

DRILLING UNITS

E2 drilling units can be found throughout the world wherever a high level of productivity and precision is vital. A long service life with excellent reliability and continued precision makes E2's drilling units a good investment.

E2 drilling units range from compact pneumatic units to power packs with electrically-operated spindles and integrated hydraulic systems. E2 units are easy to install as well as use, and have functions such as quick advance, controlled working feed, multi-wall drilling and chip-removal. Most are available with multi-spindle heads.

Each drilling unit's details include all the necessary information for selecting a suitable model based on the requirements set by your drilling application and the cutting data specified by your drill supplier. In addition to performance specifications, you will also find information on dimensions, necessary components and accessories.

To provide a quick summary, there are also guidelines for the capacities of the various models, based on conventional drills, in the most common materials.

DRILLING UNITS

UNIT	PAGE	DRIVE	FEED	DRILLING CAPACITY IN [ø, mm]		
				STEEL	ALUMINIUM/ BRASS	PLASTICS/ WOOD
BE11 and HFS100	6	Pneumatic Turbine	None	1,5	3	4
BE22SK	8	Pneumatic 5-vane Motor	None	8	12	22
BEP22SK	10	Pneumatic 5-vane Motor	None	6	9	14
BE33SK	12	Pneumatic 5-vane Motor	None	13	16	26
BE(S)21	14	Pneumatic 5-vane Motor	Pneumatic	6	11	16
BE(F)22	16	Pneumatic 5-vane Motor	Controlled, Air Hydraulic	6	11	16
BE(F)P22	18	Pneumatic 5-vane Motor	Controlled, Air Hydraulic	5	9	12
BE33	20	Pneumatic 5-vane Motor	Controlled, Air Hydraulic	10	14	20
BE48	22	Electric	Controlled, Air Hydraulic	16	25	35
BE55	24	Electric	Controlled, Hydraulic	25	35	40

HIGH PRECISION DRILLING UNIT BE11 AND HIGH SPEED GRINDER HFS100

Precision drilling/grinding unit with a basic design based on a patented air-driven turbine motor. The drive unit is powered without intermediate gears and features variable speed control up to 80 000 rpm. A special high-speed precision bearing makes the drilling unit extremely quiet with a sound level of 67 dB (A). BE 11 / HFS 100 is designed for lubrication-free operation.

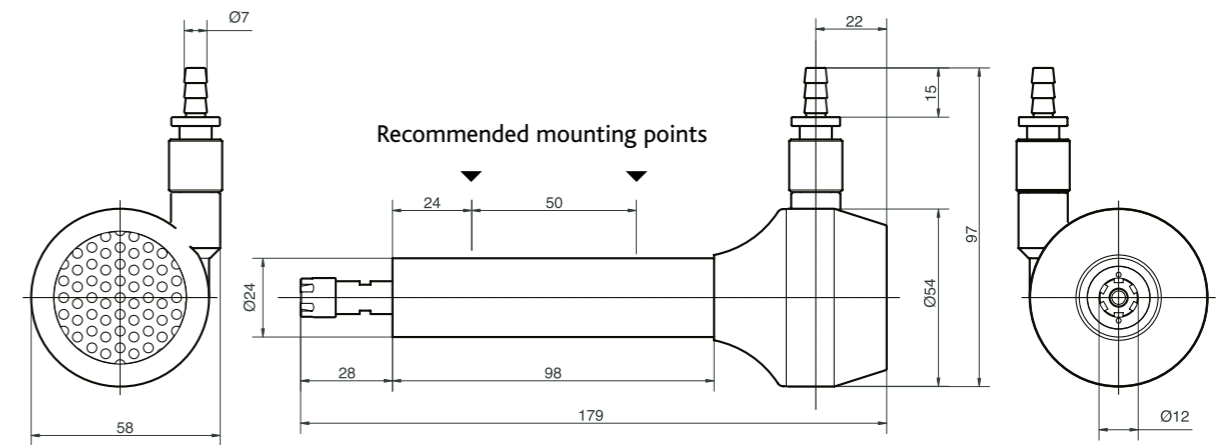
- 80 000 RPM
- PRECISION UNIT FOR DRILLING, DEBURRING ETC
- HIGHLY STABLE BEARING SYSTEM
- LOW NOISE LEVEL (67 dB(A))
- HFS 100: ALSO AVAILABLE AS HIGH SPEED GRINDER (HFS100), WHICH INCLUDES A HOSE SUITABLE FOR MANUAL HANDLING OF THE UNIT (SEE PICTURE).



Guidelines for choice of unit				[Ø, mm]
DRILLING UNIT	CAPACITY IN STEEL	CAPACITY IN ALUMINIUM/BRASS	CAPACITY IN WOOD/PLASTICS	
BE 11	1.5	3	4	


Performance specifications at 6.3 bar					
Power	0.08 kW	Min. CC Spindle Spacing	54 mm	Air consumption	<0.12 Nm ³ /min
Speed	<80 000 rpm	Run-out at spindle nose (max.)	0.007 mm	Sound level	67 dB(A)
Torque	0.02 Nm	Working pressure range	4–6.3 Bar		

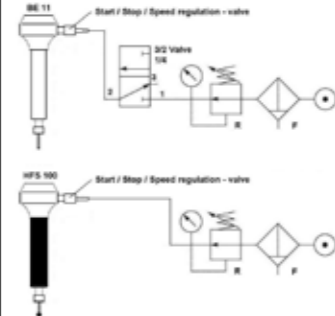
Dimensions [mm]



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

WEIGHT 0.45 KG

Necessary components		
COLLETS	TYPE	PAGE
	ER 8 collets 1.0 – 5.0 mm	47

Accessories		
CONTROLS	TYPE	PAGE
	Controls for BE 11/HFS 100	51

PNEUMATIC DRILLING UNIT BE 22 SK

The BE 22 SK consists of an air motor, a gear box and a body. The design is compact as well as robust. BE 22 SK comes in a wide range of speeds, and is available for lubrication-free operation.

