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## Air Preparation Systems



## Dehydrator 11.3511010-01

## **Description**

Dehydrator 11.3511010-01 is used in Air Brake Systems of trucks, buses, tractors and other vehicles. It is used for air drying and automatic moisture drainage.

When air pressure grows up to 1.1 MPa and then reduces to 0.8 MPa, atmospheric moisture capacity of the air, supplied into braking system, does not exceed 90...95%, excluding the possibility of system failure caused by condensate freezing.

The Dehydrator makes any additional anti-freezing systems unnecessary.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85

(8,5)

Drain: automatic

Dehydration efficiency, %, not less than: 75

Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 2,55

#### Pressure Control Valve 11.3512010



## **Description**

Pressure Control Valve 11.3512010 is used in Air Brake Systems of trucks, buses, wheeled tractors and other vehicles.

Provides pressure control of the air, supplied by compressor into the receivers of pneumatic system. Features a safety valve, which ensures that the resulting pressure does not exceed a specific value.

## **Technical specification**

ON pressure, MPa (kgs/cm $^2$ ), not less than: 0,65 (6,5) OFF pressure, MPs (kgs/cm $^2$ ): 0,85±0,02 (8,5±0,2) Relief valve engagement pressure, MPa (kgs/cm $^2$ ): from 0,9 to

1,05 (from 9 to 10,5) Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60



## **Description**

Pressure Control Valve 11.3512010-10/20 is used in Air Brake Systems of trucks, buses, trolleybuses, wheeled tractors and other commercial vehicles.

Provides pressure control of the air, supplied into vehicle's brake system.

Pressure Control Valve comes with a bracket, allowing installation of Pressure Control Valve 11.3512010-10 as a replacement for 100-3512010 and Pressure Control Valve 11.3512010-20 as a replacement for 11.3512010.

Main advantages of Pressure Control Valve 11.3512010-10/20 in comparison with Pressure Control Valve 11.3512010 are:

- air-bleed valve
- no compressed air leak when in compressor unload mode

Moving parts, rubber seals and springs of Pressure Control Valve 11.3512010-10/20 are unified with similar parts of Dehydrator with Pressure Regulator 14.3512010.

#### **Technical specification**

ON pressure, MPa (kgs/cm<sup>2</sup>), not less than: 0,65 (6,5) OFF pressure, MPs (kgs/cm<sup>2</sup>), not less than: 0,85 (8,5) Relief valve engagement pressure, MPa (kgs/cm<sup>2</sup>): from 0,95

to 1,35 (from 9,5 to 13,5) Thread, mm: M22x1,5

Air bleed valve thread, mm: M16x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,67

Anti Freezer 11.3515150-11



Anti Freezer 11.3515150-11 is used in Air Brake Systems of trucks, buses and wheeled tractors and other vehicles.

Used for forcing ethanol into the Air Brake System to prevent condensate freezing in the pipelines of the Brake System's devices.

Operated mechanically by pressing the pusher button.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85 (8,5)

Working medium: air, ethanol

Volume of ethanol, supplied in one injection:

with air pressure in the inlet: 1,0 - 1,5
without air pressure in the inlet: 1,4 - 2,0

Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60



## Dehydrator with Pressure Regulator 14.3512010



#### **Description**

Dehydrator with Pressure Regulator 14.3512010 is used in Air Brake Systems of trucks, buses, trolleybuses, wheeled tractors and other commercial vehicles.

It is used for dehydration, air pressure control and automatic moisture drainage.

Main advantages of Dehydrator with Pressure Regulator 14.3512010 in comparison with Dehydrator 11.3511010-01 are:

- 20% more effective dehydrating capability for improved safety in low temperature conditions
- No compressed air leak when in compressor unload mode (extends compressor's lifetime by reducing its operation recurrence)
- Dehydrator's and pressure regulator's features in one device (resulting in 1.2kg reduced steel intensity)
- Simplified wiring as a result of reduced connecting armature, piping and bracketry
- Mounted on the same bracket as used with Dehydrator 11.3511010-01

Price 15% lower than net price of Dehydrator 11.3511010-01 and Pressure Control Valve 11.3512010

## **Technical specification**

ON pressure, MPa (kgs/cm²), not less than: 0,65 (6,5) OFF pressure, MPs (kgs/cm²), not less than: 0,85 (8,5) Relief valve engagement pressure, MPa (kgs/cm²): from 0,95

to 1,35 (from 9,5 to 13,5) Thread, mm: M22x1,5

Air bleed valve thread, mm: M16x1,5

Temperature range, °C: from minus 45 to plus 60



## **Description**

Dehydrator with Pressure Regulator 14.3512010-10 is used in Air Brake Systems of trucks, buses, trolleybuses, wheeled tractors and other commercial vehicles.

It is used for dehydration, air pressure control and automatic moisture drainage.

Modification 14.3512010-10 differs from 14.3512010 in longer smooth pipe, used for preventing heat transfer reduction caused by pipe dirtying.

## **Technical specification**

ON pressure, MPa (kgs/cm²), not less than: 0,65 (6,5) OFF pressure, MPs (kgs/cm²), not more than: 0,85 (8,5) Relief valve engagement pressure, MPa (kgs/cm²): from 0,95

to 1,35 (from 9,5 to 13,5)

Drain: automatic Thread, mm: M22x1,5

Air bleed valve thread, mm: M16x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, not more than, kg: 2,5

#### Dehydrator with Pressure Regulator 14.3512010-01



## **Description**

Dehydrator with Pressure Regulator 14.3512010-01 is used in Air Brake Systems of trucks, buses, trolleybuses, wheeled tractors and other commercial vehicles.

It is used for dehydration, air pressure control and automatic moisture drainage.

Modification 14.3512010-01 differs from 14.3512010 in the following:

- Has a cooler flange joint made of ribbed pipe, which improves mechanical durability and assures maintainability
- Has a refined safety-valve duplication system
- Changed regulation section and improved reliability of check valve in low temperature conditions
- Improved design of bypass channel valve, providing necessary efficiency and longevity

Has a filter in the entrance lag, which ensures protection against foreign particles.

