



IBARMIA

Fixed Table Drills
Drilling/Milling Machines
Drill Batteries
Special Constructions



**IBARMIA
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Subject to change without prior notice

KTZXABCPF 0907E

Your drilling and tapping specialist because of:

TRADITION

The grey of steel and the green of our valleys. Tenacity, hard work and ambition. From the Basque Country, the heart of the Spanish machine-tool industry, with over 50 years devoted to precision engineering and 40 to the manufacturing of drills, IBARMIA has a level of "know-how" which is widely recognised within the sector.

INTERNATIONALISATION

Open to the world. The competitiveness of our products and our international recognition explain why **three in every four of our machines are for export**. Their destinies are industrially developed countries such as Germany, France, Switzerland, Italy, Belgium, USA, Canada, Denmark, etc..., with machines installed in the five continents and in the world's leading industries.

LEADERSHIP:

The fact that we are the preference and reference in many national and international industries and tenders is the outcome of having fully satisfied the expectations and demands of the users of our machines.

RESEARCH AND DEVELOPMENT

Reflected in the constant capacity for innovation and adaptation in our product range to the uses and needs of the market.

TECHNOLOGY

Evolution with time and a total command of the latest technology. That's why we have our own division for the manufacturing of the latest generation of high-performance vertical Machining centres.

DESIGN

Thinking of the person at all times, in terms of the efficiency, safety and comfort of the operator. We see design as a strategic competitive tool and apply creative engineering and the most modern computer design techniques in the service of rationalisation, ergonomics and ease of use. Our efforts have been acknowledged by The National Award for Design (BIEMH'96).

QUALITY

As objective and means. The axis of all

our activity, the basis for our prestige and leadership in the market.

PROGRAMME(*)

Round and brilliant as the columns of the machines themselves. Solid and robust as their structure. Clear and concrete. Ample, sufficient and adjusted to every need ... and budget. All in one comprehensive catalogue to leave no room for doubt. No confusion, no wasting of your valuable time. We, the specialists, have already done a great deal of your thinking for you.















(*) Some models may not be available in all markets. Please check with your dealer.





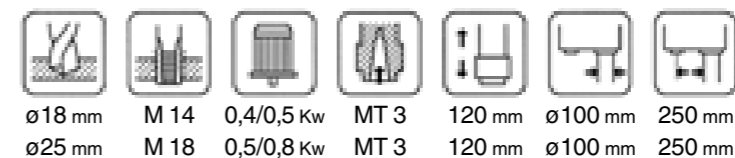
KEYS: To save time and understand our programme quickly. While the number expresses the direct drilling capacity in steel, the letters stand for:

- K:** Belt transmission
- **S:** “small”, or bench version
 - **M:** “medium”, or bench drill with intermediate worktable
 - **L:** “large”, or pillar version
- T:** Geared transmission
- **S:** “small”, or bench version
 - **M:** “medium”, or bench drill with intermediate worktable
 - **L:** “large”, or pillar version
- Z:** Belt transmission
- **S:** manual feed
 - **A:** automatic feed by mechanical clutch
 - **B:** automatic feed by electromagnetic clutch
 - **V:** mechanical speed variator
- X:** Geared transmission
- **S:** manual feed
 - **A:** automatic feed by mechanical clutch
 - **B:** automatic feed by electromagnetic clutch
- A:** Geared transmission with automatic feed by mechanical clutch
- B:** Geared transmission with automatic feed by electromagnetic clutch
- C:** Mixed transmission belt/geared
- **B:** automatic feed by electromagnetic clutch
 - **V:** mechanical speed variator
 - **VE:** electronic speed variator
- P:** Geared transmission (prismatic column drills)
- **B:** automatic feed by electromagnetic clutch
 - **L:** extralarge prismatic column
- F:** Geared transmission (prismatic column drilling/milling machines)
- **B:** automatic feed by electromagnetic clutch

 K Series Pages 6-7	Round column drills Belt transmission Drilling capacity in steel up to Ø 18/25 mm
 T Series Pages 8-9	Round column drills Geared transmission Drilling capacity in steel up to Ø 18/25 mm
 Z Series Pages 10-13	Round column drills Belt transmission Drilling capacity in steel up to Ø 32/34/40 mm
 K Series Pages 14-17	Round column drills Geared transmission Drilling capacity in steel up to Ø 32/34/40 mm
 A Series Pages 18-19	Round column drills Geared transmission Drilling capacity in steel up to Ø 35/40/45/50 mm
 B Series Pages 20-21	Round column drills Geared transmission Drilling capacity in steel up to Ø 35/40/45/50/60/70 mm
 C Series Pages 22-23	Round column drills Mixed transmission belt/geared Drilling capacity in steel up to Ø 40/50 mm
 P Series Pages 24-25	Prismatic column drills Geared transmission Drilling capacity in steel up to Ø 40/50/70 mm
 F Series Pages 26-27	Prismatic column drilling/milling machines Geared transmission Drilling capacity in steel up to Ø 35 mm Drilling capacity in steel up to 45 cm ³ /min
 Batteries K-T-Z-X-A-B-C Pages 28-29	Round column drill batteries
 Batteries P Pages 30-31	Prismatic column drill batteries
 Special Pages 32-33	Special constructions of round column Special constructions of prismatic column
 Equipment Pages 34-39	General equipment Extra equipment Accessories
 Dimensions Pages 40-47	Round column drills Prismatic column drills

K Series, your choice for:

Multi-purpose use • Unequalled robustness • Complete equipment • Speed range
Easy to run • Low maintenance • Attractive design • Value for money



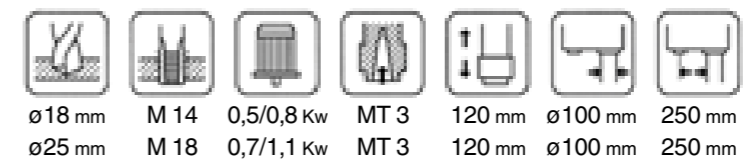
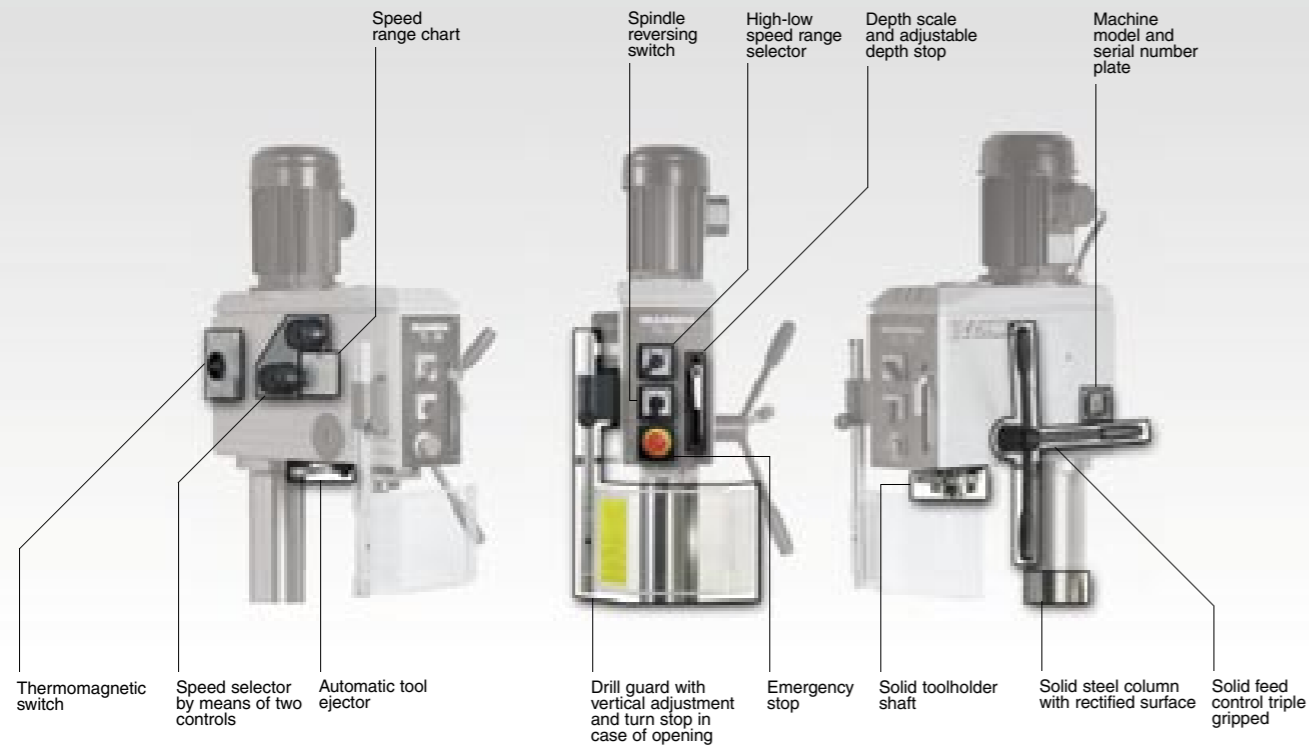
Characteristics	KS-18	KM-18	KL-18	KS-25	KM-25	KL-25
Maximum drilling capacity in steel St. 60	ø mm	18			25	
Maximum drilling capacity in cast iron 200 Brinell	ø mm	25			30	
Maximum tapping capacity in steel St. 60	mm	M 14			M 18	
Maximum tapping capacity in cast iron 200 Brinell	mm	M 18			M 22	
Morse Taper MT	Nr.	3			3	
Maximum spindle stroke (drilling depth)	mm	120			120	
Main motor power	HP(Kw)	0,55 / 0,75 (0,40 / 0,55)		0,75 / 1,1 (0,55 / 0,80)		
Transmission		Belt drive				
Number of speeds		10				
Speed range with motor at 750/1500 rpm 50 Hz 3Ph.	rpm	200-360-400-650-720-1170-1300-2000-2340-4000				
Upon request: Motor at 900/1800 rpm 60 Hz 3Ph. (240-4800 rpm)						
Feed		Manual				
Worktable dimensions (LxW)	mm	270x270	300x270	270x270	300x270	
Column diameter	mm	100				
Distance from spindle centre to column face	mm	250				
Net weight	Kg	125	150	175	125	150
Gross weight with packing	Kg	150	170	215	150	170
Packing dimensions (length x width x height)	m	0,8x0,5x1,4		2,1x0,5x0,9	0,8x0,5x1,4	
Standard equipment		Optional equipment (*)				
Depth scale and adjustable depth stop	“CE” mark ■	PKA Floor cabinet with 2 shelves		ERC Coolant system (independent container)		
Automatic tool ejector		PKB Floor cabinet with door and drawer		VE Electronic variator		
Thermomagnetic switch	■ Not standard in every market	MG Rotating table plate		RS Automatic feed reversing system for tapping (only for “VE” models)		
Emergency STOP	Please check with your dealer	(Only for “KM” & “KL” models)		TAK Digital rpm counter (only for “VE” models)		
Spindle reversing switch		MFM Reversible tiltable with vice (only for “KL” models)		HB Hydro-pneumatic power feed unit		
High/low speed range selector		MCC Co-ordinate table over support (only for “KL” models)				
Drill guard with microswitch						
Security microswitch on cover	■					

(*) On display on pages 34-39



T Series, your choice for:

State of the art technology • Geared machine head • Complete equipment
Speed range • Easy to run • Zero maintenance



With rotating table plate (MG).
 With reversible tiltable with vice (MFM).
 With co-ordinate table over support (MCC).
 With floor cabinet with 2 shelves (PKA).
 With floor cabinet with door and drawer (PKB).

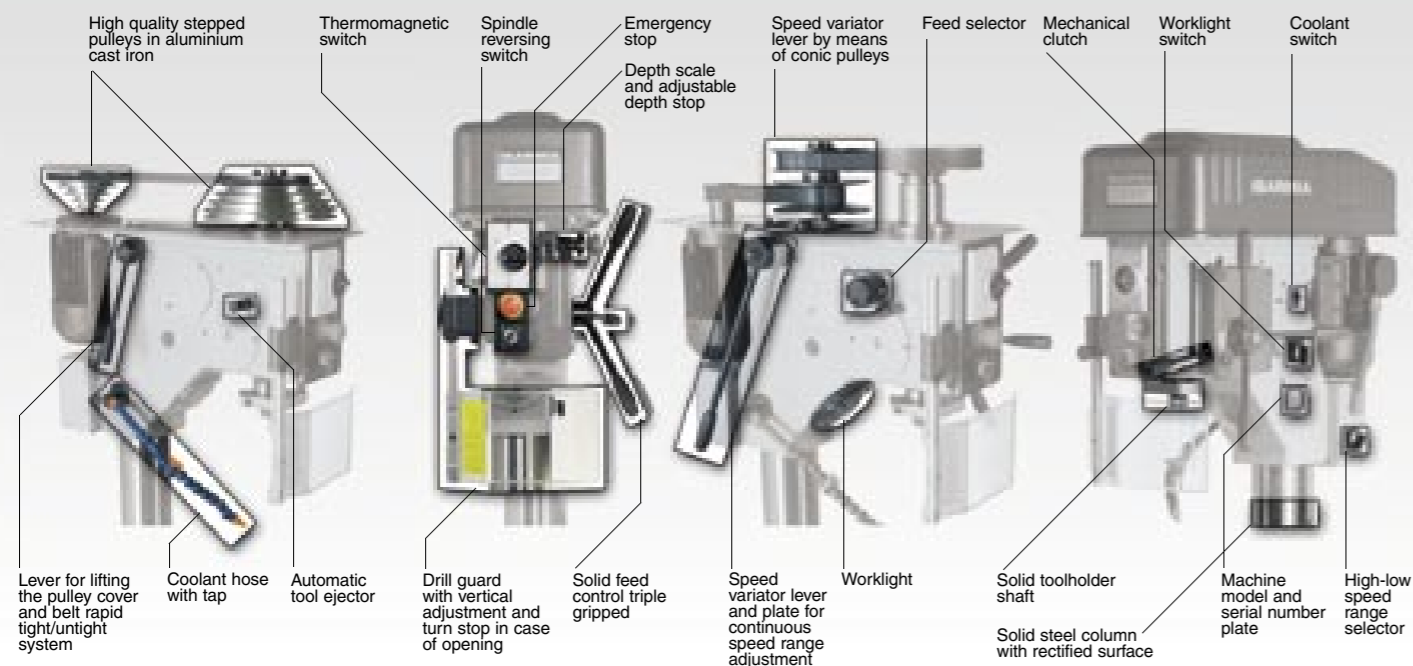


Characteristics		TS-18	TM-18	TL-18	TS-25	TM-25	TL-25
Maximum drilling capacity in steel St. 60	ø mm		18			25	
Maximum drilling capacity in cast iron 200 Brinell	ø mm		25			30	
Maximum tapping capacity in steel St. 60	mm		M 14			M 18	
Maximum tapping capacity in cast iron 200 Brinell	mm		M 18			M 22	
Morse Taper MT	Nr.		3			3	
Maximum spindle stroke (drilling depth)	mm		120			120	
Main motor power	HP(Kw)		0,75 / 1,1 (0,55 / 0,80)			1 / 1,5 (0,73 / 1,10)	
Transmission		Gear box					
Number of speeds		8					
Speed range with motor at 1500/3000 rpm 50 Hz 3Ph.	rpm	75-160-250-420-510-850-1450-2800					
Upon request: Motor at 1800/3600 rpm 60 Hz 3Ph. (90-3360 rpm)							
Feed		Manual					
Worktable dimensions (LxW)	mm	270x270	300x270		270x270	300x270	
Column diameter	mm	100					
Distance from spindle centre to column face	mm	250					
Net weight	Kg	135	165	185	135	165	185
Gross weight with packing	Kg	160	190	225	160	190	225
Packing dimensions (length x width x height)	m	0,8x0,5x1,4		2,1x0,5x0,9	0,8x0,5x1,4		2,1x0,5x0,9
Standard equipment		Optional equipment (*)					
Depth scale and adjustable depth stop	■ "CE" mark ■	PKA Floor cabinet with 2 shelves		MCC Co-ordinate table over support (only for "TL" models)			
Automatic tool ejector		PKB Floor cabinet with door and drawer		ERC Coolant system (independent container)			
Thermomagnetic switch		MG Rotating table plate		RS Automatic feed reversing system for tapping			
Emergency STOP		(Only for "TM" & "TL" models)		HB Hydro-pneumatic power feed unit			
Spindle reversing switch		MFM Reversible tiltable with vice (only for "TL" models)					
High/low speed range selector	■ Not standard in every market						
Drill guard with microswitch	■ Please check with your dealer						