- STURDY AND COMPACT DESIGN
- WIDE RANGE OF RPMs
- DIRECTED EXHAUST
- CHUCK ALTERNATIVES UP TO Ø20 MM
- IS AVAILABLE IN COUNTER CLOCKWISE ROTATION

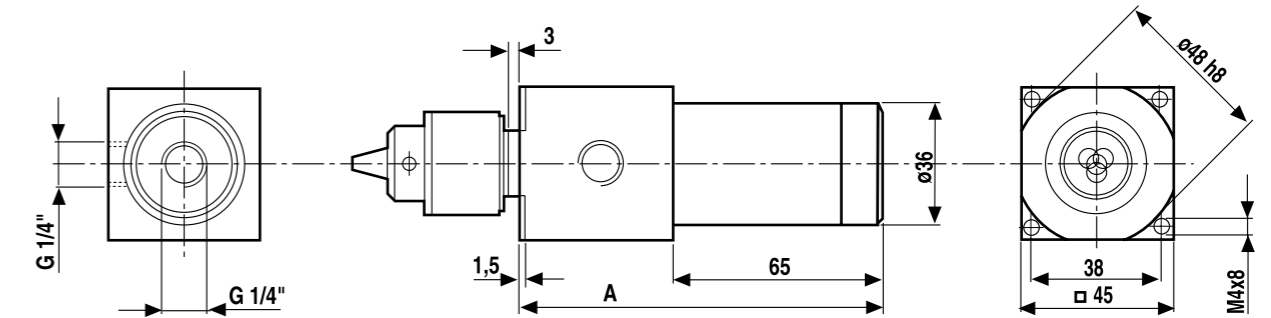


Guidelines for choice of unit [Ø, mm]												
DRILLING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN WOOD/PLASTICS			
	1	2	3	4	1	2	3	4	1	2	3	4
LOW SPEED												
BE 225 SK	8	6	5	4	12	9	8	7	22	11	9	8
BE 228 SK	8	5	5	4	12	9	8	7	20	11	9	7
BE 2211 SK	6	4	4	4	10	8	7	6	16	11	9	7
BE 2222 SK	6	3	3	3	9	7	6	5	14	9	8	6
HIGH SPEED												
BE 2236 SK	5	2.5	2.5	2	8	6	6	5	12	8	7	5
BE 2249 SK	4	1.5	1.5	1.5	6	5	5	4	10	6	6	4
BE 22220 SK	2				3				4			

Performance specifications at 6.3 Bar					
Power	0.25 kW	Run-out at spindle nose (max.)	0.03 mm	Air consumption	<0.3 Nm ³ /min
Min. Center to Center Spacing		Working pressure range	6-7 Bar	Sound level	70 dB(A)
Single Spindle	45 mm				
Double-Spindle Head	11 mm				

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

Dimensions [mm]



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

DRILLING UNIT	A [MM]	WEIGHT [KG]
LOW SPEED		
BE 225 SK	141	1.5
BE 228 SK		
BE 2211 SK		
HIGH SPEED		
BE 2222 SK	109	0.9
BE 2236 SK		
BE 2249 SK		
BE 22220 SK		

Necessary components

CHUCKS	TYPE	PAGE
	Key chucks Ø 0.5-6.5 mm (Standard chuck) Ø 0.8-10.0 mm	47
	Collet Chucks ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47
COLLETS	TYPE	PAGE
	ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47

Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04, VH06	38
CONTROLS	TYPE	PAGE
	Controls for BE SK-units	51

PNEUMATIC PRECISION DRILLING UNIT BEP 22 SK

The BEP 22 SK is a precision drilling unit, equipped with a precision chuck. Thanks to separate and double ball bearings run-out amounts to a maximum of 0.01 mm. Its design is compact as well as robust. The BEP 22 SK comes in a wide range of speeds, and is available for lubrication-free operation.

- HIGH PRECISION
- STURDY AND COMPACT DESIGN
- WIDE RANGE OF RPM:s
- DIRECTED EXHAUST

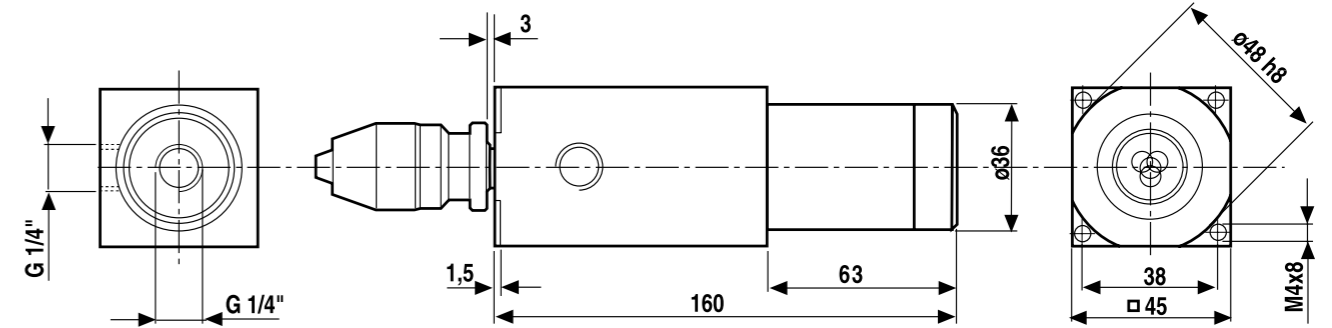


Guidelines for choice of unit [Ø, mm]			
DRILLING UNIT	CAPACITY IN STEEL	CAPACITY IN ALUMINIUM/BRASS	CAPACITY IN WOOD/PLASTICS
BEP 2222 SK	6	9	14
BEP 2236 SK	5	8	12
BEP 2249 SK	4	6	10
BEP 22220 SK	2	3	4