## **Technical specification**

ON pressure, MPa (kgs/cm²), not less than: 0,65 (6,5) OFF pressure, MPs (kgs/cm²), not more than: 0,85 (8,5) Relief valve engagement pressure, MPa (kgs/cm²): from 1,15

to 1,4 (from 11,5 to 14,0)

Drain: automatic Thread, mm: M22x1,5

Air bleed valve thread, mm: M16x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, not more than, kg: 2,75

#### Dehydrator with Pressure Regulator 14.3512010-11



# **Description**

Dehydrator with Pressure Regulator 14.3512010-11 is used in Air Brake Systems of trucks, buses, trolleybuses, wheeled tractors and other commercial vehicles.

It is used for dehydration, air pressure control and automatic moisture drainage.

Modification 14.3512010-11 has constructional improvements similar to device 14.3512010-01 and differs in the following:

• Air-bleed device with connecting threading M 16x1.5

More effective drying capability resulting from increased pressure (up to 1.0...1.07 MPa or 10...10.7 kg/cm<sup>2</sup>) produced by compressor before the check valve.

## **Technical specification**

ON pressure, MPa (kgs/cm²), not less than: 0,65 (6,5) OFF pressure, MPs (kgs/cm²), not more than: 0,85 (8,5) Relief valve engagement pressure, MPa (kgs/cm²): from 1,15

to 1,4 (from 11,5 to 14,0)

Drain: automatic Thread, mm: M22x1,5

Air bleed valve thread, mm: M16x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, not more than, kg: 2,7

Air Dryer 11.3536008/-10



#### Description

Air Dryer 11.3536008/-10 is to be used in air brake systems of commercial vehicles for the purpose of drying and purifying the compressed air and thus preventing corrosion and condensate freezing in the circuits of the air brake system. Air Dryer improves reliability of other components of the system.

Air Dryer 11.3536008/-10 features built-in pressure regulator, safety valve, heating element, silencer, and preliminary moisture separator, designed to increase the lifespan of cartridge absorber

#### **Technical specification**

Compressor atmosphere discharge mode engagement pressure, MPa (kqs/cm²):

• for 11.3536008: 0,81<sup>+0,02</sup> (8,1<sup>+0,2</sup>)

• for 11.3536008-10: 0,85<sup>+0,02</sup> (8,5<sup>+0,2</sup>)

Compressor fill mode engagement pressure, Mpa (kgs/cm²),

min: 0,7 (7,0)

Pressure, limited by safety valve, MPa (kgs/cm<sup>2</sup>):

0,95+0,2...1,35 (9,5...13,2) Thread, mm: M22x1,5

Air bleed valve thread, mm: M16x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, not more than, kg: 4,4



Rated voltage, V:

for 11.3536008: 12<sup>+3</sup>-1,5
 for 11.3536008-10: 24<sup>+6</sup>-3

Nominal power consumption, W: 100 Turn-on temperature, °C:  $7^{+2}$ -6 Turn-off temperature, °C:  $27\pm4$ 

# Air Preparation Unit 11.3536006-10 Description:

Air Preparation Unit 11.3536006-10 is an alternative to Air Dryer ZB44 series with 4-circuit protection valve produced by «KNORR-BREMSE». It consists of Air Dryer and 4-circuit Protection Valve, which are connected by steel connecting pipe. Construction advantages are decreasing of assembling costs and enlargement of lay-out variants (attitude position of the protection valve can vary by valve rotation around a «22-22» teat axle.

## Technical specification:

Compressor air discharge mode engagement pressure, MPa (kgs/cm2): 0,85+0,02 (8,5+0,2)

Compressor fill mode engagement pressure, MPa (kgs/cm2),

min: 0,7 (7,0)

Pressure, limited by protection valve, MPa (kgs/cm2):

0,95...1,35 (9,5...13,2)

Thread: M22x1,5-7H, M12x1,5-7H

Temperature range, °C: from minus 45 to plus 60

Dew point reserve, °C, min: 15

Weight, kg: 5,5

Heater Element Specification: Rated voltage, V: 24-3

Nominal power consumption, W: 100;

ON temperature, °C: 7-6 OFF temperature, °C: 27  $\pm$  4

Air Dryer Cartridge 11.3536180

# **Description:**

Replacable cartridge for Air Dryer 11.3536008/-10

# **Technical specification**

Working pressure: 800 kPa Maximum pressure: 1,3 MPa Thread, mm: M39x1,5

# electrical connector to the air dryer 11.3536190

#### **Purpose:**

This product allows you to connect the heating element to the electrical system of the vehicle for heating the exhaust valve to ensure the efficiency of the device in the autumn-winter period.

## **Technical specifications:**

Working pressure: 800 kPa Maximum pressure: 1.3 MPa







## Circuit Protection Devices



## Protection Valve Single 100-3515010-01

## **Description**

Protection Valve Single 100-3515010-01 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

It is used for isolating the malfunctioning part of the Air Brake System. Protection Valve Single can be used for separating the pneumatic drive of brake system from second-priority accessory drives.

Valves 100-3515010 and 100-3515010-01 "without upstream" are used for connecting systems, where air upstream (reverse stream) is not permitted.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85 (8,5) Feedthrough pressure, MPa (kgs/cm<sup>2</sup>): 0,5 - 0,56 (5,0 - 5,6)

Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,23

# Protection Valve Single 12-3515010-01



### **Description**

Single Protection Valve 12.3515010-01 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

This valve provides filling of circuits of braking system when certain meaning is reached. When inlet chamber pressure declines, compressed air is delivered from outlet chamber.

Valve 12.3515010-01 with upstream can be used for attachment systems without air upstream limitation.

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85 (8,5) Feedthrough pressure, MPa (kgs/cm<sup>2</sup>): 0,5 - 0,56 (5,0 - 5,6)

Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60



#### Double-Main 100-3562010/-01

## Description

Double-Main Valve 100-3562010 is used in Air Brake Systems of trucks, buses, wheeled tractors, trailers and semi-trailers.

It has two inputs and one output and provides fast air bypass from the input with bigger pressure to the output.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,42

#### Circuit Protection Valve Double 100-3515110



## Description

Circuit Protection Valve Double 100-3515110 is used in Air Brake Systems of trucks, buses and wheeled tractors.

It is designed to divide the feeder mains into two independent circuits.

