

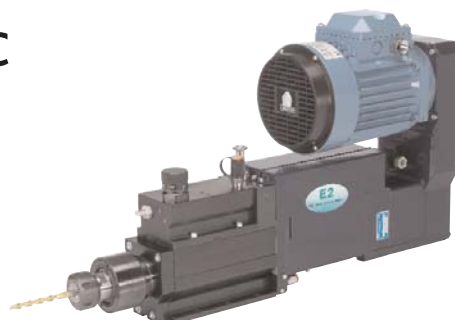
COST-EFFECTIVE AUTOMATION

COMPACT UNITS FOR

- DRILLING
- TAPPING
- MILLING

www.e2systems.com

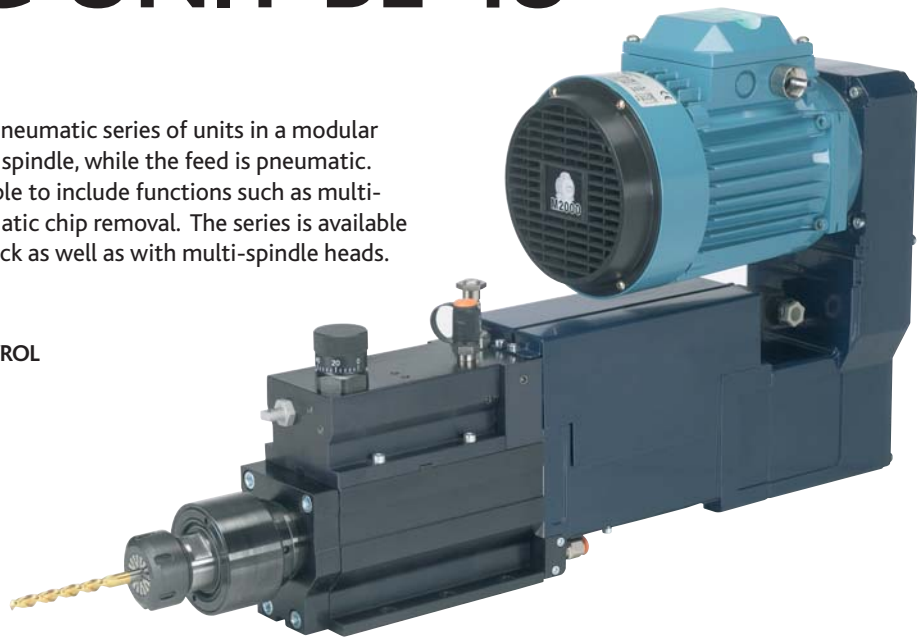
ELECTRO PNEUMATIC
DRILLING UNIT BE48



ELECTRO PNEUMATIC DRILLING UNIT BE 48

The BE 48-series is a flexible electro-pneumatic series of units in a modular design. The electric motor powers the spindle, while the feed is pneumatic. Hydraulic feed control makes it possible to include functions such as multi-wall drilling, rapid advance and automatic chip removal. The series is available with JT2 taper or integrated ER32 chuck as well as with multi-spindle heads.

- COMPACT YET FLEXIBLE DESIGN
- MODULAR HYDRAULIC FEED CONTROL FOR THE WHOLE STROKE
- SMART DEPTH CONTROL
- LINEAR TRANSDUCER FOR TOTAL CONTROL OF THE COMPLETE CYCLE (OPTIONAL)



Guidlines for choice of unit

[Ø, mm]

| DRILLING UNIT | CAPACITY IN STEEL | | | | CAPACITY IN ALUMINIUM/BRASS | | | | CAPACITY IN WOOD/PLASTICS | | | |
|---------------|-------------------|----|---|---|-----------------------------|----|----|----|---------------------------|----|----|----|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| BE481 | 10 | 6 | 4 | 3 | 15 | 12 | 8 | 6 | 21 | 16 | 11 | 8 |
| BE482 | 13 | 8 | 5 | 4 | 20 | 16 | 11 | 9 | 26 | 19 | 15 | 12 |
| BE485 | 16 | 10 | 7 | 5 | 25 | 20 | 15 | 12 | 35 | 25 | 20 | 15 |

