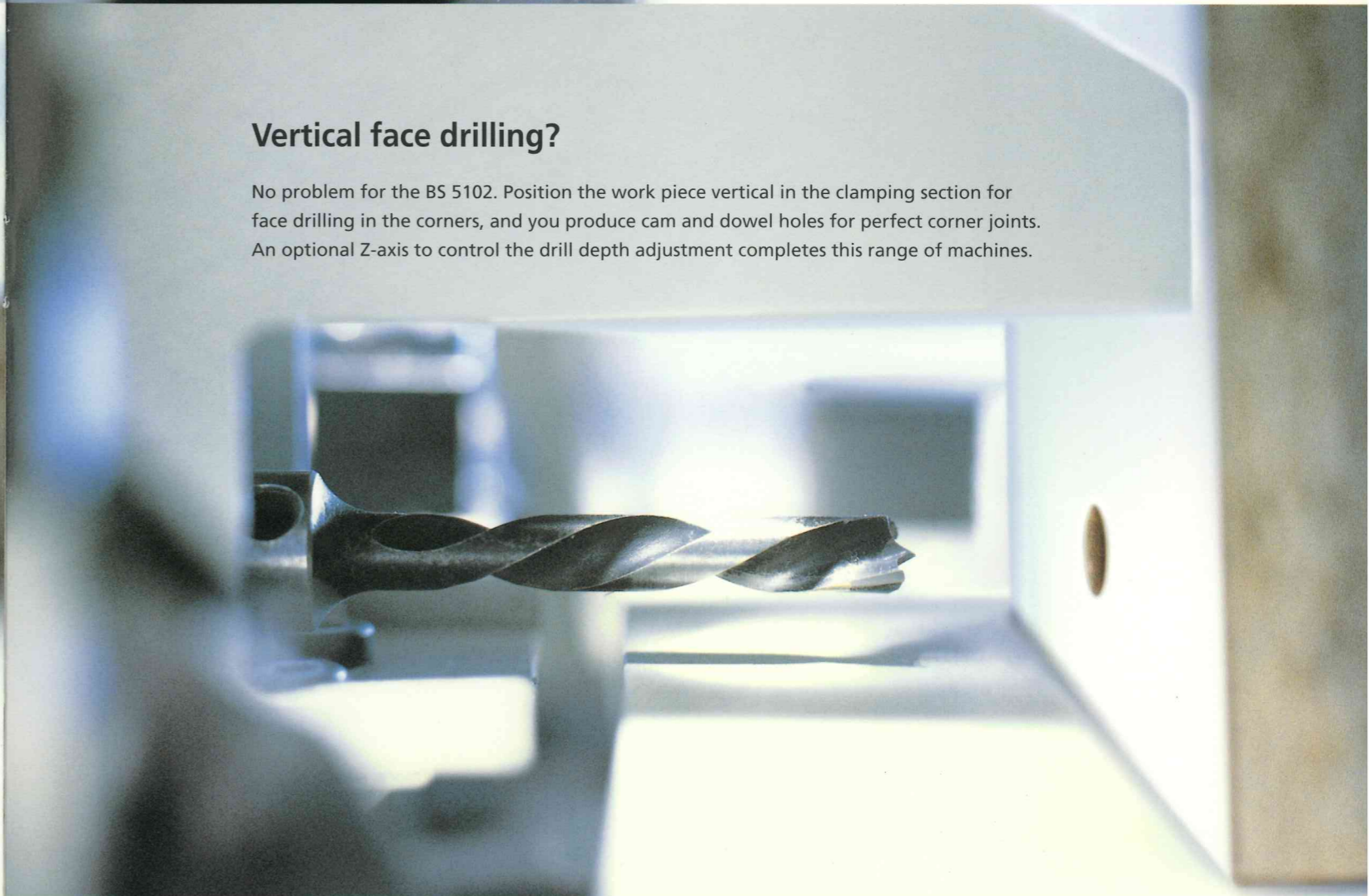


Gluing

Our dowels are the beginning of a strong bond. The glue quantity can be precisely adjusted. And the flow of glue is electronically controlled before inserting dowels. No gluing, no doweling. Cycle stops and monitor has a status report. The accurate injection valve technology directs the glue exactly into the bore hole. A high pressure glue pump for high viscosity glues is available as an option.

Vertical face drilling?

No problem for the BS 5102. Position the work piece vertical in the clamping section for face drilling in the corners, and you produce cam and dowel holes for perfect corner joints. An optional Z-axis to control the drill depth adjustment completes this range of machines.



User friendly working area on a large colour monitor. Easy programming with PC and graphical interface.

The BS 5102 V. for additional vertical drilling. in one operation.

Compact working centre to produce perfect corner joints. Additional benefit of a separate wood working station incorporated into this machine guaranteeing absolute true measurement.

Vertical drilling unit.

Clamping pistons adjustable across the working table.

Horizontal working station with drilling, gluing and doweling units for end boring.

