



Drive & Control Academy



Study topics



Workstations

- ▶ Pneumatics: Replace both grids with grooved panels to create independent workstations for up to 6 students.
- ▶ Hydraulics/Pneumatics Combined: Replace both grids with grooved panels to create independent workstations for up to 6 students; grid for hydraulics on one side and grooved plate for pneumatics on the other side (grooved plates are not included in the standard types but are available as an accessory).

Tailored to Lessons Through Extensions

To achieve your objectives, you can customize your training system to the needs of your company.

- ▶ On/off hydraulics
- ▶ Proportional servo valve technology
- ▶ Mobile hydraulics

Practical Exercises with Appropriate Teachware

Employees' specialist knowledge and expertise provide a crucial advantage for their company on a competitive global market.

- ▶ Teacher and student project manuals
- ▶ Technical books
- ▶ Teaching aids

Safety

The WS290 workstation is designed and tested according to the guidelines of Machinery Directive 2006/42/EC. A CE certificate is included in the operating instructions.

Choosing the Right Standard Type

Select the standard type of WS290 workstation to meet your needs. We will happily assist you in making the right choice. Just get in touch with us!

Order examples

Components and Spare Parts

Range of Applications of Workstations

The technical know-how of Bosch Rexroth combined with comprehensive expertise in industrial applications have gone into the design these modular workstations – this ensures that they meet to the fullest the qualification levels required in industry.

Quality that's tried and tested

All Bosch Rexroth workstations are based on standard components from the drive and control specialist's various product ranges. In particular, the core competencies in hydraulics have been incorporated into the workstations. The secure, robust, durable and easy-to-use series-produced components, which they will encounter in their future careers, allow students a smooth transition to the requirements of everyday life in industrial firms. Thanks to their versatility, the workstations can always be adapted precisely to the respective training topic. Appropriate teaching and learning tools, including project manuals for teachers and students, round off the package. With the WS200 workstation, a very cost-effective system for practical apprenticeship and in-service training has been developed. Working with the modular workstation is a clear and practical way to impart fundamental knowledge in hydraulics, pneumatics and automation. This means that the WS200 complements the existing range of starter systems, with the WS290 bringing advanced students all the elements of a focused training system. The larger work area with optimum use of space provides plenty of room for more complex tasks and more demanding examples in the areas of on/off hydraulics, proportional servo valve technology and mobile hydraulics.

Which workstation do I need?

The WS200 workstation has the advantage of a low introductory price and being compact. On/off hydraulics,

pneumatics and automation can all be covered on the easily expandable WS200 workstation. Topics such as proportional servo valve technology and mobile hydraulics can be taught using our tried and tested WS290 workstation. The following table provides an overview of the possible topics that can be covered:

Topics	WS200	WS290
On/off hydraulics – getting started	X	X
On/off hydraulics – manual operation (according to BIBB)	X	X
On/off hydraulics – electrical operation (according to BIBB)	X	X
Proportional servo valve technology – proportional hydraulics		X
Proportional servo valve technology – control hydraulics		X
Mobile hydraulics – throttle control		X
Mobile hydraulics – load sensing control		X
Mobile hydraulics – LIFD control		X
Pneumatics – fundamentals (according to BIBB)	X	X
Pneumatics – fundamentals of electropneumatics (according to BIBB)	X	X
Pneumatics – fundamentals (according to PAL)	X	X
Pneumatics – fundamentals of electropneumatics (according to PAL)	X	X
Pneumatics – control technology	X	X
Pneumatics – handling technology	X	X

WS290 Workstation

WS290 Hydraulic workstation with single pump and pressure regulator, one-sided for 2 - 3 trainees

The WS290 workstation is suitable for training the topics of on/off, proportional and control hydraulics.

On one side of the WS290 mobile work station there is a grating on which the hydraulic components can be securely mounted. The single-sided WS290 is designed for 2 - 3 students.

The hydraulic power unit has a vane pump with a pressure controller. The WS290 has a built-in control box with an ON button, a protective motor switch and two outlets. The workstation is powered by means of a power cable (length 1.8 m approximately) with CEE three-phase current plug. An emergency stop button is mounted on the workstation side. Self-sealing coupling connectors on the P/T distributor make it possible to supply of the workplace with hydraulic fluid due to easy handling with extremely low oil leakage.

The integrated container made of powder-coated sheet steel has 5 fully extensible drawers. An acrylic measuring glass with scale is equipped with a bleeding/venting valve, an overflow line and a stopcock. This provides safe use of the station and protects against overflow and overpressure. The hose tray can accommodate up to 50 hydraulic hoses. The arrangement of the hoses prevents the hydraulic fluid from leaking. The integrated oil pan is suitable for storing small parts or tools.