Performance specifications at 6.3 Bar

| | | | | | |
|-------------------------------|---------|--------------------------------|---------|---------------------------|-------------|
| Thrust (max.) | | Min. Center to Center Spacing | | Rapid advance rate (max.) | 10 m/min |
| BE481 | 1 650 N | Single Spindle | 90 mm | Controlled feed rate | >0.04 m/min |
| BE482 | 2 000 N | Double-Spindle Head | 11 mm | Air consumption | 2.8 l/100mm |
| BE485 | 2 000 N | Run-out at spindle nose (max.) | 0.02 mm | Sound level | <85 dB(A) |
| Stroke (max. 100% controlled) | 100 mm | Depth accuracy +/- | 0.01 mm | | |

Motor and Transmission specifications

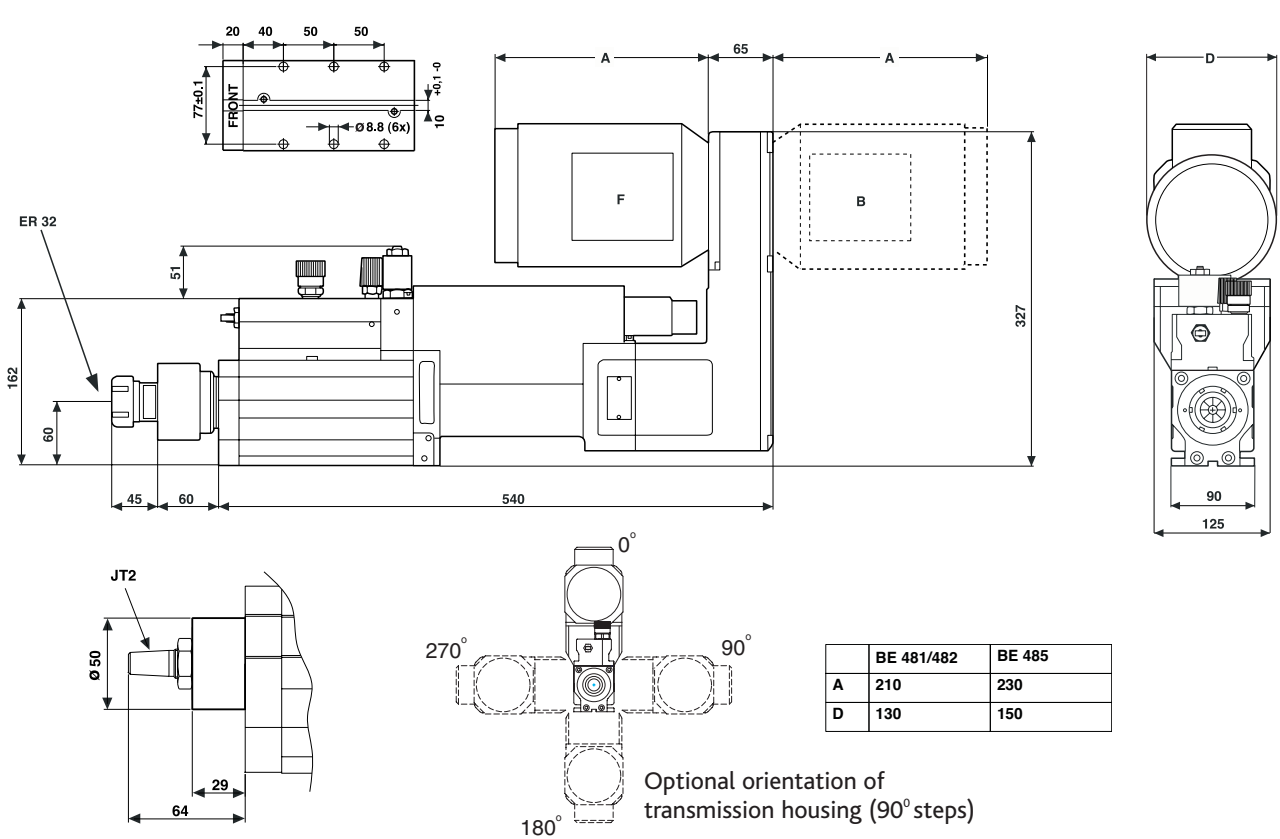
| No of Poles | DRILLING UNIT/MOTOR AT V380-420(Y)/220-240(Δ)50HZ [kW] | | |
|-------------|--|-------|-------|
| | BE481 | BE482 | BE485 |
| 2 | 0.55 | 0.75 | 1.65 |
| 4 | 0.37 | 0.55 | 1.1 |
| 6 | 0.25 | 0.32 | 0.75 |
| 8 | | | 0.4 |

