

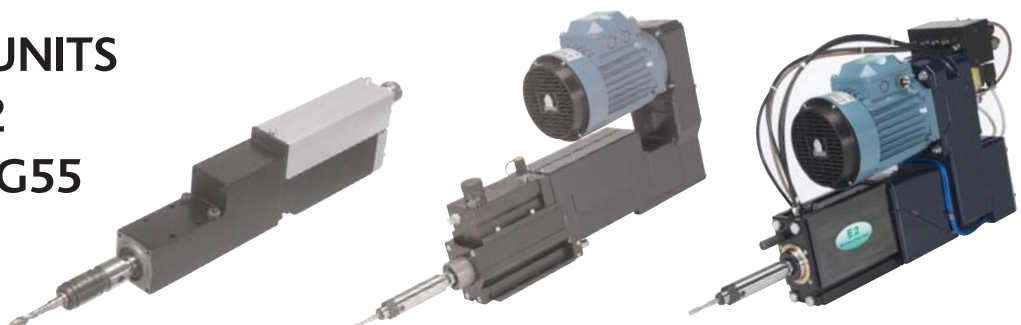
# COST-EFFECTIVE AUTOMATION

COMPACT UNITS FOR

- DRILLING
- TAPPING
- MILLING

[www.e2systems.com](http://www.e2systems.com)

**TAPPING UNITS**  
LS11, LS22  
BEG48, BEG55



A close-up, low-angle photograph of a metal tapping unit, likely a lead screw unit, against a bright blue background. The unit is cylindrical and tapers towards the right, where the cutting edge is visible. The lighting creates strong highlights and shadows, emphasizing the metallic texture and the precision of the tool.

## TAPPING UNITS

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

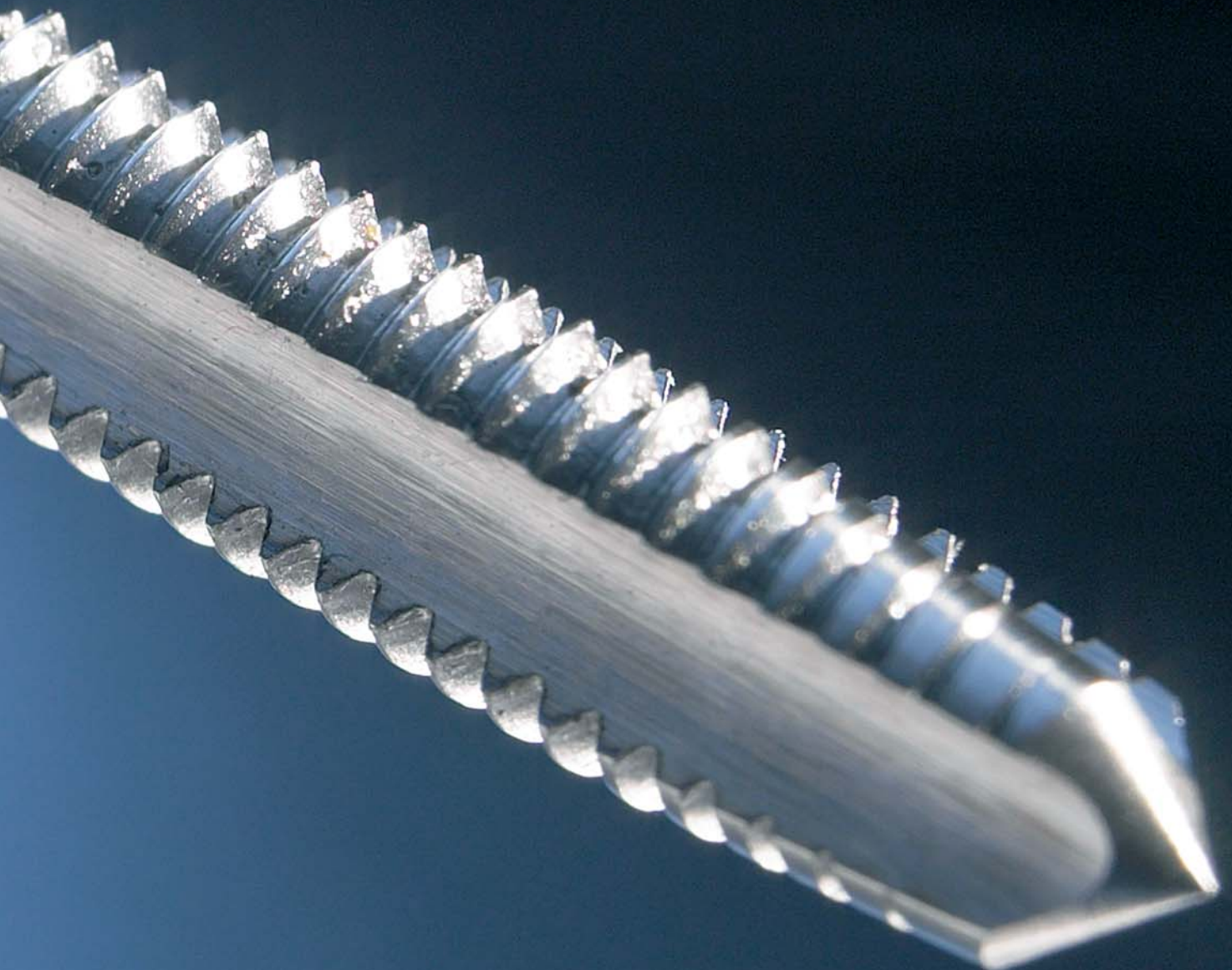
E2 tapping units range from the most compact pneumatic units on the market to powerful electrically-operated units. Our lead screw units ensure a perfect tapping process with no risk of damaging the tap. These characteristics also apply to units equipped with multi-spindle heads.

