

AS3..., AS7..., ERV3...

Relay Emergency Valves

Function

The **Relay Emergency Valve** transmits the brake demand of the driver to the trailer's service brakes.

In the event of a loss of pressure in the trailer supply (red) line, for example from an intentional or accidental uncoupling, the emergency feature of the valve will automatically apply the trailer service brakes using the air stored in the trailer's reservoir. This function is also present when charging the trailer from zero pressure; the trailer service brakes will be partially applied until the charge pressure exceeds approximately 3.0 bar – see "Emergency Braking" graph on page 2.

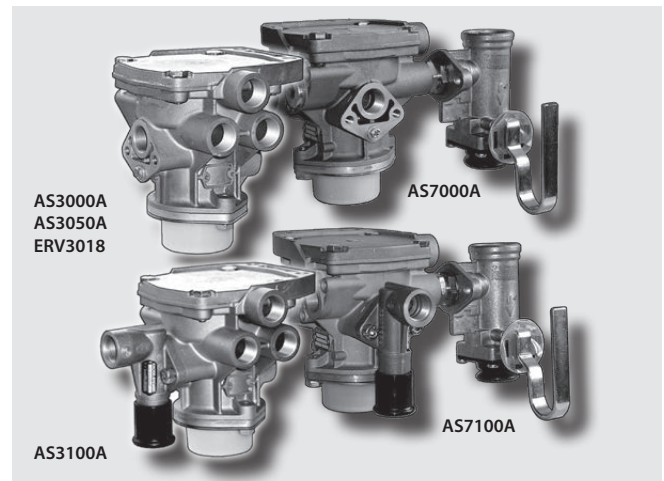
Most Relay Emergency Valves have a predominance feature that generates a pressure to the service brakes (port 2) higher than the signal pressure (port 4). This feature is used to compensate for threshold pressure losses through the trailer braking system and aims to ensure equal pressure at the control (yellow) line and brake actuators.

The AS3100A version incorporates a manoeuvring valve that allows the release and application of the trailer service brakes when the trailer is not coupled to the towing vehicle. If the reservoir pressure is below approximately 2.5 bar the service brakes cannot be released. The manoeuvring valve returns automatically to the driving position when the supply (red) line is recoupled.

The Relay Emergency Valves AS3000A, AS3050A and AS3100A have an integrated exhaust silencer

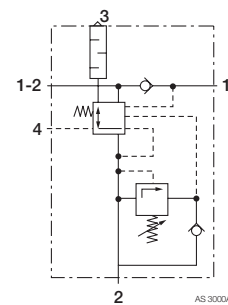
The Relay Emergency Valve AS7000A is a combination of AS3000A and manual load sensing valve BR1305 (see PD-102-000, Document No. Y011343). With this valve, when the trailer is not coupled its service brakes can be released by moving the load sensing valve lever to the "brake release" position.

The Relay Emergency Valve AS7100A is a combination of AS3100A and manual load sensing valve BR1306 (see PD-102-000, Document No. Y011343). With this valve, when the trailer is not coupled its service brakes can be applied and released by pressing the black button on the manoeuvring valve (see AS3100A above).

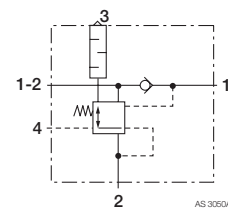


Standard Symbol as DIN ISO 1219

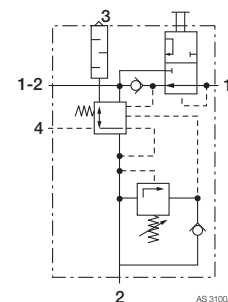
AS3000A, ERV3018



AS3050A



AS3100A



Technical Features

Maximum operating pressure:	AS3...	10.0 bar	AS7...	8.5bar
Operating temperature range:	-40 °C to +80 °C			
Weight (approx.):	AS3000A	1.6 kg	AS3050A	1.6 kg
	ERV3018	1.6 kg	AS3100A	1.9 kg
	AS7000A	2.3 kg	AS7100A	2.5 kg