## **Technical specification**

Working pressure, MPa (kgs/cm $^2$ ), not more than: 0,85 (8,5) Protection pressure in operating circuit, MPa (kgs/cm $^2$ ), not

more than: 0,64 (6,4) Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,60

# Check Valve 11.3567010



# **Description**

Check Valve 11.3567010 is used in Air Brake Systems of trucks and wheeled tractors.

It is designed to provide one-way pressure air supply without pressure control into a circuit and prevents reverse airflow from that circuit.

## **Technical specification**

Working pressure, MPa (kgs/cm²), not more than: 0,8 (8,0)

Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60

#### Check Valve 11.3567010-10



## **Description**

Check Valve 11.3567010-10 is used in Air Brake Systems of trucks and wheeled tractors.

It is designed to provide one-way pressure air supply without pressure control into a circuit and prevents reverse airflow from that circuit.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread, mm: M22x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,06



## Four-circuit Protection Valve 11.3515410

## **Description**

Four-circuit Protection Valve 11.3515410 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

It is designed to split the pneumatic system into four independent circuits and automatically disconnect damaged circuits.

#### **Technical specification**

Working pressure, MPa (kgs/cm $^2$ ), not more than: 0,85 (8,5) Protection pressure, MPa (kgs/cm $^2$ ), not lower than: in working circuits: 0,5 (0,5)

Supported air pressure in operating circuits during compressor operation and failure of one of the circuits, MPa (kgs/cm²) - 0,8...0,89 (8,0...8,9)

Thread, mm:

feeding main: M22x1,5circuit outputs: M16x1,5

Temperature range, °C: from minus 45 to plus 60

#### Four-circuit Protection Valve 14.3515410



## **Description**

Four-circuit Protection Valve 14.3515410 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

It is designed to split the pneumatic system into four independent circuits and automatically disconnect damaged circuits.

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,65...0,85

(6,5...8,5)

Temperature range, °C: from minus 45 to plus 60

Thread, mm:

feeding main: M22x1,5 - 7Hcircuit outputs: M16x1,5 - 7H

Weight, kg: 0,730

#### Three-circuit Protection Valve 14.3515210



## **Description**

The triple safety valve is designed to separate one compressed air supply line into three circuits, to automatically shut off circuits in the event of damage or leakage and to maintain a certain pressure of compressed air in intact circuits, to maintain a certain pressure of compressed air in all circuits in case of damage or leakage of the supply line.

## **Technical specifications:**

Pressure of protection, MPa 065..0,85

• working circuits - 0.55 ... 0.57

Connecting threads:

• supply line: M22X1,5

• output on contours: M16X1,5

Temperature range, ° C: from minus 45 to plus 80  $\,$ 

## Four-circuit Protection Valve14.3515410-20



## **Description**

Designed to separate the pneumatic system into two circuits of the working brake system, the circuit of the parking brake system and the user circuit, automatically shutting off one of the circuits in case of leakage and saving compressed air in intact circuits or in all circuits when the supply line is broken.

## **Technical specifications:**

Operating pressure, MPa: 0.65 .... 0.85 • Opening pressure, MPa: 0.64 (+0.03)

- Closing pressure, MPa, not less (when the pressure in supply 1 drops to zero) 0.45
- Pressure of static closing of circuits, MPa, not less (without compensation of pressure in supply 1 and lack of pressure in a faulty circuit) 0.45

Connecting threads:

o supply line: M22x1,5-7H

o output on contours: M16x1, 5-7N

Temperature range, ° C: from minus 45 to plus 80

Mass, not more, kg: 0.95

#### Two-Section Brake Valve with Lever 100-3514008/-10/-20/-30



## **Description**

Two-Section Brake Valve 100-3514008 is used is Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

The Brake Valve is operated mechanically by brake pedal, ensuring fast and controllable admission of compressed air into the brake chambers in each of two circuits, as well as into control chambers of other pneumatic apparatus of the Brake System.

If one of the Brake System's circuits is depressurized, the Brake Valve provides controllable refill of the other circuit with compressed air.

Modification 100-3514008-01/-11/-21/-31 is characterized by possibility to install the Silencer 11.3590070, produced by PJSC PAAZ, and by screen filters availability in feeds "11" and "12". The positions of lever against air inputs and outputs are similar to 100-3514008/-10/-20/-30.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85 (8,5)

Free lever stroke, mm: 4,7 - 7,4 Full opening lever stroke, mm: 18,5 - 27 Total lever stroke, mm: 23,1 - 39,1

Thread: M22x1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 3,425

#### Two-Section Brake Valve with Lever 100-3514008-01/-11/-21/-31



#### **Description**

Two-Section Foot Brake Valve for Suspended Pedal 11.3514208-01/-11-/21-/31 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

The Brake Valve is operated mechanically by suspended pedal, ensuring that the brake chambers in each of two circuits, as well as control chambers of other pneumatic apparatus of the Brake System, are filled with compressed air following appropriate filling speed and with appropriate tracking.

If one of the Brake System's circuits is depressurized, the Brake Valve provides controllable (with tracking) refill of the other circuit with compressed air. Given modification is compatible with Silencer produced by PJSC "PAAZ"" and additional filters.

The positions of pedal mechanism against air inputs and outputs are similar to 11.3514208/-10/-20/-30

## **Technical specification**

Working pressure, MPa (kgs/cm²), not more than: 0,85 (8,5)

Free lever stroke, mm: 4,7 – 7,4

Full opening lever stroke, mm: 18,5 - 27 Total lever stroke, mm: 23,1 - 39,1

Thread: M22x1,5

Temperature range, °C: from minus 45 to plus 60

#### Reverse Action Hand Brake Valve with Brake Release Device 11.3537310



## **Description**

Back Action Hand Brake Valve with Brake Release Device 11.3537310 is used in Air Brake Systems of trucks, buses and wheeled tractors.

Allows performing control check of the truck's parking brake efficiency when holding the whole articulated lorry on a slope with trailer's brakes released.

Operated mechanically by turning the handle and provides controlled compressed-air bleed from the parking brake control bus or from the reserve brake control bus.

## **Technical specification**

Working pressure, MPa (kgs/cm $^2$ ): no more than 0,8 (8,0)

Connecting threading: M14x1.5

Temperature interval, °C: minus 45 to plus 60

Weight, kg: 1.2

#### Reverse Action Hand Brake Valve 100-3537010



## Description

Reverse Action Hand Brake Valve 100-3537010 is used in Air Brake Systems of trucks, buses, wheeled tractors and other commercial vehicles.