Each tapping unit's details includes all the necessary information for selecting a suitable model based on the requirements set by your tapping application and the cutting data specified by your tap 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 thread taps in the most common materials. For fluteless taps, as a rule of thumb, 50-100% greater torque and speed is required.

# TAPPING UNITS

UNIT	PAGE	DRIVE	FEED	TAPPING CAPACITY		
				STEEL	ALUMINIUM/ BRASS	PLASTICS
LS11	28	Pneumatic 5-vane Motor	Lead screw	M5	M8	M10
LS22	30	Pneumatic 5-vane Motor	Lead screw	M8	M12	M12
BEG48	32	Electric Air Hydraulic	Controlled	M12	M20	M30
BEG55	34	Electric Hydraulic	Controlled	M16	M24	M30



# PNEUMATIC LEAD SCREW TAPPING UNIT LS 11

The LS 11 consists of a vane motor powered by compressed air, a planetary gearbox, lead screw, nut and a follower with cams to activate built-in switches. The design of the LS 11 is compact yet highly functional. The lead screw ensures high repeatability for threading operations.

- EXTREMELY COMPACT DESIGN
- SEALED LEAD SCREW
- LOW NOISE LEVEL
- SMART DEPTH CONTROL
- AVAILABLE IN ALL THREAD TYPES AS WELL AS LEFT HAND



## Guidlines for choice of unit

[M-Thread]

TAPPING UNIT	CAPACITY IN STEEL	CAPACITY IN ALUMINIUM/BRASS	CAPACITY IN PLASTICS
LS 115	M5	M8	M10
LS 118	M5	M6	M8
LS 1120	M4	M5	M6
LS 1134	M3	M4	M5

