



ŠKODA TVC s.r.o.
Technological and Production Center

Machines catalogue
Valid as of 2014

Lathes

Type	No.	Essential characteristics	Accessories	Note
SV 18RA/1000	041250	Turning Ø above bed - 380 Turning Ø above carriage - 215 Max. work piece length - 1000 Spindle bore Ø - 41 Spindle speed 14 - 2800 min ⁻¹ Max. work piece weight - 1300kg by 50 min ⁻¹ (between centers)		
SUR 350x3000	041410	Turning Ø above bed - 740 Turning Ø above cross carriage - 470 Distance between centers - 3000 Spindle bore Ø - 50 Max piece weight - 4000kg by 50 min ⁻¹ (between centers)	Face plate Ø 700	
SPS 25-3 CNC	44416	Turning Ø above bed - 400 Turning Ø above carriage - 300 Max. piece length - 230 Flanges only max. Ø - 300 by clamping Max. chuck Ø - 250 Number of tools upper head - 12 /driven 6/ Spindle speed - 20 - 4 000min ⁻¹ (cont.) Max. piece weight - 62kg	Driven units - direct 4 pcs angular 4 pcs Collets for Ø of clamping shanks 3-20 mm	Automatic machine for flange parts and also of bars - big series only - difficult replacement of collets Max. lead of thred - 9,99
SPT 32 NC	345330	Turning Ø above bed - 490 Max. work piece length - 1500 Spindle cone - METRIC 80 Max. turn. Ø - 320 Max flanges length - 250 Max. shafts length - 1500 Max. work piece weight - 300kg (spindle - tailstock) Max. weight in chuck - 200kg Spindle speed 31 - 2240 min ⁻¹	Control system Siemens Tailstock	Max. lead of thred - 9,99 Attention: high clamping pressure (soft and thin wall workpieces) - there are deformations!
Masturn 50 CNC	341280	Turning Ø above bed - 315 Turning Ø above cross carriage - 350 Distance between centers - 1500 Spindle bore Ø - 82 Max. section tool - 32x32 Spindle speed 0 - 3000 min ⁻¹ Max piece weight - 2000kg by 50 min ⁻¹	Control system Siemens 810D Multifix C	Machine suitable for piece work and low series production Machining is possible also in manual control. In rest max. Ø100!
Masturn 70 CNC	341360	Turning Ø above bed - 420 - by L<100 - 520 Turning Ø above cross carriage - 420 Distance between centers - 3000 Spindle bore Ø - 106 Max. section tool - 40x40 Spindle speed 0 - 1800 min ⁻¹ Max piece weight - 4000kg by 50 min ⁻¹	Control system Siemens 810D Multifix D	Machine suitable for piece work and low series production Machining is possible also in manual control.
ALPHA 1800 XS/2000	34135	Turning Ø above bed - 800 Turning Ø above cross carriage - 520 Distance between centers - 1800 Max. section tool - 50x50 Spindle speed - 40 - 1500 min ⁻¹	Control system FANUC 21iTB	Rests up to Ø520 Max lead of thred - 9
DFS 4/1 CNC	344440	Turning Ø above bed - 700 Turning Ø above cross carriage - 520 Min. length between centers - 700 Max. length between centers - 2400 Tools 40x40 - 12 positions Spindle speed - 10 - 2400 min ⁻¹	Control system Siemens 840SL headstock	Shaft parts only - not "houses" to axial tools. Universal chack D315 (there is also unversal chack D600)