Operated mechanically by turning the handle. Provides controlled compressed-air bleed from the parking brake control bus or from the reserve brake control bus.

#### **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85 (8,5)

Thread: M14X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,895

#### Description

Two-Section Foot Brake Valve 11.3514108 is used in Air Brake Systems of trucks, buses, and wheeled tractors.

The Brake Valve is operated mechanically by pedal, which is to be installed between valve's lugs, ensuring that the brake chambers in each of two circuits, as well as control chambers of other pneumatic apparatus of the Brake System, are filled with compressed air following appropriate filling speed and with appropriate tracking.

If one of the Brake System's circuits is depressurized, the Brake Valve provides controllable (with tracking) refill of the other circuit with compressed air.

## Available modifications:

• 11.3514108/-10/-20/-30. These modifications differ in the positions of pedal mechanism against air inputs and outputs

# Two-Section Foot Brake Valve 11.3514108/-10/-20/-30 -01/-11/-21/-31



 Optionally can be equipped with an outlet port for installing Silencer 11.3590070, produced by PJSC "Poltava Automobile Unit Plant" and with screen filter.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>): 0,65 - 0,85 (6,5 - 8,5)

Свободный ход толкателя, mm: 1,9 – 3,0 Full opening pusher stroke, mm: 8,4 – 10,8 Total pusher stroke, mm: 12,5 – 15,7

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 2,70

Two-Section Foot Brake Valve for Suspended Pedal 11.3514208/-10/-20/-30



## **Description**

Two-Section Foot Brake Valve for Suspended Pedal 11.3514208 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

The Brake Valve is operated mechanically by suspended pedal, ensuring that the brake chambers in each of two circuits, as well as control chambers of other pneumatic apparatus of the Brake System, are filled with compressed air following appropriate filling speed and with appropriate tracking.

If one of the Brake System's circuits is depressurized, the Brake Valve provides controllable (with tracking) refill of the other circuit with compressed air.

Available modifications:

• 11.3514208/-10/-20/-30. These modifications differ in the positions of pedal mechanism against air inputs and outputs

## **Technical specification**

Working pressure, MPa (kgs/cm $^2$ ): 0,65 - 0,85 (6,5 - 8,5)

Free pusher stroke, mm: 1,9 - 3,0

Full opening pusher stroke, mm: 8,4 - 10,8 Total pusher stroke, mm: 12,5 - 15,7

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

## Two-Section Foot Brake Valve for Suspended Pedal 11.3514208-01/-11/-21/-31



#### Description

Two-Section Foot Brake Valve for Suspended Pedal 11.3514208-01/-11-/21-/31 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

The Brake Valve is operated mechanically by suspended pedal, ensuring that the brake chambers in each of two circuits, as well as control chambers of other pneumatic apparatus of the Brake System, are filled with compressed air following appropriate filling speed and with appropriate tracking.

If one of the Brake System's circuits is depressurized, the Brake Valve provides controllable (with tracking) refill of the other circuit with compressed air. Given modification is compatible with Silencer produced by PJSC "PAAZ"" and additional filters.

The positions of pedal mechanism against air inputs and outputs are similar to 11.3514208/-10/-20/-30

## **Technical specification**

Working pressure, MPa (kgs/cm $^2$ ): 0,65 - 0,85 (6,5 - 8,5)

Free pusher stroke, mm: 1,9 - 3,0 Full opening pusher stroke, mm: 8,4 - 10,8

Total pusher stroke, mm: 12,5 – 15,7 Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 2,70

Two-Section Foot Brake Valve 11.3514308-10/-20/-30/ -01/-11/-21/-31



Two-Section Foot Brake Valve 11.3514308 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

The Brake Valve is operated mechanically by suspended pedal, ensuring that the brake chambers in each of two circuits, as well as control chambers of other pneumatic apparatus of the Brake System, are filled with compressed air following appropriate filling speed and with appropriate tracking.

If one of the Brake System's circuits is depressurized, the Brake Valve provides controllable (with tracking) refill of the other circuit with compressed air.

Available modifications:

- 11.3514308/-10/-20/-30. These modifications differ in the positions of pedal mechanism against air inputs and outputs
- 11.3514308-01/-11/-21/-31. These modifications are compatible with Silencer produced by PJSC "Poltava Automobile Unit Plant" and additional filters.

The positions of pedal mechanism against air inputs and outputs are similar to 11.3514308/-10/-20/-30



## **Technical specification**

Working pressure, MPa (kgs/cm $^2$ ): 0,65 - 0,85 (6,5 - 8,5)

Free pusher stroke, mm: 1,9 - 3,0

Full opening pusher stroke, mm: 8,4 - 10,8 Total pusher stroke, mm: 12,5 - 15,7

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

#### Reverse Action Hand Brake Valve 11.3537410/-10



# **Description**

Reverse Action Hand Brake Valve 11.3537410/-10 is used in Air Brake Systems of trucks, buses, wheeled tractors and other commercial vehicles.

Operated mechanically by turning the handle. Provides controlled compressed-air bleed from the parking brake control bus or from the reserve brake control bus.

## **Technical specification**

Working pressure, MPa (kgs/cm²): 0,65...0,85 (6,5...8,5) Maximum through passage section, equivalent to the aperture diameter, mm: 7

Thread, mm:

for 11.3537410 - M 14x1,5

for 11.3537410-10 - M 16x1,5

Tightening torque of connecting steel with rubber sealing

elements on the screw holes, N•m: 15...25

Working temperature range, °C: from minus 45 to plus 80 Weight, no more than, kg: 0,73

## Hand Brake Valve 11.3537510



#### Назначение:

The manual reversing brake valve is designed for use in the pneumatic brake system of trucks, buses, trolleybuses and wheel tractors. It is controlled mechanically by turning the handle and provides an adjustable release of compressed air from the parking brake control line.

Brake reverse acting valve with manual control 11.3537510 allows to make a control check effectively enough parking brake to keep on the slope of the whole truck and trailer when the trailer breaks released.

