

# Suction Cup Valves



## piSAVE® sense

- Vacuum check valves which allows a few suction cups to miss the object(s) and still maintain enough vacuum level in the system with quick response and release times.
- The vacuum check valves shall be used in a centralized vacuum system, one for each suction cup.
- Designing with vacuum check valves will require a smaller vacuum pump and save energy.
- Suitable for handling different size or different number of leaking or sealed objects such as MDF boards, corrugated cardboards or metal sheets with a flexible handling device.
- Also suitable for objects with surface leakage around the lip of the suction cup.
- Available in four sizes with different flow performance/ characteristics to suit different degree of leakage on handled material and different size of cups.
- The smallest sizes are mainly suitable for sealed and smooth materials, such as metal and glass (02/06 for small cups and 03/60 for large cups).
- The valves are supplied separately for integration or mounted in an AI-fitting with female and male threaded connections to facilitate installation.



## piSAVE® restrict

- Vacuum flow restrictors which allows a few suction cups to miss the object(s) and still maintain enough vacuum level in the system.
- Suitable for handling different size sealed sheets/objects with the same flexible lifting device.
- The vacuum flow restrictors shall be used in a centralized vacuum system, one for each suction cup.
- Designing with flow restrictors will require a smaller vacuum pump and save energy.
- Available in three sizes with different flow performance/ characteristics to suit different size suction cups.
- The restrictors are integrated in an AI-fitting with female and male threaded connections to facilitate installation.

## TECHNICAL DATA

Description	Pump flow/cup min.	Pump flow/cup to close valve	Leakage flow, max.
piSAVE® sense 02/60 (yellow)	0.001 (@ 45 -kPa) NI/s	0.21 (@ 3 -kPa) NI/s	–
piSAVE® sense 03/60 (green)	0.06 (@ 45 -kPa) NI/s	0.37 (@ 3 -kPa) NI/s	–
piSAVE® sense 04/60 (blue)	0.15 (@ 45 -kPa) NI/s	0.55 (@ 7 -kPa) NI/s	–
piSAVE® sense 05/60 (red)	0.25 (@ 45 -kPa) NI/s	0.72 (@ 11 -kPa) NI/s	–

Description	Pump flow/cup min.	Pump flow/cup to close valve	Leakage flow, max.
piSAVE® restrict multiple port fitting 0.7	–	–	0.08 Nl/s
piSAVE® restrict multiple port fitting 1.0	–	–	0.16 Nl/s
piSAVE® restrict multiple port fitting 1.3	–	–	0.27 Nl/s

## ORDERING INFORMATION

Description	Item no.
piSAVE® sense 02/60 (yellow), 100p, incl. Assembly tool	0202395
piSAVE® sense 02/60 (yellow), 10p, incl. Assembly tool	0202394
piSAVE® sense 03/60 (green), 100p, incl. Assembly tool	0202427
piSAVE® sense 03/60 (green), 10p, incl. Assembly tool	0202424
piSAVE® sense 04/60 (blue), 100p, incl. Assembly tool	0202428
piSAVE® sense 04/60 (blue), 10p, incl. Assembly tool	0202425
piSAVE® sense 05/60 (red), 100p, incl. Assembly tool	0202429
piSAVE® sense 05/60 (red), 10p, incl. Assembly tool	0202426
piSAVE® sense Assembly tool 16mm	0202589
piSAVE® sense Multiple port fitting 02/60 (yellow)	0202396
piSAVE® sense Multiple port fitting 03/60 (green)	0128719
piSAVE® sense Multiple port fitting 04/60 (blue)	0128731
piSAVE® sense Multiple port fitting 05/60 (red)	0128733
piSAVE® restrict multiple port fitting 0.7	0129339
piSAVE® restrict multiple port fitting 1.0	0129340
piSAVE® restrict multiple port fitting 1.3	0129341



piSAVE® release

- Equalises pressure in the suction cups to provide fast release of the product.
- Extra fast release by accumulating and utilising the feed-air pressure as a boost.
- ON/OFF activated simultaneously with the ejector.
- No additional controls required — use a single 3/2 control valve for the ejector and piSAVE® release.



AQR (Atmospheric Quick-Release Valve)

- Equalises pressure in vacuum gripper systems to provide fast release of product.
- Consumes no additional compressed air.
- ON/OFF activated simultaneously with the ejector.
- No additional controls required — use a single 3/2 control valve for the pump and AQR.



Blow-off Check Valve

- Prevents vacuum from being pulled through the blow-off lines, which means faster response time and completely independent vacuum units.
- Reliable quick-release function even in larger systems with several units, due to the very low feed pressure required to break away for blow-off.
- Suitable in applications where cleaning of the suction cup filters or cooling of the object to be picked is important.

TECHNICAL DATA

Description	Flow, atmospheric	Flow rate
piSAVE® release G1/8"	3.85 NI/s	–
piSAVE® release G1/4"	7.85 NI/s	–
Atmospheric quick-release valve – AQR	3.3 NI/s	–
Blow-off Check valve G1/8"	–	1.5–2.8 NI/s (@ 0.3-0.7 MPa)
Blow-off Check valve G1/4"	–	1.5–2.8 NI/s (@ 0.3-0.7 MPa)

**ORDERING INFORMATION**

Description	Item no.
piSAVE® release G1/4"	0119720
piSAVE® release G1/8"	0119721
Atmospheric quick-release valve – AQR.	0111236
Blow-off Check valve 1/8" NPSF female.	0115314
Blow-off Check valve G1/4" female	0117337