(*) On display on pages 34-39

Z Series, your decision for:

The silence of their belts • Speed variator • Suitable size and capacity
Easy to run • Low maintenance • Attractive price



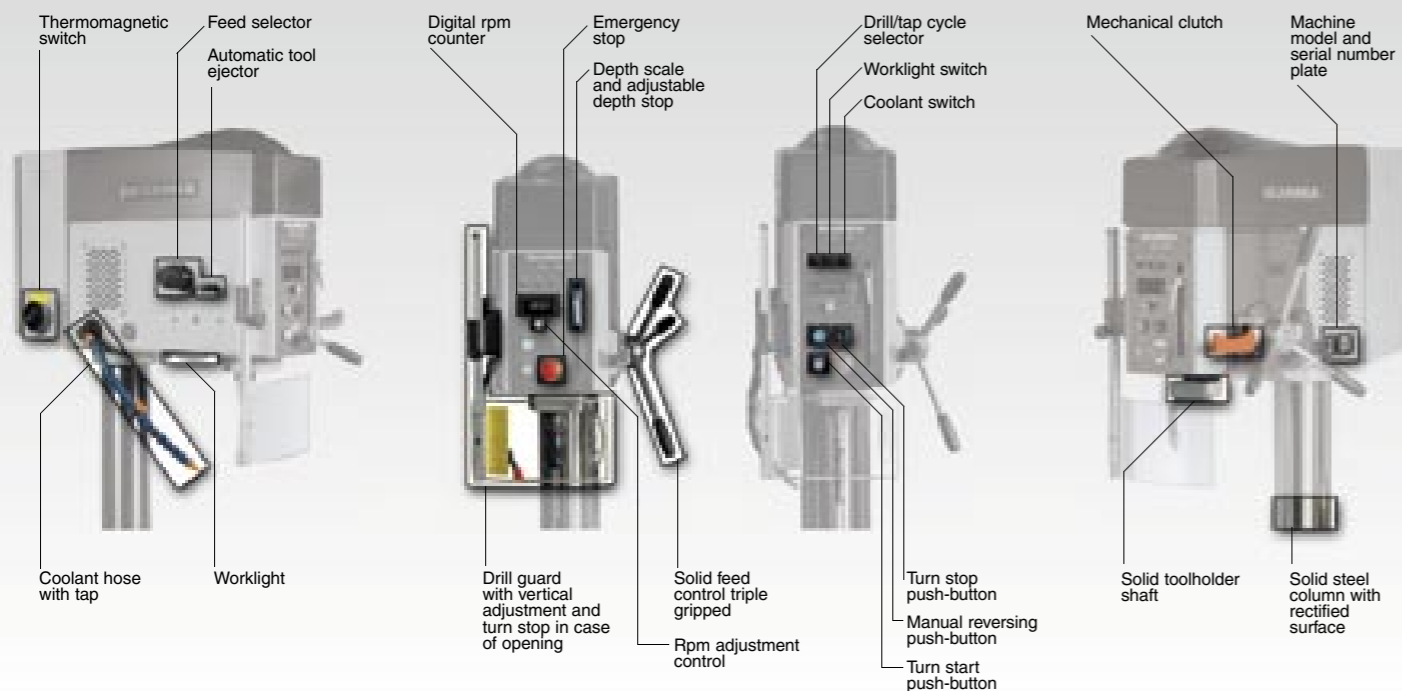
Characteristics		SZ-32	AZ-32V
Maximum drilling capacity in steel St. 60	ø mm		32
Maximum drilling capacity in cast iron 200 Brinell	ø mm		35
Maximum tapping capacity in steel St. 60	mm		M 22
Maximum tapping capacity in cast iron 200 Brinell	mm		M 30
Morse Taper MT	Nr.		3
Maximum spindle stroke (drilling depth)	mm		150
Main motor power	HP(Kw)	1,20 / 1,80 (0,9 / 1,3)	
Coolant pump motor power	HP(Kw)	0,10 (0,07)	
Transmission		Belt drive	Belt drive
Number of speeds		10	Continuous
Speed range with motor at 750/1500 rpm 50 Hz Tri.	rpm	145-220-290-345	
Upon request:		440-540-690-860-1080-1720	
Motor at 900/1800 rpm 60 Hz Tri.			80-1170
Feed		Manual	Automatic
Nr. of automatic feeds		-	2
Automatic feed range	mm/rev	-	0,1-0,2
Worktable dimensions (LxW)	mm	480x400	
Column diameter	mm	125	
Distance from spindle centre to column face	mm	300	
Net weight	Kg	260	290
Gross weight with packing	Kg	310	340
Packing dimensions (length x width x height)	m	2,3x0,6x1,1	
Standard equipment		Optional equipment (*)	
Depth scale and adjustable depth stop	Machined base with coolant tank and pump	ERC Coolant system (independent container)	RS Automatic feed reversing system for tapping
Automatic tool ejector	Worklight	MGI Rotating table plate	HB Hydro-pneumatic power feed unit
Thermomagnetic switch	Drill guard with microswitch	MGM Reversible tiltable with vice	TAK Digital rpm counter (only for "V" models)
Emergency STOP	"CE" mark	MCC Co-ordinate table over support	
Spindle reversing switch	Not standard in every market		
High/low speed range selector	Please check with your dealer		

(*) On display on pages 34-39



Z Series, your decision for:

Innovative design • Smooth & Silent • Electronic speed variator • Digital rpm counter
Automatic feed reversing for tapping • Easy to run • Low maintenance



ø34 mm	M 27	2,2 Kw	MT 4	150 mm	ø125 mm	300 mm
ø40 mm	M 33	3 Kw	MT 4	180 mm	ø150 mm	350 mm



Characteristics		SZ-34	AZ-34	BZ-34	SZ-40	AZ-40	BZ-40
Maximum drilling capacity in steel St. 60	ø mm		34			40	
Maximum drilling capacity in cast iron 200 Brinell	ø mm		40			45	
Maximum tapping capacity in steel St. 60	mm		M 27			M 33	
Maximum tapping capacity in cast iron 200 Brinell	mm		M 33			M 39	
Morse Taper MT	Nr.		4			4	
Maximum spindle stroke (drilling depth)	mm		150			180	
Main motor power	HP(Kw)		3 (2,2)			4 (3)	
Coolant pump motor power	HP(Kw)			0,10 (0,07)			
Transmission				Belt			
Number of speeds				Continuous			
Speed variator type				Electronic			
Speed range with motor at 1500 rpm 50 Hz 3Ph.	rpm						
Upon request:				100-2000			
Motor at 1800 rpm 60 Hz 3Ph. (118-2360 rpm)							
Feed		Manual	Automatic	Manual	Automatic		
Nr. of automatic feeds		-	3	-	3		
Automatic feed range	mm/rev	-	0,1-0,2-0,3	-	0,1-0,2-0,3		
Worktable dimensions (LxW)	mm	400x480			480x560		
Column diameter	mm	125			150		
Distance from spindle centre to column face	mm	300			350		
Net weight	Kg	345	360	370	445	460	470
Gross weight with packing	Kg	395	410	420	495	510	520
Packing dimensions (length x width x height)	m	2,3x0,6x1,1					

Standard equipment	Optional equipment (*)
Electronic speed variator Potentiometer of speed selector Digital rpm counter RS Automatic feed reversing system for tapping Depth scale and adjustable depth stop Automatic tool ejector Emergency STOP Rightwards turn push button Leftwards turn push button	ERC Coolant system (independent container) MGI Rotating table plate and tilting support MGM Reversible tiltable with vice (only for "Z-34" model) MCC Co-ordinate table over support ACNL Automatic drilling cycle ACNL-S Automatic drilling cycle for tubes and profiles (only for "BZ" models)
Built-in low voltage electrical equipment in machine head Machined base with coolant tank and pump Worklight Spindle turn selection switch Drill guard with microswitch "CE" mark ■	HB Hydro-pneumatic power feed unit UC Union, dragging cone and assembly for multi-spindle heads GM Multi-spindle head guide rod PM START/STOP/EMERGENCY control extension (only for "BZ" models) SC Column riser of 200 mm
■ Not standard in every market Please check with your dealer	

(*) On display on pages 34-39

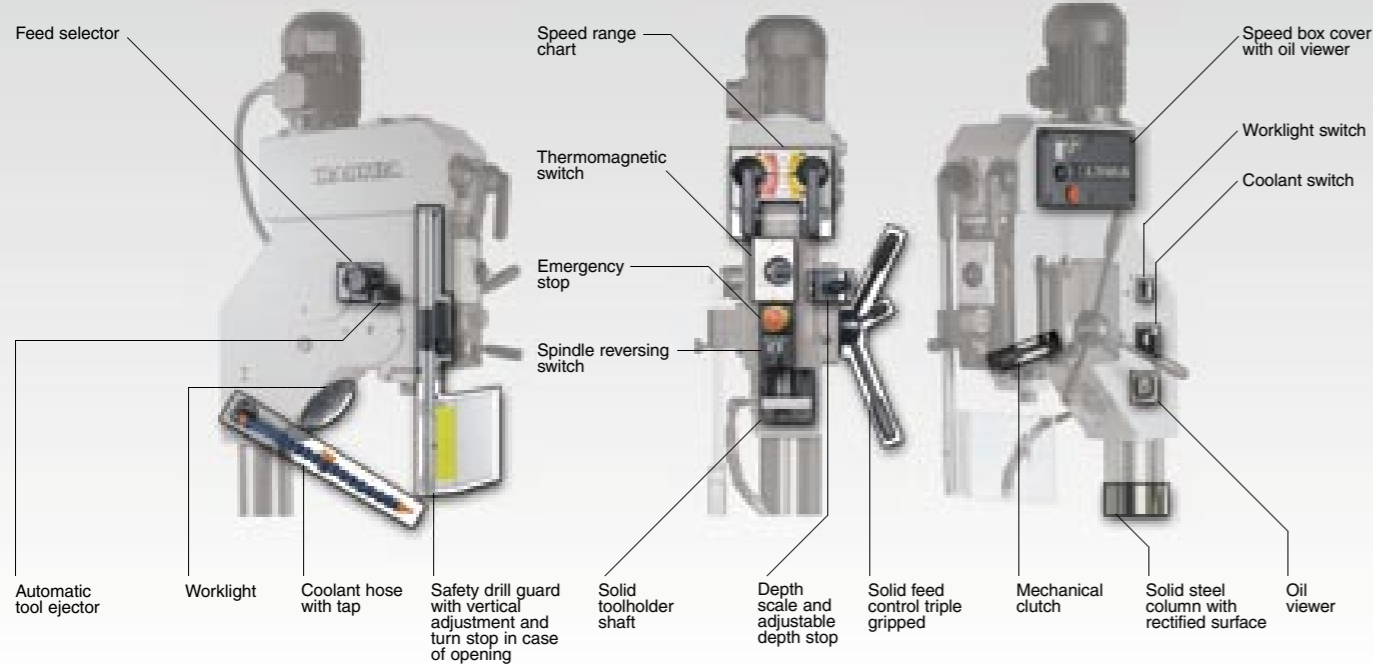


With rotating table plate and tilting support (MGI).
 With reversible tiltable with vice (MGM).
 With co-ordinate table over support (MCC).



