

# AIR HYDRAULIC DRILLING UNIT BE 33

The basic design of the BE 33 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 over the whole range. The throttle/check valve in the hydraulic system permits exact setting of the feed rate and high speed return.



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

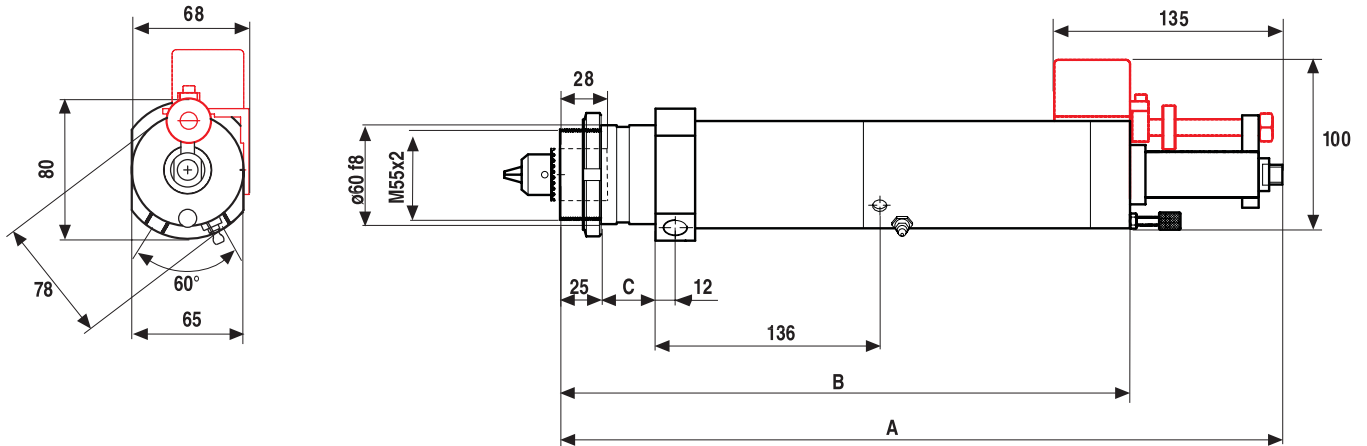
Guidelines for choice of unit												[Ø, mm]
DRILLING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN WOOD/PLASTICS			
No of Spindles	1	2	3	4	1	2	3	4	1	2	3	4
BE 335	10	6	4	3	14	10	8	5	20	12	10	9
BE 337	10	6	4	3	14	10	8	5	20	12	10	9
BE 3313	9	6	4	2.5	12	10	8	5	16	12	10	9
BE 3326	7	4	3	2	10	8	6	4	13	10	9	8
BE 3333	6	3	3	2	9	7	5	4	13	10	8	7
BE 3360	3	2	2	1	7	5	4	3	8	8	6	5
BE 33210	2.5				4				5			

Performance specifications at 6.3 Bar					
Thrust	see below	Run-out at spindle nose (max.)	0.05 mm	Air consumption	<0.5 Nm <sup>3</sup> /min
Power	0.36 kW	Depth accuracy +/-	0.01 mm	Sound level	70 dB(A)
Stroke (max. 100% controlled)	50 mm	Rapid advance rate	10 m/min		
Min. Center to Center Spacing		Controlled feed rate	>0.01 m/min		
Single Spindle	65 mm	Working pressure range	6–7 Bar		
Double-Spindle Head	11 mm				

DRILLING UNIT	SPEED (IDLE) [RPM]	SPEED (AT MAX OUTPUT) [RPM]	TORQUE (AT MAX OUTPUT) [NM]	THRUST [N]
BE 335	500	250	12.6	1 000
BE 337	700	350	10.4	1 000
BE 3313	1 300	650	5.7	1 000
BE 3326	2 600	1 300	2.9	800
BE 3333	3 300	1 650	2.3	800
BE 3360	6 000	3 000	1.3	800
BE 33210	21 000	10 500	0.37	800

## Dimensions

[mm]




You can download 2D CAD-drawings and 3D CAD-models on [www.e2systems.com](http://www.e2systems.com).


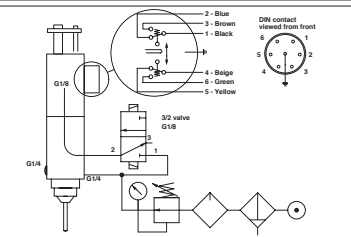

limit switch package.

