

2-component ACF Cartridge Systems

for Industrial
Applications



Performance, Precision and Perfection.

Ritter GmbH has during many years gained a reputation as a market leading manufacturer of two-component cartridges and static mixers. In order to meet the ever-increasing demand on structural bonding and sealant performances with regard to precision, safety and productivity, Ritter has developed its new range of ACF-coded cartridges. "ACF" – air-free and cross-contamination-free cartridges – the name says it all. The ACF-Cartridge range is complemented by high-performing, specifically tailored mixing nozzles. In line with these requirements is the stretching of the ACF-range to embrace 50 ml size cartridges in mixing ratios 1:1, 2:1, 4:1 and 10:1.



Ritter Sales Team Cartridges

Cross-contamination-free

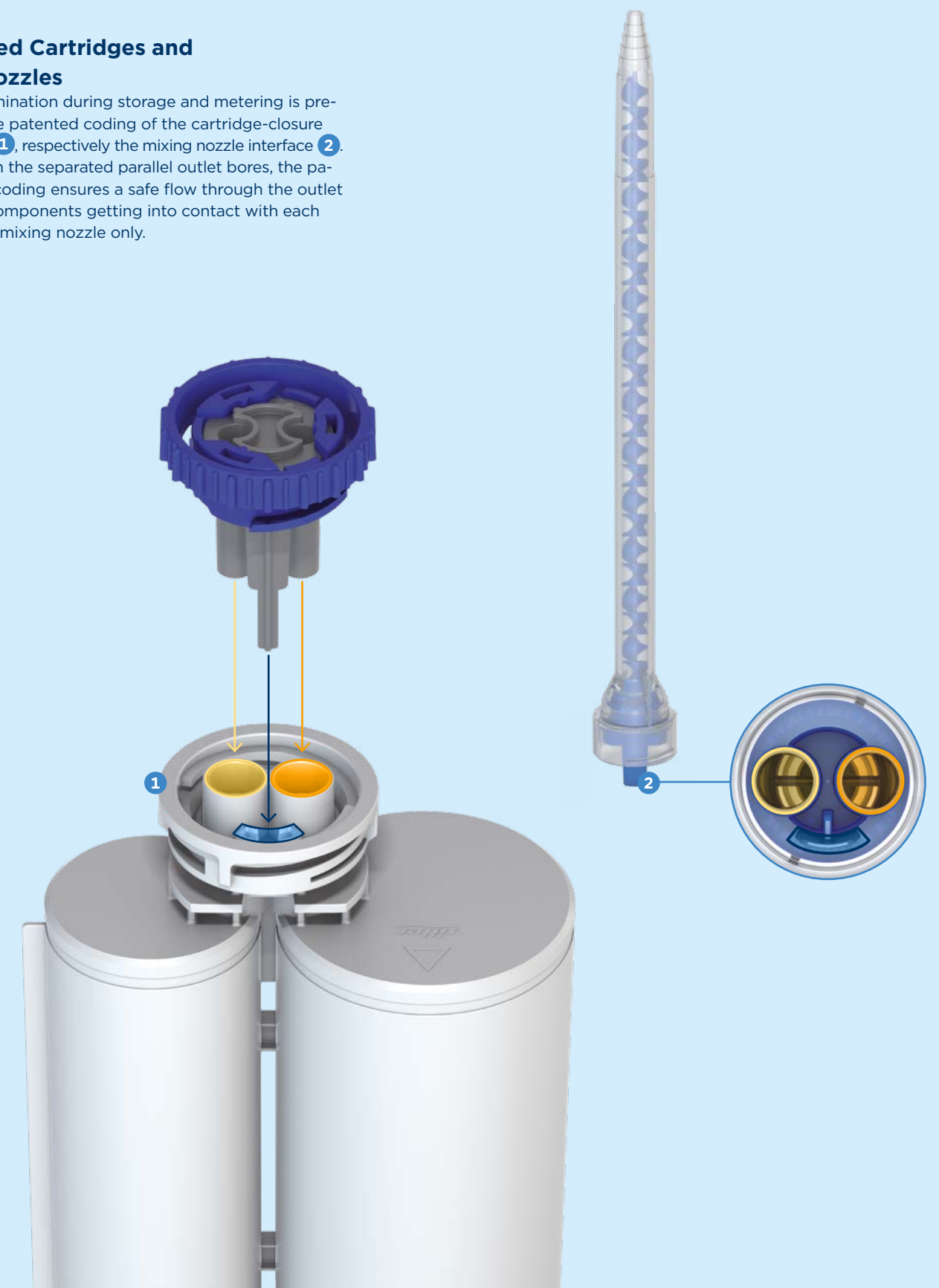
2 - 3

ACF-coded Closure Cap

ACF-coded cartridges feature a pre-assembled screw plug that allow for easy opening and safe recloseability. The coded interface prevents the closure cap from being unintentionally put back on the cartridge in either ways and therefore guarantees safe storage of the partially used product.