X Series, your decision for:

Proven success • Optimum mechanical system • Suitable size and capacity
Easy to run • Long life • Optimum value for money



ø32 mm	M 18	0,75 Kw	MT 3	150 mm	ø125 mm	300 mm
ø32 mm	M 22	1,1 Kw	MT 3	150 mm	ø125 mm	300 mm

Characteristics		SX-32	AX-32
Maximum drilling capacity in steel St. 60	ø mm	32	32
Maximum drilling capacity in cast iron 200 Brinell	ø mm	35	35
Maximum tapping capacity in steel St. 60	mm	M 18	M 22
Maximum tapping capacity in cast iron 200 Brinell	mm	M 22	M 27
Morse Taper MT	Nr.	3	3
Maximum spindle stroke (drilling depth)	mm	150	150
Main motor power	HP(Kw)	1 (0,75)	1,5 (1,1)
Coolant pump motor power	HP(Kw)	0,10 (0,07)	
Transmission		Gear box	
Number of speeds		9	
Speed range with motor at 1500 rpm 50 Hz 3Ph.	rpm	104-152-217-250-365-522-692-1015-1450	
Upon request: Motor at 1800 rpm 60 Hz 3Ph. (125-1740 rpm)			
Feed		Manual	Automatic
Number of automatic feeds		-	2
Automatic feed range	mm/rev	-	0,1-0,2
Worktable dimensions (LxW)	mm	480x400	
Column diameter	mm	125	
Distance from spindle centre to column face	mm	300	
Net weight	Kg	315	330
Gross weight with packing	Kg	360	375
Packing dimensions (length x width x height)	m	2,3x0,6x1,1	

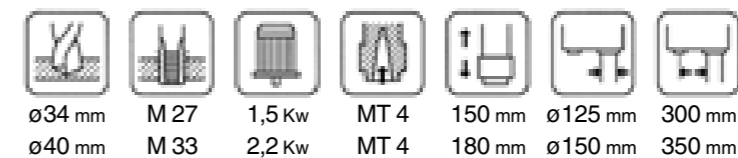
Standard equipment		Optional equipment (*)	
Hardened and ground high quality steel gears	Spindle reversing switch	ERC Coolant system (independent container)	HGP Master guide spindle and nut set for RPF
Speed plate and selecting levers on head front	Machined base with coolant tank	MG Rotating table plate	HB Hydro-pneumatic power feed unit
Gear box lubrication by automatic pump	Worklight	MGI Rotating table plate and tilting support	
Depth scale and adjustable depth stop	Drill guard with microswitch ■	MGM Reversible tiltable with vice	
Automatic tool ejector	“CE” mark ■	MCC Co-ordinate table over support	
Thermomagnetic switch		RS Automatic feed reversing system for tapping	
Emergency STOP		RPF Automatic tapping cycle by lead screw system	
		RPF-ANR RPF with 100 mm pneumatic rapid approach	

■ Not standard in every market
Please check with your dealer

(*) On display on pages 34-39

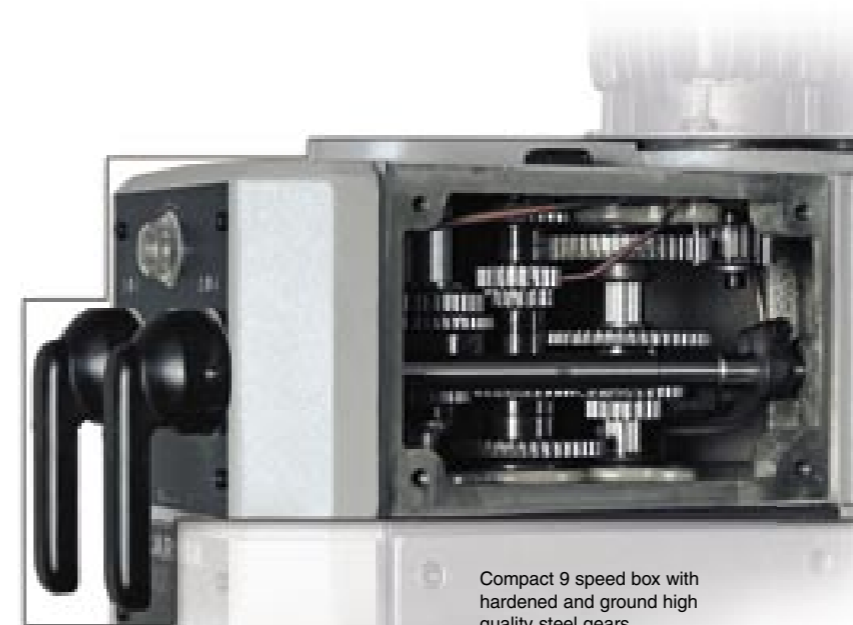
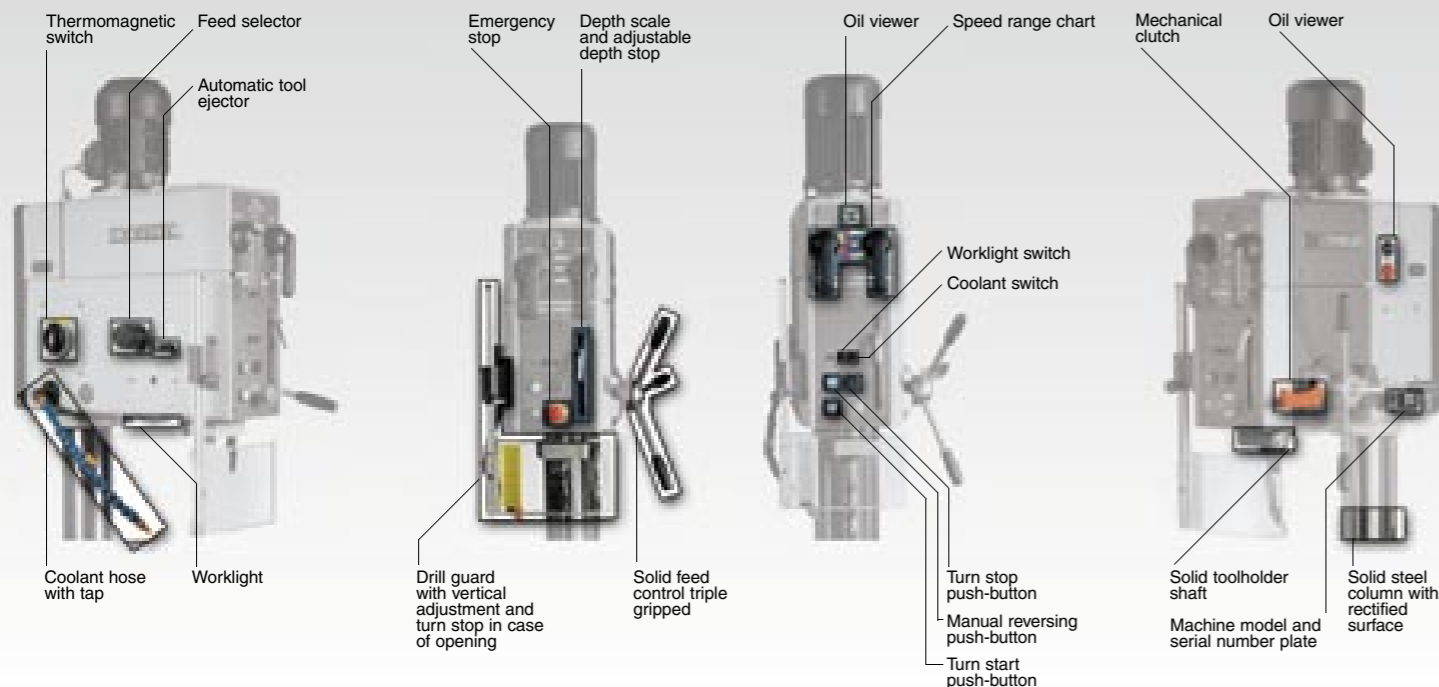


AX-32



X Series, your choice for:

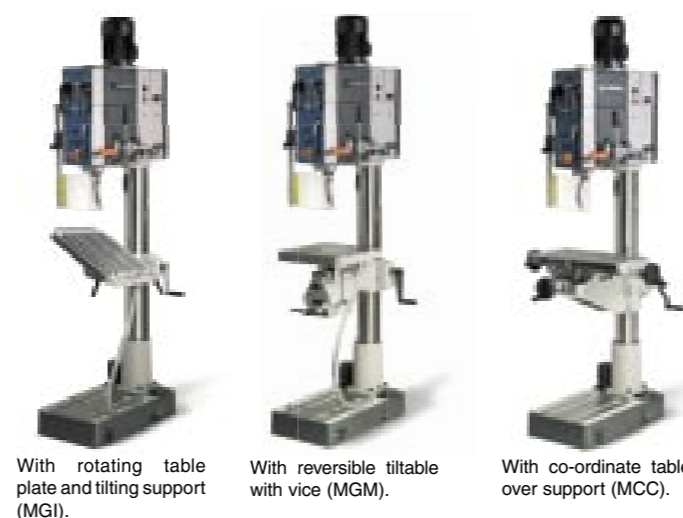
Innovative design • Variety of alternatives • Suitable size and capacity
Easy to run • Long life • Mechanical reliability



Characteristics	SX-34	AX-34	BX-34	SX-40	AX-40	BX-40
Maximum drilling capacity in steel St. 60	ø mm	34		40		
Maximum drilling capacity in cast iron 200 Brinell	ø mm	40		45		
Maximum tapping capacity in steel St. 60	mm	M 27		M 33		
Maximum tapping capacity in cast iron 200 Brinell	mm	M 33		M 39		
Morse Taper MT	Nr.	4		4		
Maximum spindle stroke (drilling depth)	mm	150		180		
Main motor power	HP(Kw)	2 (1,5)		3 (2,2)		
Coolant pump motor power	HP(Kw)		0,10 (0,07)			
Transmission		Gear box				
Number of speeds		9				
Speed range with motor at 1500 rpm 50 Hz 3Ph.	rpm	132-194-277-319-466-666-883-1296-1852				
Upon request: Motor at 1800 rpm 60 Hz 3Ph. (160-2220 rpm)						
Feed		Manual	Automatic	Manual	Automatic	
Number of automatic feeds		-	3	-	3	
Automatic feed range	mm/rev	-	0,1-0,2-0,3	-	0,1-0,2-0,3	
Worktable dimensions (LxW)	mm	400x480			480x560	
Column diameter	mm	125			150	
Distance from spindle centre to column face	mm	300			350	
Net weight	Kg	385	400	410	475	490
Gross weight with packing	Kg	435	450	460	525	540
Packing dimensions (length x width x height)	m	2,3x0,6x1,1				

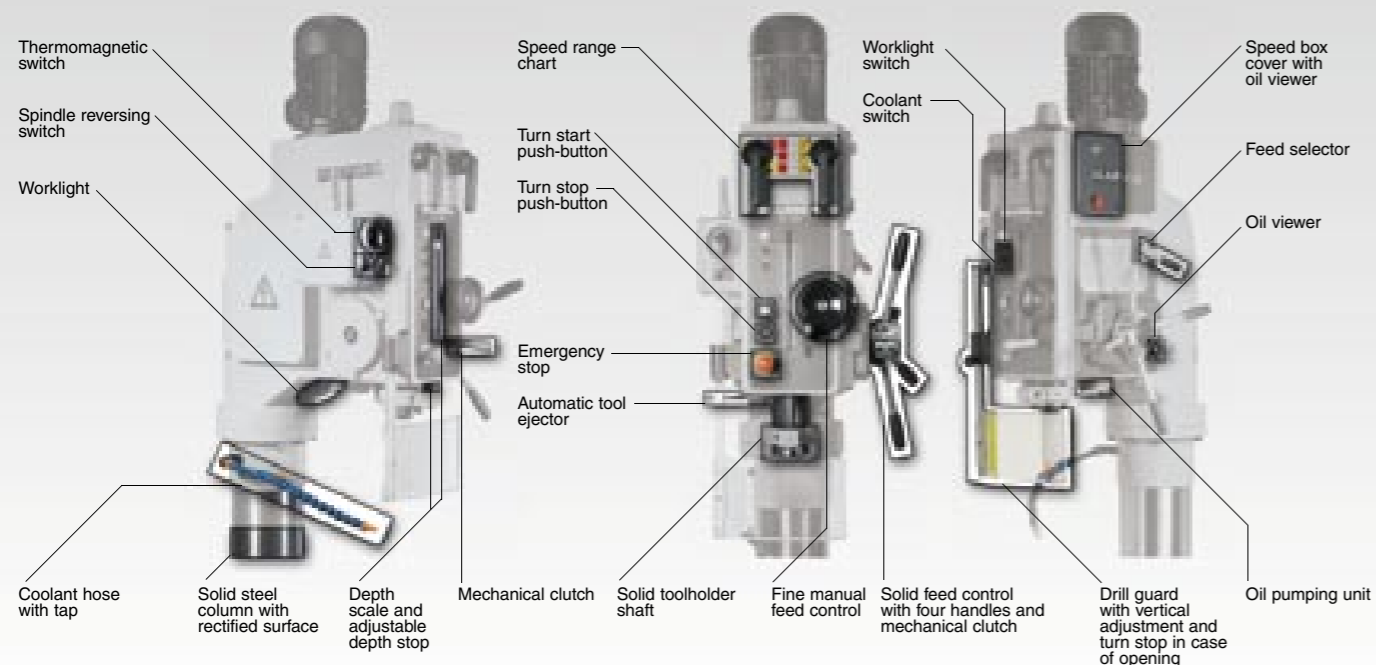
Standard equipment		Optional equipment (*)	
H Hardened and ground high quality steel gears	M Machined base with coolant tank	ERC Coolant system (independent container)	ACNL-S Automatic drilling cycle for tubes and profiles (only for "BX" models)
S Speed plate and selecting levers on head front	W Worklight	MGI Rotating table plate and tilting support	HB Hydro-pneumatic power feed unit
G Gear box lubrication by automatic pump	S Spindle turn selection switch	MGM Reversible tiltable with vice (only for "X-34" models)	UC Union, dragging cone and assembly for multi-spindle heads
D Depth scale and adjustable depth stop	D Drill guard with microswitch	MCC Co-ordinate table over support	GM Multi-spindle head guide rod
A Automatic tool ejector	CE mark	RS Automatic feed reversing system for tapping	PM START/STOP/EMERGENCY control extension (only for "BX" models)
E Emergency STOP		RPF-ANR RPF with 100 mm pneumatic rapid approach	SC Column riser of 200 mm
S Spindle reversing switch		HGP Master guide spindle and nut set for RPF	
B Built-in low voltage electrical equipment in machine head		ACNL Automatic drilling cycle (only for "BX" models)	

(*) On display on pages 34-39



A Series, your choice for:

Mechanical reliability • Size and ergonomics • Industrial use • Real capacity
Variety of sizes • Full equipment • Long life • Lasting value



ø35 mm	M 27	1,5 Kw	MT 4	200 mm	ø160 mm	370 mm
ø40 mm	M 33	2,2 Kw	MT 4	200 mm	ø180 mm	385 mm
ø45 mm	M 33	2,2 Kw	MT 4	200 mm	ø180 mm	385 mm
ø50 mm	M 36	3 Kw	MT 4	230 mm	ø200 mm	370 mm

Characteristics		A-35	A-40	A-45	A-50
Maximum drilling capacity in steel St. 60	ø mm	35	40	45	50
Maximum drilling capacity in cast iron 200 Brinell	ø mm	45	50	55	60
Maximum tapping capacity in steel St. 60	mm	M 27		M 33	M 36
Maximum tapping capacity in cast iron 200 Brinell	mm	M 33		M 40	M 42
Morse Taper MT	Nr.			4	
Maximum spindle stroke (drilling depth)	mm		200		230
Main motor power	HP(Kw)	2 (1,5)		3 (2,2)	4 (3)
Coolant pump motor power	HP(Kw)			0,10 (0,07)	
Transmission				Gear box	
Number of speeds				9	
Speed range with motor at 1500 rpm 50 Hz 3Ph.	rpm	81-115-162		61-85-123	54-75-109
Upon request:		226-321-452		191-269-390	169-237-344
Motor at 1800 rpm 60 Hz 3Ph.		637-904-1274		574-806-1169	507-712-1032
Feed		Automatic by mechanical clutch			
Number of automatic feeds		3		4	
Automatic feed range	mm/rev	0,1-0,2-0,3		0,1-0,2-0,3-0,4	
Worktable dimensions (LxW)	mm	560x480		620x520	
Column diameter	mm	160		180	200
Distance from spindle centre to column face	mm	370		385	370
Net weight	Kg	490	610	640	710
Gross weight with packing	Kg	570	695	725	795
Packing dimensions (length x width x height)	m	2,3x0,6x1,1		2,5x0,6x1,2	2,6x0,6x1,2
Standard equipment		Optional equipment (*)			
Hardened and ground high quality steel gears	Depth scale and adjustable depth stop	MGI Rotating table plate and tilting support	UC Union, dragging cone and assembly		
Speed plate and selecting levers on head front	Automatic tool ejector	RS Automatic feed reversing system for tapping	GM Multi-spindle head guide rod		
Gear box lubrication by automatic pump	Built-in low voltage electrical equipment in machine head	RPF Automatic tapping cycle by lead screw system	SC Column riser of 200 mm		
Machined base with coolant tank and pump	Emergency STOP	RPF-ANR RPF with 100 mm pneumatic rapid approach			
Worklight	Spindle turn selection switch	HGP Master guide spindle and nut set for RPF			
Rotating table plate	Drill guard with microswitch ■	HB Hydro-pneumatic power feed unit			
Automatic feed and cut-off by mechanical clutch	"CE" mark ■	AR Feed range reduced to 50% of their standard values			
Front hand wheel for fine feed work	■ Not standard in every market Please check with your dealer	DLM Mechanical spotface device			
		CN Pneumatic counterbalance for spindle return			