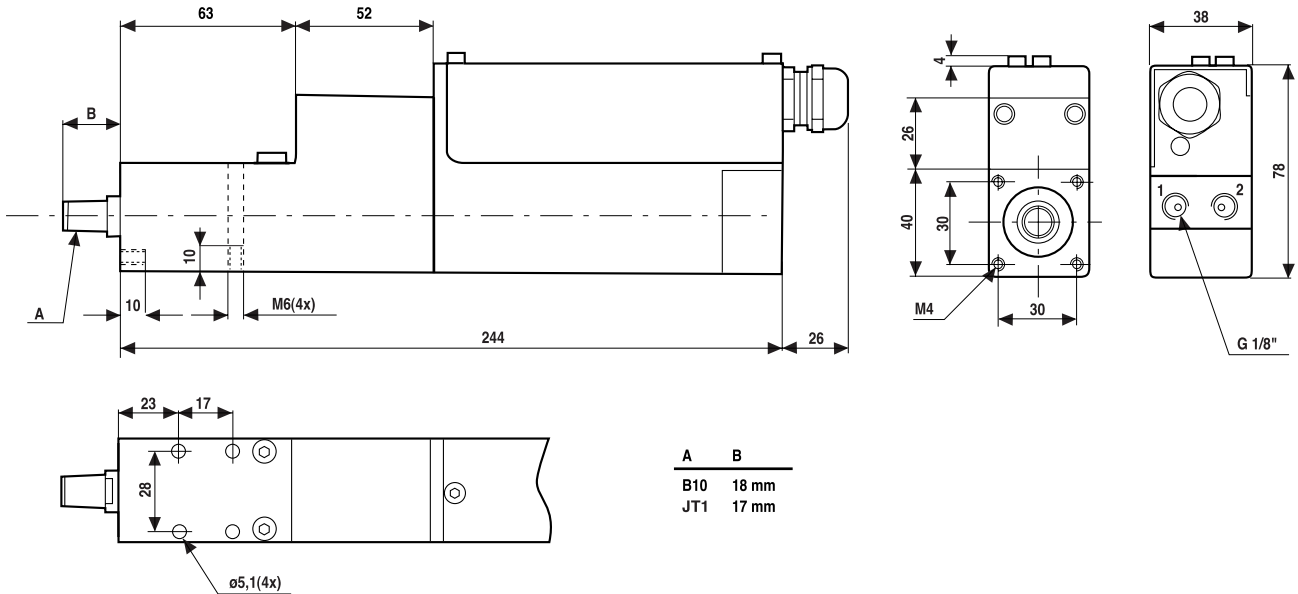
## Performance specifications at 6.3 Bar

Power	0.09 kW	Depth accuracy +/-	0.01 mm	Sound level	70 dB(A)
Stroke (max, 100% controlled)	32 mm	Working pressure range	6-7 Bar		
Min. CC Spindle Spacing	38 mm	Air consumption	<0.2 Nm <sup>3</sup> /min		

TAPPING UNIT	SPEED (IDLE)	[RPM]	SPEED (AT MAX OUTPUT)	[RPM]	TORQUE (AT MIN STARTING)	[NM]	TORQUE (AT MAX OUTPUT)	[NM]
LS 115	440		250		5.0		3.5	
LS 118	700		400		3.1		2.1	
LS 1120	1 800		1 000		1.3		0.84	
LS 1134	2 850		1 650		0.78		0.53	

## Dimensions

[mm]



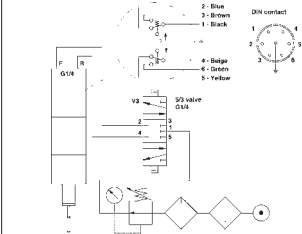
You can download 2D CAD-drawings and 3D CAD-models on [www.e2systems.com](http://www.e2systems.com).

**WEIGHT 3.5 KG**

## Necessary components

QUICK CHANGE CHUCKS	TYPE	PAGE
	WFO for B10 Metric	52
	C8 for JT1	52
TAP HOLDERS	TYPE	PAGE
	SE0/WE0 for WFO (B10) Metric	52
	T8 for C8 (JT1)	52
LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	58

## Accessories

CONTROLS	TYPE	PAGE
	Controls for LS 11/22-units Electric Pneumatic	58

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**, **Limit switches**,  $\emptyset$  and  $\square$  for the tap holder, pitch, and if it is to be used in Lubrication-free operation.

# PNEUMATIC LEAD SCREW TAPPING UNIT LS 22

The LS 22 consists of a vane motor powered by compressed air, a planetary gearbox, lead screw, nut and a follower with cams to activate built-in switches. The design of the LS 22 is compact yet highly functional. The lead screw ensures high repeatability for threading operations.

- EXTREMELY COMPACT DESIGN
- SEALED LEAD SCREW
- LOW NOISE LEVEL
- SMART DEPTH CONTROL
- AVAILABLE IN ALL THREAD TYPES AS WELL AS LEFT HAND