ACF-coded Cartridges and Mixing Nozzles

Cross-contamination during storage and metering is prevented by the patented coding of the cartridge-closure cap junction **1**, respectively the mixing nozzle interface **2**. Together with the separated parallel outlet bores, the patented ACF-coding ensures a safe flow through the outlet by the two components getting into contact with each others in the mixing nozzle only.



High-performance raw materials

High standards for perfect solutions require the highest levels of consistent quality and precision. Our ACF-coded cartridges are manufactured from high quality raw materials which offer good chemical resistance against the product and permit safe storage and long shelf life of the industrial adhesive or sealant.

Filling from the Rear and Front

Air-free filling is accomplished, when the cartridge is rear-filled by the active usage of Ritter's patented selfbleeding SUPERIOR pistons and valve pistons. ACF 50 ml cartridges come with SUPERIOR pistons **1** (in ratio 1:1) and self-venting pistons (in ratios 2:1, 4:1 and 10:1). The separated parallel outlet bores **2** also allow air-free front filling of all ACF-Cartridges.

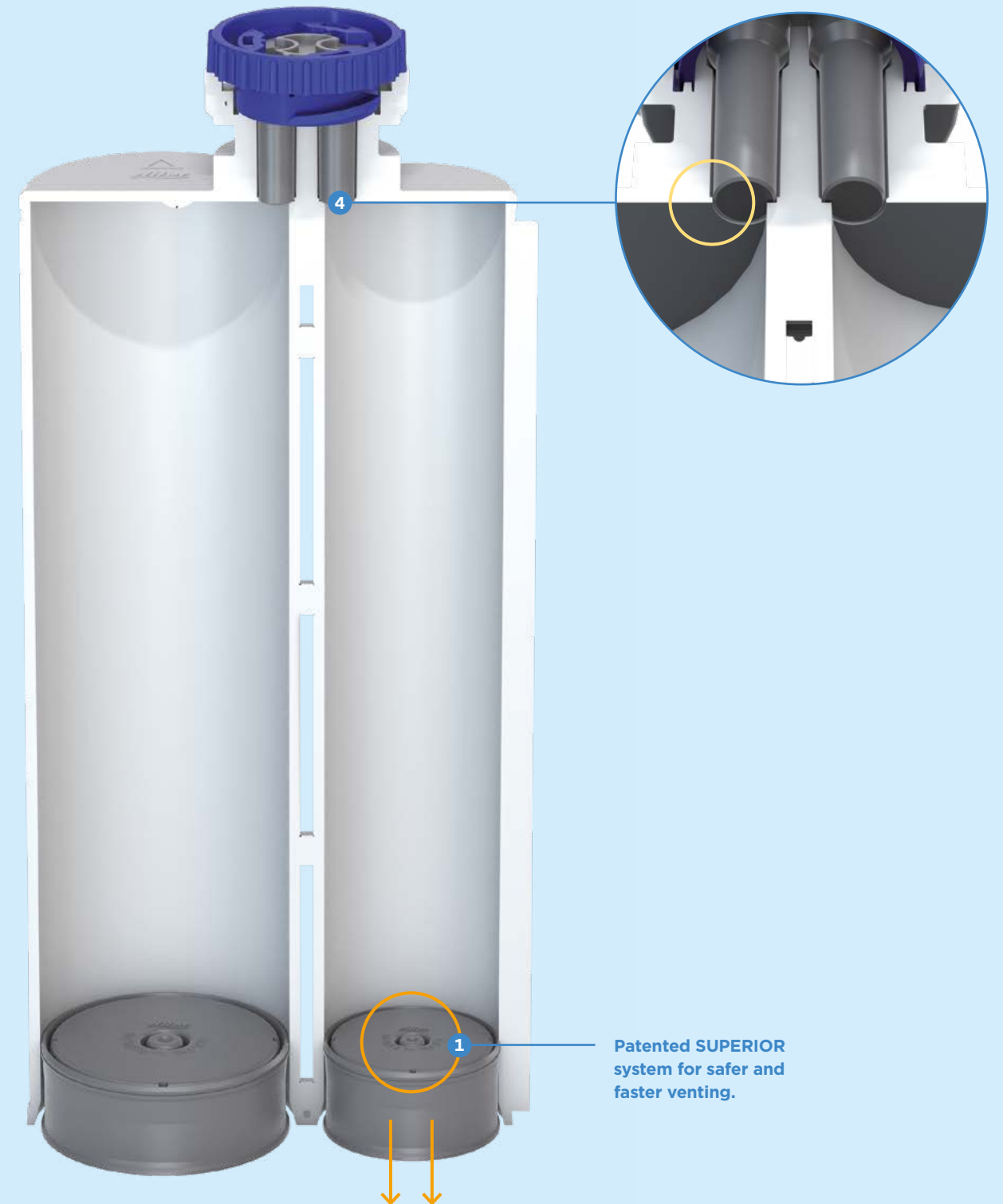


Fast and efficient venting

X-Ray image **3** of a filled ACF 400 ml 2:1 cartridge, showing an entirely bled cartridge. The cartridge was rear-filled on a fully automated filling station, using self-bleeding SUPERIOR or valve pistons for fast and efficient venting.

Even surface avoids air pockets

Air-free filling and storage is made sure thanks to the design of the closure plug at the cartridge outlet, which is closing evenly **4** with the cartridge shoulder: No risk for air entrapment, as potential air pockets can't occur during filling on the flat surface.



