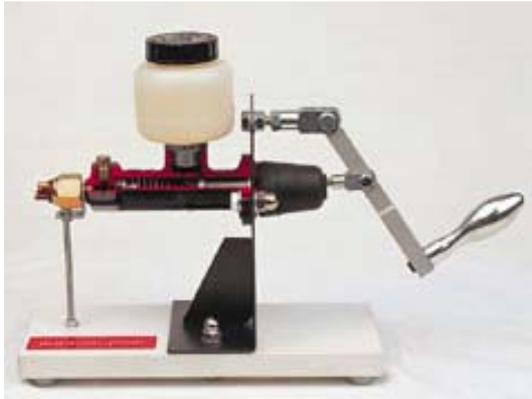


HAKO Cut-away models - Section 11
Hydraulic braking, air-braking



Order no. 1036
Single main brake cylinder

- Demonstration:
- sliding the pressure rod and piston
 - closing the pressure chamber differential and tracking bore function
 - pressure building-up
 - bottom valve function



Order no. 1037
Tandem main brake cylinder

- Demonstration:
- sliding the pressure rod and piston
 - closing the pressure chamber differential and tracking bore function
 - pressure building-up
 - function in the event of a failure of any circuit



Order no. 1068
Graduated Tandem main brake cylinder with central valve

- Demonstration:
- as per Order no. 1037
 - plus: failure of the front differential bore (due to regulation with ABS system)
 - opening and closing the central valve



Order no. 1118
Twintax main brake cylinder

- function of both pistons
- function in case of failure of one of the circuits
- securing of the stepped piston
- brake-pressure increase in circuit II in case of failure of circuit I
- shorter pedal travel in case of failure of one of the circuits
- securing of the piston



Order no. 1083
Brake pressure reducer

Function: Movement of stepped piston to reduce brake pressure

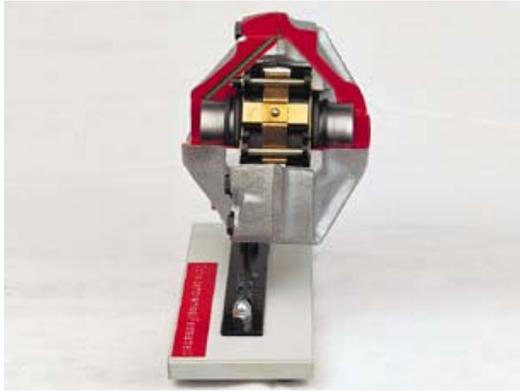


Order no. 1086
Brake pressure regulator

Function: Movement of stepped piston and actuation of conical-seat valve

HAKO Cut-away models - Section 11

Hydraulic braking, air-braking



Order no. 1039

Fixed calliper disc brake

Demonstration:

- Brake piston and sealant ring function
- Connecting channels between both parts of calliper
- Securing pin and split spring function
- Brake and bleed bore



Order no. 1130

Fixed calliper disc brake with 4 brake plungers

- function of sealing ring and plunger
- automatic readjustment in case of wear
- function of the connecting ports between both calliper sections
- function of the brake and ventilation bores
- if circuits I or II fail, the front axle always brakes



Order no. 1040

Floating calliper disc brake

Demonstrations:

- brake piston and sealant ring function
- sliding the float frame on the retainer
- securing pin and split spring function
- brake and bleed bore



Order no. 1038

Sliding calliper disc brake

Demonstrations:

- brake piston and sealant ring function
- sliding the retainer on the housing (calliper)
- securing pin and split spring function
- brake and bleed bore



Order no. 1096

Hydraulic brake booster with tandem master brake cylinder

Function of reaction piston, spool valve and return bore

Order no. 1104

.. without master brake cylinder



Order no. 1236

Pneumatic brake power assist unit with tandem brake master cylinder

By pressing the lever the outer valve can be seen to open. The piston rod with diaphragm disk moves forward. The pressure rod moves both the pistons in the brake master cylinder and the braking process is started.

HAKO Cut-away models - Section 11

Hydraulic braking, air-braking



Order no. 1203

Drum brake with brake drum

The brake drum and the wheel cylinder are substantially cut away. The brake pistons can be spread using a control lever, thus applying braking pressure to the easily- turned brake drum.



Order no. 1035

Wheel cylinder

Demonstration:
- function of sleeve, piston and adjusting ring



Order no. 1030

ABS hydro unit

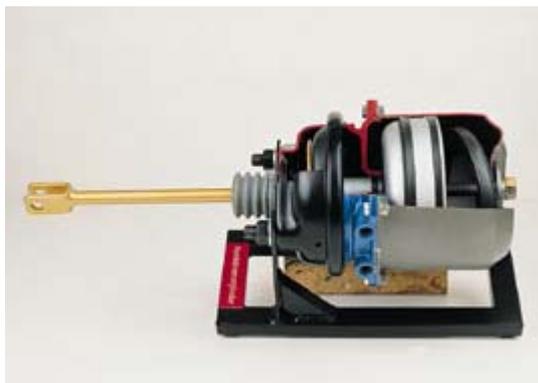
Demonstration:
- function of the electric motor and return flow pump
- pressure reservoir function
- magnetic valve function



Order no. 1144

Piston cylinder

piston extension when rear chamber is ventilated
piston retraction via the force of the incorporated spring