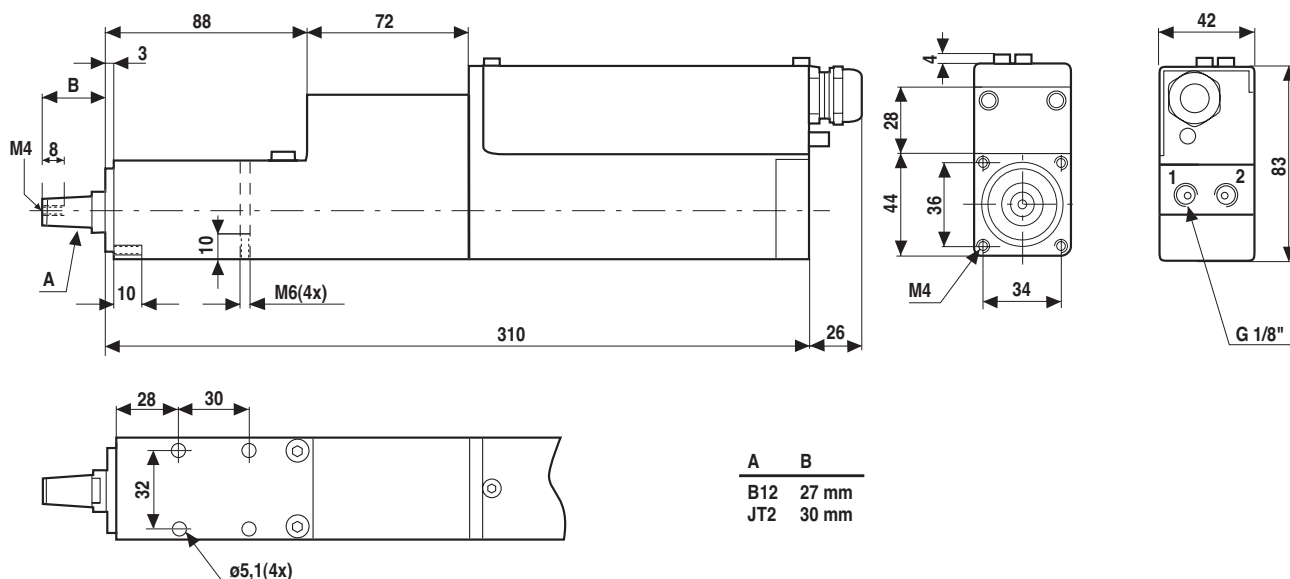
Guidlines for choice of unit												[M-Thread]	
TAPPING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN PLASTICS				
	No of Spindles	1	2	3	4	1	2	3	4	1	2	3	4
LS 223	M8	M6	M6	M5	M12	M10	M8	M8	M12	M12	M10	M10	
LS 225	M6	M5	M5	M4	M12	M8	M6	M6	M12	M10	M8	M8	
LS 226	M6	M5	M5	M4	M10	M8	M6	M6	M10	M8	M8	M6	
LS 2213	M5	M4	M4	M3	M8	M6	M5	M5	M8	M8	M6	M5	
LS 2221	M4	M3	M3	M2	M6	M5	M4	M4	M8	M6	M5	M4	
LS 2228	M3	M3	M2		M5	M4	M3	M3	M6	M5	M4	M4	

Performance specifications at 6.3 Bar			
Power	0.16 kW	Depth accuracy +/-	0.01 mm
Stroke (max, 100% controlled)	51 mm	Working pressure range	6–7 Bar
Min. Center to Center Spacing		Air consumption	<0.3 Nm <sup>3</sup> /min
Single Spindle	42 mm	Sound level	70 dB(A)
Double-Spindle Head	11 mm		

TAPPING UNIT	SPEED (IDLE) [RPM]	SPEED (AT MAX OUTPUT) [RPM]	TORQUE (AT MIN STARTING) [NM]	TORQUE (AT MAX OUTPUT) [NM]
LS 223	240	140	13.4	10.8
LS 225	400	240	8.0	6.7
LS 226	540	310	5.9	5.0
LS 2213	1 050	650	3.0	2.4
LS 2221	1 750	1 050	1.8	1.5
LS 2228	2 400	1 390	1.3	1.1

## Dimensions

[mm]




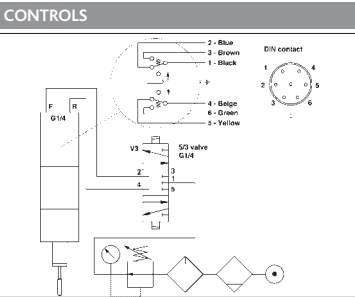
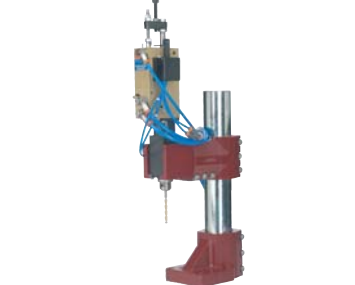
You can download 2D CAD-drawings and 3D CAD-models on [www.e2systems.com](http://www.e2systems.com).