ACF-Cartridge-Kits

Supply in kit format

ACF-Cartridges and related accessories are being supplied in kit format. A kit means as a standard the cartridge and the closure cap being preassembled, the pistons being boxed separately. Upon requirement, other modules are available.

Dispenser compatibility

ACF-Cartridges are designed for use with industry standard dispensing guns, no matter if a manual, pneumatic or electrical version is preferred. For the right dispenser selection, Ritter recommends to contact the manufacturer directly, e.g. Beyer & Otto or Soraton.



ACF-Cartridges, 200 – 250 ml

Article	Volume in oz	Mixing ratio	Material cartridge	Piston Design	Reference
ACF 200 ml	7	1:1	PP	valve	16351 - 0001
ACF 200 ml S	7	1:1	PP	valve	16351 - 0002
ACF 200 ml	7	2:1	PP	valve	16352 - 0001
ACF 200 ml S	7	2:1	PP	valve	16352 - 0002
ACF 250 ml	8	10:1	PBT	superior/valve	16360 - 0013
ACF 250 ml	8	10:1	PP	superior/valve	16360 - 0012



ACF-Cartridges, 400 – 490 ml

Article	Volume in oz	Mixing ratio	Material cartridge	Piston Design	Reference
ACF 400 ml	14	1:1	PBT	superior	16371 - 0003
ACF 400 ml S	14	1:1	PBT	superior	16371 - 0005
ACF 400 ml	14	1:1	PP	valve	16371 - 0002
ACF 400 ml S	14	1:1	PP	valve	16371 - 0004
ACF 400 ml	14	1:1	PP	superior	16371 - 0012
ACF 400 ml S	14	1:1	PP	superior	16371 - 0014
ACF 400 ml	14	2:1	PP	valve	16372 - 0002
ACF 400 ml S	14	2:1	PP	valve	16372 - 0004
ACF 400 ml	14	2:1	PA	superior	16372 - 0001
ACF 415 ml	14	4:1	PBT	superior/valve	16375 - 0003
ACF 415 ml	14	4:1	PP	superior/valve	16375 - 0002
ACF 490 ml	17	10:1	PBT	superior/valve	16380 - 0004
ACF 490 ml	17	10:1	PP	superior/valve	16380 - 0005

