

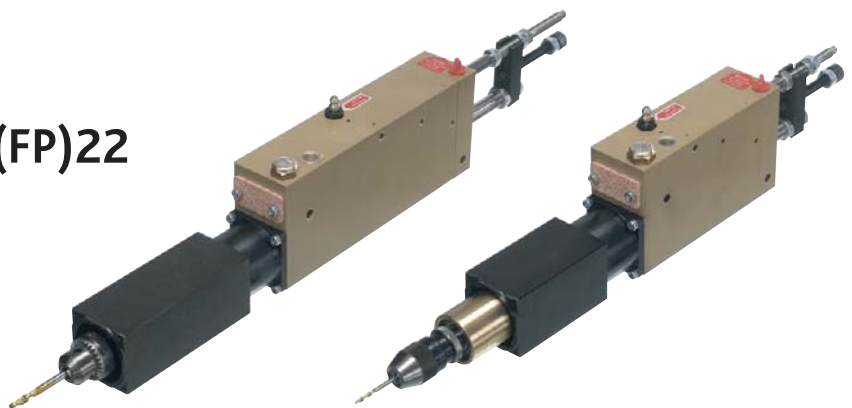
COST-EFFECTIVE AUTOMATION

COMPACT UNITS FOR

- DRILLING
- TAPPING
- MILLING

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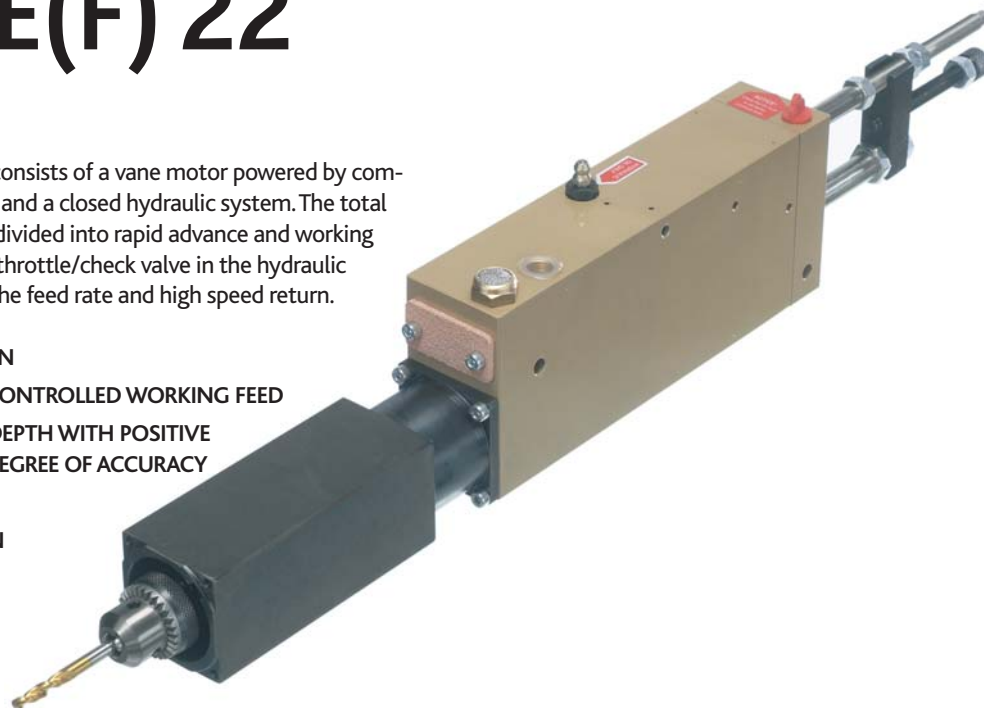
AIR HYDRAULIC
DRILLING UNIT BE(FP)22



AIR HYDRAULIC DRILLING UNIT BE(F) 22

The basic design of the BE(F) 22 consists of a vane motor powered by compressed air, a pneumatic cylinder, and a closed hydraulic system. The total stroke length can be variably subdivided into rapid advance and working feed across the whole range. The throttle/check valve in the hydraulic system permits exact setting of the feed rate and high speed return.