## **Technical specifications:**

Operating pressure, MPa (kgf / cm2): 0.65 ... 0.85 (6.5 ... 8.5) Maximum flow area equivalent to the diameter of the hole,mm: 7 Size of connecting thread, mm: M 14x1.5

Tightening torque of connecting fittings with rubber sealing elements on the threaded holes., N  $\bullet$  m: 15 ... 25

Operating temperature range, ° C: from minus 45 to plus 80 Weight, not more, kg: 0.73



#### Pneumatic Valve 100-3537110

#### Description

Directional Control Valve 100-3537110 is used in Air Brake Systems of trucks, buses and wheeled tractors.

Mechanically operated (without tracking). Ensures entry of compressed air into slave cylinders of Auxiliary Brake System.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread: M12X1,5

Temperature range, °C: from -45 to +60

Weight, kg: 0,24



## Pneumatic Cylinder 35x65 100-3570210

## Description

Pneumatic Cylinder 35x65 100-3570210 is used in pneumatic drive of Auxiliary Brake Systems of trucks and wheeled tractors.

It is used for controlling air-gates of auxiliary (engine) brake. Operated pneumatically by the valve of Auxiliary Brake System. Can be used in pneumatic drives of different systems and aggregates.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Cylinder diameter, mm: 35

Rod stroke, mm: 65 Thread: M12X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,65

## Pneumatic Cylinder 30x25 11.3570110



## Description

Pneumatic Cylinder 30x25 100-3570110 is designed to manage the fuel pump control bar in order to disable fuel feeding when vehicle's auxiliary (engine) brake is enabled.

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Cylinder diameter, mm: 30

Rod stroke, mm: 25 Thread: M10X1

Temperature range, oC: from minus 45 to plus 60

## **Double Line Trailer Brake Control Valve 100-3522010**



## **Description**

Double Line Trailer Brake Control Valve 100-3522010 is used two-circuit brake systems of trucks and wheeled tractors.

Controlled pneumatically by two-line brake valve and autonomously by hand brake valve or by the valve of auxiliary brake system.

Ensures fast and controllable admission of compressed air into trailer's main line. If one of the carrier's brake circuits is depressurized, the Double Trailer Brake Control Valve controls the properly functioning circuit.

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 2,1

Single - line Trailer Brake Control Valve 100-3522110



#### **Description**

Single-Line Trailer Brake Control Valves are used in Air Brake Systems of trucks and wheeled tractors.

Operated pneumatically by Two-Line Trailer Brake Control Valve. Ensures fast and controllable air bleeding from the connecting line of the single-line trailer actuator.

Additionally, the valves include a regulating device, which limits the pressure of air, supplied into the trailer's brake gear.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0) Air pressure in trailer main, MPa (kgs/cm<sup>2</sup>): 0,5...0,54

(5,0....5,4) Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 2,42



## Single - line Trailer Brake Control Valve 100-3522110-10

#### **Description**

Single-Line Trailer Brake Control Valves are used in Air Brake Systems of trucks and wheeled tractors.

Operated pneumatically by Two-Line Trailer Brake Control Valve. Ensures fast and controllable air bleeding from the connecting line of the single-line trailer actuator.

Additionally, the valves include a regulating device, which limits the pressure of air, supplied into the trailer's brake gear.

Valve 100-3522110-10 can be controlled mechanically by turning the valve handle. When controlled pneumatically, valve 100-3522110-10 works similarly to valve 100-3522110.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0) Air pressure in trailer main, MPa (kgs/cm<sup>2</sup>): 0,5...0,54

(5,0....5,4) Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 2,42

## Double Line Trailer Brake Control Valve with Emergency Valve 11.3522008



## Description

Double Line Trailer Brake Control Valve with Emergency Valve 11.3522008 is designed to be used in Two Circuit Air Brake System of trucks and wheeled tractors.

Operated pneumatically by Two-Circuit Brake Valve and autonomously by Back Action Hand Brake Valve or by Auxiliary Brake Valve and ensures fast and controllable admission of compressed air into trailer's main line.

Provides automatic trailer's brake action if the main line is depressurized or not connected.

## **Technical specification**

Working pressure, MPa (kg/cm²): no more than 0.85 (8.5)

Connecting threading: M22X1,5

Temperature interval, °C: minus 45 to plus 60

Weight, kg: 2,6

## Double Line Trailer Brake Control Valve with Emergency Valve 11.3522008-10/-20



# Description

Two-Line Trailer Brake Control Valve with Breakage Valve 11.3522008-10/-20 is designed to be used in Two Circuit Air Brake System of trucks and wheeled tractors.

Operated pneumatically by Two-Circuit Brake Valve and autonomously by Back Action Hand Brake Valve or by Auxiliary Brake Valve and ensures fast and controllable admission of compressed air into trailer's main line.

Provides automatic trailer's brake action if the main line is depressurized or not connected.

## **Technical specification**

Working pressure, MPa (kg/cm<sup>2</sup>): no more than 0.85 (8.5)

Connecting threading: M22X1,5

Temperature interval, °C: minus 45 to plus 60

## Air Dispenser for Two-Line Trailer Brake System 11.3531010-71



## **Description:**

Air Dispenser for Two-Line Trailer Brake System 11.3531010-71 is used in both Two-Line and Combined Air Brake Systems of trailers and semi-trailers. Operated mechanically and ensures fast and controllable admission of compressed air into trailer's brake chambers. Features a mechanically operated valve for automatic trailer brake release.

It is a improved modification of the Air Dispenser 11.3531010-70, distinguishing by discharged valve system, which allows to decrease initial device sensitivity from 0,045 MPa to 0,03 MPa and consequently to decrease trailer (semi-trailer) air brake abrasion time. A distinguishing feature of this device is improved appearance and lesser steel intensity by using injection casting in body production without a price rise in comparison with 11.3531010-70.

Air Dispenser 11.3531010-71 is interchangeable with the 11.3531010-70 by ports size.

## **Technical specification:**

Working pressure, MPa (kgs/cm<sup>2</sup>): 0,65...0,85 (6,5...8,5)

Thread: M22X1,5-7H

Temperature range, °C: from minus 45 to plus 60

Weight, kg, not more than: 1,8

Initial sensitivity, MPa (kgs/cm<sup>2</sup>): 0,03 (0,3)

Air Dispenser for Two-Line Trailer Brake System 11.3531010-81



## **Description:**

Air Dispenser for Two-Line Trailer Brake System 11.3531010-81 is used in Single-Line Air Brake System of trailers and semi-trailers. Operated mechanically and ensures fast and controllable admission of compressed air into trailer's brake chambers. Features a mechanically operated valve for automatic trailer brake release.