• Motor specifications shown in the tables are valid for 380–420V(Y) /220–240V(Δ) (±5%), 50 Hz. These motors can also be used at 440–480 V(Y) (±5%), 60 Hz. If so the rpm will increase by ~20% and the power by ~15% relative to the data for 50Hz. E2 also offers motors for other voltages and frequencies. Please state voltage and frequency when requesting a quote or ordering.

• The torque at the spindle for a specific rpm is calculated as:

$$M = (P_{[kW]} \times 9500) / \text{rpm}$$

| No of Poles | SPINDEL RPM AT GEAR RATIO AND 50HZ | | | | | | | | | | | | | | | | |
|-------------|------------------------------------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2.5:1 | 2.1:1 | 1.8:1 | 1.6:1 | 1.4:1 | 1.2:1 | 1:1 | 1:1.2 | 1:1.4 | 1:1.6 | 1:1.8 | 1:2.1 | 1:2.3 | 1:2.5 | 1:2.8 | 1:3.1 | 1:3.4 |
| 2 | 1130 | 1350 | 1580 | 1750 | 2090 | 2420 | 2820 | 3290 | 3810 | 4550 | 5040 | 5880 | 6460 | 7170 | 7760 | 8600 | 9450 |
| 4 | 560 | 670 | 780 | 860 | 1030 | 1190 | 1390 | 1620 | 1880 | 2240 | 2480 | 2900 | 3190 | 3530 | 3820 | 4240 | 4660 |
| 6 | 360 | 440 | 510 | 560 | 670 | 780 | 910 | 1060 | 1230 | 1470 | 1630 | 1900 | 2090 | 2310 | 2500 | 2780 | 3050 |
| 8 | 270 | 330 | 380 | 420 | 500 | 580 | 680 | 790 | 920 | 1100 | 1210 | 1420 | 1560 | 1730 | 1870 | 2070 | 2280 |



You can download 2D CAD-drawings and 3D CAD-models on www.e2systems.com.

WEIGHT 24-28 KG

Necessary components

| CHUCKS | TYPE | PAGE |
|----------------|---|------|
| | Key Chucks for JT2, Ø 0–13 mm (Standard chuck) | 50 |
| | Drill Chucks for JT2 Ø 1.0–10.0 mm Ø 3.0–16.0 mm | 50 |
| | Integrated ER32 Collet Chuck Ø 2.0–20.0 mm | |
| COLLETS | TYPE | PAGE |
| | ER32, Ø 2.5–20.0 mm | 51 |
| LIMIT SWITCHES | TYPE | PAGE |
| | Electric switches Pneumatic switches or Linear Transducer | 57 |

Accessories

| MULTI-SPINDLE HEADS | TYPE | PAGE |
|---------------------|---|----------|
| | Adjustable heads VH04-, VH06-, VH08-, VH10-, MBKV 40-, MBKV 60-, MBKV 80- and MBK 6V-series | 42 47 |
| CONTROLS | TYPE | PAGE |
| | Controls for BE(G)48- units with Electric switches Pneumatic switches or Linear Transducer | 57 |

On www.e2system.com you can find more information as well as the same information as above in imperial units.

When requesting a quote or ordering, please state: **Model, Chuck (collet size), Limit Switches, Spindle rpm, Motor Power and Front or Backward Motor orientation.**

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.

Complementing the line of units, E2 also offers a full line of accessories for machining applications.

E2 also have supplementary product lines of

- Rotary actuators
- Air thrusters
- Pneumatic/Hydraulic components and systems

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