**WEIGHT 4.6 KG**

## Necessary components

QUICK CHANGE CHUCKS	TYPE	PAGE
	WFO for B12 Metric	52
	C12 for JT2	52
TAP HOLDERS	TYPE	PAGE
	SEO/WE0 for WFO/B12 Metric	52
	T12 for C12 (JT2)	52
LIMIT SWITCHES	TYPE	PAGE
	Electric Pneumatic	58

## Accessories

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04-, MBKV 402 and MBK 6V2-series	42 48
CONTROLS	TYPE	PAGE
	Controls for LS 11/22-units  Electric Pneumatic	58
MOUNTINGS	TYPE	PAGE
	Mountings for the LS22 units.	

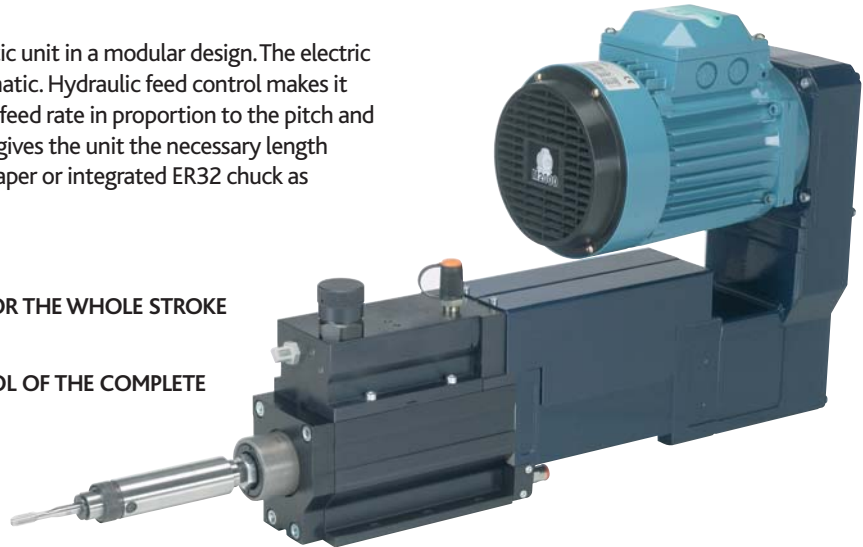
On [www.e2system.com](http://www.e2system.com) you can find more information as well as the same information as above in imperial units.

When requesting a quote or ordering, please state: **Model, Limit switches, Ø and □** for the tap holder, pitch, and if it is to be used in Lubrication-free operation.

# ELECTRO PNEUMATIC TAPPING UNIT BEG 48

The BEG 48-series is a flexible electro-pneumatic unit in a modular design. The electric motor runs the spindle, while the feed is pneumatic. Hydraulic feed control makes it possible to use rapid advance and to adjust the feed rate in proportion to the pitch and the rpm. A tapping collect or a tapping spindle gives the unit the necessary length compensation. 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

[M-Thread]

TAPPING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN PLASTICS				
	No of Spindles	1	2	3	4	1	2	3	4	1	2	3	4
BE481		M6	M5	M4	M3	M10	M8	M8	M6	M14	M8	M8	M8
BE482		M8	M6	M5	M3	M14	M10	M8	M8	M16	M14	M12	M10
BE485		M12	M8	M6	M6	M20	M14	M12	M10	M30	M20	M20	M16

## Performance specifications at 6.3 Bar

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

## Motor and Transmission specifications

No of Poles	TAPPING UNIT/MOTOR AT V380-420(Y)/220-240(Δ)50HZ [kW]		
	BEG481	BEG482	BEG485
2	0.55	0.75	1.65
4	0.37	0.55	1.1
6	0.25	0.32	0.75
8			0.4

