

# Punching System ECO Technical Data Sheet



#### Design

The punching drive ECO consists of the Voith block cylinder and the directly mounted punching module. The result of this is a very compact and user-friendly design. Pipe-work is kept to a minimum as several valve components are integrated directly into the punch module. The dynamic movements using this valve technology can give a exact and precise control. Compared to other control systems, this special control design allows a reduced power requirement with increased performance. The control card (HS2) is the electronic link between the machine control and the punch unit. Control and monitoring of the complete punch process is handled by the HS2. Electronic boosting greatly reduces the valve switching time.

An optimised power pack will be included in our quotation.

## **Technical Data**

Ambient temperature Mounting system Max work load Stroke length Pressure range Standard retraction forces Control voltage Valve switching time -5°C to +40°C any 400 kN 40 mm 190 bar / 280 bar 30% of work load 24 V DC < 10 ms **Control Circuit** 

## Advantages

- Robust valve technology
- Simple functions
- High performance
- · Optimized punch force because of the differential valve
- · Short switching times via high speed pilot valves
- · Soft control process via pilot operated valve
- Selectable stoke end position through electronic limit switch
- Simple link to the machine control
- · Compact unit resulting in reduced pipe-work

#### Applications

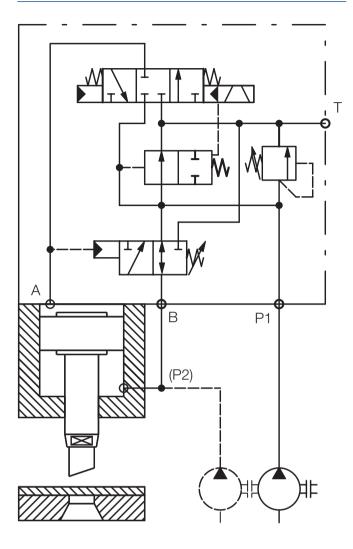
- Punch machines
- Nibbling machines

#### Options

- Further levels of punching power
- · Cylinder with alternative mounting methods
- · Hydraulic power packs as per the customers specification
- Programmable end of stroke positions ECO<sup>plus</sup>

## **Product Range**

- Punching System ECO
  - Optimised punching cylinder
  - Valve technology and damping elements
- Electronic HS2
  - Intelligent motion control
- Hydraulic power packs
  - Optimized layout for customer requirements
  - Integrated cooling and filtering circuit

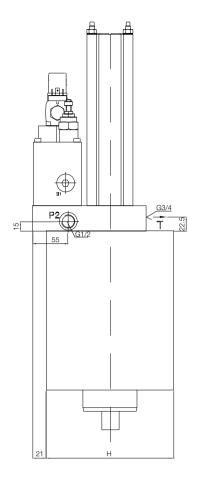


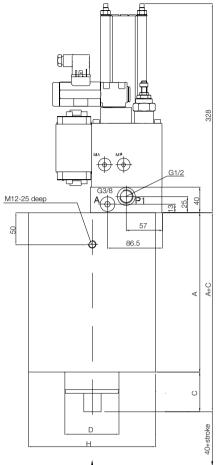
2

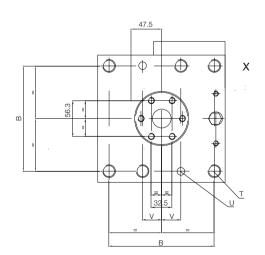
# Key Performance Figures - ECO 20to / 30to / 40to\*:

|                                   | ECO 20 to | ECO 30 to | ECO 40 to |
|-----------------------------------|-----------|-----------|-----------|
| working pressure max.             | 280 bar   | 280 bar   | 280 bar   |
| work force max.                   | 220 kN    | 317 kN    | 431 kN    |
| punching force under partial load | 73 kN     | 108 kN    | 149 kN    |
| cylinder stroke                   | 40 mm     | 40 mm     | 40 mm     |
| standard electric power           | 11 kW     | 11 kW     | 11 kW     |
| cycle time punch stroke 6 mm      | 105 ms    | 130 ms    | 160 ms    |
| cycle time punch stroke 8 mm      | 125 ms    | 160 ms    | 205 ms    |
| cycle time punch stroke 10 mm     | 165 ms    | 220 ms    | 280 ms    |

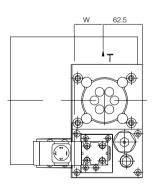
\*additional data according to dimensioning protocol





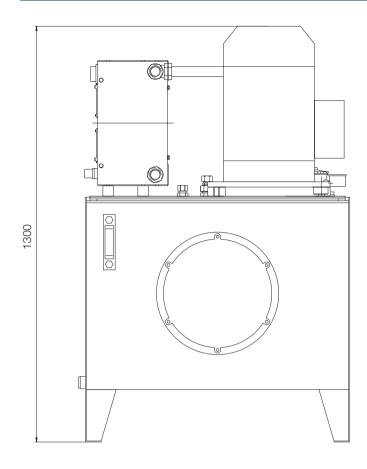


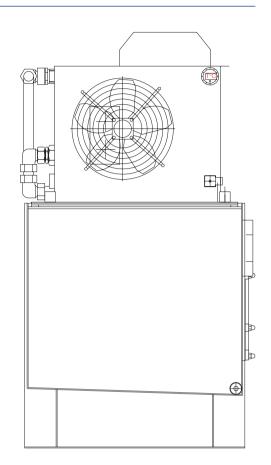


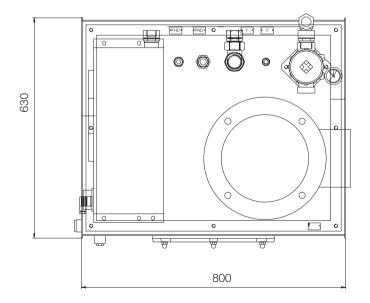


|           | A   | В   | С  | D   | Н   | Т     | U     | V  | W  |
|-----------|-----|-----|----|-----|-----|-------|-------|----|----|
| ECO 20 to | 240 | 145 | 62 | 70  | 180 | 6xM20 | 2xØ12 | 30 | 38 |
| ECO 30 to | 250 | 165 | 62 | 85  | 200 | 6xM20 | 2xØ12 | 30 | 48 |
| ECO 40 to | 260 | 170 | 62 | 100 | 210 | 8xM20 | -     | 45 | 53 |
|           |     |     |    |     |     |       |       |    |    |

# Dimensional Drawing Power Pack







5

Voith Turbo H + L Hydraulic GmbH & Co. KG Schuckertstraße 15 71277 Rutesheim, Germany Tel. +49 7152 992-3 Fax +49 7152 992-400 sales-rut@voith.com voith.com