It is a improved modification of the Air Dispenser 11.3531010-80, distinguishing by discharged valve system, which allows to decrease initial device sensitivity from 0,045 MPa to 0,03 MPa and consequently to decrease trailer (semi-trailer) air brake abrasion time. A distinguishing feature of this device is improved appearance and lesser steel intensity by using injection casting in body production without a price rise in comparison with 11.3531010-80.

Air Dispenser 11.3531010-81 is interchangeable with the 11.3531010-80 by ports size.

## **Technical specification:**

Working pressure, MPa (kgs/cm<sup>2</sup>): 0,65...0,85 (6,5...8,5)

Thread: M22X1,5-7H

Temperature range, °C: from minus 45 to plus 60

Weight, kg, not more than: 1,8

Initial sensitivity, MPa (kgs/cm<sup>2</sup>): 0,03 (0,3)

#### Relay Valve 11.3518010/-20



## **Description**

Relay Valve 11.3518010/-20 is used in Air Brake Systems of trucks, buses, wheeled tractors, trailers and semi-trailers.

Operated pneumatically and ensures fast and controllable admission of compressed air into respective brake chambers or control lines.

## **Technical specification**

Working pressure, MPa (kgs/cm²), not more than: 0,8 (8,0)

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 1,05

#### Relay Valve 11.3518010-10



# Description

Relay Valve 11.3518010-20 is used for fast and controllable admission (dismissal) of compressed air into respective brake chambers or control lines. Compatible with Silencer.

## **Technical specification**

Working pressure , MPa (kgs/cm $^2$ ) - from 0,65 to 0,85 (from 6,5 to 8,5);

Initial insensitivity, MPa (kgs/cm<sup>2</sup>) - below 0,03 (0,3); Thread - M22x1,5-7H;

Temperature range, °C - from minus 50 to plus 60; Weight, kg - 0,830.



# Fast Brake Release Valve 11.3518110

## **Description**

Fast Brake Release Valve 11.3518110 is used in Air Brake Systems of trucks, buses, wheeled tractors, trailers and semi-trailers.

It is designed to decrease brake release time by accelerating air exhaust from actuators at the expense of reduced distance covered by air during exhausting process. Fast Brake Release Valve is compatible with Silencer 11.3590070 produced by PJSC "Poltava Automobile Unit Plant".

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,65-0,85 (6,5-8,5)

Maximum flow area equivalent to diameter of the hole, mm: 14

Start of air receipt at valve outlet, when valve inlet pressure is, MPa  $(kgs/cm^2)$ , not more than: 0,02 (0,2)

Pressure difference at valve's outlet and inlet with increasing pressure, MPa (kgs/cm²), not more than: 0,02 (0,2)

Thread: M22X1,5

Connecting torque of fittings with rubber seals at thread

M22x1,5, N•m: 15...25

Temperature range, °C: from minus 45 to plus 60

## Hose Couplings "PALM" type 100-3521110/111, 11.3521410/11, 11.3521510/11



## **Description**

Hose Couplings "PALM" type 100-3521110/111 are used in Air Brake Systems of trucks, wheeled tractors, trailers and semitrailers.

Hose Couplings are designed for fast and reliable connection of both air supply line and trailer brake control line to tractive vehicle's brake circuit under the two-line scheme.

Produced in following modifications:

- Basic 100-3521110 (red), 100-3521111 (blue or yellow)
- Automatic 11.3521410 (red), 11.3521411 (blue or yellow). Self-locks when disconnected, making additional disconnecting valve unnecessary
- Filtering 11.3521510 (red), 11.3521511 (blue or yellow).
   Features a filtering element, making additional line filter unnecessary

## **Technical specification**

Working pressure, MPa (kgs/cm²), not more than: 0,8 (8,0)

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,275

Main Filter 12.3511310-01



## **Description**

Main Filter 12.3511310-01 is used in Air Brake Systems of trailers and semi-trailers.

Installed in supplying, controlling and connecting lines after hose couplings and hoses for the purpose of preventing ingress of dust and other contamination into trailer's brake gear.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), 0,65...0,80

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

# Hose Coupling with Relay Valve 11.3521110-02



# **Description**

Hose Coupling with Relay Valve 11.3521110-02 is used in Air Brake Systems of trailers and semi-trailers.

It is designed to connect trailer's air brake line to tractive vehicle's brake circuit under the single-line scheme. Provides fast air exhaust from airline for the purpose of decreasing reaction time of trailer's brake gear during brake release.

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

# **Auxiliary Devices**



#### Pressure Controll Valve 11.3122009-02

## **Description**

Pressure Controll Valve with Limiting Valve is used in trucks and wheeled tractors with centralized tire pressure control system.

It is designed to provide air delivery and air bleed to/from tires for the purpose of rough-terrain performance improvement due to controlled air pressure in tires.

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>): 0,65...0,85 (6,5...8,5)

Spool stroke, mm: 24 during air bleed, mm: 12 Conditional pass, mm: 5,5

Thread: K3/8"

Spool movement force, max, N (kgs): 100 (10) Temperature range, °C: from minus 50 to plus 60

Dimensions, mm:

- length 223
- height 54
- width 50

Weight, kg: 0,5

#### Pressure Controll Valve 11.3122110



# **Description**

Pressure Controll Valve is used in pneumatic break gear of vehicles. Provides air delivery and air bleed to/from air brake circuit.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>): 0,65...0,85 (0,65...8,5)

Spool stroke, mm: 24 during air bleed, mm: 12

Thread: K3/8"

Temperature range, °C: from minus 50 to plus 60

#### Drain Valve 11.3513110/-10



## **Description**

Drain Valve 11.3513110/-10 is used to force condensate drainage from the brake system's air receiver and, if needed, to bleed compressed air from the receiver.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85 (8,5)

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

• 11.3513110 – with ring on pusher

• 11.3513110-10 - without ring on pusher

Weight, kg: 0,044





# Description

Control Output Valve is applied in Air Brake Systems of trucks, buses, wheeled tractors, trailers and semi-trailers.