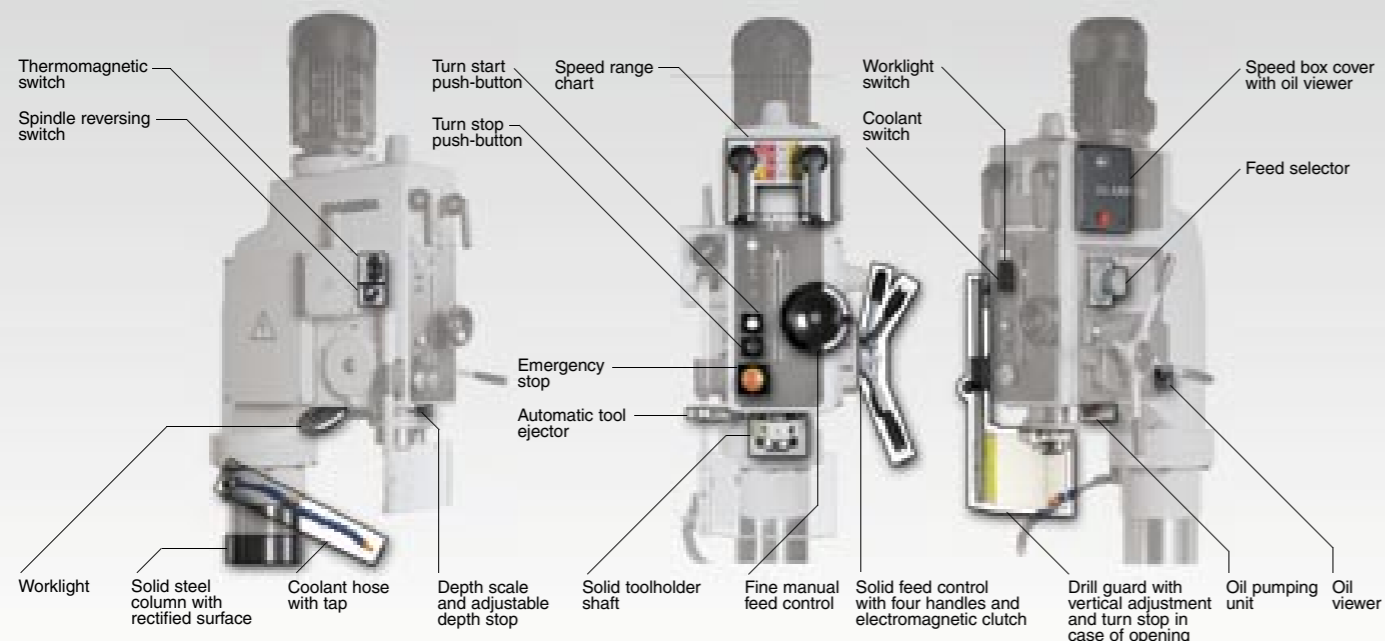
(*) On display on pages 34-39



A-50

B Series, your choice for:

**Easy to run • Mechanical reliability • Technology • Size and ergonomics • Industrial use
True capacity • Variety of sizes • Full equipment • Long life • Lasting value**



ø35 mm	M 27	1,5 Kw	MT 4	200 mm	ø160 mm	370 mm
ø40 mm	M 33	2,2 Kw	MT 4	200 mm	ø180 mm	385 mm
ø45 mm	M 33	2,2 Kw	MT 4	200 mm	ø180 mm	385 mm
ø50 mm	M 36	3 Kw	MT 4	230 mm	ø200 mm	370 mm
ø60 mm	M 42	4 Kw	MT 5	260 mm	ø220 mm	400 mm
ø70 mm	M 50	5,5 Kw	MT 5	260 mm	ø220 mm	400 mm

Characteristics		B-35	B-40	B-45	B-50	B-60	B-70	
Maximum drilling capacity in steel St. 60	ø mm	35	40	45	50	60	70	
Maximum drilling capacity in cast iron 200 Brinell	ø mm	45	50	55	60	70	80	
Maximum tapping capacity in steel St. 60	mm	M 27	M 33	M 33	M 36	M 42	M 50	
Maximum tapping capacity in cast iron 200 Brinell	mm	M 33	M 40	M 40	M 42	M 50	M 60	
Morse Taper MT	Nr.	4			5			
Maximum spindle stroke (drilling depth)	mm	200			230	260		
Main motor power	HP(Kw)	2 (1,5)	3 (2,2)	4 (3)	5,5 (4)	7,5 (5,5)		
Coolant pump motor power	HP(Kw)	0,10 (0,07)			0,12 (0,09)			
Transmission		Gear box						
Number of speeds		9			12			
Speed range with motor at 1500 rpm 50 Hz 3Ph.	rpm	81-115-162	61-85-123	54-75-109	64-80-106-138	51-64-84-110		
Upon request:		226-321-452	191-269-390	169-237-344	199-248-328-429	158-198-262-342		
Motor at 1800 rpm 60 Hz 3Ph.		637-904-1274	574-806-1169	507-712-1032	561-701-926-1210	447-559-738-966		
Feed		Automatic by electromagnetic clutch						
Number of automatic feeds		3	4		6			
Automatic feed range	mm/rev	0,1-0,2-0,3	0,1-0,2-0,3-0,4		0,1-0,2-0,3-0,4-0,5-0,6			
Worktable dimensions (LxW)	mm	560x480		620x520		700x600		
Column diameter	mm	160	180		200	220		
Distance from spindle centre to column face	mm	370	385		370	400		
Net weight	Kg	490	610	640	720	820	840	
Gross weight with packing	Kg	570	695	725	805	920	940	
Packing dimensions (length x width x height)	m	2,3x0,6x1,1	2,5x0,6x1,2		2,6x0,6x1,2	2,7x0,7x1,2		
Standard equipment		Optional equipment (*)						
Hardened and ground high quality steel gears	Depth scale and adjustable depth stop	MGI Rotating table plate and tilting support			DLM Mechanical spotface device			
Speed plate and selecting levers on head front	Automatic tool ejector	RS Automatic feed reversing system for tapping			CN Pneumatic counterbalance for the spindle			
Gear box lubrication by automatic pump	Built-in low voltage electrical equipment in machine head	RPF Automatic tapping cycle by lead screw system			UC Union, dragging cone and assembly for multi-spindle heads			
Machined base with coolant tank and pump	Emergency STOP	RPF-ANR RPF with 100 mm pneumatic rapid approach			GM Multi-spindle head guide rod			
Worklight	Spindle turn selection switch	HGP Master guide spindle and nut set for RPF			PM START/STOP/EMERGENCY control extension			
Rotating table plate	Drill guard with microswitch ■	ACNL Automatic drilling cycle			SC Column riser of 200 mm			
Automatic feed and cut-off by electromagnetic clutch	"CE" mark ■	ACNL-S Automatic drilling cycle for tubes and profiles						
Front hand wheel for fine feed work	■ Not standard in every market Please check with your dealer	ACNL-RPF Automatic drilling and tapping cycles						
		AR Feed range reduced to 50% of their standard values						

(*) On display on pages 34-39



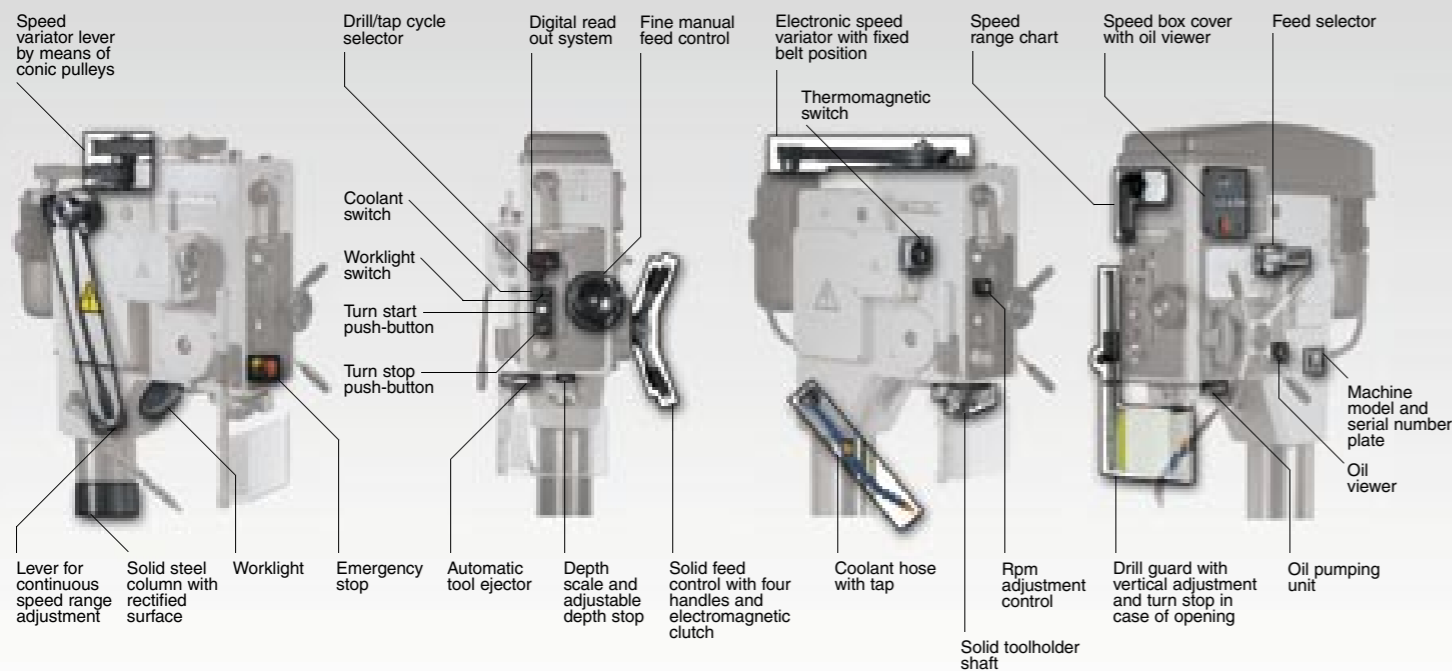
With rotating table plate and tilting support (MGI).

B-50

ø40 mm	M 36	3 Kw	MT 4	200 mm	ø180 mm	385 mm
ø50 mm	M 42	4 Kw	MT 4	200 mm	ø200 mm	370 mm

C Series, your choice for:

Continuous speed range • Digital display of revolutions • Spindle reverse for tapping
Easy to run • State of the art technology • Industrial use • Full equipment



Characteristics		BC-40V	BC-40VE	BC-50V	BC-50VE
Maximum drilling capacity in steel St. 60	ø mm	40			50
Maximum drilling capacity in cast iron 200 Brinell	ø mm	50			60
Maximum tapping capacity in steel St. 60	mm	M 36			M 42
Maximum tapping capacity in cast iron 200 Brinell	mm	M 42			M 50
Morse Taper MT	Nr.	4			4
Maximum spindle stroke (drilling depth)	mm	200			200
Main motor power	HP(Kw)	4 (3)			5,5 (4)
Coolant pump motor power	HP(Kw)		0,10 (0,07)		
Transmission			Belt/Gears		
Number of speeds			Continuous		
Speed variator type		Mechanical	Electronic	Mechanical	Electronic
Speed range with motor at 1500 rpm 50 Hz 3Ph.	rpm	60 a 200	30 a 230	60 a 200	30 a 230
Speed range selection in 3 steps		200 a 600	90 a 730	200 a 600	90 a 730
Upon request motor at 1800 rpm 60 Hz 3Ph.		600 a 1500	190 a 1500	600 a 1500	190 a 1500
Feed		Automatic by electromagnetic clutch			
Number of automatic feeds		4			
Automatic feed range	mm/rev	0,1-0,2-0,3-0,4			
Worktable dimensions (LxW)	mm	560x480		620x520	
Column diameter	mm	180		200	
Distance from spindle centre to column face	mm	385		370	
Net weight	Kg	660		760	
Gross weight with packing	Kg	750		850	
Packing dimensions (length x width x height)	m	2,2x0,7x1,2		2,2x0,7x1,3	

Standard equipment	Optional equipment (*)
<p>Wide continuous speed range in 3 steps</p> <p>Speed plate and selecting levers on head front</p> <p>Mechanical speed variator in "V" model</p> <p>Electronic speed variator in "VE" model</p> <p>Digital rpm counter in front plate</p> <p>Gear box lubrication by automatic pump</p> <p>Machined base with coolant tank and pump</p> <p>Worklight</p>	<p>MGI Rotating table plate and tilting support</p> <p>AR Feed range reduced to 50% of their standard values</p>
<p>Rotating table plate</p> <p>Automatic feed and cut-off by electromagnetic clutch</p> <p>Front hand wheel for fine feed work</p> <p>Depth scale and adjustable depth stop</p> <p>Automatic feed reversing system for tapping</p> <p>Automatic tool ejector</p>	<p>Built-in low voltage electrical equipment in machine head</p> <p>Emergency STOP</p> <p>Spindle turn selection switch</p> <p>Drill guard with microswitch ■</p> <p>"CE" mark ■</p>
<p>■ Not standard in every market Please check with your dealer</p>	<p>(*) On display on pages 34-39</p>

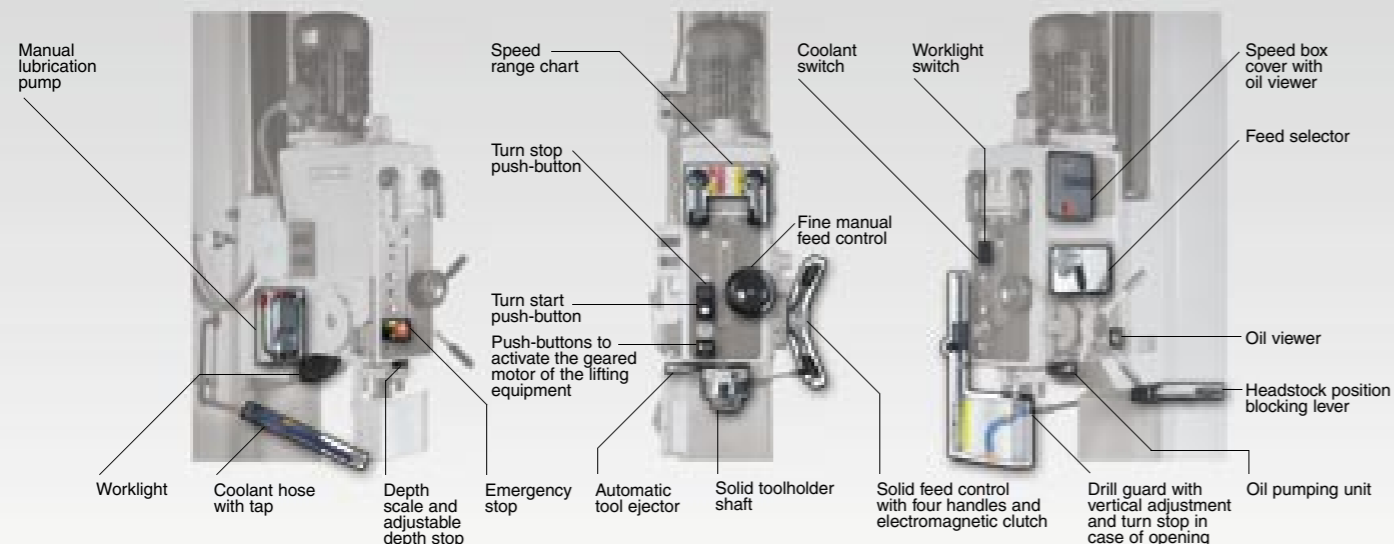


With rotating table plate and tilting support (MGI).

