

**2BV AIR SAVE 20-150 EJECTOR**

- >85% vacuum at 4,5 bar
- Integrated full pneumatic air saving device
- >95% air-saving potential
- Preset 60% on
- Adjustable low set point +/- 10%
- Hysteresis ~10%
- Very compact
- Low weight
- Quick response
- Controlled Blow-off (RR)
- Connection for vacuum sensor
- Robust
- Easy mounting
- Increased safety

**2 BV AIR SAVE Ejector with pneumatic air saving**

The ejector is equipped with an integrated full pneumatic control circuit which shuts off the air supply when the preset max vacuum level is reached and restarts when reaching the min level. This enables compressed air savings of more than 95 %.

The preset vacuum level can be changed +/- 10 % with the adjusting screw on the unit.

By connecting compressed air to the unit, the air saving is controlled internally independent of any external control system.

A blow-off signal is required to release the object from the suction cup. The valve in the release signal port opens at 0.5 bar, which results in a very quick and controlled blow-off.

A vacuum sensor connected to the unit can give feedback to an external control system that the ongoing sequence can continue.

**Simple installation**

The 2BV AIR SAVE EJECTOR simplifies the installation as no external control system is required. The internal control circuit monitors the vacuum level and shuts off the air consumption when the max vacuum level is reached and restarts when reaching the min level.

The min level is preset on just over 60 % vacuum and can be changed +/- 10% with the adjusting screw on the unit. The hysteresis is ~10%. This means that the air supply is shut off at approx. 75 % and restarts at just over 60% vacuum.

In case a feedback signal to an external control system is required, a vacuum sensor can be connected which can indicate that e.g. the required vacuum level has been reached.

**Blow-off connection (RR)**

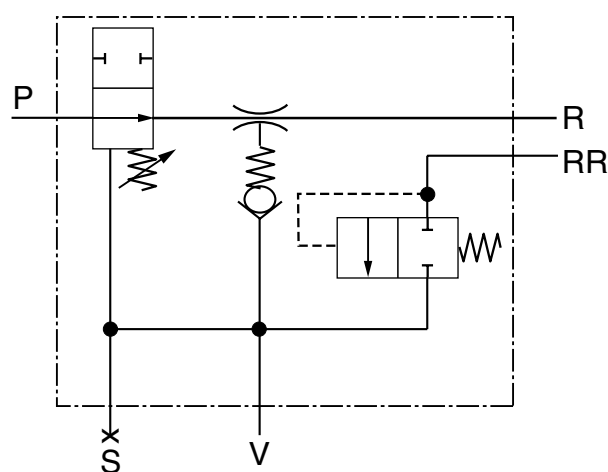
The 2BV AIR SAVE EJECTOR has a connection for a blow-off signal which is required to ensure a quick and controlled blow-off.

**Double safety**

The holding valve in the vacuum port prolongs the time until the object will drop due to pressure loss.

The blow-off valve blocks in case of a broken signal tube. The valve opens at a signal pressure of 0.5 bar which gives a distinct release signal.

A vacuum sensor connected to the device can monitor the vacuum level and ensures the alarm is triggered at too low vacuum level.



P = Air connection  
V = Vacuum Connection  
R = Exhaust  
RR = Blow off (Rapid Release)