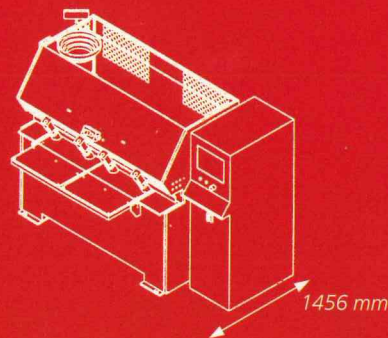
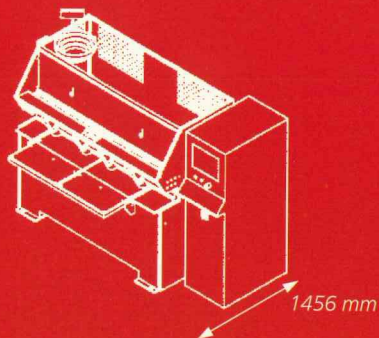
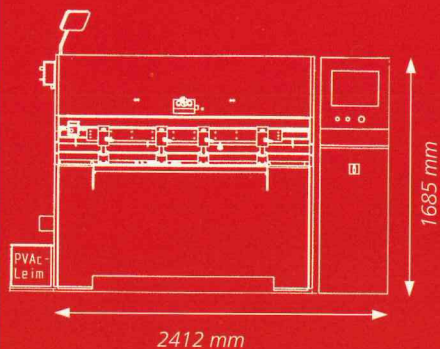
End boring, gluing and dowel inserting, face drilling in one clamping cycle.

Drill depth adjustment with digital read out.

Unlimited program for drill hole distances, vertical and horizontal drilling units are on the same support and adjusted and positioned together.



Here you can find all the technical details.



BS 5102

Horizontal working station with drilling, gluing and doweling units

BS 5102 V

With additional vertical drilling unit

Work piece width
Work piece width in tandem operation
Work piece length
Work piece thickness
Drill distance from side fence
Horizontal working area (x-axis)
Max feed speed servo axis
Vertical working area (y-axis)

min. 60 mm, max 1.200 mm
max. 600 mm
min. 100 mm, max. –
min. 15 mm, max. 60 mm
min. 10 mm
0 - 1.250 mm
60 m/min
7,5 - 50 mm

min. 60 mm, max 1.200 mm
max. 600 mm
min. 100 mm, max. –
min. 15 mm, max. 60 mm
min. 10 mm
0 - 1.250 mm
60 m/min
7,5 - 50 mm

Clamping pistons

4 short cycle pistons
with 63 mm dia, tilted

4 short cycle pistons
with 63 mm dia, tilted

1 horizontal drill motor

infinitely variable adjustment
9.000 - 18.000 rpm; 1,5 kw

infinitely variable adjustment
9.000 - 18.000 rpm; 1,5 kw

Drill depth adjustment

Max drill depth
Drill carrier

with digital read out
45 mm (with 80 mm drills)
M 10 outside thread or as per request

with digital read out
45 mm (with 80 mm drills)
M 10 outside thread or as per request

1 vertical drill motor

RPM

Drill feed

Drill stroke

Drill depth adjustment

–

–

–

–

–

1,5 kw AT 18.000 rpm, 1 spindle
infinitely variable adjustment 9.000 - 18.000 rpm
pneumatically
max. 25 mm
manually with digital read out in relation
to end drilling (+ 15 mm / -10 mm)
min. 5 mm, max. 35 mm manual adjustment with
digital read out motorised as an option
M 10 outside thread or as per request
length 80 mm, max. OD 35 mm

Distance to reference edge

–

Tool carrier

Tool dimensions

–

–

Dowel dimensions

Adjustment dowel projection

Dowel quality

diameter 8 x 30 / 50 standard
10 - 30 mm
DIN 68150 type A, manually separated

diameter 8 x 30 / 50 standard
10 - 30 mm
DIN 68150 type A, manually separated

Dowel transport

vibrating conveyour

vibrating conveyour

Glue system

Glue nozzle

Glue

Viscosity

membrane pump 1:1 (standard)
0,6 mm (options: 0,4 mm or 0,8 mm)
low viscosity PVAC glue
150 - 350 PA S

membrane pump 1:1 (standard)
0,6 mm (options: 0,4 mm or 0,8 mm)
low viscosity PVAC glue
150 - 350 PA S

Dust collecting duct

80 mm diameter

80 mm diameter

Required air quantity

Compressed air connection

Compressed air consumption

540 M3 at 30 m/sec. air speed
10 mm ID, 6 bar
approx. 50 l/min., depending on cycles

540 M3 at 30 m/sec. air speed
10 mm ID, 6 bar
approx. 50 l/min., depending on cycles

Electrical consumption

approx. 4,0 kw, depending on equipment

approx. 4,0 kw, depending on equipment

Controls

PLC, PC with colour monitor

PLC, PC with colour monitor

Safety

according to CE standards

according to CE standards

All technical modifications reserved.

Herstellung und Kundendienst für C.F.SCHEER & CIE.:
Hans Koch GmbH | Glandorfer St. 25 | 49196 Bad Laer
Tel.: 05424-2972-0 | Fax.: 05424-2972-50
Mail.: info@hanskochgmbh.de | www.hanskochgmbh.de