BC-40VE

P Series, your purchase for:

Power • Precision • Productivity • Mechanical reliability • Technology • Industrial use
True capacity • Variety of sizes • Complete equipment • Long life • Lasting value



ø40 mm	M 33	2,2 Kw	MT 4	200 mm	400 mm
ø50 mm	M 42	4 Kw	MT 4	230 mm	475 mm
ø70 mm	M 64	7,3 Kw	MT 5	260 mm	525 mm

Characteristics		BP-40	BP-50	BP-50L	BP-70	BP-70L
Maximum drilling capacity in steel St. 60	ø mm	40	50	50	70	70
Maximum drilling capacity in cast iron 200 Brinell	ø mm	50	60	60	80	80
Maximum tapping capacity in steel St. 60	mm	mm	M 33	M 42		M 64
Maximum tapping capacity in cast iron 200 Brinell	mm	M 40		M 50		M 68
Morse taper MT	Nr.		4			5
ISO taper (upon request)	Nr.	30	40	40	50	50
Maximum spindle stroke (drilling depth)	mm	200	230	230	260	260
Main motor power	HP(Kw)	3 (2,2)	5,5 (4)	5,5 (4)	10 (7,3)	10 (7,3)
Coolant pump motor power	HP(Kw)		0,12 (0,09)	0,12 (0,09)		
Rise and falling head geared-motor power	HP(Kw)	1 (0,73)		1,5 (1,1)		
Transmission		Gear box				
Number of speeds		9			12	
Speed range with motor at 1500 rpm 50 Hz 3Ph.	rpm	81-115-162	54-75-109		51-64-84-110	
Upon request:		226-321-452	169-237-344		158-198-262	
Motor at 1800 rpm 60 Hz 3Ph.		637-904	507-712		342-447-559	
		1274	1032		738-966	
Feed		Automatic by electromagnetic clutch				
Number of automatic feeds		3	6			
Automatic feed range	mm/rev	0,1-0,2-0,3	0,1-0,2-0,3-0,4-0,5-0,6			
Worktable dimensions (LxW)	mm	600x500	700x600		900x700	
Distance from spindle centre to column face	mm	400	475		525	
Net weight	Kg	1100	1400	1600	1850	2100
Gross weight with packing	Kg	1300	1600	1850	2100	2400
Packing dimensions (length x width x height)	m	2,2x0,9x1,3	2,6x1,1x1,7	3,2x1,1x1,9	2,7x1,3x1,8	3,2x1,3x1,8

Standard equipment	Optional equipment (*)
Adjusting of the vertical position of the head by geared-motor Hardened and ground high quality steel gears Gear box lubrication by automatic pump Automatic guide greasing by manual pump Speed plate and selecting levers on head front Coolant tank and pump in machine base Worklight Ample fixed worktable Automatic feed and cut-off by electromagnetic clutch Front hand wheel for fine feed work	RS Automatic feed reversing for tapping RPF Automatic tapping cycle by lead RPF-ANR RPF with 100 mm pneumatic rapid approach HGP Master guide spindle and nut set for RPF ACNL Automatic drilling cycle ACNL-S Automatic drilling cycle for tubes and profiles ACNL-RPF Automatic drilling and tapping AR Feed range reduced to 50% of their standard values LDG Digital read-out system for table axis MH-4 Cross table DLM Mechanical spotface device CN Pneumatic counterbalance for the spindle
Depth scale and adjustable depth stop Automatic tool ejector Built-in low voltage electrical equipment in column rear Emergency STOP Rightwards turn push button Leftwards turn push button Drill guard with microswitch Side protection panels with front door "CE" mark ■ Not standard in every market Please check with your dealer	UC Union, dragging cone and assembly multiple GM Multi-spindle head guide rod PM START/STOP/EMERGENCY control extension PMC Suspendel control panel (all functions) ISO-40 ISO-40 spindle with quick tool change nut (only for models 50) ISO-50 ISO-50 spindle with quick tool change nut (only for models 70)

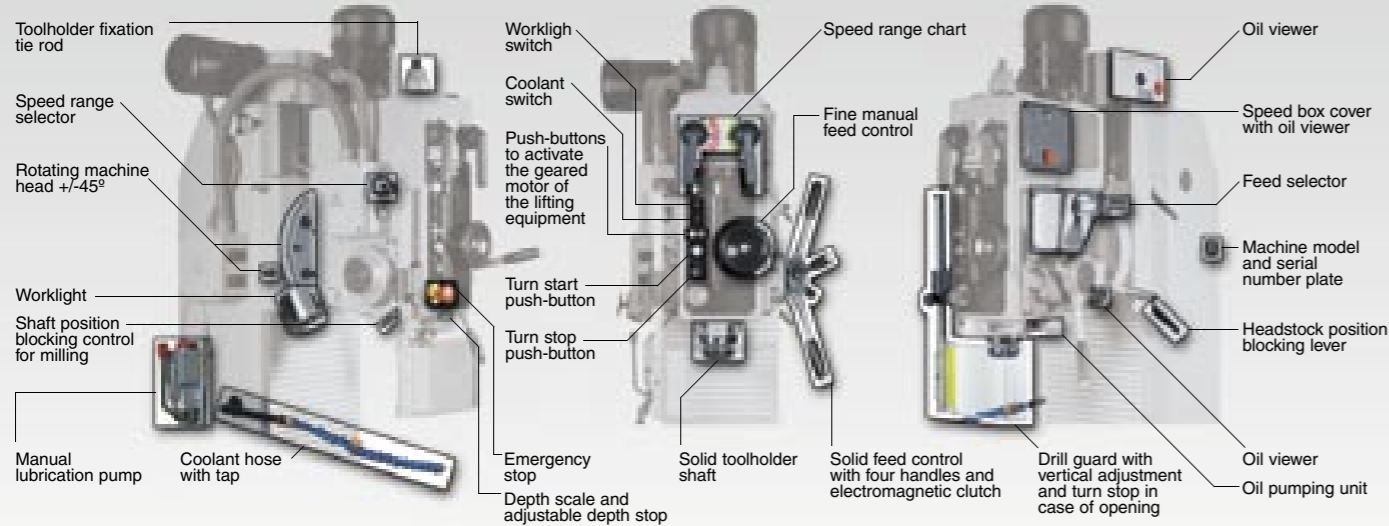
(*) On display on pages 34-39



All models of the P Series are supplied with side protection panels with front door except for those models fitted with a cross table.

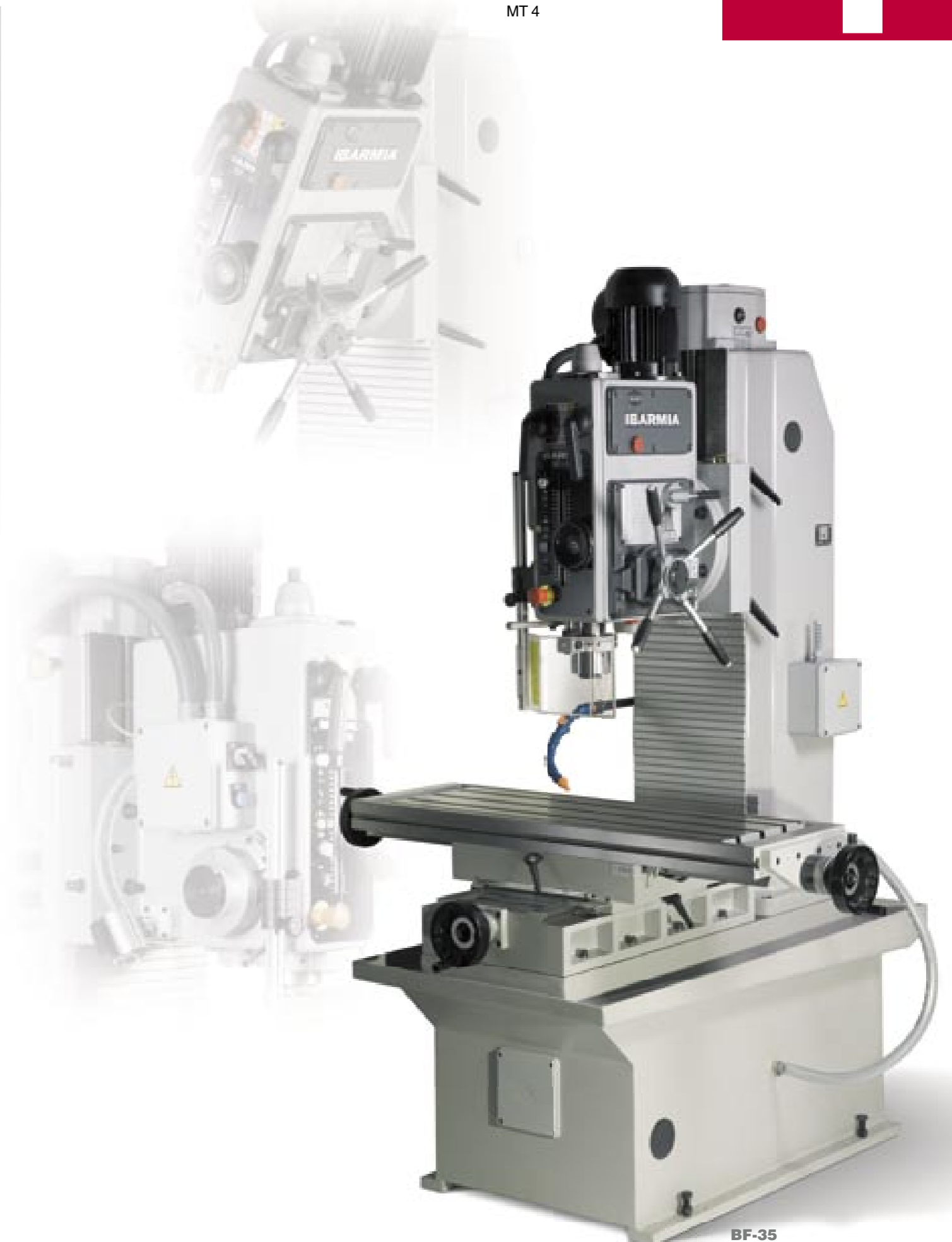
BP-70L

Mechanical skill • Creativity • Multifunctional use • Precision
Ample cross table • Complete equipment • Reliability



Characteristics	BF-35	
Maximum drilling capacity in steel St. 60	ø mm	35
Maximum drilling capacity in cast iron 200 Brinell	ø mm	40
Maximum milling capacity in steel St. 60	cm³/min	45
Maximum milling capacity in cast iron 200 Brinell	cm³/min	80
Maximum tapping capacity in steel St. 60	mm	M 30
Maximum tapping capacity in cast iron 200 Brinell	mm	M 33
ISO tape	Nr.	30
Morse taper MT (upon request)	Nr.	4
Maximum spindle stroke (drilling depth)	mm	200
Main motor power	HP(Kw)	1,5 / 2 (1,1 / 1,5)
Coolant pump motor power	HP(Kw)	0,12 (0,09)
Rise and falling head geared-motor power	HP(Kw)	1 (0,75)
Transmission		Gear box
Number of speeds		18
Speed range with motor at 1500/3000 rpm 50 Hz 3Ph.	rpm	75 155 285 430 825 1200
Upon request:		106 200 310 575 850 1680
Motor at 1800/3600 rpm 60 Hz 3Ph. (125-2850 rpm)		140 220 400 600 1150 2375
Feed		Automatic by electromagnetic clutch
Number of automatic feeds		3
Automatic feed range	mm/rev	0,1 - 0,2 - 0,3
Worktable dimensions (LxW)	mm	1200x360
Longitudinal movement of the table (X)	mm	700
Cross movement of the table (Y)	mm	360
Distance from spindle centre to column face	mm	383
Net weight	Kg	1250
Gross weight with packing	Kg	1450
Packing dimensions (length x width x height)	m	1,6x1,6x2,3
Standard equipment	Optional equipment (*)	
Adjustment of the vertical position of the head by geared-motor	Automatic feed and cut-off by electromagnetic clutch	RS Automatic feed reversing for tapping
45° tilting head on both sides of the central axis	Front hand wheel for fine feed work	AR Feed range reduced to 50% of their standard values
Hardened and ground high quality steel gears	Depth scale and adjustable depth stop	LDG Digital read-out system for the table
Gear box lubrication by automatic pump	Automatic tool ejector	SERVO X Electronic feed unit for table X axis
Automatic guide greasing by manual pump	Built-in low voltage electrical equipment in column rear	SERVO Y Electronic feed unit for table Y axis
Speed plate and selecting levers on head front	Emergency STOP	HM4 MORSE taper MT4 ●
High/low speed range selector	Spindle turn selection switch	TCR Quick tool change nut for ISO-30
Coolant tank and pump in machine base	Drill guard with microswitch ■	
Worklight	"CE" mark ■	
Co-ordinate cross table	■ Not standard in every market Please check with your dealer	

● No extra price
 (*) On display on pages 34-39



BF-35

18 25 K	18 25 T	32 Z	34 Z	32 X	34 X	40 Z	40 X	35 40 50 A	35 40 50 B	40 50 C
Dimensions in mm.										
Drill with fixed table and rise and falling head		 A x B 400 x 400		 A x B 500 x 600						
Drill with oversize table and rotating rise and falling head		 A x B 400 x 900		 A x B 500 x 1050						
Drill with extralarge fixed table and rise and falling head		 A x B 300 x 900 300 x 1400 300 x 1900 300 x 2400 300 x 2900		 A x B 400 x 950 400 x 1500 400 x 2050 400 x 2600 400 x 3150						
Drill batteries 2 to 6 headstocks		 A x B 300 x 900 300 x 1400 300 x 1900 300 x 2400 300 x 2900		 A x B 400 x 950 400 x 1500 400 x 2050 400 x 2600 400 x 3150						

Check page 42-43 for models and dimensions

An ample fixed work table is often interesting because:

- it offers greater convenience for the positioning of the necessary parts and elements,
- bulky or heavy pieces can be secured to the work table.