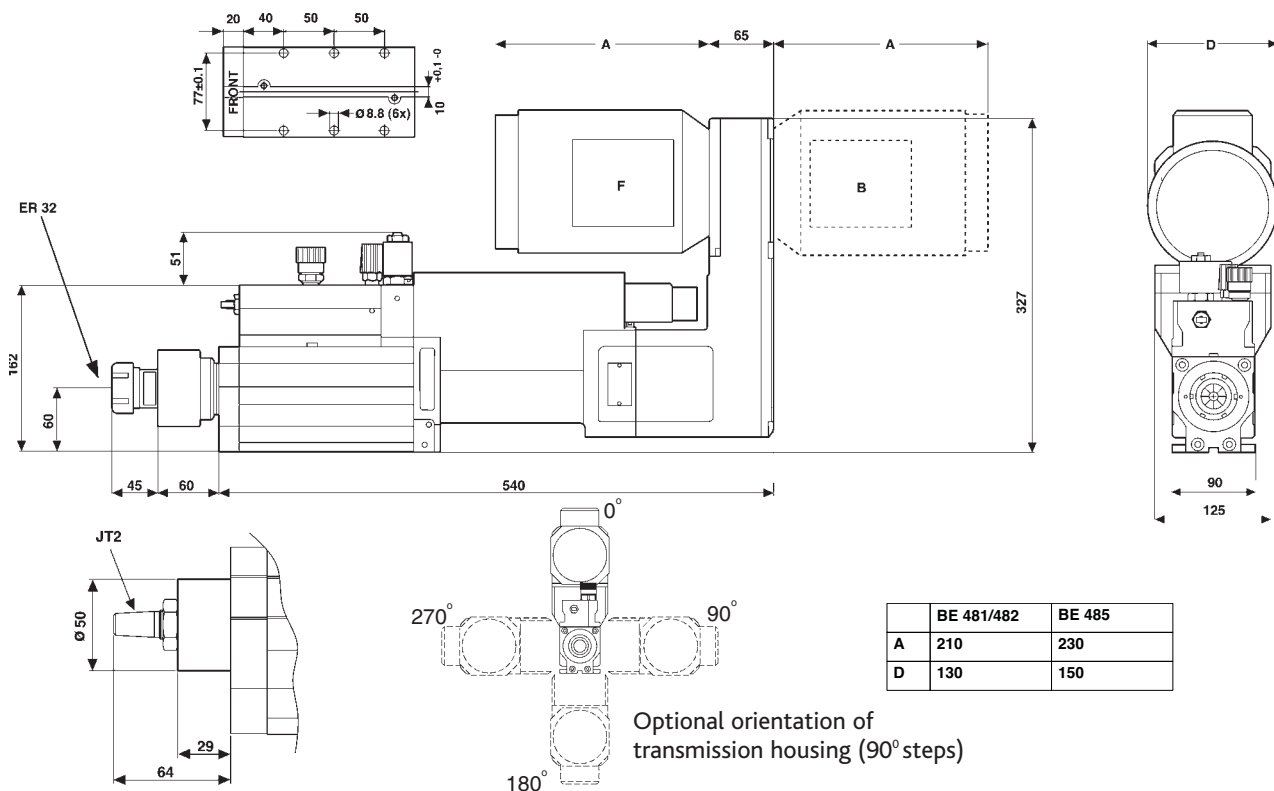
• Motor specifications shown in the tables are valid for 380–420V(Y) /220–240V(Δ) (±5%), 50 Hz. These motors can also be used at 440–480 V(Y) (±5%), 60 Hz. If so the rpm will increase by ~20% and the power by ~15% relative to the data for 50Hz. E2 also offers motors for other voltages and frequencies.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

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

E2 does not recommend tapping with a floating holding at higher speeds than 2000 rpm. Maximum speed is lower when tapping a deep or blind hole and/or using a large thread.

No of Poles	SPINDEL RPM AT GEAR RATIO AT 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	
2	1130	1350	1580	1750												
4	560	670	780	860	1030	1190	1390	1620	1880							
6	360	440	510	560	670	780	910	1060	1230	1470	1630	1900				
8	270	330	380	420	500	580	680	790	920	1100	1210	1420	1560	1730	1870	





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

**WEIGHT 24–28 KG**

**Necessary components**

TAPPING ATTACHMENTS	TYPE	PAGE
	Length compensation up to 10 mm Integrated ER32 chuck with length compensating collets M4–M12	52
	Length compensation up to: 25 mm Tapping spindle GS12E M4–M16 (JT2) 40 mm Tapping spindle GS24E M8–M30 (ER32+B18/ø16 taper shank)	52
TAP HOLDERS	TYPE	PAGE
	ER32 collets with length compensation M4–M12	52
	T12 for GS12E T24 for GS24E	52
LIMIT SWITCHES	TYPE	PAGE
	Electric switches Pneumatic switches or Linear Transducer	57