Performance specifications at 6.3 Bar					
Power	0.25 kW	Run-out at spindle nose (max.)	0.01 mm	Air consumption	<0.3 Nm ³ /min
Min. CC Spindle Spacing	45 mm	Working pressure range	6–7 Bar	Sound level	70 dB(A)

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

Dimensions [mm]



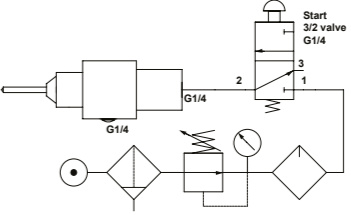
You can download 2D CAD-drawings and 3D CAD-models on www.e2systems.com.

WEIGHT 1.7 KG

Necessary components

CHUCKS	TYPE	PAGE
	Precision chucks Ø 0–3.0 mm Ø 0–5.0 mm (Standard chuck) Ø 0–8.0 mm	47
	Precision Collet Chuck ER 11 Ø 0.5–8.0 mm	47
COLLETS	TYPE	PAGE
	ER 11 Ø 0.5–8.0 mm	47

Accessories

CONTROLS	TYPE	PAGE
	Controls for BE SK-units	51

PNEUMATIC DRILLING UNIT BE 33 SK

The BE 33 SK consists of an air motor, a gear box and a body. The design is compact as well as robust. BE 33 SK comes in a wide range of speeds, and is available for lubrication-free operation.

- STURDY AND COMPACT DESIGN
- WIDE RANGE OF RPMs
- DIRECTED EXHAUST
- CHUCK ALTERNATIVES UP TO Ø20 MM
- IS AVAILABLE IN COUNTER CLOCKWISE ROTATION

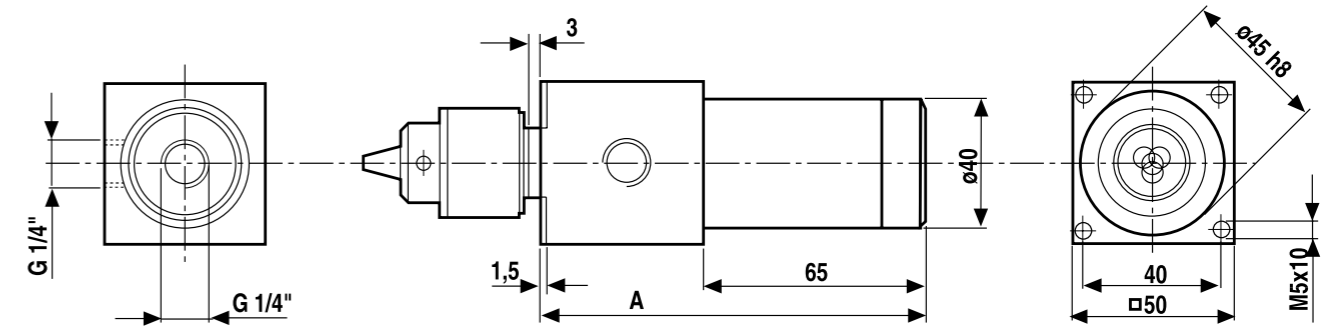


Guidelines for choice of unit [Ø, mm]													
DRILLING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN WOOD/PLASTICS				
	No of Spindles	1	2	3	4	1	2	3	4	1	2	3	4
LOW SPEED	BE 335 SK	13	7	6	6	16	10	10	9	26	12	10	10
	BE 337 SK	13	7	6	6	16	10	10	8	22	12	10	10
	BE 3313 SK	10	7	6	5	14	10	8	8	20	12	10	10
HIGH SPEED	BE 3326 SK	9	6	5	4	12	9	8	6	16	10	10	9
	BE 3333 SK	6	5	4	3	9	7	6	6	13	10	8	8
	BE 3360 SK	4	4	3	3	7	5	5	5	10	8	6	5
	BE 33210 SK	2.5				4				5			

Performance specifications at 6.3 Bar					
Power	0.36 kW	Run-out at spindle nose (max.)	0.05 mm	Air consumption	<0.5 Nm ³ /min
Min. Center to Center Spacing		Working pressure range	6-7 Bar	Sound level	70 dB(A)
Single Spindle	50 mm				
Double-Spindle Head	11 mm				

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

Dimensions [mm]



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

DRILLING UNIT	A [MM]	WEIGHT [KG]
BE 335 SK	149	2.0
BE 337 SK		
BE 3313 SK		
BE 3326 SK	115	1.4
BE 3333 SK		
BE 3360 SK		
BE 33210 SK		

Necessary components

CHUCKS	TYPE	PAGE
	Key chucks Ø 0.8-10.0 mm (Standard chuck)	47
	Collet Chucks ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47
COLLETS	TYPE	PAGE
	ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47

Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04, VH06, VH08	38
CONTROLS	TYPE	PAGE
	Controls for BE SK-units	51

AIR OPERATED DRILLING UNIT BE(S) 21

The BE 21 is an air operated drilling unit with feed. The design of the BE 21 makes it very suitable for drilling blind holes, reaming etc. We also offer this unit in a Stainless version, the BES 21, ideal for operation in environments where water or other corrosive fluids are present.