For these cases we offer our drill batteries, machines whose construction has one over-riding rule: **flexibility.**

As well as for bulky or heavy pieces, these assemblies are very interesting

for jobs in big batches where the piece must receive more than one operation as it moves from one machine head to another, receiving each operation in turn. Naturally, each machine head can be equipped differently according to the function of the operation (automatic drilling cycle, automatic tapping cycle, spotfacing, etc...).

One of the highlights of these drill batteries is that the machine heads can rotate radially extending the field of applications, allowing a

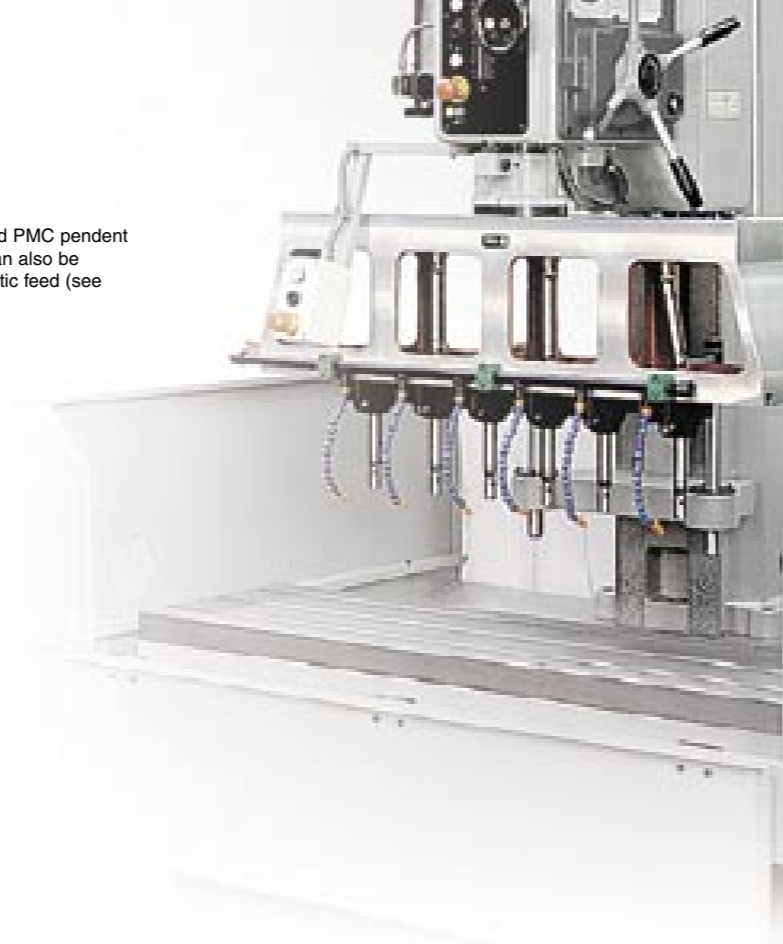
greater number of operations without having to move the piece around the worktable.

In IBARMIA we offer you an endless number of combinations so that you can set up the machine to match your needs exactly. Tables of different widths and/or lengths can be combined with one, two, three .. up to six machines heads. Detailed information on the different sizes of table and number of machine heads can be found on pages 42-43.



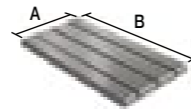


BP-70 with MH-4 cross table and PMC pendent control panel. The MH-4 table can also be optionally equipped with automatic feed (see page 35).



AVAILABLE TABLES

BP-40 BP-50		BP-70	
A x B	A x B	A x B	A x B
400 x 950	500 x 1050	500 x 1050	500 x 1650
400 x 1500	500 x 1650	500 x 2250	500 x 2850
400 x 2050	500 x 2850	500 x 3450	
400 x 2600			
400 x 3150			



Dimensions in mm.



BP-50 with extralarge table of 400x1500 mm. for the drilling of rods using a multi-spindle drilling head arranged in a line.



Standard version of a 4BP-40 drill battery with a 400 x 2050 mm. worktable supplied to a subcontractor of the railway industry.

These assemblies are extremely interesting in jobs of long production series where the piece undergoes more than one operation, moving from one machine head to another, receiving each operation in turn. Naturally, each machine head can be equipped differently according to the function of the operation (automatic drilling cycle, automatic tapping cycle, spotfacing, etc...). In many cases, these solutions are much more productive than machines such as machining centres and at a much lower cost.



3BP-50

Special constructions of round column



Simultaneous drilling of 76 holes in a paddle pallet.



2 Headstock drill battery (drill/tap by means of master guide spindle and nut set) for automotion hinges.



Hydraulic self-centering clamping tools for automotion hinges.



Drill with rotating head over double table base. The back lower table allows working on big pieces.

Our experience comes from the manufacturing of hundreds of machines, hand in hand with our clients, carrying out in practice projects of "shared engineering": responding to the problems and needs that the client has with solutions that our experience tells us are the most appropriate. This sharing of needs and experience has led to ingenious solutions and machines.

Numerous applications of our machines are to be found in the automobile components sector, manufacturing of valves, flanges, etc..., providing solutions for productivity and cost machine/piece which are unbeatable even by the most sophisticated numerical control machines.

Special constructions of prismatic column



Pneumatic self-centering 3 jaw chuck with synchronized open/close cycle.



4 Position rotating table for circular drill battery with synchronized hydraulic clamping tools.



2 Headstock drill battery including full guarding, automatic doors, working area division, synchronized clamping tools, automatic chip conveyor and outside control panel.



4 Position circular drill battery:
 • Position 1: loading with automatic regulation of the piece length.
 • Position 2: drilling operation.
 • Position 3: tapping operation.
 • Position 4: automatic ejection of the pieces to the basket.



Multi-spindle headstock drilling detail of car handwheels.



Multi-spindle headstock drilling of car handwheels, under strict technical and security standards.

Cabinets / Bases / Containers / Light



PKA
Floor cabinet with 2 shelves.
Available for **K/T** Series.



PKB
Floor cabinet with door and drawer.
Available for **K/T** Series.



ERC
Coolant system (independent container).
Available for **K/T/Z*/X*** Series.
* Models with flat base plate.



ERB
"T" slotted machine base with coolant pump.
Standard for **Z/X/A/B/C** Series.



PV
Safety drill guard against chips with a micro-switch.
Standard in all Series.



EL
Worklight.
Standard for **Z/X/A/B/C/P/F** series.
Optional for **K/T** series.

Tables including support



MF
Fixed table.
Standard for **K/T/Z/X(32)** series.



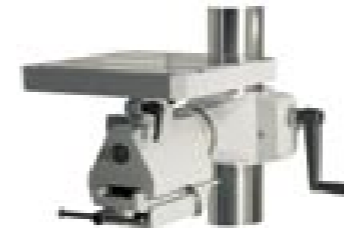
MG
Rotating table plate.
Available for **K/T/Z/X(32)** series.
Standard for **Z/X(34-40)/A/B/C** series.



MGI
Rotating table plate and tilting support.
Available for **Z/X/A/B/C** Series.



MFM
Reversible tiltable with vice.
Available for **K/T** series.



MGM
MGM Reversible rotating tiltable with vice.
Available for **Z/X (32/34)** series.



MCC-100
Cross table over support.
Available for **K/T** series.



MCC-125
Cross table over support.
Available for **Z/X (32/34)** series.



MCC-150
Cross table over support.
Available for **Z/X (40)** series.

Cross tables



MB1
Cross table.
X = 190 mm.
Y = 115 mm.
Table net weight = 33 kg.
Available for **K/T** series.



MB2D
Cross table.
X = 250 mm.
Y = 150 mm.
Table net weight = 46 kg.
Available for **Z/X** series.



MB3D
Cross table.
X = 350 mm.
Y = 150 mm.
Table net weight = 56 kg.
Available for **Z/X(32-34)** series.



MB4D
Cross table.
X = 470 mm.
Y = 230 mm.
Table net weight = 86 kg.
Available **Z/X/A/B/C** series.



MB5D
Cross table.
X = 500 mm.
Y = 320 mm.
Table net weight = 125 kg.
Available for **Z/X(40)/A/B/C** series.



MH4
Cross table.
X = 700 mm.
Y = 360 mm.
Table net weight = 300 Kg.
Available for **P** series.



SERVO X / SERVO Y
Electronic "SERVO" feed unit for X/Y axis.
Feed range: 20 to 1000mm/min.
Available for **MH-4** cross table.

Speed control / Measure / Tapping



VE
Electronic speed variator.
Standard for **Z(34-40)** y **C-VE** series.
Available for other models upon request.



TAK
Digital rpm counter.
Standard for **Z(34-40)** and **C-VE** series.
Available for VE models on **K** Series and **V** models on **Z-32** Series.



LBC
Depth scale read-out system.
Available for all series.



LDG
Digital read-out system for the table.



RS
Automatic feed reversing for tapping.
Standard for **Z(34-40)** y **C** series.
Available for all series.



RPF
Automatic tapping cycle by lead screw system with brake motor for spindle reverse.
Available for **X/A/B/P** series.



RPF-ANR
RPF Automatic tapping cycle with pneumatic rapid approach of 100 mm.
Available for **X/A/B/P** series.



HGP
Master guide spindle and nut set.
Available for **X/A/B/P** series.

Feed devices / Multi-spindle heads / Lubrication



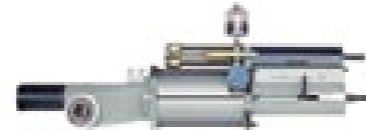
CN
Pneumatic counterbalance for spindle return (recommended with multi-spindle head applications).
Available for **X/A/B/P** Series.



ACNL
Automatic drilling cycle with rapid approach, working feed and rapid retract.
Available for **B** models on **Z/X/B/P** Series.



ACNL-S
Automatic drilling cycle with two rapid approaches (recommended for tube and profile drilling).
Available for **B** models on **Z/X/B/P** Series.



HB
Hydro-pneumatic power feed unit.
Available for **K/T/Z/X/A** (up to 35 mm models only) Series.



CM
Multi-spindle drilling heads with fixed or adjustable spindles.
Available for all Series.



AR
50% lowered feed rate range.
Available for **A/B/P** Series.



MQL
Microlubrication system.
Available for all Series.

Standard assembly for jobs using multi-spindle heads:

ACCESSORIES AND FUNCTIONS

ACNL
Automatic drilling cycle with rapid approach, working feed and rapid retract, with additional pneumatic counterweight function for the multi-spindle head.

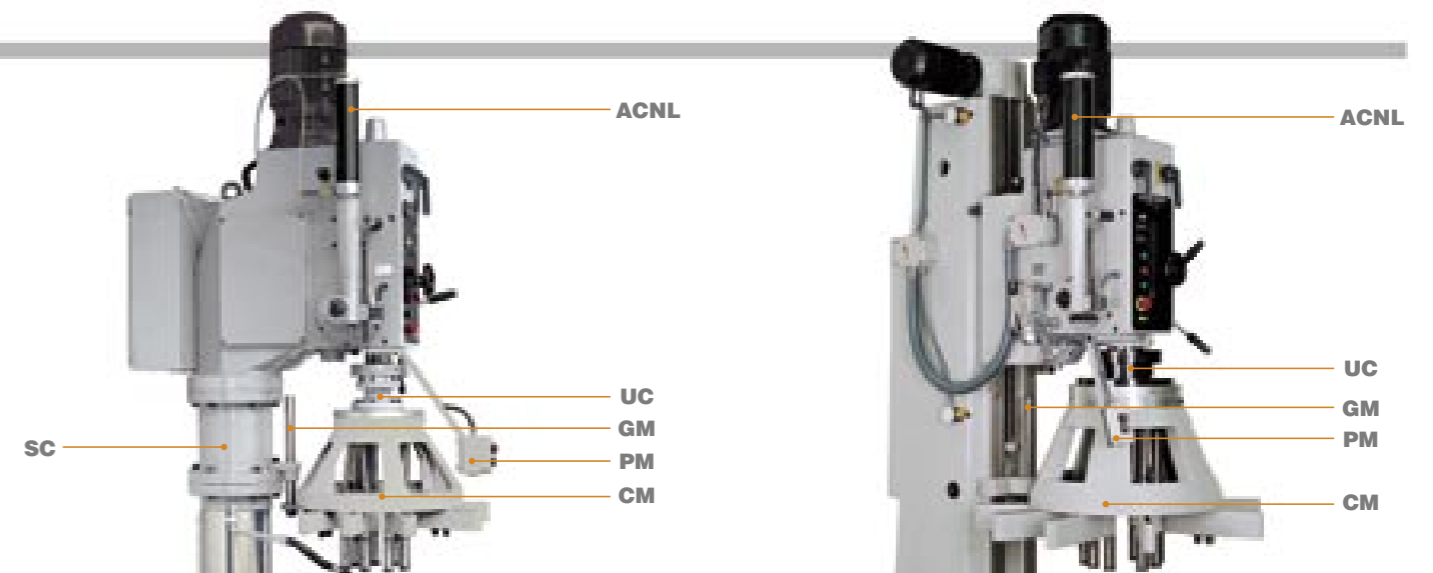
UC
Union, dragging cone and assembly of the multi-spindle head.

CM
Multi-spindle head with fixed or adjustable (see picture) spindles.

GM
Multi-spindle head guide rod.

PM
START/STOP and emergency STOP control extensión.

SC
Column riser of 200 mm for greater distance between spindle nose and worktable.



Standard vices



SL-110
Vise with fixed base (Light Series).
Maximum opening: 110 mm.
Jaw width: 120 mm.
Jaw height: 37 mm.
Net weight: 7 Kg.
Available for **K/T/Z/X/A/B/C** series.



SL-150
Vise with fixed base (Light Series).
Maximum opening: 150 mm.
Jaw width: 140 mm.
Jaw height: 37 mm.
Net weight: 12 Kg.
Available for **K/T/Z/X/A/B/C** series.



