



DZS 315-2 with 2 drilling-milling processing stations and 12-fold turret VDI 50

Concept

Our newly developed DZS machines are available in 4 sizes and can be equipped with one spindle, two spindles, and with or without additional machining devices for high-performance milling, hob peeling (gear cutting), shaping, engraving and other machining methods.

The centres may be operated with two independent compound slide rests enabling parallel machining at the same time.

The longitudinal slide moves along three linear guides and is equipped with a linear drive providing high stability together with high dynamics (rapid traverse rate of up to 140 m/min, acceleration of 5 m/s²).

Short auxiliary process times:

- Linear motor and three guides for the longitudinal slide
- 100 m/min and 5 m/s² on the X-axis
- Highly dynamic drives for the main spindle and the Z-axis
- Turret indexing time < 1 sec.

High flexibility:

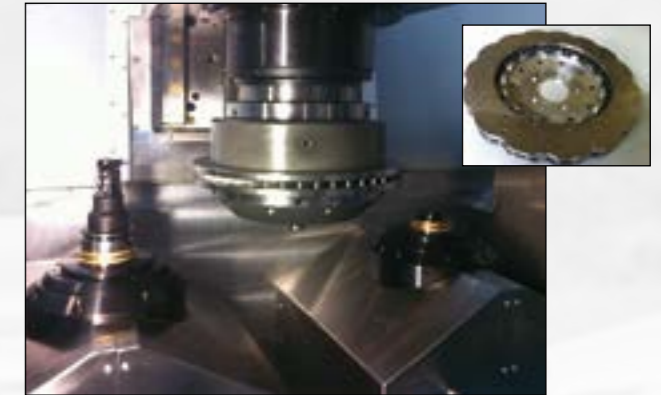
- Tailored to the manufacturing job to be handled
- One-stop solutions for automation components, i.e. linear gantries, manipulators, gripper components, magazines, conveyor belts etc. starting from the idea via design up to fabrication.

Options

- Installation of additional machining units
- Automation system tailored to the technology applied
- Integrated measuring station inside turret, working area or on the outside
- Tool and process monitoring
- Driven tools
- And many other features



DZS 250-2 with two motor spindles, two compound slides and two 12-fold star turrets for simultaneous processing of OP 10 and OP 20



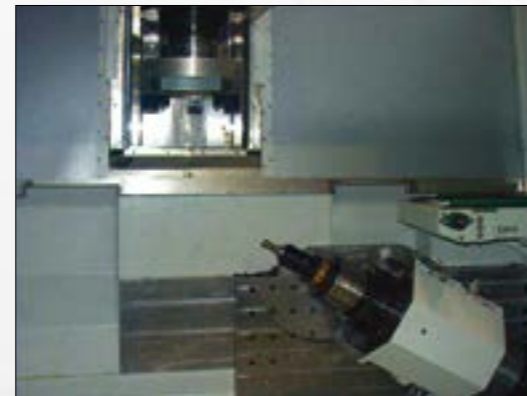
Hobbing of contour at the periphery of a disc-shaped part in DZS 250



DZS 200-2 with block tools for synchronous processing of hardened sliding sleeves



Si 840D-sl with Rasoma screen



DZS 315 with angle-adjustable drilling-milling spindle



Basic structure of the DZS machines, here with two compound slides on three linear guides with intermediate linear motor



Simultaneous machining of clutch bodies at two processing stations of the machine DZS 315-2



DZS 125-2 with 2 x 3 block tools, turning station and finished part slide



DS 200 with feed and discharge conveyor of work pieces, RASOMA portal RP 30 and external measuring station (coloring as per specification sheet)

Concept

Very high rigidity thanks to:

- Separate x- and z-slides (no compound slide)
- Upper of the machine designed as welded monoblock filled with polymer concrete

High thermal stability thanks to:

- Cooled motor spindle
- Controlled fume exhaust
- Chip conveyor

Short ancillary process times:

- Rapid traverses of up to 60 m/min at high accelerations; hydraulic weight counterbalance in the vertical axis
- Feed and removal of the work piece at speeds of up to 120 m/min, that means loading and unloading of the spindle takes less than 6 seconds
- Turret indexing time < 1 sec.