DRILLING UNIT	A [MM]	B [MM]	C [MM]	WEIGHT [KG]
BE 335	472	380	67	7.1
BE 337				
BE 3313				
BE 3326	438	346	33	6.6
BE 3333				
BE 3360				
BE 33210				

## Necessary components

CHUCKS	TYPE	PAGE
	Key chucks Ø 0.5–6.5 mm Ø 0.8–10.0 mm (Standard chuck)	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-, VH08-, MBK 6V- and MBKV 60- series	42 47
CONTROLS	TYPE	PAGE
	Controls for BE 22/33- units Electric Pneumatic	56
MOUNTINGS	TYPE	PAGE
	Mountings for the BE33	–

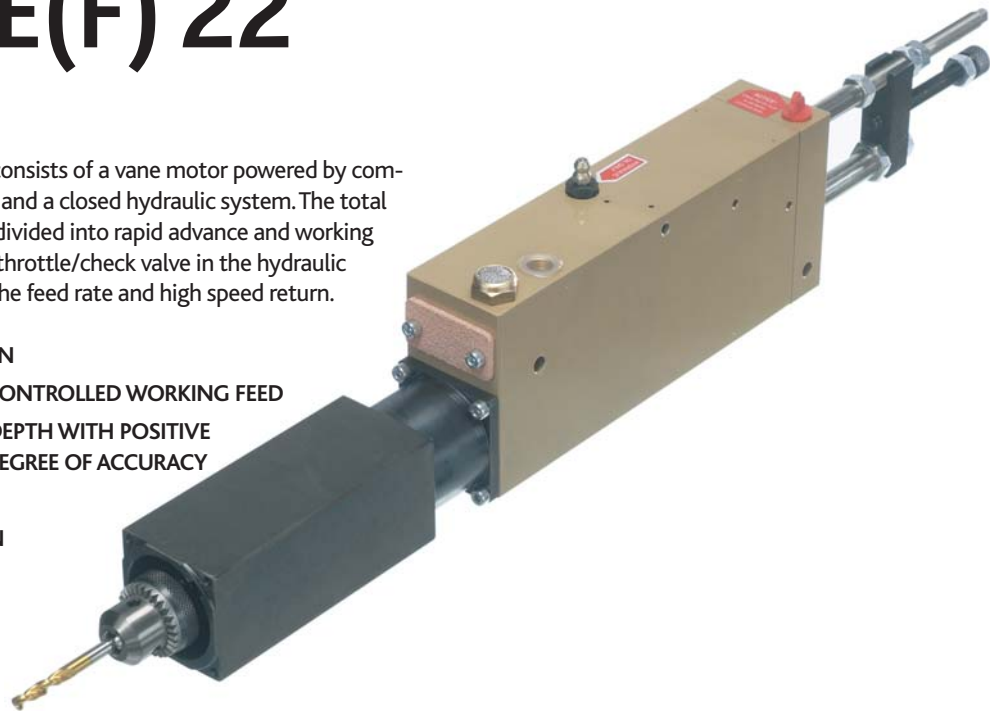
On [www.e2system.com](http://www.e2system.com) you can find more information as well as the same information as above in imperial units.

When requesting a quote or ordering please state: **Model, Chuck (collet size), Limit Switches** and if it is to be used for **Lubrication-free operation**.

# 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 <sup>3</sup> /min
	BEF total		Run-out at spindle nose (max.)		Sound level	70 dB(A)
	of which is controlled		Depth accuracy +/-			
	30 mm		Rapid advance rate			
	60 mm					
	45 mm					