The side-mounted hinged load unit is equipped with a weight of 15 kg. When using this load unit it is possible to carry out exercises for applying loads to cylinders. All moving parts are safely housed in a Plexiglas protective housing.



Delivery includes:	<ul style="list-style-type: none"> ▶ WS290 base frame ▶ 1 grid with reinforcement for suspended attachment ▶ 1 integrated container ▶ 1 measuring glass ▶ 1 hose tray for 50 hoses ▶ 1 15 kg swiveling load unit. ▶ 4 oil drip trays ▶ completely assembled
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Dimensions	mm (L x W x H)	1810 x 800 x 1950
Number of workstations		2 - 3
Weight	kg	315
Max. operating pressure	bar	50
Safety pressure of the hydraulic power unit	bar	70
Maximum flow	l/min	8
Container	l	40

	With rack	Without rack
Supply voltage 230 V, single-phase mains frequency 50 Hz Power 1.5 kW Protective motor switch 9 - 12 A	Material number R961009454 Material short text WORKSTATION TS-WS290-1X/G1A4B1C1M1S1L1T2-M1	Material number R961009862 Material short text WORKSTATION TS-WS290-1X/G1A4B0C1M1S1L1T2-M1
Supply voltage 400 V, three-phase mains frequency 50 Hz Power 2.2 kW Protective motor switch 4.5 - 6.3 A	Material number R961009453 Type short description WORKSTATION TS-WS290-1X/G1A5B1C1M1S1L1T2-M1	Material number R961009863 Type short description WORKSTATION TS-WS290-1X/G1A5B0C1M1S1L1T2-M1

WS290 Hydraulic workstation with double pump and pressure regulator, double-sided for 4 - 6 trainees

The WS290 workstation is suitable for training courses in on/off, proportional, control and mobile hydraulics.

On both sides of the WS290 mobile work station, there is a grating on which the hydraulic components can be securely mounted.

The double-sided WS290 is designed for 4 - 6 students. The built-in hydraulic power unit has two pumps with flow-pressure controller (load sensing) which make it possible to carry out independent exercises on both sides. The WS290 has a built-in control box with an ON button, a protective motor switch and two outlets. The workstation is powered by means of a power cable (length 1.8 m approximately) with a CEE three-phase current plug. In addition, there is an emergency stop button on both sides of the workstation. Self-sealing coupling connectors on the P/T distributor make possible the supply of the workplaces with hydraulic fluid due to easy handling with extremely low oil leakage.

The Integrated container made of powder-coated sheet steel has 5 fully extensible drawers.

An acrylic measuring glass with scale is equipped with a bleed valve, an overflow line and a shut-off cock. This makes it possible to safely use the station and protects against overflow and overpressure. The hose tray can accommodate up to 50 hydraulic hoses. The arrangement of the hoses prevents the hydraulic fluid from leaking. The integrated oil pan is suitable for storing small parts or tools.

The side-mounted hinged load unit is equipped with a weight of 15 kg. When using this load unit it is possible to carry out exercises for applying loads to cylinders. All moving parts are safely housed in a Plexiglas protective housing.

Delivery includes:	<ul style="list-style-type: none"> ▶ WS290 base frame ▶ 2 grids with reinforcement ▶ 1 integrated container ▶ 2 measuring glasses ▶ 1 hose tray for 50 hoses ▶ 1 15 kg swiveling load unit. ▶ 4 oil drip trays ▶ completely assembled
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Dimensions	mm (L x W x H)	1810 x 800 x 1950
Number of workstations		4 - 6
Weight	kg	415
Max. operating pressure	bar	50
Safety pressure of the hydraulic power unit	bar	70
Maximum flow	l/min	2 x 8
Container	l	40

	With rack	Without rack
Supply voltage 230 V, single-phase mains frequency 50 Hz Power 1.5 kW Protective motor switch 9 - 12 A	Material number R961009457 Type short description WORKSTATION TS-WS290-1X/G2A1B2C1M2S1L1T2-M1	Material number R961009864 Type short description WORKSTATION TS-WS290-1X/G2A1B0C1M2S1L1T2-M1
Supply voltage 230 V, single-phase mains frequency 60 Hz Power 1.5 kW Protective motor switch 9 - 12 A	Material number R961009456 Type short description WORKSTATION TS-WS290-1X/G2A2B2C1M2S1L1T2-M1	Material number R961009865 Type short description WORKSTATION TS-WS290-1X/G2A2B0C1M2S1L1T2-M1
Supply voltage 3x400 V, three-phase mains frequency 50 Hz Power 2.2 kW Protective motor switch 4.5 - 6.3 A	Material number R961009455 Type short description WORKSTATION TS-WS290-1X/G2A3B2C1M2S1L1T2-M1	Material number R961009866 Type short description WORKSTATION TS-WS290-1X/G2A3B0C1M2S1L1T2-M1