Range Overview

Part No.	Type No.	Predominance		Manoeuvring Valve	Manual Load Sensing Valve	Ports	
		Adjustment range [bar] ¹⁾	Preset to [bar]			1, 1-2, 4	2
AS3000A	-	0 - 0.5	0	None	None	M22 x 1.5	M22 x 1.5 (3x)
K109380 ²⁾	ERV3018					M22 x 1.5 ³⁾	
AS3050A	-	without	-			I136133 AE4232	
AS3100A	-	0 - 0.5	0	None	I84575 BR1305		M22 x 1.5 (1x)
AS7000A	-			I136133 AE4232	I84576 BR1306	M22 x 1.5 (1x)	
AS7100A	-						

¹⁾ see Warning note on page 5

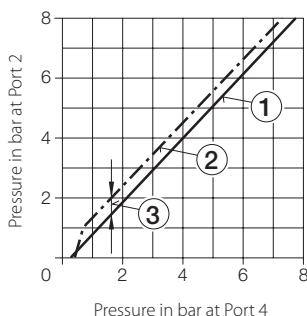
²⁾ Part Number will carry the suffix "N00" which defines that it is supplied without packaging.

³⁾ Port 4 has M22 x 1.5 N10172 thread.

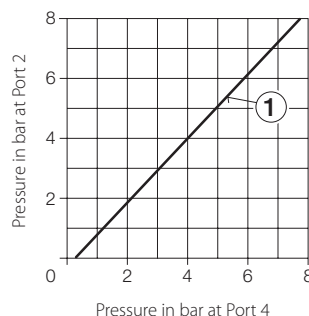
Performance Charts

Service Braking

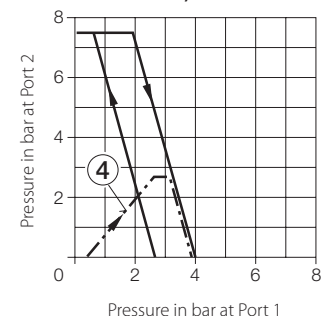
AS3000A, AS3100A, ERV3018



AS3050A



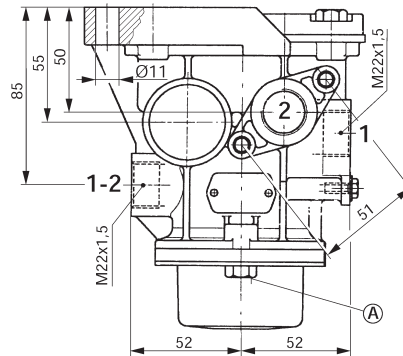
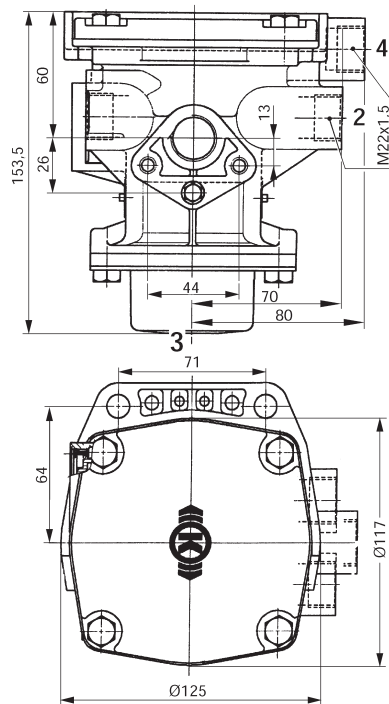
AS3000A, AS3050A
AS3100A, ERV3018



- ① = Predominance at 0 bar
- ② = Predominance at 0.5 bar
- ③ = Predominance Setting Range
- ④ = Initial charging