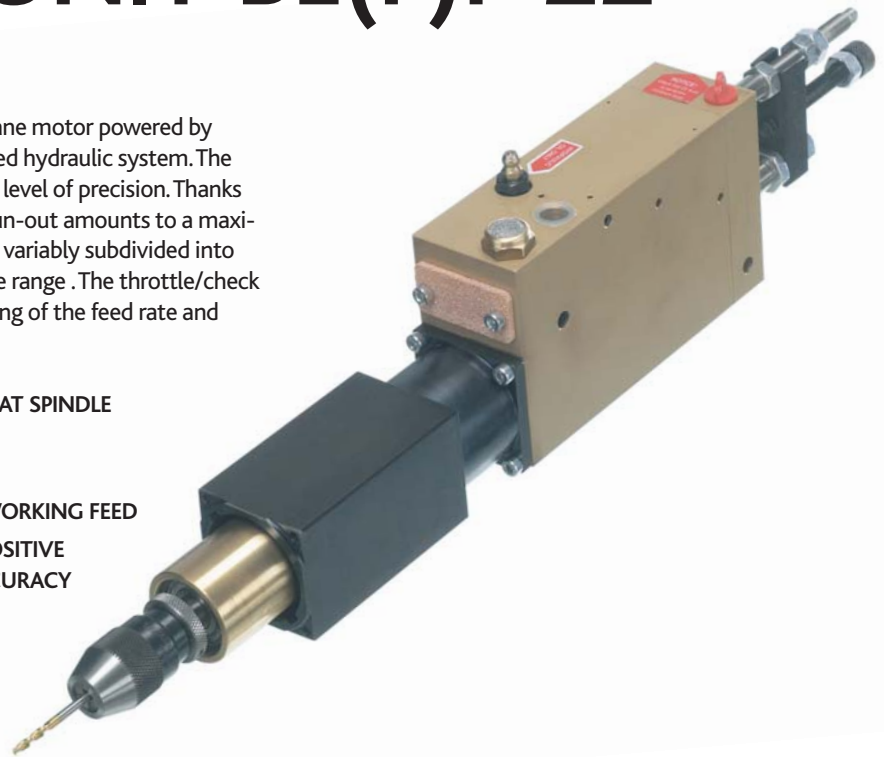
DRILLING UNIT	SPEED [IDLE]	[RPM]	SPEED [AT MAX OUTPUT]	[RPM]	TORQUE (AT MAX OUTPUT)	[NM]
BE (F) 225	500		250		9.9	
BE (F) 228	800		400		6.0	
BE (F) 2211	1 100		550		4.3	
BE (F) 2222	2 200		1 100		2.4	
BE (F) 2236	3 600		1 800		1.5	
BE (F) 2249	4 900		2 450		1.1	
BE (F) 22150	15 000		7 500		0.25	
BE 22220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



# 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

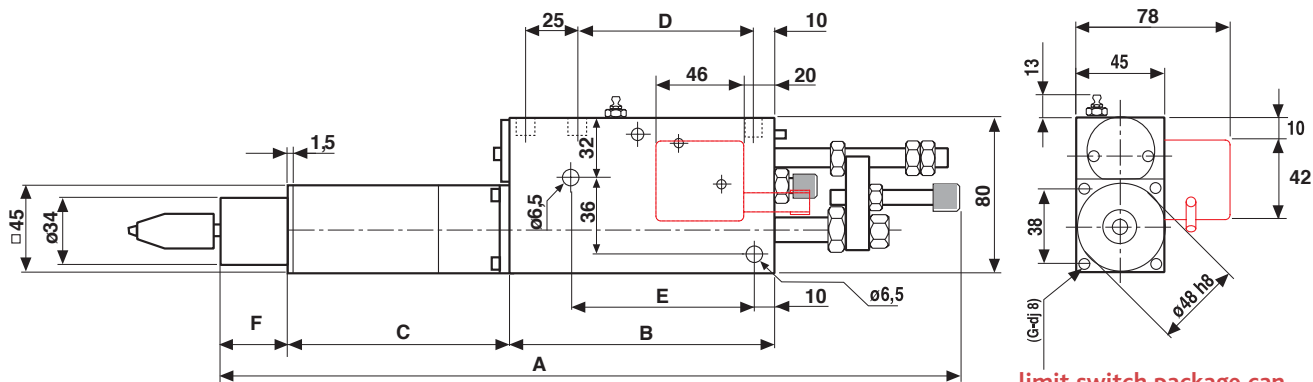
## Performance specifications at 6.3 Bar

Thrust (max.)	600 N	Min. CC Spindle Spacing	45 mm	Air consumption	<0.3 Nm <sup>3</sup> /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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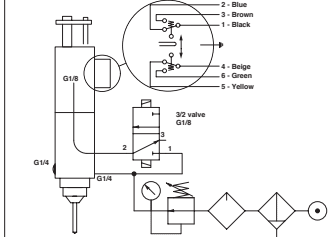
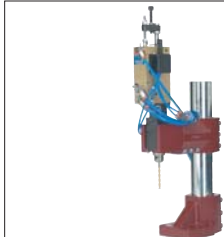
limit switch package can be mounted on either side.

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 Ø 0–3.0 mm Ø 0–5.0 mm (Standard chuck) Ø 0–8.0 mm	51
COLLETS	TYPE	PAGE
	Precision Collet Chuck ER 11 Ø 0.5–8.0 mm	51
COLLETS	TYPE	PAGE
	ER 11 Ø 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	–

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