Order no. 1063

Spring-loaded brake cylinder

- function of the spring-loaded cylinder
- function of the various compressed-air supply lines
- function of both springs
- function of the mechanical release device



Order no. 1131

Diaphragm cylinder

- connection of both housing sections
- splitting up of housing in two chambers by means of the rubber diaphragm
- piston extension and retraction

HAKO Cut-away models - Section 11
Hydraulic braking, air-braking



Order no. 1057
Operating brake valve 1

Demonstrations:

- movement of the graduating and control piston opening and closing the inlet and outlet
- release, partial braking and full braking position



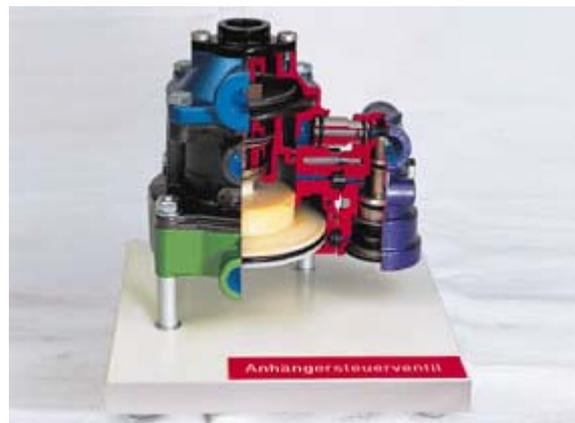
Order no. 1137
Operating brake valve 2



Order no. 1059
Trailer brake valve

Demonstrations:

- activation of the trailer brake system
- emergency braking in the event of pressure loss in the reservoir line
- applying the brake on the coupled trailer
- piston and valve functions



Order no. 1060
Trailer control valve

Demonstrations:

- function of both pistons and the valve
- function in the release, partial braking and full braking position
- applying the brake with the help of the safety brake valve

HAKO Cut-away models - Section 11

Hydraulic braking, air-braking



Order no. 1271

Cutaway model: Parking secondary brake valve

It has the task of holding the stationary vehicle by purely mechanically generated forces. If the service brake system fails, it acts as a secondary brake.

Functions: driving position, parking brake position, partial braking position, secondary brake.



Order no. 1031

Air compressor

- function of the crankshaft drive
- function of the valves



Order no. 1058

Quadruple circuit shut-off valve

Demonstration:

- distribution of the compressed air to the individual brake circuits
- guarantees pressure to the intact circuit in the event of a pressure loss in a defective brake circuit
- the return and excess flow valve functions



Order no. 1062

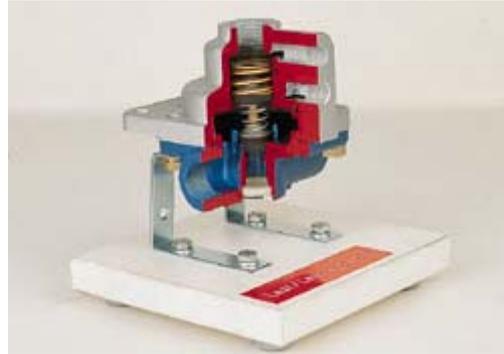
Relay valve

- function of the piston
- function of the valve and of the valve spring
- driving position and braking position

HAKO Cut-away models - Section 11
Hydraulic braking, air-braking



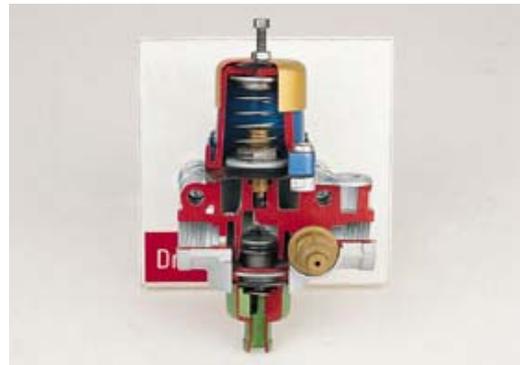
Order no. 1113
Automatic water drain valve
- lifting of the valve's body
- condensed water collection
- cambering of the valve body's diaphragm
- condensed water drainage



Order no. 1115
Load-idle valve
- function of the piston and valves
- driving positions
- actuation of the emergency and parking brake system
- actuation of the service brake system
- corresponding activation and deactivation of the emergency and parking brake system



Order no. 1117
Non-return valve
function of a non-return valve
air flow only possible in one direction



Order no. 1066
Pressure regulator
- function of the intake and exhaust valves
- function of the diaphragm
- function of the valve's body
- load position, idle position, top-up position



Order no. 1045
Air dryer
- function of the various valves
- function of the granulate
- granulate regeneration



Order no. 1116
Automatic antifreeze pump
- function of the automatic antifreeze pump
- automatic injection of the antifreeze agent

HAKO Cut-away models - Section 11
Hydraulic braking, air-braking



Order no. 1109
Automatic load-dependent brake power distributor

- function of the control lever
- release, partial-load and full load position
- function of the valves
- function of the plunger



Order no. 1114
Line filter

- function of the line filter
- filter cartridge



Order no. 1110
Coupling head, brake air pressure

- Functions:
- clutch engagement, declutching
 - seal function
- function of the claws on both heads
 - no mix up safety



Order no. 1112
Brake coupling head

- Functions:
- clutch engagement, declutching
 - seal function
- function of the claws on both heads
 - no mix up safety