Dimensions

AS3000A
AS3050A
ERV3018

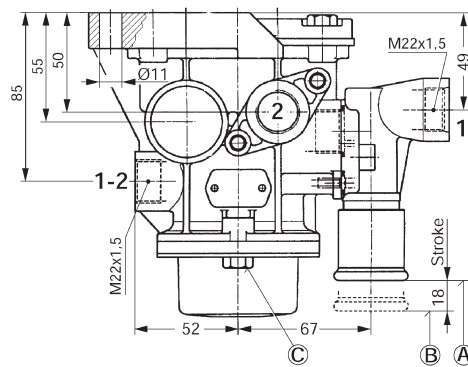
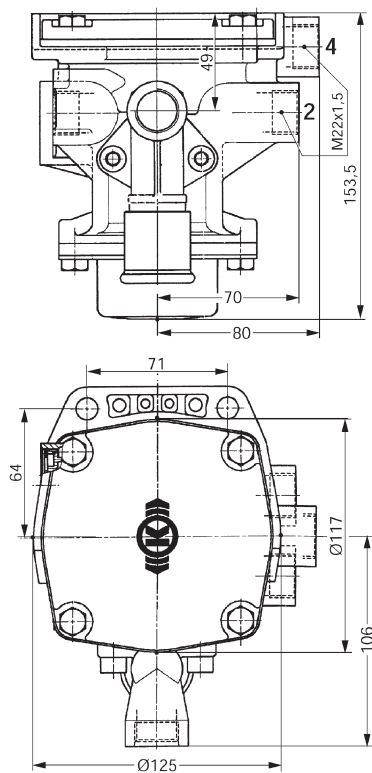


(A) = Warning! Compressed spring force approx. 750N

Ports:

- 1 = Supply (from red trailer coupling)
- 1-2 = Trailer reservoir
- 2 = Delivery to brake actuators
- 3 = Exhaust
- 4 = Control (from yellow trailer coupling)

AS3100A



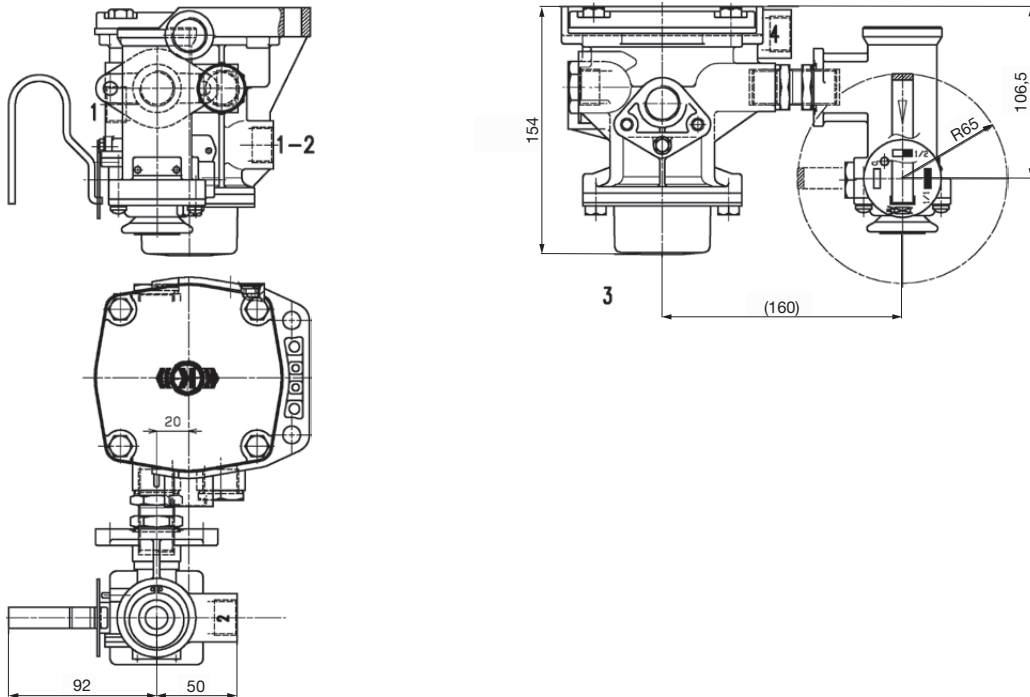
- (A) = Manoeuvring Position } with trailer uncoupled
- (B) = Brakes Applied }
- (C) = Warning! Compressed spring force approx. 750N

