

# **COST-EFFECTIVE AUTOMATION**

COMPACT UNITS FOR

- DRILLING
- TAPPING
- MILLING

## AIR TURBINES/ AIR MOTORS/ DRILLING SPINDLES



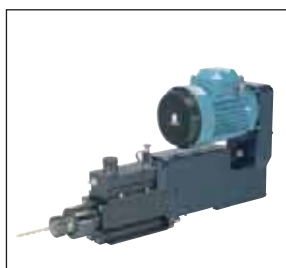
|                                       | Air Turbines |              | Air Motors / Drilling Spindles |                   |
|---------------------------------------|--------------|--------------|--------------------------------|-------------------|
|                                       | BE 11/HFS100 | BE 22 SK     | BEP 22 SK                      | BE 33 SK          |
| Drilling Capacity in Steel; Aluminium | 1.5 ; 3      | 8 ; 12       | 6 ; 9                          | 13 ; 16 [Ø, mm]   |
| Power                                 | 80           | 250          | 250                            | 360 [W]           |
| Speed (idle)                          | 80.000       | 500–22000    | 2200–22000                     | 500–21000 [rpm]   |
| Torque*                               | 0.02         | 9.9–0.25     | 2.4–0.25                       | 12.6–0.37 [Nm]    |
| Min CCSS**                            | 54           | 45 (MSH: 11) | 45                             | 50 (MSH: 11) [mm] |
| Run-Out***                            | <0.007       | <0.03        | <0.01                          | <0.05 [mm]        |

## PNEUMATIC DRILLING UNITS



|                                       | Air Operated Drilling Units |              | Air Hydraulic Drilling Units |                   |
|---------------------------------------|-----------------------------|--------------|------------------------------|-------------------|
|                                       | BE(S) 21                    | BE(F) 22     | BE(F)P 22                    | BE 33             |
| Drilling Capacity in Steel; Aluminium | 6 ; 11                      | 6 ; 11       | 5 ; 9                        | 10 ; 14 [Ø, mm]   |
| Power                                 | 250                         | 250          | 250                          | 360 [W]           |
| Speed (idle)                          | 500–15000                   | 500–22000    | 2200–22000                   | 500–21000 [rpm]   |
| Torque*                               | 9.9–0.25                    | 9.9–0.25     | 2.4–0.25                     | 12.6–0.37 [Nm]    |
| Thrust (max)                          | 665                         | 600          | 600                          | 800–1000 [N]      |
| Stroke (max)                          | 50                          | 30 (60)      | 30 (60)                      | 50 [mm]           |
| Min CCSS**                            | 45                          | 45 (MSH: 11) | 45                           | 65 (MSH: 11) [mm] |
| Run-Out***                            | <0.05                       | <0.03        | <0.01                        | <0.05 [mm]        |

## ELECTRO PNEUMATIC/ HYDRAULIC DRILLING UNITS



|                                       | Electro-Pneumatic Drilling Unit | Electro-Hydraulic Drilling Unit |
|---------------------------------------|---------------------------------|---------------------------------|
|                                       | BE 48                           | BE 55                           |
| Drilling Capacity in Steel; Aluminium | 16 ; 25                         | 25 ; 35 [Ø, mm]                 |
| Power                                 | 250–1650                        | 370–2700 [W]                    |
| Speed                                 | 270–9450                        | 250–7780 [rpm]                  |
| Torque*                               | 19.7–0.55                       | 41.8–0.90 [Nm]                  |
| Thrust (max)                          | 1650–2000                       | 6000 [N]                        |
| Stroke (max)                          | 100                             | 120 [mm]                        |
| Min CCSS**                            | 90 (MSH: 11)                    | 140 (MSH: 14) [mm]              |
| Run-Out***                            | <0.02                           | <0.03 [mm]                      |

## TAPPING UNITS



Pneumatic Lead Screw Units

LS 22

Electro-Pneumatic Tapping Unit

BEG 48

Electro-Hydraulic Tapping Unit

BEG 55

| Tapping Capacity in Steel; Aluminium | M8 ; M12     | M12 ; M20    | M16 ; M24 [M-Thread] |
|--------------------------------------|--------------|--------------|----------------------|
| Power                                | 160          | 250–1650     | 370–2700 [W]         |
| Speed                                | 240–2400     | 270–1900     | 250–1980 [rpm]       |
| Torque*                              | 10.8–1.1     | 19.7–1.25    | 41.8–1.80 [Nm]       |
| Stroke (max)                         | 51           | 100          | 120 [mm]             |
| Min CCSS**                           | 42 (MSH: 11) | 90 (MSH: 11) | 140 (MSH: 14) [mm]   |

## PNEUMATIC MILLING UNITS



Pneumatic Milling Units

BE 22 SKM

BE 33 SKM

| Milling Capacity in Steel; Aluminium | BE 22 SKM | BE 33 SKM |         |
|--------------------------------------|-----------|-----------|---------|
| Saw Ø                                | - ; 100   | 80 ; 100  | [Ø, mm] |
| Blade gauge                          | - ; 2     | 1.5 ; 4   | [mm]    |
| End mill Ø                           | 4 ; 6     | 6 ; 10    | [mm]    |
| Cutting Depth                        | 2 ; 2     | 2 ; 4     | [mm]    |
| Power                                | 250       | 360       | [W]     |
| Speed (idle)                         | 500–22000 | 500–21000 | [rpm]   |
| Torque*                              | 9.9–0.25  | 12.6–0.37 | [Nm]    |

## COST-EFFECTIVE AUTOMATION

You will find units for Drilling, Tapping and Milling installed wherever increased rates of production are required. They are a cost-effective means of automating drilling, tapping and milling operations.

E2 products are known world wide for their quality, durability, precision and power. Each series of E2 units are the most compact in the market today.

E2 customers benefit from the high quality of the E2 product line with less down-time and reduced operating costs. The compact design of the E2 units together with a good availability of CAD-drawings/-models makes the design of a machine more straight forward.

E2's concern for the worker and his environment is evident in all E2 products. Low noise levels and non-lubrication features eliminating oil mist in the air is a common feature of the E2 product line.

E2 self-feeding units utilizes a built-in hydraulic feed control system. They combine precision with power enabling a high level of precision also in multi-spindle head applications. The extremely compact Air hydraulic drilling units and Lead screw tappers are ideal for drilling/tapping smaller holes. E2's electro-pneumatic and –hydraulic units can to be used when more power is required. You will still have the E2 durability and precision. The E2 product line also includes non-feed pneumatic units perfect for drilling as well as milling, slitting and grinding.

### Legend

Generally air units run at half of the max. Speed under max. load (generating max. Power and Torque)

\*At max output. Generally Higher Speed and/or Less Power means Less Torque

\*\*Centre-to-Centre Spindle Spacing: Single Spindle (Multi-Spindle Head)

\*\*\*Run-Out is measured at the spindle nose

You are always welcome to [www.e2systems.com](http://www.e2systems.com) for more and always up-to-date information, CAD-files and more.

**E2 Systems specialise in the design and production of Drilling and Tapping units and pneumatics/hydraulics according to customer specification. Our business is based on long experience and cutting-edge competence within the hydraulic and pneumatic technologies. The products are of compact design in order to offer high performance and save space.**

E2 products are in operation in practically every country around the world through distribution by E2 's representatives or delivery as vital components of other manufacturers ' equipment.

A large portion of E2 products are used in the automotive industry, but they can also be found in other manufacturing industries as well as the woodworking industry. Our customers include: Electrolux, General Motors, Getinge, Honda, Kinnarps, Rolls Royce, SKF and Volvo.