



# MAC VALVES

## Filling Valve Control Solenoid Upgrades Compatible with Krones® Filling Equipment

- Better filling level accuracy thanks to extremely consistent solenoid valve response times
- Drop-in solutions 100 % compatible with OEM supplied assemblies
- Possibility to replace solenoid valves individually – No need to disassemble the manifold
- Superior reliability compared to OEM supplied solenoid valves
- Less downtime – Improved production yield
- Reduced cost per failure
- Less spare parts in inventory



### HOW CAN A SOLENOID VALVE DE-ENERGIZING RESPONSE TIME IMPACT YOUR PROFIT ?

	DRT* Valve 1	DRT* Valve 2	DRT* Valve 3	DRT* Valve 4	DRT* Valve 5	DRT* Valve 6	DRT* Valve 7	DRT* Valve 8	DRT* Valve 9	DRT* Valve 10	DRT* Valve 11	DRT* Valve 12	DRT* Valve 13	DRT* Valve 14	DRT* Valve 15	DRT* Valve 16	Variance**	Variation*** (in ml)	Annual Customer Benefit to use MAC**** (€)
MAC Valves	28.8	28.8	28.8	29.6	28.8	28.8	28.8	29.6	28.8	28.8	28.8	28.8	29.6	30.4	29.6	30.4	+/- 0.8	0.32	
OEM Supplied Solenoids Generation 1	46	47.6	50.8	47.2	42	47.2	50.8	42	50.8	45.2	48.8	48.8	49.6	49.6	49.2	52.8	+/- 5.4	2.16	77 280,-
OEM Supplied Solenoids Generation 2	40	44	40.8	42.4	39.2	44.8	41.6	41.6	41.6	41.6	41.6	41.6	40	40.8	41.6	40.8	+/- 2.3	1.12	33 599,-
OEM Supplied Solenoids Generation 3	38.4	40.8	40	41.6	40.8	39.2	43.2	40	40	40.8	40	39.2	42.4	36.8	40.8	42.4	+/- 3.2	1.28	40 320,-

\* DRT = De-Energized Response Time: time for closing fill head valve (in ms).

\*\* Variance = Statistic concept; shows how values are spread out around average. If variance = 0 ; all values are the same. The larger the variance, the larger the dispersion

\*\*\* Variation= Shows theoretical difference (in ml) between the less and the most filled bottles, with a given fluid flow of 10 l/min

\*\*\*\* Shows theoretical annual savings for filler users to replace existing valves with MAC. Based on 140 Mio bottles/year with a cost of product of €/l 0.3



CPR® is a proprietary ROI process utilized by MAC and the MDN (MAC Distributor Network) to maximize customer profitability.

The CPR® process has been utilized with hundreds of customers to propose over \$150 million in real bottom line savings (implementing \$105 million) since 2010.

Please contact your local MDN Distributor to calculate the ROI relevant to your situation through our CPR®.



MAC Valves, Inc. Wixom, Michigan - MAC Valves, Inc. Dundee, Michigan  
MAC Valves Europe, Inc. Liège, Belgium - MAC Valves Asia, Inc. Taiwan

To find your **local** distributor, visit [www.macvalves.com](http://www.macvalves.com)





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## Compatible with Krones® Filling Equipment

COMPETITION		MAC VALVES 	DIMENSIONS (MM) & FOOTPRINT	
OEM Supplied Solenoid Valves Generation 1 (16 positions)		BV314		 WIDTH : 90 LENGTH : 219.9
 				
HOW TO ORDER : EBA-BV023 (Ordering data include manifold and solenoids)				
OEM Supplied Solenoid Valves Generation 1 (8 positions)		BV314		 WIDTH : 59 LENGTH : 143.5
 				
HOW TO ORDER : EBA-BV022 (Ordering data include manifold and solenoids)				
OEM Supplied Solenoid Valves Generation 2		BV314		 WIDTH : 63.5 LENGTH : 225.4
 				
HOW TO ORDER : 16 x BV314A-CC1-00-BCCA-CTA/ EL19-9 & 1 x CCMV14A-EL18-9				
OEM Supplied Solenoid Valves Generation 3		BV314		 WIDTH : 56 LENGTH : 278
 				
HOW TO ORDER : 16 x BV314A-CC1-00-BCCA-CTA/EL19-9 & 1 x CCMV14A-EK81-9				
OEM Supplied Solenoid Valves Found On Old Fillers		35 Series		 WIDTH : 65 LENGTH 86 / LENGTH 109 / LENGTH 217
 				
HOW TO ORDER: Y x 35A-B00-DFBJ-1JM/532B-9 & 1 x EBM35A-002-C-0Y EJ25-9 (Y has to be 3 or 4 or 7 – number of solenoids on manifold)				

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