It is used for compressed air remove from the system to connect it to diagnostic equipment or for compressed air remove for external consumers. Also it can be used for compressed air supply into external source system.

## **Technical specification**

Working pressure, MPa (kgs/cm²), not more than: 0,85 (8,5) Thread:

• for measuring device nut: M16X1,5

• for screwing valve: M22X1,5

Temperature range, °C: from minus 45 to plus 60  $\,$ 

Weight, kg: 0,06

Control Output Valve 13.3515310-10



## **Description**

Control Output Valve is used in Air Brake Systems of trucks, buses, wheeled tractors, trailers and semi-trailers.

Used for connecting diagnostic equipment for Air Brake System pressure control. The valve can also be used for air bleeding

# **Technical specification**

Working pressure, MPa (kgs/cm $^2$ ), not more than: 0,85 (8,5) Thread:

for measuring device nut: M16X1,5

• for screwing valve: M22X1,5

Temperature range, °C: from minus 45 to plus 60

#### Disconnecting Valve 12.3520010/-10



## **Description**

Disconnecting Valve 12.3520010 is used for blocking the airlines connecting the tractive vehicle with a trailer or a semi-trailer.

Modification 12.3520010-10 allows air bleed from the system when the valve is in blocking state.

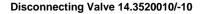
## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread: kg 1/2"

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,45





## **Description**

Disconnecting Valve 14.3520010 is used for blocking the airlines connecting the tractive vehicle with a trailer or a semi-trailer.

Modification 14.3520010 has a bleeder opening, allowing compressed air bleed from trailer or semi-trailer to atmosphere performing when the main is closed.

## **Technical specification**

Working pressure, MPa (kgs/cm²), not more than: 0,65 – 0,85

(6,5 - 8,5) Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

## Electrical-Pneumatic Valve 11.3745000-21



# **Description**

Electro-Pneumatic Valve 11.3745000-21 is used in pneumatic systems of commercial vehicles and technological equipment for the purpose of airflow management in pneumatic circuits.

Available modifications:

• 11.3745000-21 featuring a threaded hole with tapered thread KG 1/8"

## **Technical specification**

Conditional pass, mm.: 1,6

Working pressure of compressed air, MPa (kgs/cm<sup>2</sup>): 0,6...0,8

(6,0...8,0)

Reaction time, s.: 0,03 Type of current: directs

Voltage, V: 24

Power consumption, W: 7

Weight, kg: 0,35

Throughput, not less than, m<sup>3</sup>/hr: 0,08

#### Electrical-Pneumatic Valve 12.3745000/-10/-30



## **Description:**

Electrical-Pneumatic Valves 12.3745000 with 3 mm internal diameter and bayonet electro-cutoff point according to the DIN 72585-1 ensure reliable and waterproof bond. It is used in pneumatic systems of commercial vehicles and technological equipment for control stream of compressed air in pneumatic circuits. Electrical-Pneumatic Valves design allows to assemble them in blocks.

## **Technical specification:**

Conditional pass, mm.: 1,6

Working pressure of compressed air, MPa (kgs/cm<sup>2</sup>): 0,6...0,8

(6,0...8,0)

Reaction time, s.: 0,03 Type of current: directs

Voltage, V: 24

Power consumption, W: 7

Weight, kg: 0,35

Throughput, not less than, m<sup>3</sup>/hr: 0,08

#### Wheel Valve 2555 - 4224110 5



## **Description**

Wheel Valve  $255B - 4224110 \ B$  is used in trucks, wheeled tractors with centralized tire pressure control system.

Designed to connect and disconnect the tire to/from the source of compressed air. Features a valve for individual tire filling.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread: M18X1,5

Temperature range, °C: from minus 45 to plus 60



# Fuel Regulating Valve 6322-1104650-01/-11

## **Description**

Fuel Regulating Valve 6322-1104650-01/-11 is installed on vehicle's fuel tank and is used for switching fuel intake from the fuel tanks and fuel discharge from the engine into the fuel tanks.

## **Technical specification**

Working pressure, MPa (kgs/cm²), not more than: 0,1 (1,0) Type: cork Thread: M16X1,5 Temperature range, °C: from minus 45 to plus 60 Weight, kg:

257-1104650-01: 1,83257-1104650-11: 1,94



#### Silencer 11.3590070

#### Description

Silencer 11.3590070 is used in Air Brake Systems of trucks, buses, trolleybuses and wheeled tractors.

Installed on exhaust ports of air brake control valves.

## Compatible with:

- Brake Valves 100-3514008-01/-11/-21/-31, 11.3514108, 11.3514208-01/-11/-21/-31
- Relay Valves 11.3518010-10

## **Technical specification**

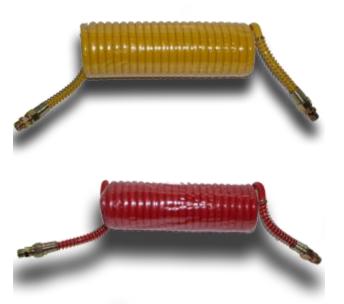
Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,85 (8,5)

Connection diameter, mm: x28,9

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,06

Coiled tube 11.3506010 (red), 11.3506011 (yellow)



# **Description**

Coiled tube is used to transfer compressed air energy from the tractor to the trailer.

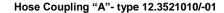
## **Technical specifications:**

Operating pressure, MPa: 0.65 .... 0.85 Length at maximum stretch, not more, mm: 4500 Size of connecting thread, mm: M16x1.5-6g

Size of connecting thread, mm: M16x1.5-6g Temperature range, ° C: from minus 45 to plus 80

Mass, not more than, kg: 0.7

## **Tractor Apparatus**





## **Description**

Hose Coupling "A"- type 12.3521010/-01 is used for connecting trailer's single-line air brake system as well as for automatic blocking of airflow when the heads are disconnected.

## **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>), not more than: 0,8 (8,0)

Thread: M22X1,5

Temperature range, °C: from minus 45 to plus 60

Weight, kg: 0,25

#### Pressure Regulator 11.3512010-30



## **Description**

Pressure Regulator 11.3512010-30 is used in Air Brake Systems of trucks, buses and wheeled tractors.

Provides pressure control of the air, supplied into vehicle's brake system.