Ports:

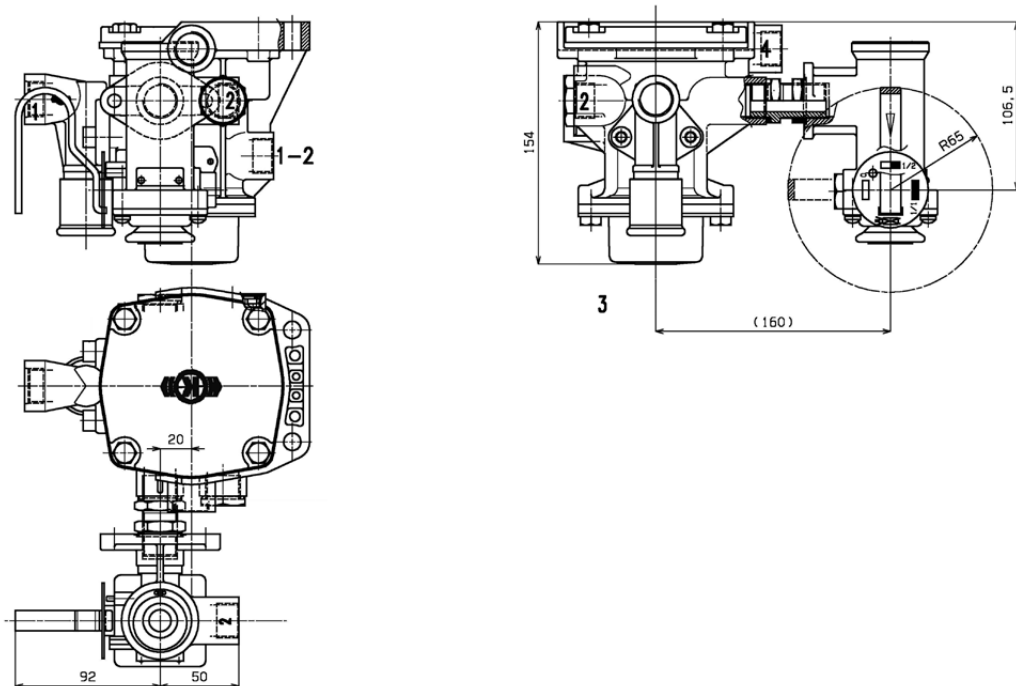
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- 1-2 = Trailer reservoir
- 2 = Delivery to brake actuators
- 3 = Exhaust
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AS3..., AS7..., ERV3... Relay Emergency Valves

AS7000A



AS7100A



Testing and Setting

Testing of the Predominance pressure

- Connect air pressure gauges to Ports 2 and 4 of the valve.
- With a constant air pressure (>6 bar) at Port 1 and a constant 2.0 bar pressure at Port 4, measure the pressure at Port 2.
- Predominance is present if the pressure at Port 2 is greater than the pressure at port 4.
- Predominance levels are specified with 2.0 bar at Port 4.

Adjustment of the Predominance pressure:



- No pressure at port 4
- Insert a key (to DIN 3116) or small pair of circlip pliers (see photo) into the plastic disc (1).
- Turn the disc clockwise to increase the predominance or anticlockwise to reduce the predominance - see **WARNING** below.
- Apply 2.0 bar pressure to Port 4 and measure the pressure at Port 2, repeat procedure if required, remembering to remove the pressure from Port 4 before each adjustment.

WARNING:

The predominance is only allowed to be set within the legal bands.

Additionally it should only be set in accordance with the vehicle manufacturer's instructions.

The predominance must not exceed 0.5 bar.

Revision Details

Rev. 005	April 2019	New Layout



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