- EXTREMELY COMPACT (OUTER Ø 45 MM)
- POSITIVE STOP GUARANTEES HIGH DEGREE OF ACCURACY
- LOW AIR CONSUMPTION
- LOW NOISE LEVEL
- AVAILABLE IN STAINLESS DESIGN FOR CORROSIVE ENVIRONMENTS



Guidelines for choice of unit [Ø, mm]

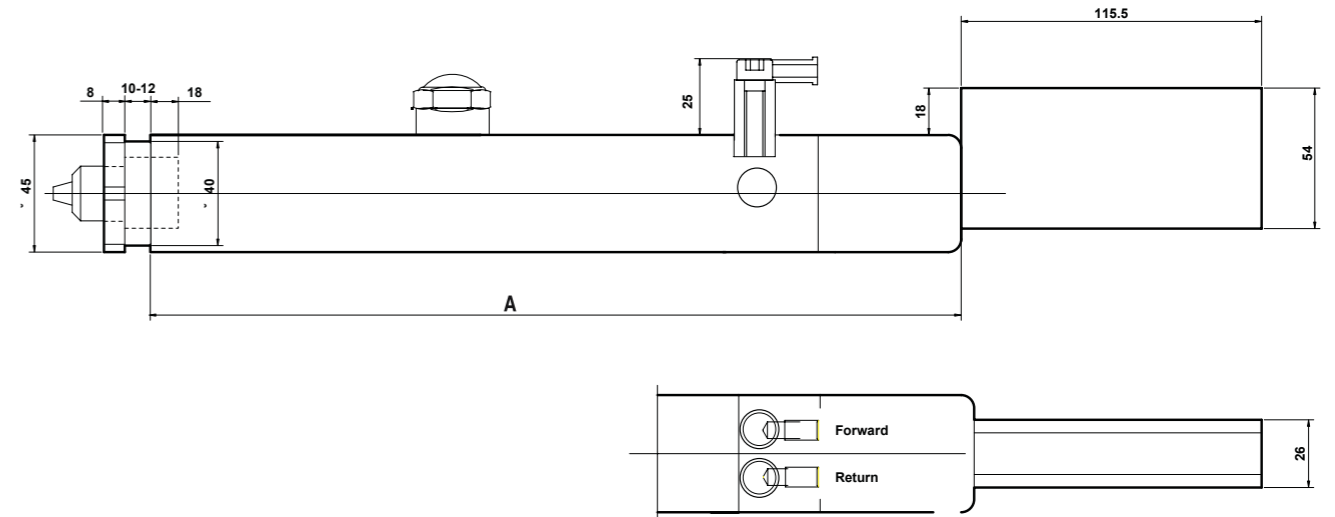
DRILLING UNIT	CAPACITY IN STEEL	CAPACITY IN ALUMINIUM/BRASS	CAPACITY IN WOOD/PLASTICS
BE(S) 215	6	11	16
BE(S) 218	6	11	16
BE(S) 2111	6	10	14
BE(S) 2122	5	9	12
BE(S) 2136	4	7	10
BE(S) 2149	3	6	8
BE(S) 21220	2	3	4

Performance specifications at 6.3 Bar

Thrust (max.)	665 N	Min. CC Spindle Spacing	45 mm	Working pressure range	6-7 Bar
Power	0.25 kW	Run-out at spindle nose (max.)	0.05 mm	Air consumption	<0.3 Nm ³ /min
Stroke (max.)	50 mm	Depth accuracy +/-	0.01 mm	Sound level	70 dB(A)

DRILLING UNIT	SPEED (IDLE) [RPM]	SPEED (AT MAX OUTPUT) [RPM]	TORQUE (AT MAX OUTPUT) [NM]
BE(S) 215	500	250	9.9
BE(S) 218	800	400	6.0
BE(S) 2111	1 100	550	4.3
BE(S) 2122	2 200	1 100	2.4
BE(S) 2136	3 600	1 800	1.5
BE(S) 2149	4 900	2 450	1.1
BE(S) 21220	15 000	7 500	0.25

Dimensions [mm]



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

DRILLING UNIT	A [MM]	WEIGHT [KG]
BE 215		
BE 218	312	3.3
BE 2111		
BE 2122		
BE 2136	282	3.1
BE 2149		
BE 21220		
BES 215		
BES 218	312	3.0
BES 2111		
BES 2122		
BES 2136	282	2.8
BES 2149		
BES 21220		

Necessary components

CHUCKS	TYPE	PAGE
	Key chucks Ø 0.5-6.5 mm (Standard chuck) Ø 0.8-10.0 mm	47
	Collet Chucks ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47
COLLETS	TYPE	PAGE
	ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47

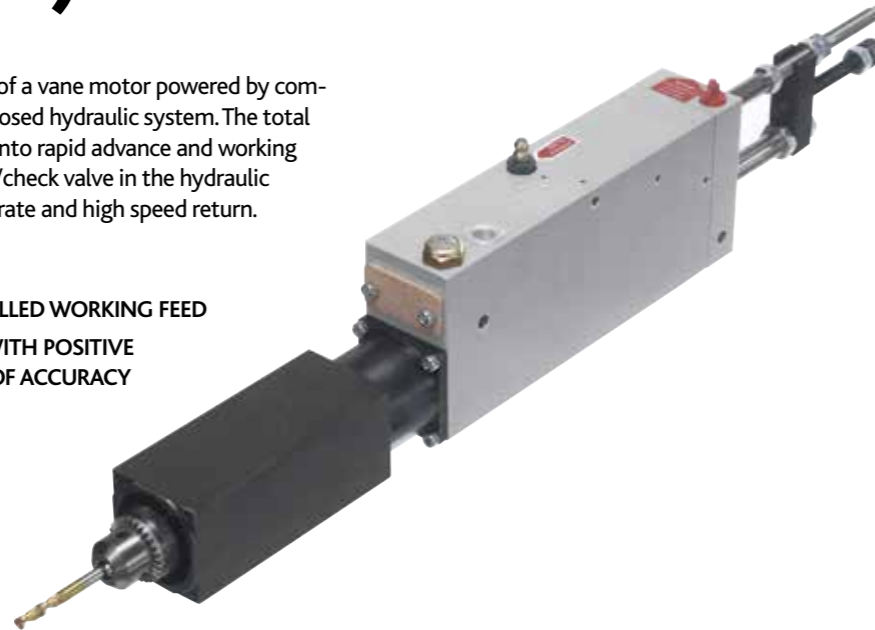
Accessories

LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	51
CONTROLS	TYPE	PAGE
	Controls for BE 21-units Pneumatic Electric	51