High flexibility:

- Tailored to the manufacturing job to be handled
- One-stop solutions for automation components, i.e. linear gantries, manipulators, gripper components, magazines etc. starting from the idea via design up to fabrication

Options

- Automation system tailored to the technology applied
- Integrated measuring station inside turret, working area or on the outside
- Minimal quantity lubrication
- Tool and process monitoring
- Driven tools
- And many other features



DS 100 coloring according to customer request



10 DS 250 machines with oval storage, lined up in pairs, for semiautomatic machining of gear wheels for commercial vehicles before and after heat-treating



DS 250, interlinked



Fully automatic machining of 1st and 2nd clamping operation, turning of the wheel hub to be machined in the gripper



Plate storage for raw parts and telescopic slide with manipulator



Articulated robot for loading/unloading and feeding of the measuring station, SPC slide and stacking mandrel storage of finish parts



RASOMA telescopic slide for feeding and removal of parts



Feed conveyor for raw parts with baffle for prevention of false placed work pieces



SPC slide

Technology solutions implemented with RASOMA vertical turning centres



Technical data

		DS 100	DS 200	DS 250	DZS 125	DZS 200	DZS 250	DZS 315	DZS 400
Suited for combination of various machining methods		-	-	-	yes	yes	yes	yes	yes
Machining area									
Swing diameter	mm	280	280	280	320	320	440	440	580
chuck Ø, standard	mm	140	210	250	125	200	250	315	400
X-axis (horizontal)	mm	300	300	300	720 / 1,520 / 2,320				
Z-axis (vertical)	mm	300	300	300	300	300	400	400	500
Y-axis gibs (optional)	mm	-	-	-	+/- 40	+/- 40	+/- 60	+/- 60	+/- 80
Feed drives									
Ball screw Ø X	mm	40	40	40	linear drive				
Ball screw Ø Z	mm	40	40	40	32	32	50	50	63
rapid traverse X-axis	m/min	60	40	30	80	80	100	100	60
rapid traverse Z-axis	m/min	60	40	30	60	45	45	45	30
Directly driven motor spindle									
spindle head with short taper	size	A5	A5	A6	A5	A6	A6/A8	A8	A8/A11
Nominal power, 100% duty cycle	kW	15	16.5	28.3	20	31	28.3	60	64
Rated load torque, 100% duty cycle	Nm	105	105	300	120	130	300	585	700
Nominal speed	U/min	1,500	1,500	900	1,450	2,300	900	1,100	750
Maximum speed rpm	U/min	8,000	6,000	5,000	6,000	6,000	5,000	4,000	3,500
diameter of the front bearing	mm	90	90	120	90	90	120	125	150/(180)
Control system		SIEMENS		SIEMENS	SIEMENS	SIEMENS	SIEMENS	SIEMENS	SIEMENS
Type		Si 840 D solution line	Si 840 D solution line	Si 840 D solution line	Si 840 D solution line	Si 840 D solution line	Si 840 D solution line	Si 840 D solution line	Si 840 D solution line
Tool carrier									
Star turret positions	places	12	12	12	12	12	12	12	12
Optional driven tools		optional	optional	optional	optional	optional	optional	optional	optional
Holder for straight shank	mm	30	40	40	30	30	40	40/50	40/50
add. tool blocks possible		-	-	-	ja	ja	ja	ja	ja
separate milling spindle possible		-	-	-	ja	ja	ja	ja	ja
Weight									
approx.	kg	5,500	6,000	6,500	6,500	6,700	12,000	12,300	18,000
					10,000	10,400	15,000	15,600	24,000

Range of products and services of RASOMA

- Machine tools
- Special-purpose machines
- Automation solutions
- Services (consultancy, technology, customer service, maintenance etc.)



EBZ 400-4500 for end- machining large crankshaft of up to 4,500 mm in length



RASOMA special-purpose machine DSP 450-2 e.g. for perforating braking discs



Selected references in alphabetic order

Alfing, DE
 Anji Precision, CN
 Asia Nama, IR
 BMW, DE
 Buderus Guss, DE
 CMV, IT
 Continental, DE
 Cotarko, DE
 Daimler, DE
 Daimler, US
 Eifelwerk Gruppe, DE
 EMAG, DE
 Federal Mogul, DE
 Ford Aquitaine, FR
 Ford, UK
 Ford Otosan, TR
 Freudenberg, DE
 General Motors, US
 GKN HAY, DE
 IFA Rotorion, DE
 Kavosh, IR
 KOKI Technik, DE
 Kordel, DE
 KmB Technologie, DE
 Küpper, DE
 KTR Kupplungstechnik, DE
 Lakshmi, IN
 Linamar, DE
 Mahle, DE
 MAN Ferrostahl, DE
 Mannesmannrohr, DE
 MTS Traktorenwerk Minsk, BY
 NZWL Neue Zahnradwerk Leipzig, DE
 NILES Simmons, DE
 Opel, DE
 Orsk Machine Building, RU
 Reintjes, DE
 SEW, FR
 SHW, DE
 UKM, DE
 Visteon, US
 Volkswagen, DE
 VTF Group, CH
 VTZ Volszhky, RU

RASOMA
 Werkzeugmaschinen GmbH
 Alexanderstraße 6
 D-04720 Döbeln
www.rasoma.de



RASOMA
 Werkzeugmaschinen GmbH

since 1919

Innovation from tradition for over 90 years.
 INNOVATION FROM TRADITION FOR OVER 90 YEARS

RASOMA Vertical Turning Centres DZS and DS