**Materials**

Body Black anodized aluminium  
Nozzle Brass

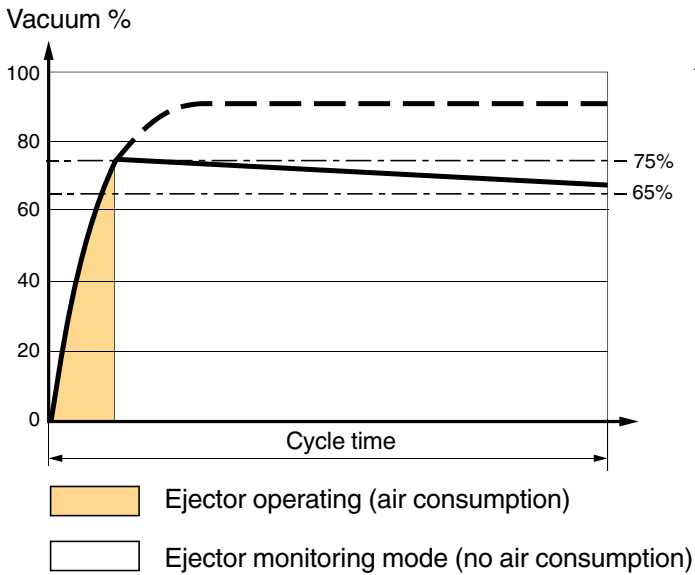
**Temperature**

Temperature range -10 to +70 °C

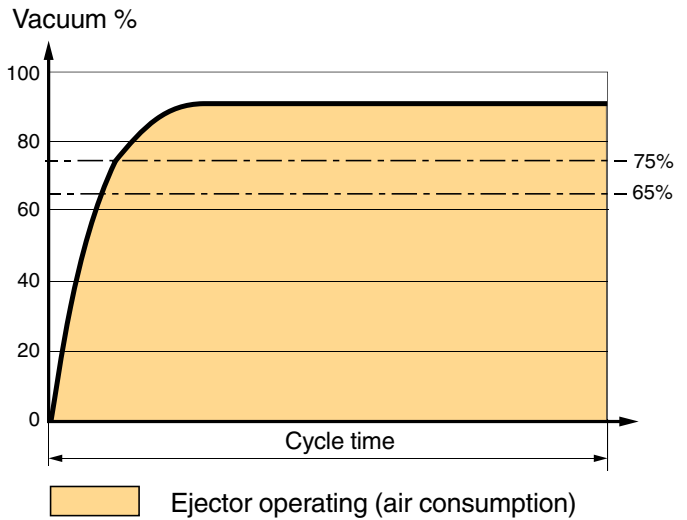
**Compressed air**

Pressure max 8 bar  
Optimum supply pressure 4,5 bar

## Air saving potential with 2BV AIR SAVE Ejector



## Air consumption with a traditional ejector



### Case 1

1. A 0,1 litre volume shall be evacuated to 75% vacuum in 0,3 seconds. An ejector size 60 has been chosen.
2. A cycle time is 120 seconds.
3. By using an ejector without air saving, the total air consumption is 120 litre per cycle.
4. With a 2BV 60 AIR SAVE EJECTOR the air consumption is 0.3 litre under the same conditions.
5. This results in an air saving of more than 99 %.

### Case 2

1. A 0,05 litre volume shall be evacuated to 75% vacuum in 0,36 seconds. An ejector size 30 has been chosen.
2. A cycle time is 10 seconds.
3. By using an ejector without air saving, the total air consumption is 5 litre per cycle.
4. With a 2BV 30 AIR SAVE EJECTOR the air consumption is 0.18 litre under the same conditions.
5. This results in an air saving of more than 96 %.