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]

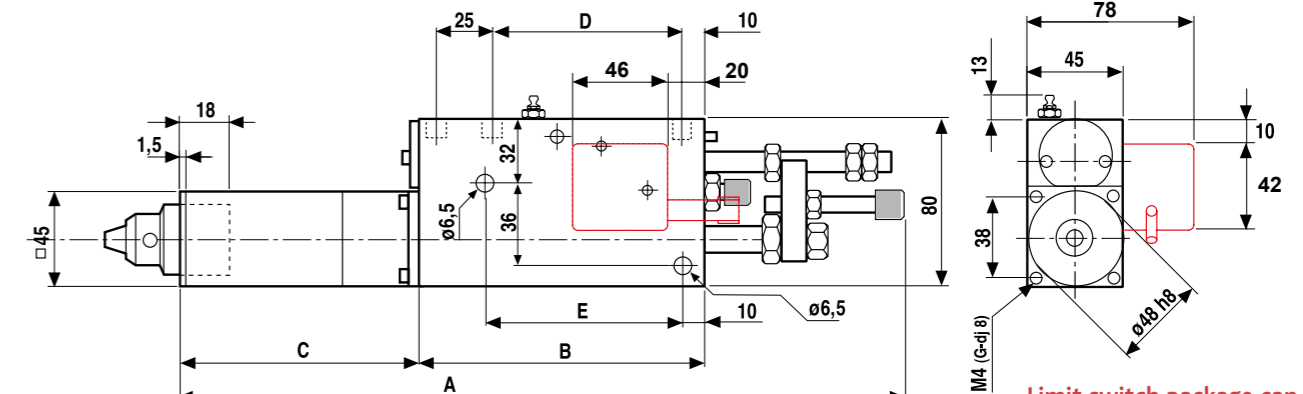
DRILLING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN WOOD/PLASTICS				
	No of Spindles	1	2	3	4	1	2	3	4	1	2	3	4
BE(F) 225	6	5	2.5	1.5	11	8	6	4	16	11	9	7	
BE(F) 228	6	5	2.5	1.5	11	8	6	4	16	11	9	7	
BE(F) 2211	6	4	2.5	1.5	10	8	6	4	14	11	9	7	
BE(F) 2222	5	3	2	1.5	9	7	5	4	12	9	8	6	
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	>0.01 m/min
Power	0.25 kW	Single Spindle	45 mm
Stroke (max.)		Double-Spindle Head	11 mm
BE 100% controlled	30 mm	Run-out at spindle nose (max.)	0.03 mm
BEF total	60 mm	Depth accuracy +/-	0.01 mm
of which is controlled	45 mm	Rapid advance rate	10 m/min

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.


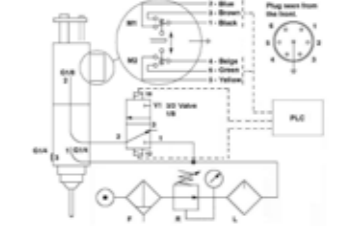

Limit switch package can be mounted on either side.

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	47
	Collet Chucks ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47
COLLETS	TYPE	PAGE
	ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47
LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	51

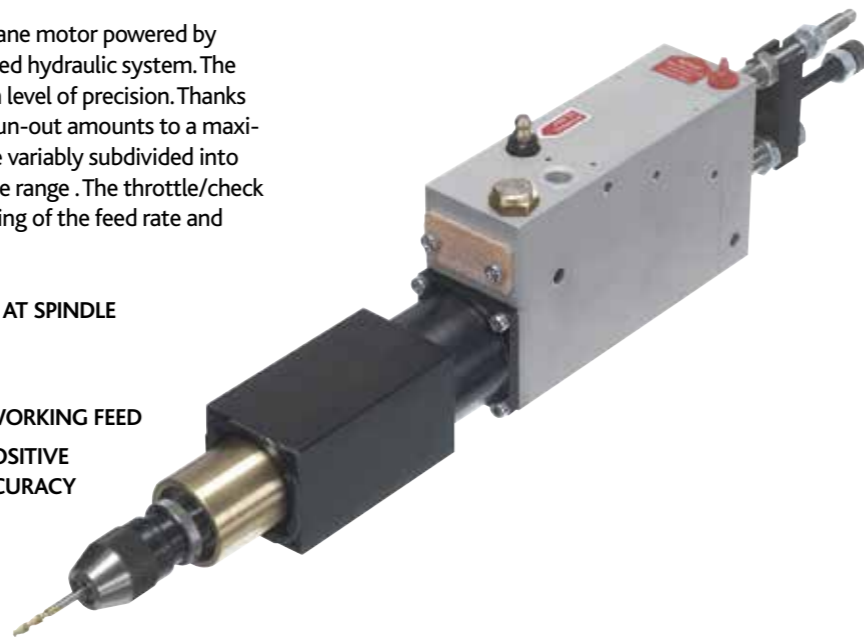
Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04, VH06	38
CONTROLS	TYPE	PAGE
	Controls for BE 22-units Electric Pneumatic	51
MOUNTINGS	TYPE	PAGE
	Mountings for the BE(FP) 22	