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		Max. weight in chuck briefly – 200 kg Max piece weight - 4000kg by 50 min ⁻¹		difficult to change and are not jaw. Dimensional tolerance (+0,0;+0,025) Ra 0,8 (Recess base Ra 3,2)
Vertical single column lathe (carousel) SPCS 12 CNC	442133	Max. Ø of turning – 1400 Max. Ø of frontal turning. – 1400 Max. workpiece height – 1900 Clamping plate Ø - 1250 Max.distance between clamping plate and clamping surface of ram – 2080 Max. travel of ram – 1000 Max. travel of crosshead – 1300 Max. section of tools – 40x40 Speed range – 3,3 – 400 min ⁻¹ Speed of tools (rotat.) – 4 – 3000 min ⁻¹ max. workpiece weight – 8000kg		
Turning machining center single column (carousel) MCSK 8 CNC	442211	Max. Ø of turning – 800 Max. Ø of frontal turning – 1000 Max workpiece height – 720 Max. height from camping plate to lower edge of support – 760 Max. travel of ram – 630 Positioning of clamp. plate - 5° Max. section of tools – 40x40 Speed range – 4 – 400 min ⁻¹ Speed of tools (rotat.) – 5,5 – 34,4 Max /min. Ø of grindstone – 150/136 Max. width of grindstone – 36 Max. travel/depth of grinding – 225 Max. speed of grindstone – 3500 min ⁻¹ Max. workpiece weight – 2500kg	Control system NS 560	Excentric drilling, tapping Grinding spindle for auxiliary grinding of rotating and planar surfaces with a face of disc Possibility of turning the cones
SR 1000x4000	043911	Rolling of axles - Ø 85 – Ø 300 Maximum contact force 12 tons (continuously variable) Hardening depth of 4-8 mm at feed 0.6 mm / rev. Two roller pulleys - one with R20 (right - nearer to tailstock), the second with the R65 with transitions of sides of pulleys of R8 (left - nearer to front plate)		Lathe is modified to force rolling of axles. Rollers are 260 from each other, the left is 160 from the edge of carriage. It is possible to reach a distance of about 200 (left roller) from the jaws (right about 460).

Milling machines and milling centers

Typee	No.	Essential characteristics	Accessories	Note
Vertical Milling Machine FA 4 V	0522602	Table - 1600x315 - 3 rabbets Spindle taper - ISO 70 Max.distance from the table- 480 Longitudinal travels - 1000 Cross travels - 355 Vertical travels - 425 Leaning angle of the spindle + - 45° Spindle speed 32 - 1400 min ⁻¹ – 12° Max piece weight- 600kg		Rough works
Universal console milling machine FA 5 U	0516603	Table - 2000x400 - 3 rabbets Spindle taper - ISO 70; METRIC 50 Max. dist. of spindle axis from table - 450 Longitudinal travels - 1260 Cross travels - 410 Vertical travels - 410 Max.swivelling of table + - 45° Spindle speed 18 - 1400 min ⁻¹ – 20° Max piece weight - 600kg	Additional equipment for slotting of internal square - travel cca 100 - slot max. 80	
Milling machine for tools FNK 25 A	047150	table - 1200x250 work. travel - longitudinal -800 - cross -350 - vertical - 420 travel of quill spindle - 125		
Machining center FSQ 80 CNC	452331	Table – 800x3000 Spindle taper - ISO 50 Nuner of T rabbets of table – 5 Longitudinal travel X – 3000 Cross travel Y – 960 Vertical travel Z – 880 Spindle speed – 11 – 2500 min ⁻¹ Max. power of spindle drive – 17,2 kW Range of travels : 1 – 4000min ⁻¹ Rapid traverse – 10.000 mm/min. Toolstore – 24 pcs Max. workpiece weight – 2500 kg		The machine will be operated mainly in "manual mode", eventually with simple programs made by the operator.
DECKEL MAHO DMC 80 U	652330	Table: Ø 800 flattened to 630 – 2 pcs Axis X – 800 Axis Y – 800 Axis Z – 800 Swivelling of table - 360° (cont.) Swivelling of head - 2 positions: 0°-vertical 90°- horizontal Speed – 10.000 min ⁻¹ Tool taper – ISO 50 Work travel – 30.000 mm/min Rapid traverse – 60.000 mm/min Toolstore – 60 pcs Threads (acc. conditions): M4 – M24 – aluminum M5 – M20 (M24) - steel	Control system 3D HEIDENHAIN iTNC 530	Vertical and horizontal machine Possibility to produce short pins (hole and surface) by milling! (Short standard tool)