- EXTREMELY COMPACT DESIGN
- BUILT-IN HYDRAULICS FOR CONTROLLED WORKING FEED
- ADJUSTMENT OF DRILLING DEPTH WITH POSITIVE STOP GUARANTEES A HIGH DEGREE OF ACCURACY
- LOW NOISE LEVEL
- MINIMAL AIR CONSUMPTION



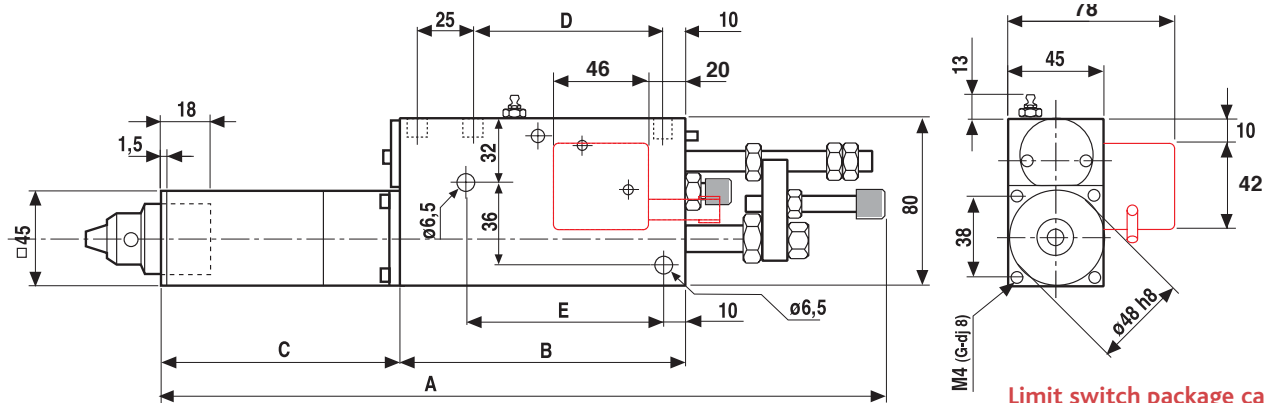
Guidelines for choice of unit												[Ø, mm]			
DRILLING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN WOOD/PLASTICS						
No of Spindles	1	2	3	4	1	2	3	4	1	2	3	4			
BE(F) 225	6	5	2.5	1.5	11	8	6	4	16	11	9	7			
BE(F) 228	6	5	2.5	1.5	11	8	6	4	16	11	9	7			
BE(F) 2211	6	4	2.5	1.5	10	8	6	4	14	11	9	7			
BE(F) 2222	5	3	2	1.5	9	7	5	4	12	9	8	6			
BE(F) 2236	4	2.5	1.5	1	7	6	4	3	10	8	7	5			
BE(F) 2249	3	1.5	1.5	1	6	4	3	2.5	8	6	6	4			
BE(F) 22150	2				3				4						
BE 22220	2				3				4						

Performance specifications at 6.3 Bar						
Thrust (max.)	600 N		Min. Center to Center Spacing		Controlled feed rate	>0.01 m/min
Power	0.25 kW		Single Spindle		Working pressure range	6-7 Bar
Stroke (max.)	BE 100% controlled		Double-Spindle Head		Air consumption	<0.3 Nm ³ /min
	BEF total		Run-out at spindle nose (max.)		Sound level	70 dB(A)
of which is controlled		30 mm	Depth accuracy +/-			
		60 mm	Rapid advance rate			
		45 mm				

DRILLING UNIT	SPEED [IDLE]	[RPM]	SPEED [AT MAX OUTPUT]	[RPM]	TORQUE (AT MAX OUTPUT)	[NM]
BE (F) 225	500		250		9.9	
BE (F) 228	800		400		6.0	
BE (F) 2211	1 100		550		4.3	
BE (F) 2222	2 200		1 100		2.4	
BE (F) 2236	3 600		1 800		1.5	
BE (F) 2249	4 900		2 450		1.1	
BE (F) 22150	15 000		7 500		0.25	
BE 22220	22 000		11 000		0.25	

Dimensions

[mm]



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


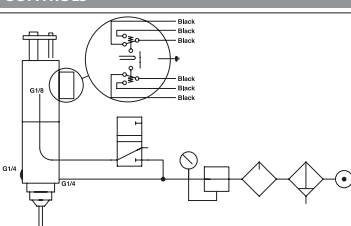

Limit switch package can be mounted on either side.

DRILLING UNIT	A	[MM]	B	[MM]	C	[MM]	D	[MM]	E	[MM]	WEIGHT	[KG]
BE 225	384		140		147		94.5		107		5.1	
BEF 225	519		200		177		154.5		167		7.1	
BE 228	384		140		147		94.5		107		5.1	
BEF 228	519		200		177		154.5		167		7.1	
BE 2211	384		140		147		94.5		107		5.1	
BEF 2211	519		200		177		154.5		167		7.1	
BE 2222	353		140		116		94.5		107		4.7	
BEF 2222	488		200		146		154.5		167		6.7	
BE 2236	353		140		116		94.5		107		4.7	
BEF 2236	488		200		146		154.5		167		6.7	
BE 2249	353		140		116		94.5		107		4.7	
BEF 2249	488		200		146		154.5		167		6.7	
BE 22150/22220	353		140		116		94.5		107		4.7	
BEF 22150	488		200		146		154.5		167		6.7	