**Accessories**

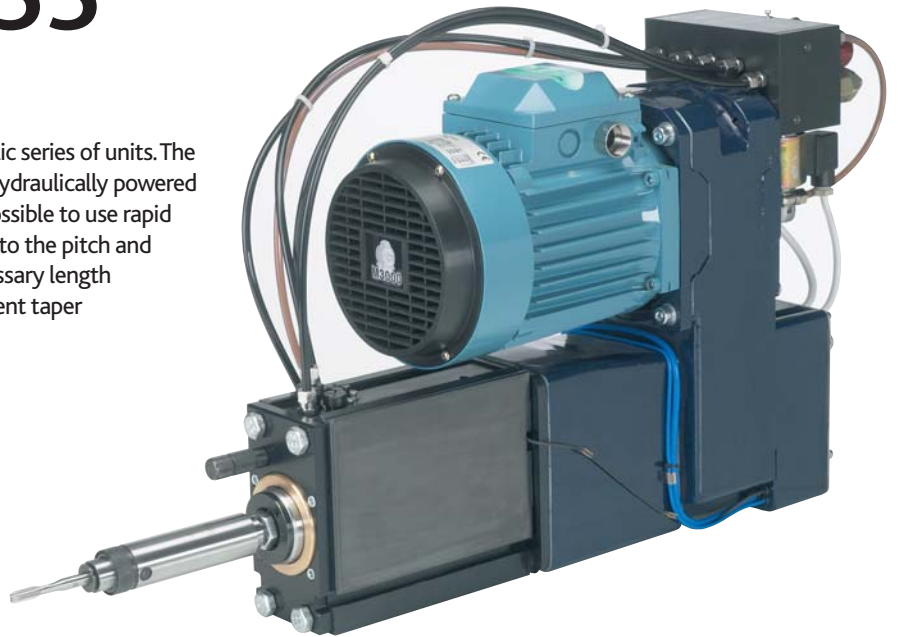
MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH04-, VH06-, VH08-, VH10-, MBK V40-, MBKV 60-, MBKV 80- and MBK 6V-series	42 47
CONTROLS	TYPE	PAGE
	Controls for BE(G) 48-units with Electric switches Pneumatic switches or Linear Transducer	57

On [www.e2system.com](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, Spindle rpm, Motor Power, Front or Backward Motor orientation, Float compensation required (if known) as well as Ø and □ for the tap holder.**

# ELECTRO HYDRAULIC TAPPING UNIT BEG 55

BEG 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. Hydraulic feed control makes it possible to use rapid advance and to adjust the feed rate in proportion to the pitch and the rpm. A tapping spindle gives the unit the necessary length compensation. The series is available in two different taper options as well as with multi-spindle heads.



- COMPACT DESIGN YET POWERFUL
- INTEGRATED HYDRALIC SYSTEM
- LONG STROKE – 120 MM
- HIGH PRECISION
- LOW NOISE LEVEL

Guidlines for choice of unit											[M-Thread]		
TAPPING UNIT	CAPACITY IN STEEL				CAPACITY IN ALUMINIUM/BRASS				CAPACITY IN PLASTICS				
No of Spindles	1	2	3	4	1	2	3	4	1	2	3	4	
BEG552	M8	M6	M5	M5	M14	M10	M8	M8	M16	M14	M12	M10	
BEG555	M12	M8	M6	M6	M20	M14	M12	M10	M30	M16	M16	M14	
BEG558	M16	M10	M10	M8	M24	M16	M16	M14	M30	M20	M20	M16	

Performance specifications			
Thrust (max.)	6 000 N	Depth accuracy +/-	0.01 mm
Stroke (max. 100% controlled)	120 mm	Rapid advance rate (max.)	6 m/min
Min. Center to Center Spacing		Controlled feed rate	0.04–0.65 m/min
Single Spindle	140 mm	Sound level	<80 dB(A)
Double-Spindle Head	14 mm		

Motor and Transmission specifications			
No of Poles	TAPPING UNIT/MOTOR AT V380-420(Y)/220-240(Δ) 50HZ [kW]		
	BEG552	BEG555	BEG558
2	0.75	1.65	2.7
4	0.55	1.1	2.2
6	0.37	0.75	1.3
8		0.4	0.75