Typee	No.	Essential characteristics	Accessories	Note
DECKEL MAHO DMU 80 P	652430	Table Ø900mm flattened to 700mm Axis X – 800 Axis Y – 800 Axis Z – 800 Swivelling of work table - 360° -1400 kg. Swivelling of head – 2 positions: horizontal+vertical Speed – 10 000 ot/min Tool taper ISO 50 Rapid traverse 60.000mm/min Toolstore – 60 pcs	Control system 3D HEIDENHAIN iTNC 530	Vertical and horizontal 4D machine Possibility to produce short pins (hole and surface) by milling! (Short standard tool) Dimensional tolerances (+0,01) – surfaces Dimensional tolerances (+0,005) –holes IT 7; Ra 1,6 – surfaces IT 6;Ra 0,8 - holes
DECKEL MAHO DMU 80P	653410	Table: Ø 900 mm (flattened to 630 mm) Axis X – 800 Axis Y – 700 Axis Z – 600 Swivelling of work table - 360° (cont.) Swivelling of head – 90° (cont.) Speed – 12.000 ot./min Tool taper – HSK 63A Work travel – 15.000 mm/min Rapid traverse – 50.000 mm/min Toolstore – 60 pcs Threads (acc. conditions): M4 – M24 – aluminum M5 – M16 - steel	Control system 3D HEIDENHAIN iTNC 530	Vertical and horizontal machine Possibility to produce short pins (hole and surface) by milling! (Short standard tool)
DECKEL MAHO DMF 220	452340	Table: fixed – 2600x600 Axis X – 2200 Axis Y – 560 Axis Z – 720 Swivelling of work table – do not rotate Swivelling of head – do not rotate Speed – 20 – 18000 min-1 Tool taper – HSK 63A Toolstore – 30 pcs Work travel – 20.000 mm/min. Rapid traverse – 50.000 mm/min. Threads (acc. conditions): M4 – M16 – aluminum M5 – M16 - steel	Control system 3D HEIDENHAIN iTNC 530	Vertical machine
HERMLE AG C50U	652420	Table - Ø 1150 flattened to 900 Travels X-Y-Z 1000-1100-750 Swivelling of work table - +100°/-130° Swivelling of table - 360° (cont.) Speed – 9000ot/min Tool taper – SK50 Max. Ø of tool – 120mm Max. length of tool – 430 mm Max. piece length with the possibility of Table rotation -1250 mm Max. piece length with the possibility of table rotation (spec. clamping) – 1310 mm Rapid traverse – X-Y-Z 60-60-50 m/min Toolstore - 42 Max. weight on table - 2000 kg	Control system 3D HEIDENHAIN iTNC 530 5 - axis machine Possibility to drill long frontal holes to shafts	Dimensional tolerances (+-0,01) - surfaces Dimensional tolerances (+-0,05) – holes IT 7 - surfaces IT 6 - holes Ra 1,6 - surfaces Ra 0,8 - holes

Slotting, planer, broaching machines

Type	No.	Essential characteristics	Accessories	Note
Vertical slotting machine HOV 25 A	0492801	Ø of table - 500 Cross travel of table - 450 Longitudinal travel of table - 560 Slotting height – 200 Travel of ram - 270 Max. dist. of tool from clamping table - 535 Max piece weight - 350kg		

Drilling and boring machines

Type	No.	Essential characteristics	Accessories	Note
Swing drilling machine VR 4 D	0465101	Table - 1475x900 Spindle taper - Mo 4 Nuner of spindles - 1 Spindle Ø - 70 Max. drill hole – 50 – steel Max. drill hole – 60 – cast-iron Max. drill depth - 320 Max. Ø of thread : M30/W1 1/4 (steel) M42/W1 3/4 (grey cast-iron) Min. Ø of thread - M6 Max/min. distance between tool and table - 1340/280 Spindle speed 28 - 2500 min ⁻¹	Auxiliary table - 750x500	
Horizontal boring machine WHN 9 B Renovation Varnsdorf 3x	348141	Table - 1120x1000 Cross travel of table (X) - 1200 Longitudinal travel of table (Y) - 950 Vertical travel of spindle (Y) - 900 Spindle taper - ISO 40 Ø of work spindle - 100 Spindle speed 10 - 2500 ot/min Sliding of spindle - 630 Max piece weight - 3000kg	Continuous control system TNC 530 Heidenhain Dividing rotary device Ø 500	Precision flatness- 0,0108 cylindricity - 0,0070 roundness - 0,0306 coaxiality - 0,0248 alignment - 0,0153 perpendicularity-0,0043
Horizontal boring machine WHQ 13 CNC	448281	Table – 2200x1800 Cross travel of table (X) – 3500 Vertical travel of axis of work spindle (Y) – 2000 Longitudinal travel of stand (Z) – 1250 Sliding in work spindle (W) - 800 Ø of work spindle – 130 Spidle speed - 10 – 3000 min ⁻¹ Max piece weight – 12000kg Spindle taper - ISO 50	Clamping angles UU 1620 - 2x Short guiding support	Head around the corner