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

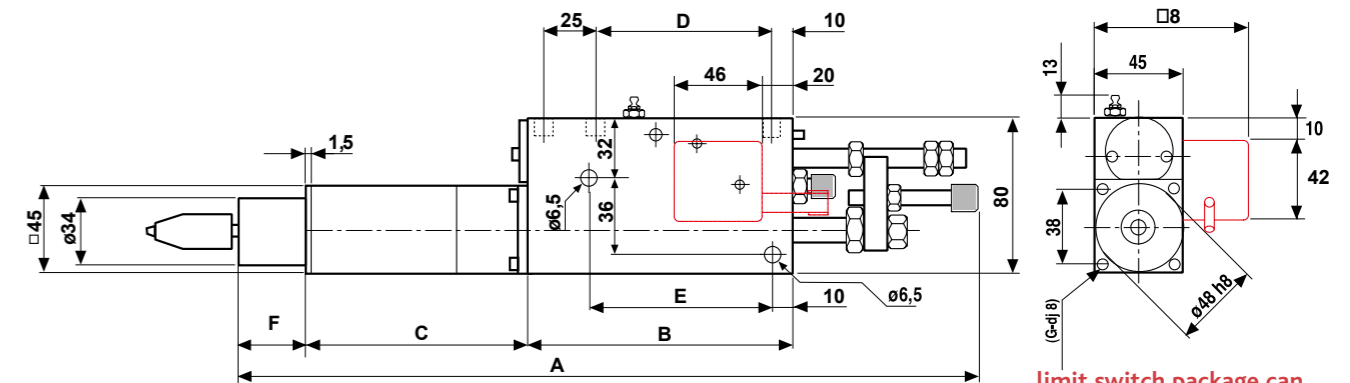


Guidelines for choice of unit [Ø, mm]			
DRILLING UNIT	CAPACITY IN STEEL	CAPACITY IN ALUMINIUM/BRASS	CAPACITY IN WOOD/PLASTICS
BE(F)P 2222	5	9	12
BE(F)P 2236	4	7	10
BE(F)P 2249	3	6	8
BEFP 22150	2	3	4
BEP 22220	2	3	4

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]



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]	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	47
COLLETS	TYPE	PAGE
	Precision Collet Chuck ER 11 Ø 0.5-8.0 mm	47
COLLETS	TYPE	PAGE
	ER 11 Ø 0.5-8.0 mm	47
LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	51

Accessories

CONTROLS	TYPE	PAGE
	Controls for BE 22-units Electric Pneumatic	51
MOUNTINGS	TYPE	PAGE
	Mountings for the BE(F)P22	

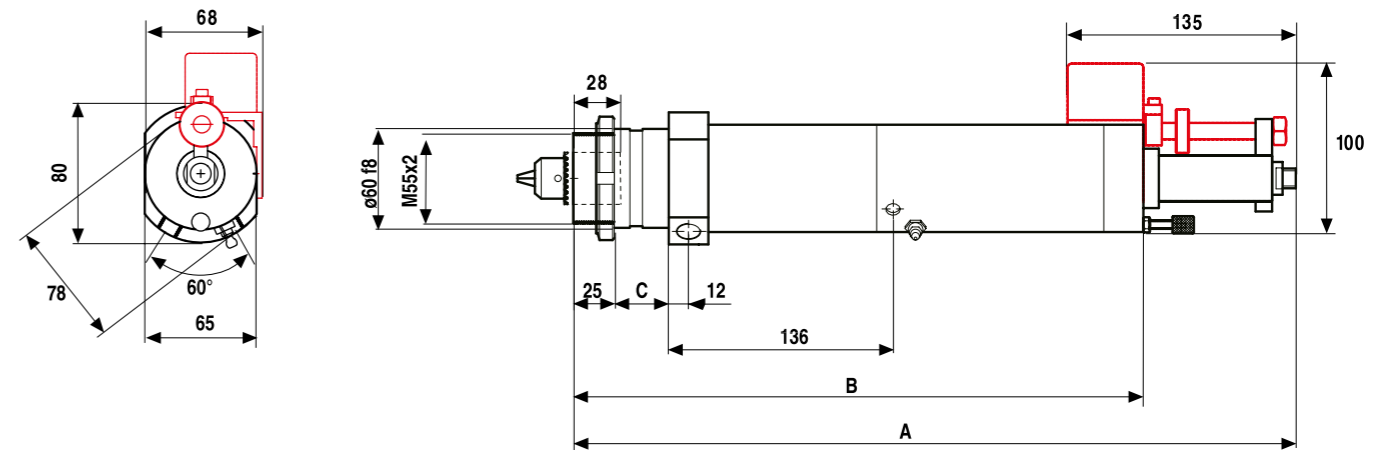
AIR HYDRAULIC DRILLING UNIT BE 33

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



Dimensions [mm]



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

limit switch package.

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

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	9
BE 337	10	6	4	3	14	10	8	5	20	12	10	9	9
BE 3313	9	6	4	2.5	12	10	8	5	16	12	10	9	9
BE 3326	7	4	3	2	10	8	6	4	13	10	9	8	8
BE 3333	6	3	3	2	9	7	5	4	13	10	8	7	7
BE 3360	3	2	2	1	7	5	4	3	8	8	6	5	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 ³ /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

Necessary components

CHUCKS	TYPE	PAGE
	Key chucks Ø 0.5-6.5 mm Ø 0.8-10.0 mm (Standard chuck)	47
	Collet Chucks ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47
COLLETS	TYPE	PAGE
	ER11 Ø 1.0-7.0 mm ER20 Ø 1.0-13.0 mm ER32 Ø 2.0-20.0 mm	47
LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	51

Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04, VH06, VH08	38
CONTROLS	TYPE	PAGE
	Controls for BE 33-units Electric Pneumatic	51
MOUNTINGS	TYPE	PAGE
	Mountings for the BE33	-

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			
No of Spindles	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
BE484	12	8	5	4	20	16	11	9	26	19	15	12
BE487	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
BE484	2 000 N	Double-Spindle Head	12 mm	Air consumption	2.8 l/100mm
BE487	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	BE484	BE487
2	0.55	1.1	2.2
4	0.37	0.75	1.5
6	0.25	0.55	1.1
8			0.55

• 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.