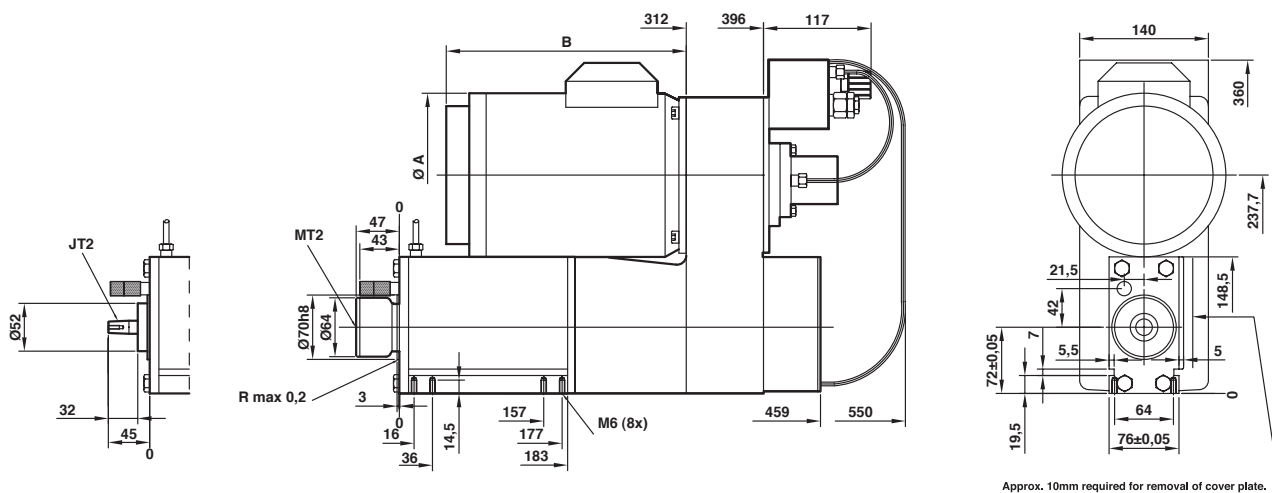
No of Poles	SPINDEL RPM AT GEAR RATIO AT 50HZ							
	2.7:1	2.1:1	1.7:1	1.4:1	1:1	1:1.4	1:1.7	1:2.1
2	1040	1370	1690					
4	500	640	830	1070	1390	1810		
6	330	420	550	700	910	1180	1520	1980
8	250	310	410	520	680	880	1130	1480

• 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.

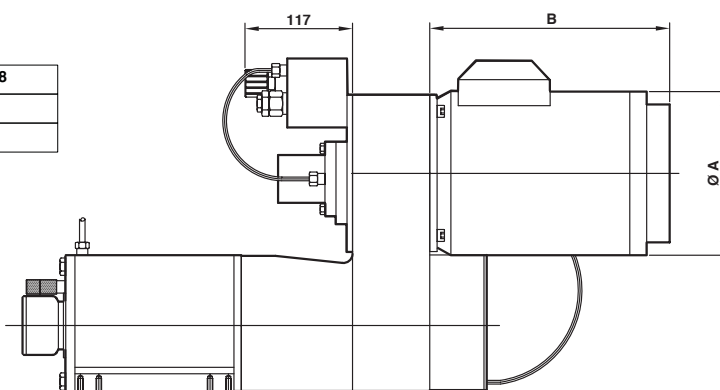
• The torque at the spindle for a specific rpm is calculated as:  

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

E2 does not recommend tapping with a floating holding at higher speeds than 2000 rpm. Maximum speed is lower when tapping a deep or blind hole and/or using a large thread.





	BEG 552/555	BEG 558
A	150	178
B	221	261



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

**WEIGHT 25–35 KG**

**Necessary components**

TAPPING ATTACHMENTS	TYPE	PAGE
	Length compensation up to: 25 mm Tapping spindle GS12E M4–M16 (JT2) 40 mm Tapping spindle GS24E M8–M30 (MT2) (MT2+B18/MT2 taper shank)	52
TAP HOLDERS	TYPE	PAGE
	T12 for GS12E T24 for GS24E	52

**Accessories**

MULTI-SPINDLE HEADS	TYPE	PAGE
	Adjustable heads VH06-, VH08-, VH10-, VH13-, VH18-, MBKV 60-, MBK 6V-, MBKV 80-, MBKV 100- MBKV 130- and MBKV 140-series	42 48
CONTROLS	TYPE	PAGE
	Controls for BE(G)55-units	58

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), Control system, Spindle rpm, Motor Power, Front or Backward Motor orientation, Float compensation required (if known)** as well as Ø and □ for the tap holder.

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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