Grinding machines, regulation of punches

Type	No.	Essential characteristics	Accessories	Note
Centre grinder Kallenberger UR- M175x1500CNC	3552401	Max. distance between centers - 1500 Points height - 175 Max. workpiece \varnothing - 349 Max. travel of table (Z-axis) - 1615 Max. travel (X-axis) - 260 Grinding wheel for external grinding: 400x63x127 Grinding wheel for face grinding: 300x40x127 Min. grinding hole - 20 Clamping \varnothing of spindles for in. grinding - 80 Spindle angle adjustment : + 120°...- 30° Spindle speed 5 - 500 min ⁻¹ (carr. spindle) Input of engine – 4,4kW Input of engine of carr. spindle – 2,4kW Max piece weight: 65kg – mass production 130kg – piece work production	Control system KELCO 90	Grinding of holes, faces and surfaces - (1 clamping between centers) - max 60 kg In a magnetic board (1 side) - max.25kg Max. \varnothing ground 340 In rest max. \varnothing 240 Max. desk \varnothing 250 Grinding of holes - 2 2 types of rests: \varnothing 10 – 120 \varnothing 120 – 240 Grinding of surfaces: \varnothing 5 – 75 (max. 2 rests)
Centre grinder BHU 50A/3000	055320	Max. swing \varnothing 500 Max. work piece length - 3000 Grinding wheel - \varnothing x width x hole : 500x80x203 Spindle angle adjustment: + - 45° Table angle adjustment: +4° -2° Min. hole - 20 Spindle speed 18 – 560 min ⁻¹ (carr. spindle) Max piece weight: 300kg – by camping between centers 60kg – by camping (only 1 side)	Device for internal grinding - chuck \varnothing 200 - swing \varnothing in a support - 110 - spindle speed: 1720/1980 min ⁻¹ - input 16kW	
Hole grinder RIN 44 (WOTAN)	055740	Max./min. \varnothing of grind hole - 600/35 Max. grinded depth - 400 Max. swing \varnothing - 800 \varnothing of grinding wheel - 215 \varnothing of clamping desk of work piece - 500 Spindle angle adjustment: - 30° Spindle speed 25-250 min ⁻¹ (carr. spindle) Max piece weight - 75kg (acc. to conditionals up to 100kg)	Circular magnetic clamp with radial poling \varnothing 500	Good condition Grinding without support
Hole grinder 3HS 500	0557302	Max./min. \varnothing of grind hole - 260/15 Max. grinded depth - 600 Max. swing \varnothing - 360 Max. grinding \varnothing - 360 Grinding \varnothing in clamping sleeve – 200 Spindle angle adjustment - 90° Table angle adjustment: + - 6° Spindle speed 30 - 300 min ⁻¹ (carr. spindle) Max piece weight- 40kg	Magnetic plate	Holes, surfaces, faces
Flat surface grinder BPH 20N/630	0561301	Table - 630x200 Max. grinded width - 200 Max. length – 600 \varnothing of grinding wheel - 250 Spindle speed 100 - 4000 min ⁻¹ Distance from axes of spindle to table – 550 Max. grind. height (\varnothing gr.wheel 120) - 490 Max piece weight - 140kg	Magnetic plate 600x200	Good condition Tilting magnet – L=230
Flat surface grinder BPH	0561501	Table - 1000x320 Max.grinded width - 320 Max.grinded length - 1000		Inconvenient