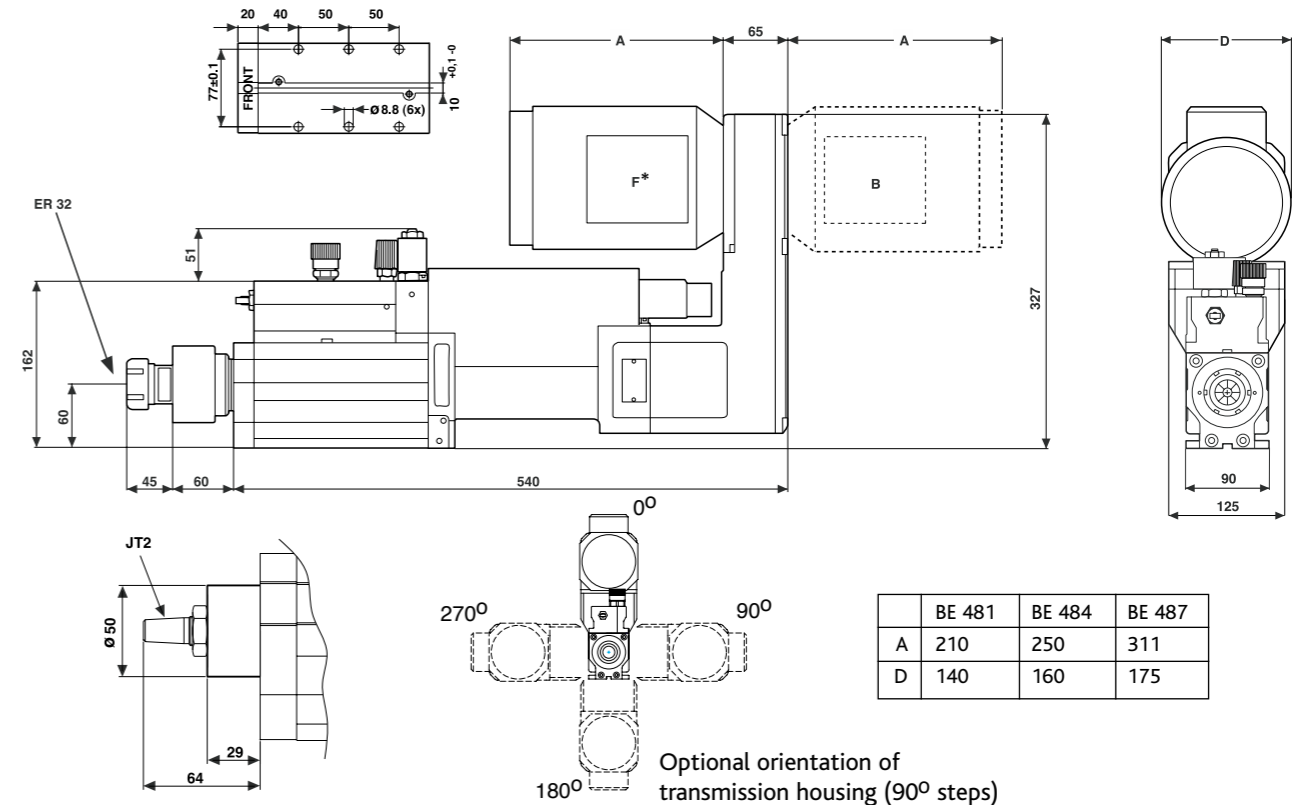
• The torque at the spindle for a specific rpm is calculated as:
 $M = (P_{[kW]} \times 9500) / \text{rpm}$

No of Poles	SPINDEL RPM AT GEAR RATIO AND 50HZ														
	2.5:1	2:1	1.8:1	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	1:2.5	1:3.1	
2	1130*	1350	1580	1750	2090	2420	2820	3290	3810	4550	5040	5880	7170*	8600*	
4	560*	670	780	860	1030	1190	1390	1620	1880	2240	2480	2900	3530*	4240*	
6	360*	440	510	560	670	780	910	1060	1230	1470	1630	1900	2310*	2780*	
8	270*	330	380	420	500	580	680	790	920	1100	1210	1420	1730*	2070*	

*Not available for BE487

Dimensions

[mm]



*Front mount is not possible at BE487 with linear transducer

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

WEIGHT 29-40 KG

Necessary components

CHUCKS	TYPE	PAGE
	Drill Chucks for JT2 Ø 1.0–10.0 mm Ø 3.0–16.0 mm	47
	Integrated ER32 Collet Chuck Ø 2.0 –20.0 mm	47
COLLETS	TYPE	PAGE
	ER32, Ø 2.0–20.0 mm	47
LIMIT SWITCHES	TYPE	PAGE
	Electric switches Pneumatic switches Inductive switches or Linear Transducer	51

Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04- VH06, VH08, VH10-	38
CONTROLS	TYPE	PAGE
	Controls for BE 48-units with Electric switches Pneumatic switches Inductive switches or Linear Transducer	51

On www.e2systems.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.**

ELECTRO HYDRAULIC DRILLING UNIT BE 55

BE 55 is a powerful yet compact electro-hydraulic series of units. The electric motor runs the spindle while the feed is hydraulically powered and controlled. The hydraulic feed control together with position switches makes it possible to include functions such as multi-wall drilling, rapid advance and automatic chip removal. The units are available in two different taper options as well as with multi-spindle heads.