Necessary components

CHUCKS	TYPE	PAGE
	Key chucks Ø 0.5–6.5 mm (Standard chuck) Ø 0.8–10.0 mm	50
	Collet Chucks Ø 1.0–10.0 mm Ø 3.0–20.0 mm	51
COLLETS	TYPE	PAGE
	DA 200 Ø 1.0–10.0 mm DA 180 Ø 3.0–20.0 mm	51
LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	56

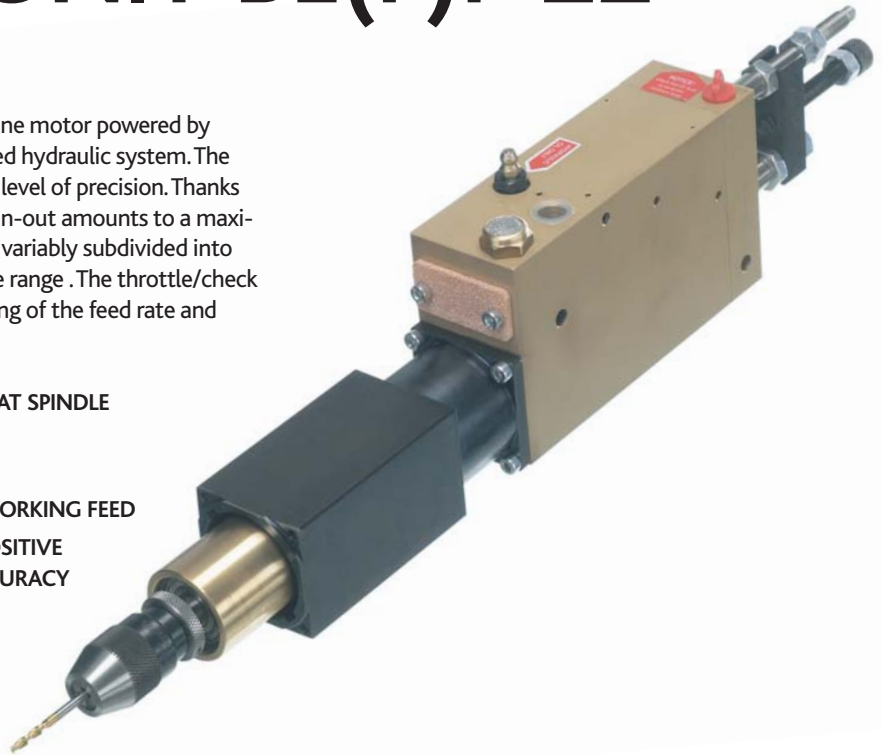
Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04-, VH06- MBK 6V-series	42 46
CONTROLS	TYPE	PAGE
	Controls for BE 22/33-units Electric Pneumatic	56
MOUNTINGS	TYPE	PAGE
	Mountings for the BE(FP) 22	

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** and if it is to be used in **Lubrication-free operation**.

AIR HYDRAULIC PRECISION DRILLING UNIT BE(F)P 22

The basic design of the BE(F)P 22 consists of a vane motor powered by compressed air, a pneumatic cylinder, and a closed hydraulic system. The BE(F)P 22 has a precision chuck for an extra high level of precision. Thanks to precision, separate and double ball bearings run-out amounts to a maximum of 0.01 mm. The total stroke length can be variably subdivided into rapid advance and working feed across the whole range. The throttle/check valve in the hydraulic system permits exact setting of the feed rate and high speed return.



- PRECISION DESIGN WITH A MAX RUN-OUT AT SPINDLE NOSE OF 0.01 MM
- EXTREMELY COMPACT DESIGN
- BUILT-IN HYDRAULICS FOR CONTROLLED WORKING FEED
- ADJUSTMENT OF DRILLING DEPTH WITH POSITIVE STOP GUARANTEES A HIGH DEGREE OF ACCURACY
- LOW NOISE LEVEL
- MINIMAL AIR CONSUMPTION