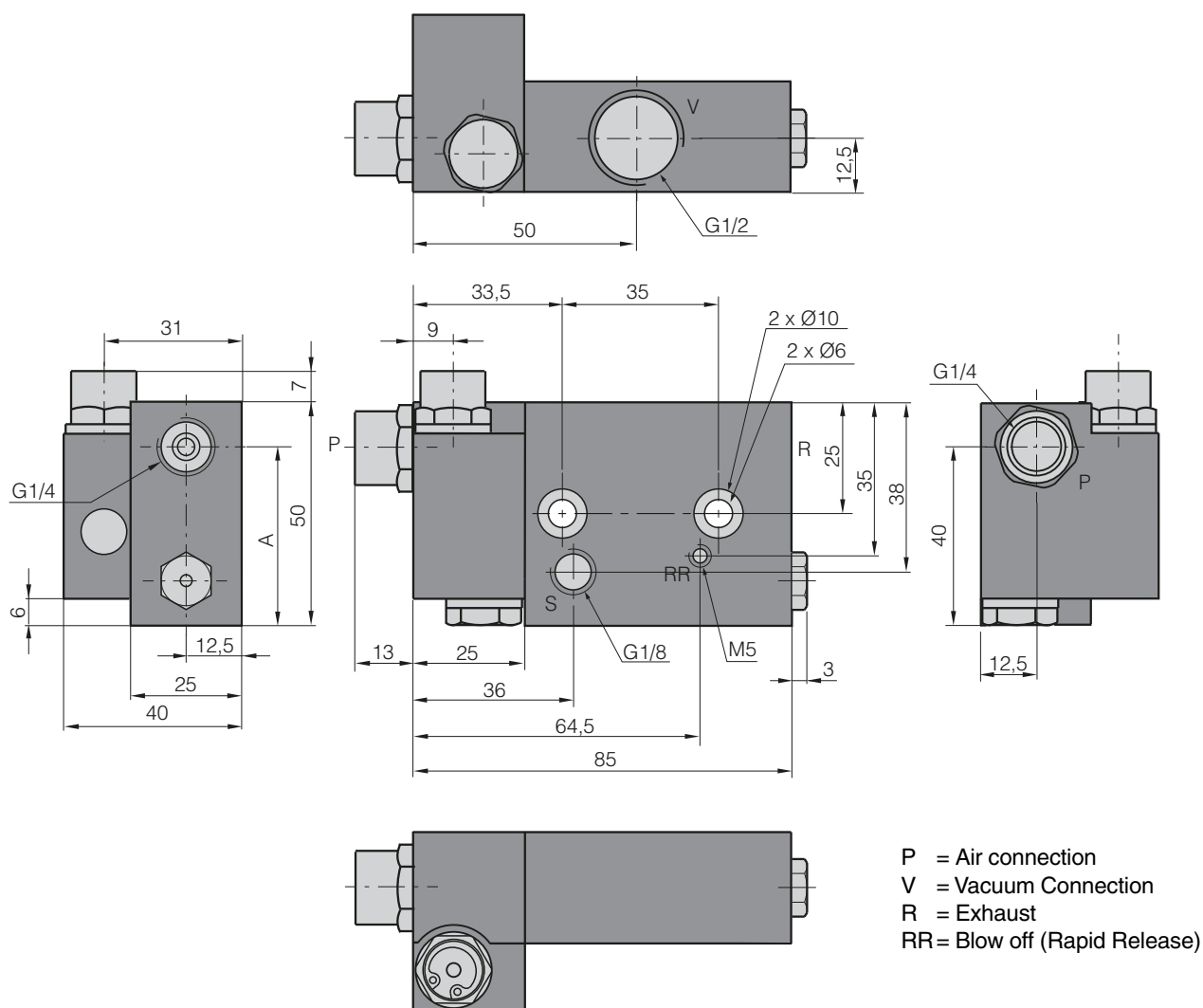
## Vacuum flow of the ejector and the primary nozzle diameter

Designation	Vacuum flow at different vacuum level [NI/min]									Primary nozzle(s) Ø mm
	0%	10%	20%	30%	40%	50%	60%	70%	80%	
AVAC 2BV-AS-20	12,8	11,3	8,8	5,9	3,6	2,7	1,8	0,8	0,3	0,70
AVAC 2BV-AS-30	17,3	15,5	13,3	11,5	9,0	6,3	3,8	1,3	0,6	0,95
AVAC 2BV-AS-40	27,6	23,2	19,5	17,0	14,0	10,3	6,0	3,2	0,9	1,10
AVAC 2BV-AS-60	42,6	37,6	32,0	27,0	20,1	15,3	10,3	3,3	1,5	1,25
AVAC 2BV-AS-100	64,0	56,4	47,6	39,0	32,6	26,6	19,0	9,0	3,0	2 x 1,1
AVAC 2BV-AS-150	96,0	84,6	71,4	58,5	48,9	39,9	28,5	13,5	4,5	3 x 1,1

## Ejectors AVAC 2BV-AS (AIR SAVE)

Designation	Connection threads				Measure A mm	Air consumption NI/min.	Evacuation time (s)*	Weight g	Order no
	P	V	R	RR					
AVAC 2BV-AS-20	G1/4	G1/2	G1/4	M5	40	0 to 20	9	310	300 020 07
AVAC 2BV-AS-30	G1/4	G1/2	G1/4	M5	40	0 to 30	6	315	300 030 07
AVAC 2BV-AS-40	G1/4	G1/2	G1/4	M5	40	0 to 40	4,5	320	300 040 07
AVAC 2BV-AS-60	G1/4	G1/2	G1/4	M5	40	0 to 60	3	325	300 060 07
AVAC 2BV-AS-100	G1/4	G1/2	G1/2	M5	38,5	0 to 100	2	325	300 100 07
AVAC 2BV-AS-150	G1/4	G1/2	G1/2	M5	38,5	0 to 150	1,2	325	300 150 07

\* Time to evacuate 1 litre air from atmospheric pressure to 75% vacuum.



**Operating Instructions**  
<http://www.avac.se/pdf/i-2BVAS.pdf>