Type	No.	Essential characteristics	Accessories	Note
320/1000		<p>∅ of grinding wheel - 250 Spindle speed 2520 - 3320 min⁻¹ Vertical travel of grind. spindle – 75- 475 (max.workpiece height – 350) Max piece weight- 200kg</p>		
Flat surface grinder BRH40/BII/1500	0561701	<p>Table - 1520x400 Max. grinding length - 1500 ∅ of grinding wheel – 350 Spindle taper – 1:5 Spindle speed - 1920 min⁻¹ Max. piece height – 400 (after agreement) Max. distance from axes of spindle to table – 675 (R of wheel) Max. height of piece for face grinding – 84 (new wheel) Max piece weight - 200kg</p>		<p>Good condition</p> <p>Max. height of grinding without magnetic plate - 500</p>
Flat surface grinder vertical BPV 40A/2000	0563801	<p>Table - 2000x400 Max. length of grinding – 2000 Max. width of grinding - 400 ∅ grinding wheel – 520 Spindle speed 950 min⁻¹ Speed of table 1 – 36 m/min.</p>	<p>Electromag. clamping plate 1000/400/100 - 2pcs</p> <p>Weight up to 500kg</p>	<p>For rough machining max. heigh of grinding without magnetic plate - 500</p>
Slot grinder 3451 G	0574802	<p>Table - 2800x250 Height of points - 180 Max. distance of centers - 2000 Max/min. length of grinding - 1850/200 Max/min. ∅ of grinding - 136/18 Max. ∅ of work piece - 320 Number of grind. slots - 6;8;10 Wheel width – 10 - 40 Max/min. ∅ of grind. wheel 200/90 Max piece weight - 200kg (from 40kg with a support)</p>		

Presses, saws, benders, welding machines

Type	No.	Essential characteristics	Accessories	Note
Hydraulic press RP 50	033330	Working force - 50 Mpa Slide stroke - 165 Shafts straightening – up to Ø 100 Pressing of various items – in a jig		Small machine for pressing and straighten of change items
Hydraulic press PYE 100	033330	Working force – 100Mpa Slide stroke – 500 Table – 500x1600 Distance of straightening supports - 1700		The press is modified and especially designed for straightening of drilling spindles of horizontal milling machines Ø 160 and Ø 200
Hand spindle press	094210	Screw - Ø40 Stroke - 320 Table - 800x800 Gap between columns - 340		For pressing bushes, etc.
Belt saw PP 502 CNC, PP 301 A	059670	Max Ø 420 ,4HR max. 420x500		In storehouse
Manual sheet twist	094210	Max.thickness - 3 Ø of rollers - 90 Min. twist Ø - 95 Max. twist length - 1000		Used for vessels and bushes
Manual bending machine	094210	Max. thickness - 2 Max. length - 1000		
Welder KEMPPI Pro MIG 530	127120	electrode diam. – 2 – 10 weld. current (elektrodes) – max. 420A weld. current (CO2) – max. 280 A		
Welder KEMPPI Master TIG MLS 2000	127120	electrode diam. – 2 – 10 weld. current (elektrodes) – max. 160A weld. current (TIG) – max. 200 A		

Special machines

Type	No.	Essential characteristics	Accessories	Note
Measuring maschine LK INTEGRA 20.10.8	3874902	Measuring range: X – 2016 Y – 1016 Z – 813 Linear deviation indication, in axis direction: 2,0µ (L300) Volumetrical indication deviation, general position in space: 2,5µ (L300) Deviation of sensing system CMMA: 2,0µ Maximal allowable load (till point 1): 2117kg	Measurement system Renishaw RGH	
Ecological washing table	094210	Working area – 1980x680 Working height – 870 Max weigth – 150kg		

Drying	094210	Internal dimensions - width x height x depth 800x500x600 Max. temperature - 300 ° C Capacity - 240 l Power - 4 kW	Graf. temperature recorder Exhaust fan Connecting the controller to the PC Measurement of relative humidity Calibration of the measurement loop	+-1°C acc. to manufacturer (+-0,7°C by last calibration)
Hydraulic unit MA-1147-02	094210	Pump - max pressure of 250 bar. Flow rate - max 2 dm ³ /min. Tank capacity - 8 dm ³ Working fluid - mineral oil HLP class.	Drip tray with grate for draining oil.	- Adjustment of cycling - For pressure and function tests