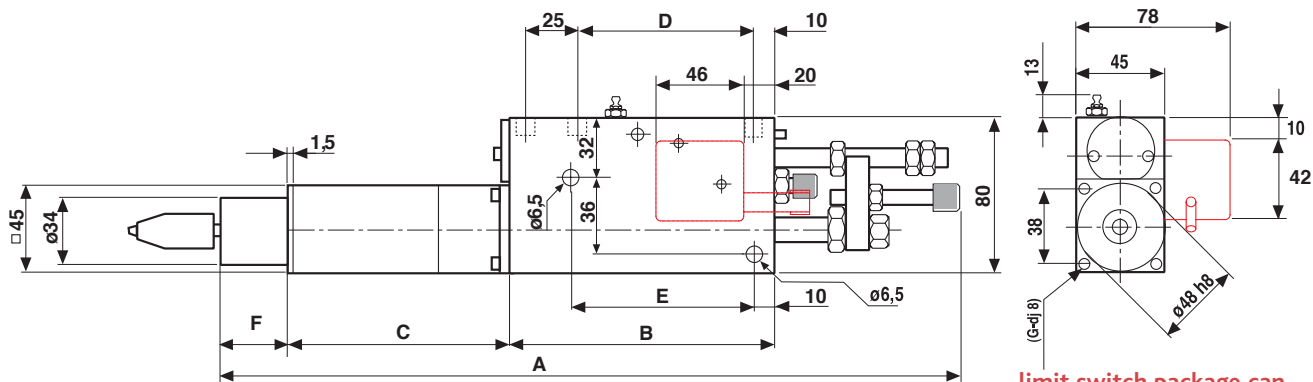
Guidelines for choice of unit			[Ø, mm]
DRILLING UNIT	CAPACITY IN STEEL	CAPACITY IN ALUMINIUM/BRASS	CAPACITY IN WOOD/PLASTICS
BE(F)P 2222	5	9	12
BE(F)P 2236	4	7	10
BE(F)P 2249	3	6	8
BEFP 22150	2	3	4
BEP 22220	2	3	4

Performance specifications at 6.3 Bar					
Thrust (max.)	600 N	Min. CC Spindle Spacing	45 mm	Air consumption	<0.3 Nm ³ /min
Power	0.25 kW	Run-out at spindle nose (max.)	0.01 mm	Sound level	70 dB(A)
Stroke (max.)		Depth accuracy +/-	0.01 mm		
BEP 100% controlled	30 mm	Rapid advance rate	10 m/min		
BEFP total	60 mm	Controlled feed rate	>0.01 m/min		
of which is controlled	45 mm	Working pressure range	6–7 Bar		

DRILLING UNIT	SPEED (IDLE) [RPM]	SPEED (AT MAX OUTPUT) [RPM]	TORQUE (AT MAX OUTPUT) [NM]
BEP 2222	2 200	1 100	2.4
BEFP 2222	2 200	1 100	2.4
BEP 2236	3 600	1 800	1.5
BEFP 2236	3 600	1 800	1.5
BEP 2249	4 900	2 450	1.1
BEFP 2249	4 900	2 450	1.1
BEFP 22150	15 000	7 500	0.25
BEP 22220	22 000	11 000	0.25

Dimensions

[mm]






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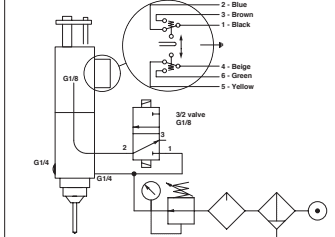
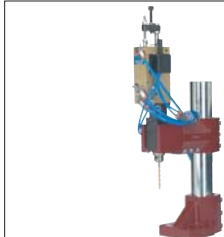
limit switch package can be mounted on either side.

DRILLING UNIT	A	[MM]	B	[MM]	C	[MM]	D	[MM]	E	[MM]	F	[MM]	WEIGHT	[KG]
BEP 2222	380		140		116		94.5		107		32		4.7	
BEFP 2222	485		200		146		154.5		167		2		6.7	
BEP 2236	380		140		116		94.5		107		32		4.7	
BEFP 2236	485		200		146		154.5		167		2		6.7	
BEP 2249	380		140		116		94.5		107		32		4.7	
BEFP 2249	485		200		146		154.5		167		2		6.7	
BEFP 22150	485		200		146		154.5		167		2		6.7	
BEP 22220	380		140		116		94.5		107		32		4.7	

Necessary components

CHUCKS	TYPE	PAGE
	Precision chucks \varnothing 0–3.0 mm \varnothing 0–5.0 mm (Standard chuck) \varnothing 0–8.0 mm	51
COLLETS	TYPE	PAGE
	Precision Collet Chuck ER 11 \varnothing 0.5–8.0 mm	51
COLLETS	TYPE	PAGE
	ER 11 \varnothing 0.5–8.0 mm	51
LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	56

Accessories

CONTROLS	TYPE	PAGE
	Controls for BE 22/33-units Electric Pneumatic	56
MOUNTINGS	TYPE	PAGE
	Mountings for the BE(FP)22	–

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 and if to be used in Lubrication-free operation.

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

E2 Systems AB, Strömslundsgatan 3, SE-507 62 Borås, Sweden

Tel: +46 33 20 88 40 , Fax: +46 33 20 88 49

www.e2systems.com