FL-116
Vise with fixed base.
Maximum opening: 116 mm.
Jaw width: 100 mm.
Jaw height: 31,5 mm.
Net weight: 9 Kg.
Available for **Z/X/A/B/C** series.



FL-157
Vise with fixed base.
Maximum opening: 157 mm.
Jaw width: 125 mm.
Jaw height: 41,5 mm.
Net weight: 15 Kg.
Available for **Z/X/A/B/C** series.



FS-150
Vise with fixed base (Heavy Series).
Maximum opening: 150 mm.
Jaw width: 150 mm.
Jaw height: 44 mm.
Net weight: 28 Kg.
Available for **A/B/C/P/F** series.



FG-150
Vise with swiveling base (Heavy Series).
Maximum opening: 150 mm.
Jaw width: 150 mm.
Jaw height: 44 mm.
Net weight: 37 Kg.
Available for **A/B/C/P/F** series.

Rapid close and self-centering vices



FR-90
Opening-cam rapid close vice.
Maximum opening: 90 mm.
Jaw width: 103 mm.
Jaw height: 20 mm.
Net weight: 9 Kg.
Available for all series.



FR-125
Opening-cam rapid close vice.
Maximum opening: 125 mm.
Jaw width: 125 mm.
Jaw height: 30 mm.
Net weight: 18 Kg.
Available for all series.



FK-103
Self-centering vice.
Maximum opening: 103 mm.
Jaw width: 103 mm.
Jaw height: 20 mm.
Net weight: 10 Kg.
Available for all series.



DRILL-CHUCKS
Self-centering drill-chuck from Ø 13 to Ø 16. Morse taper 3 & 4.
Available for all Series.



TAPHOLDER
Morse taper, tapholder and tapping collets.



REDUCING SLEEVES
Different reducing sleeves for Morse tapers.
Available for all Series.



ISO 40
Spindle with quick change nut.
Available for BP-50 models.

ISO 50
Spindle with quick change nut.
Available for BP-70 models.



PL
Manual jaw chuck.
Available for all Series.



PN
Pneumatic jaw chucks.
Available for all Series.



PST
Cycle or spindle turn START foot pedal.
PSR
Spindle turn reverse foot pedal (for tapping)
Available for all Series.



PEM
Emergency STOP foot pedal.
Available for all Series.



PMC
Pendant control panel (all functions).
Available for **P** series.

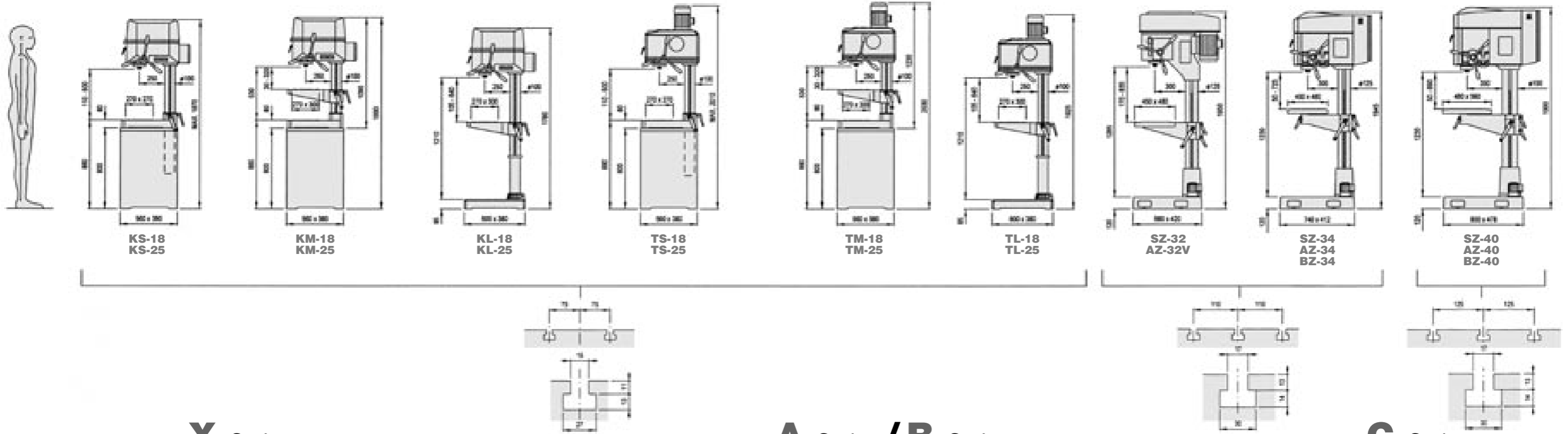
Chucks, foot pedals, ...



K Series

T Series

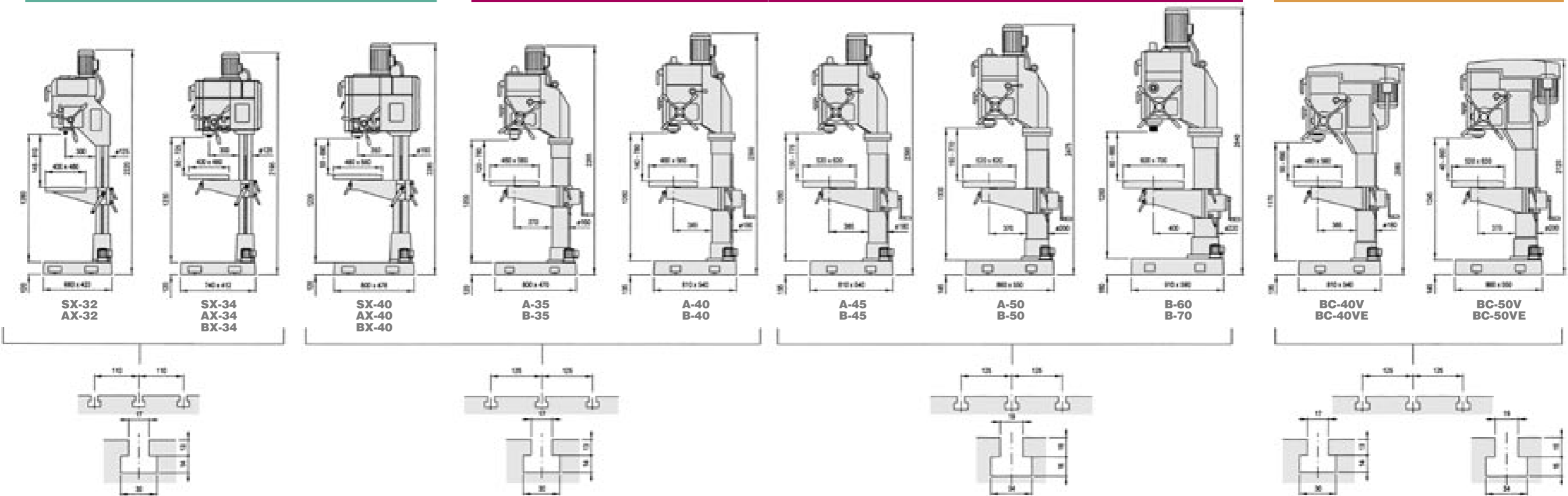
Z Series



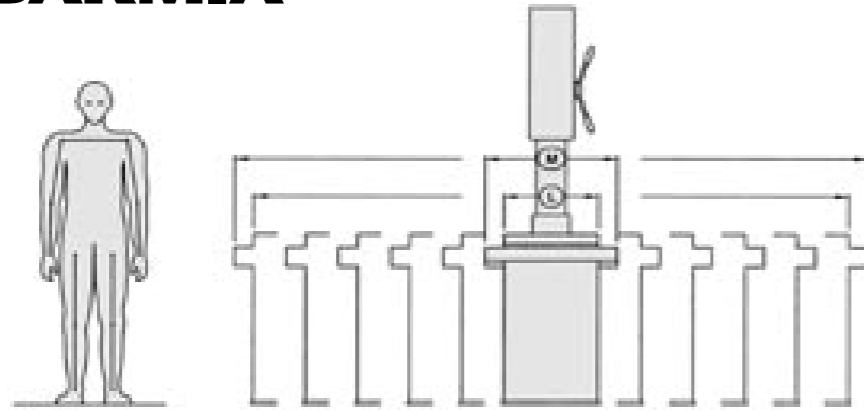
X Series

A Series / B Series

C Series



Dimensions in mm.



Model		W	L	M	E
1KS-18 1KS-25	1TS-18 1TS-25	400	400	600	125
1KS-18-G 1KS-25-G	1TS-18-G 1TS-25-G	400	950	1150	125

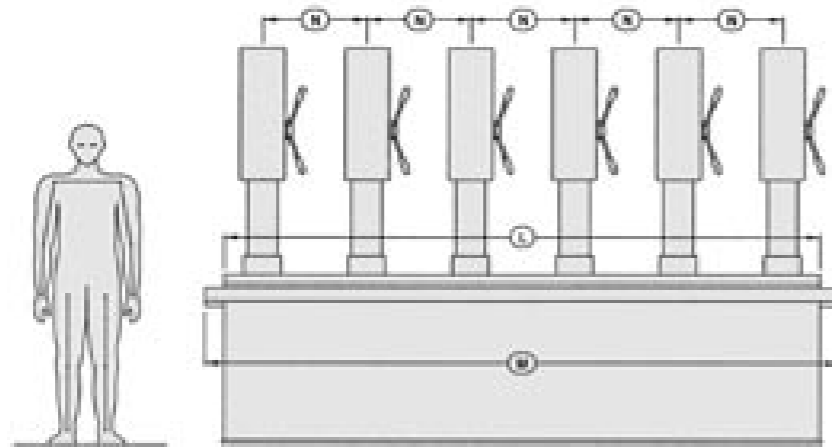
Model		W	L	M	E
1SZ-40 1AZ-40 1BZ-40	1SX-40 1AX-40 1BX-40	500	600	800	150
1SZ-40-G 1AZ-40-G 1BZ-40-G	1SX-40-G 1AX-40-G 1BX-40-G	500	1050	1250	150

Optional tables

Model	W	L	M	E
1KS-18 1KS-25	300	900	1100	90
1KS-18 1KS-25	300	1400	1600	90
1KS-18 1KS-25	300	1900	2100	90
1KS-18 1KS-25	300	2400	2600	90
1KS-18 1KS-25	300	2900	3100	90

Optional tables

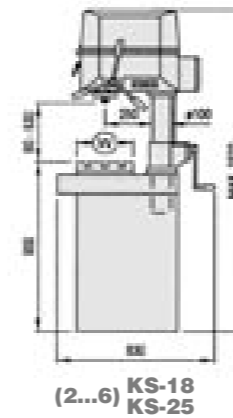
Model	W	L	M	E
1SZ-40 1AZ-40 1BZ-40	400	950	1150	125
1SZ-40 1AZ-40 1BZ-40	400	1500	1700	125
1SZ-40 1AZ-40 1BZ-40	400	2050	2250	125
1SZ-40 1AZ-40 1BZ-40	400	2600	2800	125
1SZ-40 1AZ-40 1BZ-40	400	3150	3350	125



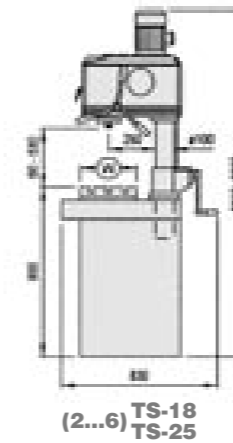
Model		W	L	M	N	E
2KS-18 2KS-25	2TS-18 2TS-25	300	900	1100	500	90
3KS-18 3KS-25	3TS-18 3TS-25	300	1400	1600	500	90
4KS-18 4KS-25	4TS-18 4TS-25	300	1900	2100	500	90
5KS-18 5KS-25	5TS-18 5TS-25	300	2400	2600	500	90
6KS-18 6KS-25	6TS-18 6TS-25	300	2900	3100	500	90

Model		W	L	M	N	E
2SZ-40 2AZ-40 2BZ-40	2SX-40 2AX-40 2BX-40	400	950	1150	550	125
3SZ-40 3AZ-40 3BZ-40	3SX-40 3AX-40 3BX-40	400	1500	1700	550	125
4SZ-40 4AZ-40 4BZ-40	4SX-40 4AX-40 4BX-40	400	2050	2250	550	125
5SZ-40 5AZ-40 5BZ-40	5SX-40 5AX-40 5BX-40	400	2600	2800	550	125
6SZ-40 6AZ-40 6BZ-40	6SX-40 6AX-40 6BX-40	400	3150	3350	550	125

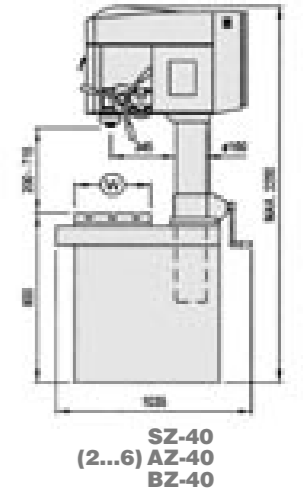
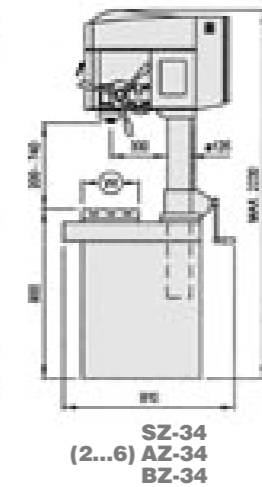
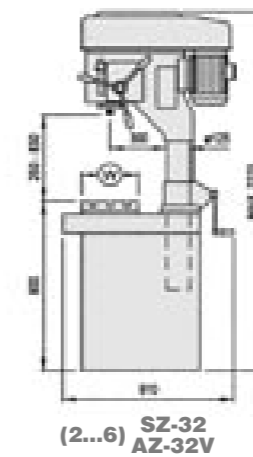
K Series



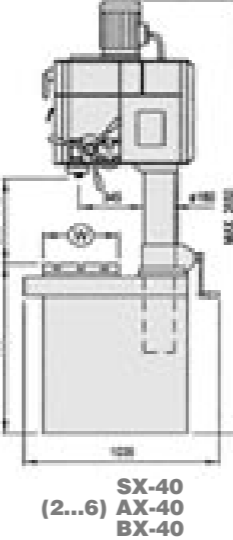
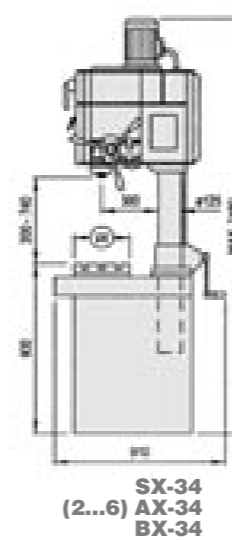
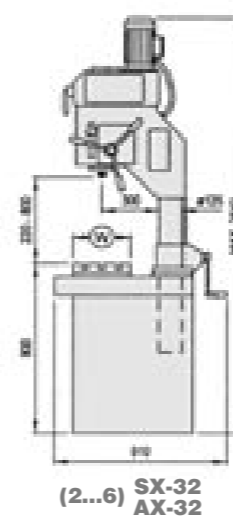
T Series