- COMPACT YET POWERFUL DESIGN
- INTEGRATED HYDRAULIC SYSTEM
- LONG STROKE – 120 MM
- IDEAL FOR FLOW DRILLING
- HIGH PRECISION
- LOW NOISE LEVEL



Guidlines 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
BE55	25	19	14	11	35	27	23	18	40	35	26	23	

Performance specifications

Thrust (max.)	6 000 N	Run-out at spindle nose (max.)	JT2	0.02 mm	Controlled feed rate	0.04–0.65 m/min
Stroke (max. 100% controlled)	120 mm		MT2	0.03 mm	Sound level	<80 dB(A)
Min. Center to Center Spacing			Depth accuracy +/-	0.01 mm		
Single Spindle	140 mm		Rapid advance rate (max.)	6 m/min		
Double-Spindle Head	17 mm					

Motor and Transmission specifications

No of Poles	DRILLING UNIT/MOTOR AT V380-420(Y)/220-240(Δ)50HZ [kW] BE55
2	2.2
4	1.5
6	1.1
8	0.55

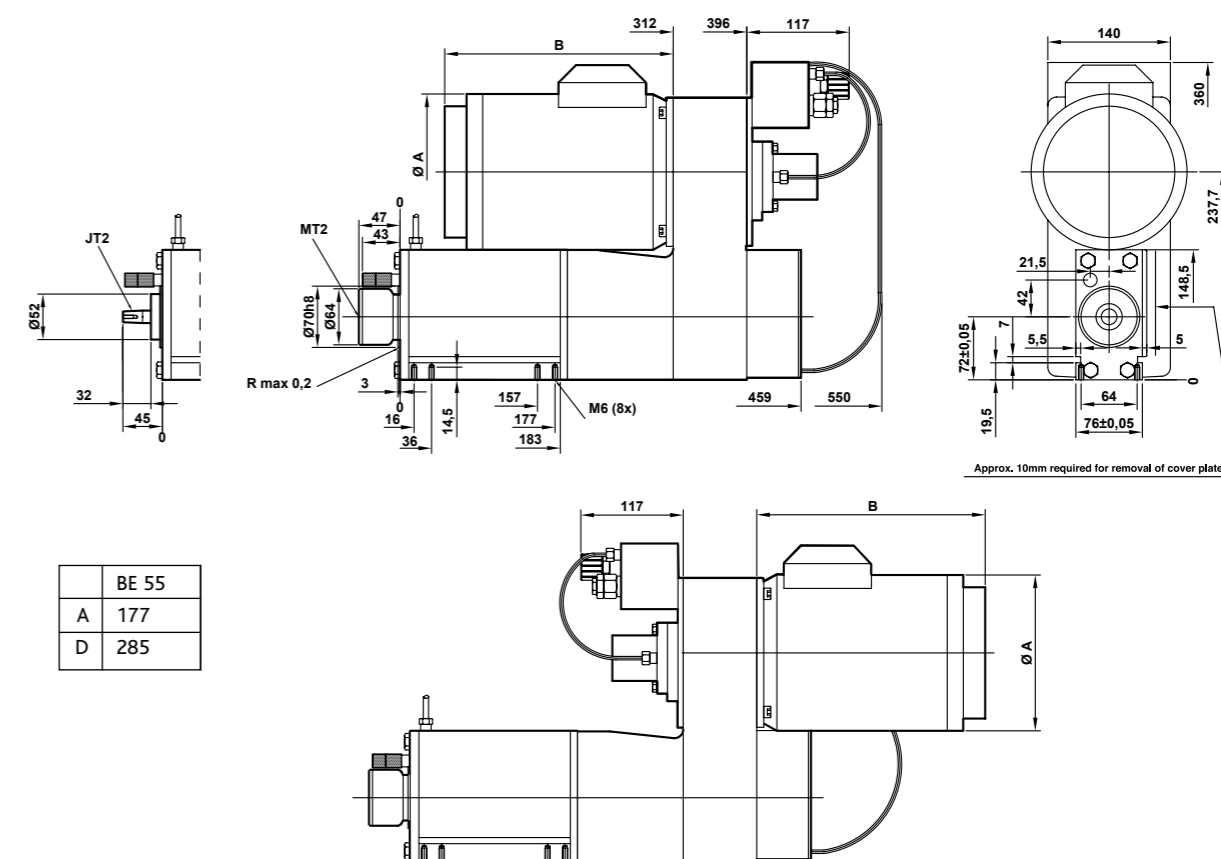
• Motor specifications shown in the tables are valid for 380–420V(Y) / 220–240V(Δ) (±5%), 50 Hz. These motors can also be used at 440–480V(Y) (±5%), 60 Hz. If so the rpm will increase by ~20% and the power by ~15% relative to the data for 50Hz. E2 also offers motors for other voltages and frequencies. 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								
	2.8:1	2.2:1	1.7:1	1.3:1	1:1	1:1.3	1:1.7	1:2.2	1:2.8
2	1020	1300	1690	2170	2820	3670	4700	6130	7780
4	500	640	830	1070	1390	1810	2320	3020	3830
6	330	420	550	700	910	1180	1520	1980	2510
8	250	310	410	520	680	880	1130	1480	1880

Dimensions

[mm]



	BE 55
A	177
D	285

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

WEIGHT 35-46KG

Necessary components

CHUCKS	TYPE	PAGE
	Drill Chucks for JT2: Ø 1.0–10.0 mm for MT2: Ø 3.0–16.0 mm	47
	Collet Chuck for JT2 ER 40 Ø 3.0–30.0 mm Collet Chuck for MT2 ER40 Ø 2.0–30 mm	47
COLLETS	TYPE	PAGE
	Collets ER 40 Ø 3.0–30.0 mm	47

Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH06, VH08, VH10, VH13, VH18	38
CONTROLS	TYPE	PAGE
	Controls for BE(G)55-units	51

On www.e2systems.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), Control system, Spindle rpm, Motor Power and Front or Backward Motor orientation.**