## **Technical specification**

ON pressure, MPa (kgs/cm<sup>2</sup>): 0,65 (6,5) OFF pressure, MPa (kgs/cm<sup>2</sup>): 0,85 (8,5)

Relief valve engagement pressure, MPa (kgs/cm<sup>2</sup>): from 0,85

to 1,0 (from 8,5 to 10,0)

Thread: K 3/8"

Air bleed valve thread: M16X1,5

Temperature range, °C: from -45 to +60

Weight, kg: 0,70

## Pressure Regulator 11.3512010-40



## **Description**

Pressure Regulator 11.3512010-40 is used in Air Brake Systems of trucks, buses and wheeled tractors.

Provides air pressure control, supplied into vehicle's brake system.

## **Technical specification**

ON pressure, MPa (kgs/cm<sup>2</sup>): 0,65 (6,5) OFF pressure, MPa (kgs/cm<sup>2</sup>): 0,85 (8,5)

Relief valve engagement pressure, MPa (kgs/cm<sup>2</sup>): from 0,85

to 1,0 (from 8,5 to 10,0)

Thread: K 3/8"

Air bleed valve thread: M16X1,5

Temperature range, °C: from -45 to +60

## Brake Valve 14.3514010



## **Description**

Brake Valve 14.3514010 is used in single-line air brake systems of tractors.

Operated mechanically by pulling. The valve provides fast and controlled admission and exhaust of compressed air to/from control chambers of pneumatic apparatus of trailers' brake systems.

# **Technical specification**

Working pressure, MPa (kgs/cm<sup>2</sup>): 0,65...0,8 (6,5...8,0) Free rod stroke, mm: 1,0 - 2,0 Working rod stroke, mm: 10 - 12 Full rod stroke, mm: 13 - 14 Thread: K3/8" Temperature range, °C: from -45 to +60

Rod 14.3514160/-10/-20/-30



## **Description**

It is used in Brake Valve 14.3514010, which is used in singleline pneumatic driving gear of braking system and is mechanically operated by the rod.

## **Technical specification**

Initial spring force, N, not more than: 210 Installation spring length, mm: 37±1,25

Weight, kg, not more than: 0,4

# Hydraulic auto components

#### Shock absorber of driver's seat 260-6809100-10



Shock absorber of driver's seat designed for smooth damping of the vertical component of oscillation of the driver's spring-loaded seat

# **Specifications**

- force during compression and recoil at a rod displacement speed of 0.226 m / s (oscillation frequency  $100 \pm 5$  per minute, rod stroke  $44 \dots 50$  mm), kg  $40 \pm 10$
- maximum diameter, mm 44
- working stroke, mm 58

Full, mm - 67

- $\bullet$  length along the centers of the connecting holes in the compressed state, mm 168
- diameter of connecting holes., Mm 12
- weight, kg 0.56
- operating temperature range, ° C from minus 45 to plus 60

#### Hydraulic cylinder 6437-3405005



Hydraulic cylinder 6437-3405005 and hydraulic cylinder 6510-3405010 is designed to create the necessary effort to turn the steering axle in the power steering system of heavy trucks.

## **Specifications**

- working diameter of the cylinder, mm 70
- full stroke, mm 280
- $\bullet$  maximum pressure of working fluid, MPa 13
- operating temperature range, ° C from minus 45 to plus 60



Hydraulic cylinder 6437-3405005 and hydraulic cylinder 6510-3405010 is designed to create the necessary effort to turn the steering axle in the power steering system of heavy trucks.

# **Specifications**

- working diameter of the cylinder, mm 70
- full stroke, mm 280
- maximum pressure of working fluid, MPa 13
- operating temperature range, ° C from minus 45 to plus 60

## For 6510-3405010:

- connecting diameter of an eyelet, mm 30
- length from the center of the eye to the end of the rod 495 mm
- Mass, kg 12.2

#### Clutch servo 121.1609010/-10



#### **Description**

Clutch servo serves to reduce the force applied by the driver to the pedal when disengaging the clutch by using the energy of compressed air in order to reduce driver fatigue by increasing the ergonomic qualities of the car.

## **Technical specifications:**

Technical specifications:

Operating pressure, MPa: 0.65 - 0.85 Operating fluid pressure: up to 1MPa

Maximum pressure: 7 MPa air flow area; not less than 6mm

The force on the rod at a pressure of compressed air:

0.6 MPa - not less than 5000 N;0.8 MPa - not less than 6200 N.

Full stroke, mm: 68-72

Temperature range, C °: from minus 40 to plus 60

Connection threads: M14x1.5, M16x1.5

Weight, kg, not more: 5.1



## **Description**

Clutch servo serves to reduce the force applied by the driver to the pedal when disengaging the clutch by using the energy of compressed air in order to reduce driver fatigue by increasing the ergonomic qualities of the car.

# **Technical specifications:**

Technical specifications:

Operating pressure, MPa: 0.65 - 0.85 Operating fluid pressure: up to 1MPa

Maximum pressure: 7 MPa air flow area; not less than 6mm

The force on the rod at a pressure of compressed air:

0.6 MPa - not less than 5000 N;0.8 MPa - not less than 6200 N.

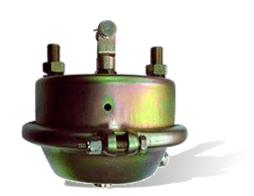
Full stroke, mm: 68-72

Temperature range, C °: from minus 40 to plus 60

Connection threads: M14x1.5, M16x1.5

Weight, kg, not more: 5.1

# Brake chambers



# **Brake chamber type 24 11.3519510**

# **Description**

Designed to convert the energy of compressed air into a force that activates the brake mechanism

## **Technical specifications:**

Working pressure, MPa (kgf / cm2): 0.65 - 0.85 (6.5 - 8.5)

Connecting thread: M16x1.5

Stroke, mm 70 ... 75

Temperature range, ° C: from minus 45 to plus 80

Weight, kg: 3.7



# Brake chamber type 30 11.3519610

## Назначение:

Designed to convert the energy of compressed air into a force that activates the brake mechanism

## Техническая характеристика:

Working pressure, MPa (kgf / cm2): 0.65 - 0.85 (6.5 - 8.5)

Connecting thread: M16x1.5

Stroke, mm 70 ... 75

Temperature range, ° C: from minus 45 to plus 80