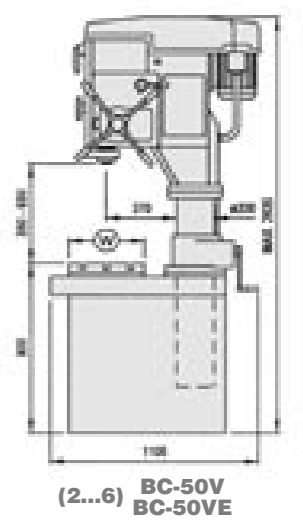
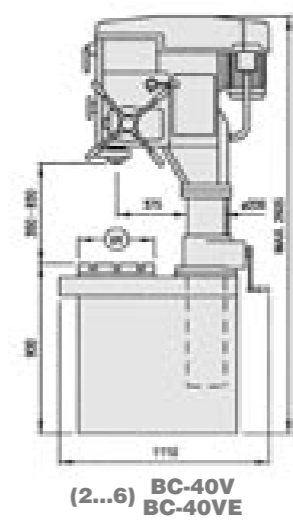
Z Series



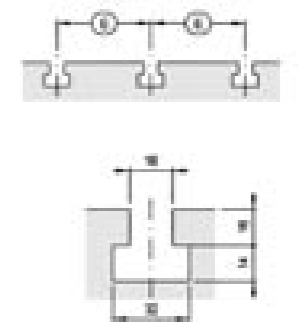
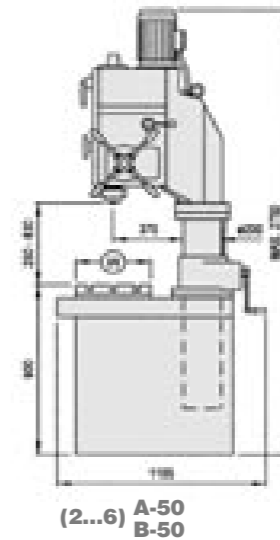
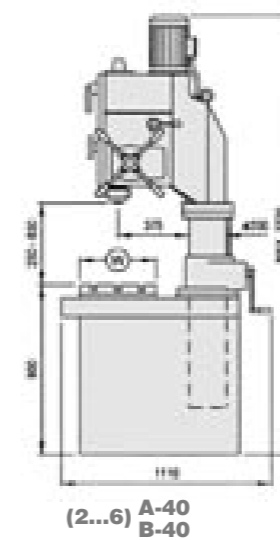
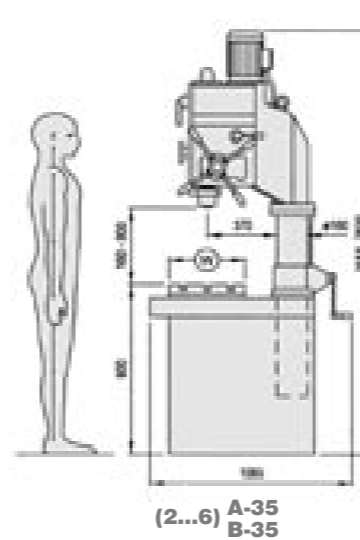
X Series



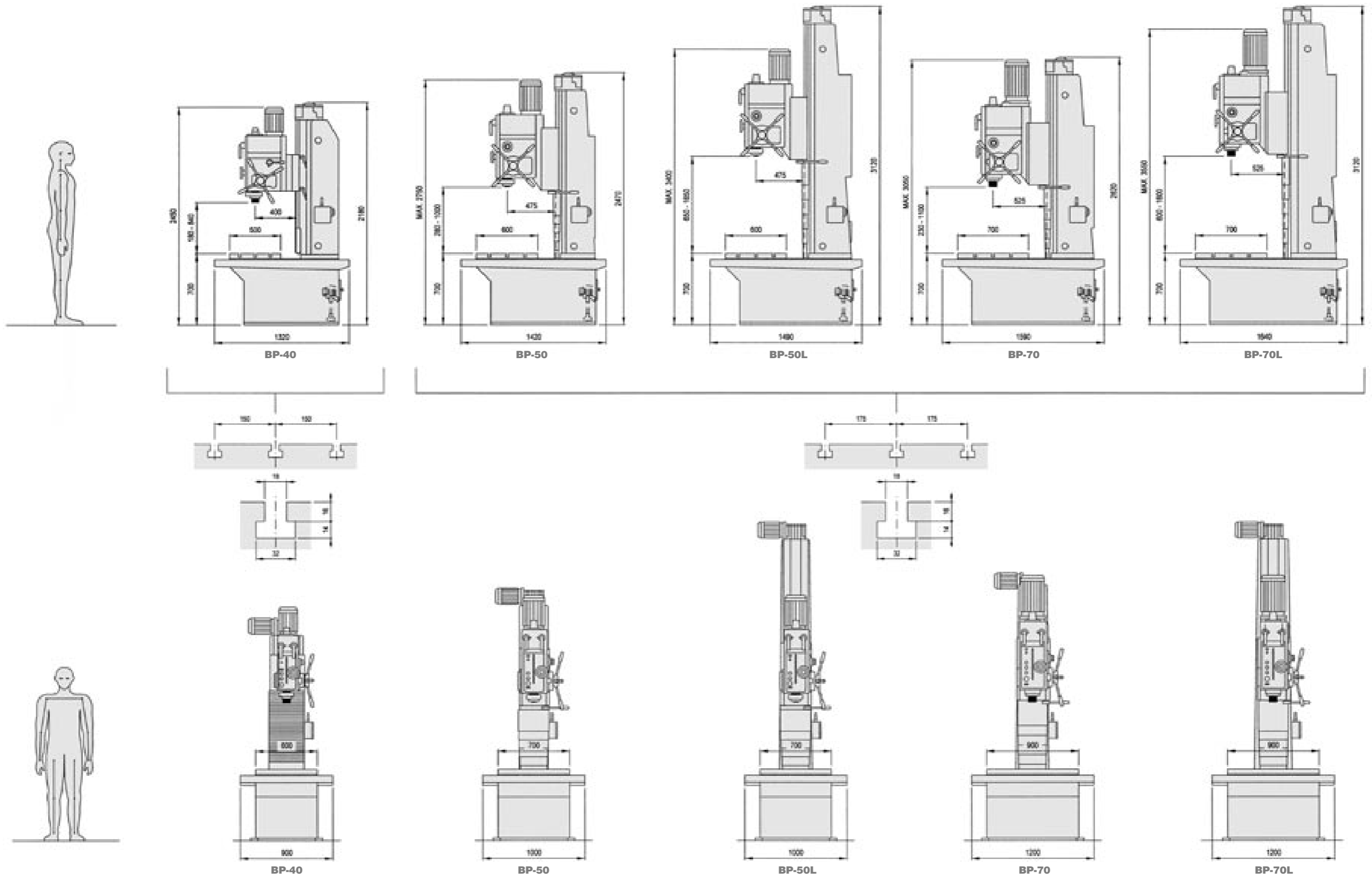
C Series



A Series / B Series



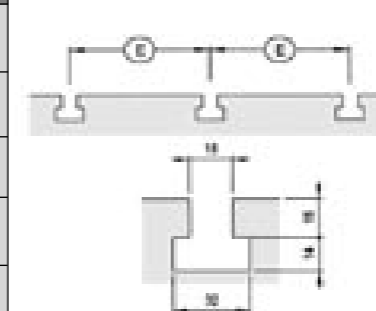
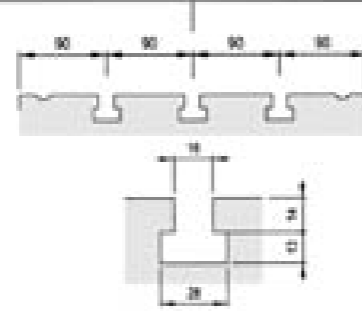
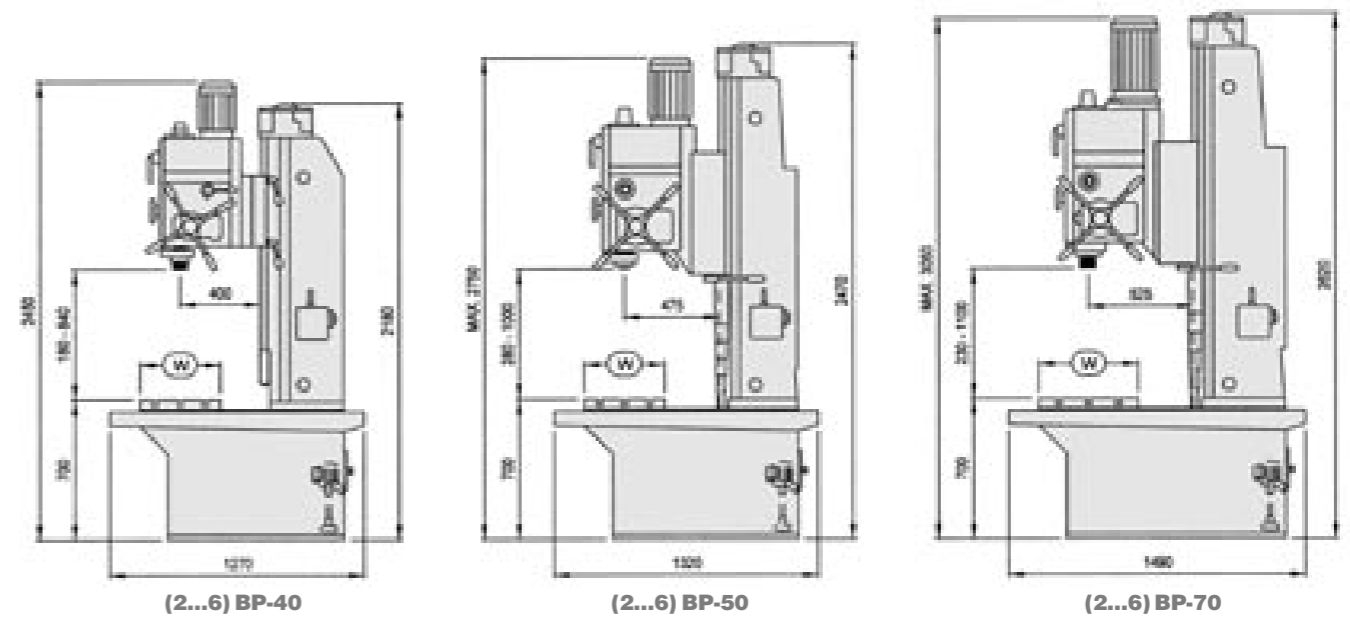
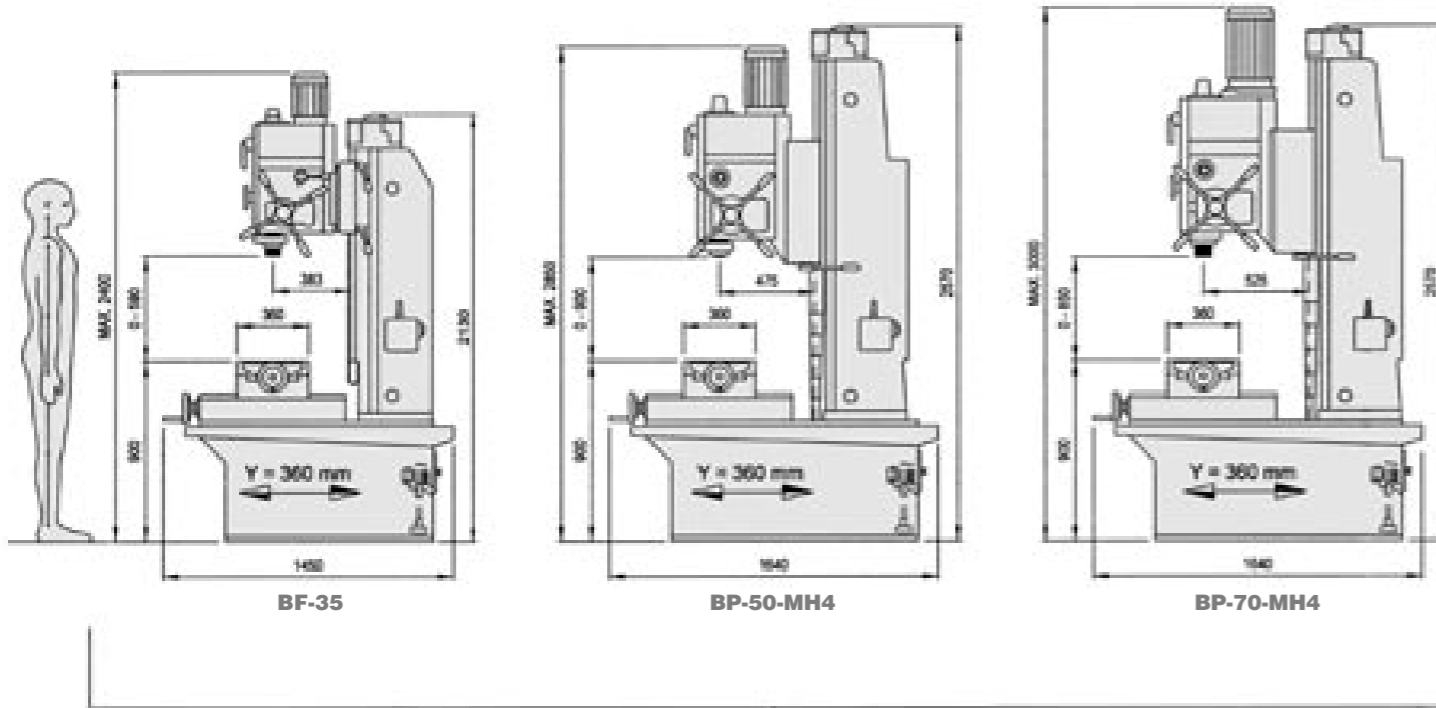
P Series



F Series

P Series + MH4

P Series drill batteries



Model	W	L	M	N	E
2BP-40 2BP-50	400	950	1250	550	125
3BP-40 3BP-50	400	1500	1800	550	125
4BP-40 4BP-50	400	2050	2350	550	125
5BP-40 5BP-50	400	2600	2900	550	125
6BP-40 6BP-50	400	3150	3450	550	125

Model	W	L	M	N	E
2BP-70	500	1050	1350	600	150
3BP-70	500	1650	1950	600	150
4BP-70	500	2250	2550	600	150
5BP-70	500	2850	3150	600	150
6BP-70	500	3450	3750	600	150