ACF-Coax-Cartridges



Coax mixing ratio 10:1

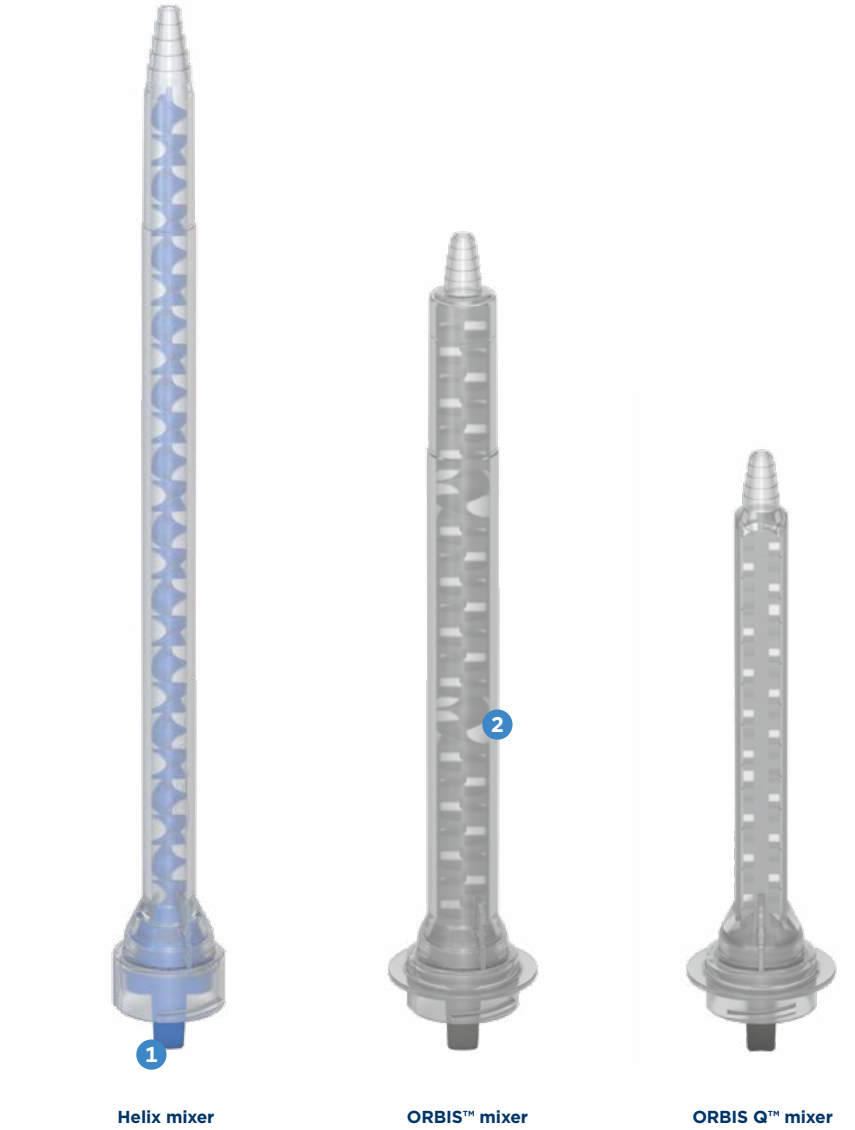
ACF-Coax-Cartridges, 380 ml

Article	Volume in oz	Mixing ratio	Material cartridge	Piston Design	Reference
Coax 380 ml ACF	13	10:1	PBT	superior/valve	16390 - 0001
Coax 380 ml ACF S	13	10:1	PBT	solid/valve	16390 - 0002

Helix and ORBIS™ mixers

The ACF-Cartridge range is accompanied by aligned Helix and ORBIS™ mixing-nozzles. They fit for the most demanding mixing challenge and the ACF-coding **1** allows for the use of one single range of mixers despite of various mixing ratios. This is userfriendly and economical.

The ORBIS™ is Ritter's latest development, providing superior mixing efficiency of most 2-component adhesives. The orbital geometry of the tube, in combination with the specifically designed **2** mixing element, ensure reduced dead spot and minimize the required extrusion force.



ACF-Mixing Nozzles, 200 – 490 ml

Article	Elements	Ø Tube in mm	Length in mm	Ø Outer Outlet in mm	Ø Inner Outlet in mm	Retained Volume in ml	Reference
ACF Helix 08-18	18	8	186	5,0	2,9	7,5	13300 - 2001
ACF Helix 08-24	24	8	234	5,0	2,9	9,6	13300 - 2002
ACF Helix 08-32	32	8	298	5,0	2,9	12,2	13300 - 2003
ACF Helix 10-18	18	10	219	5,7	3,0	12,8	13300 - 2101
ACF Helix 10-24	24	10	277	5,7	3,0	16,4	13300 - 2102
ACF Helix 10-32	32	10	355	5,7	3,0	21,3	13300 - 2103
ACF Helix 13-12-X	12	13	173	7,9	5,0	16,1	13401 - 3001
ACF Helix 13-18-X	18	13	236	6,9	4,0	23,1	13402 - 3001
ACF ORBIS™ 8.7-19	19	8,7	132	4,2	3,2	7,2	13600 - 3151
ACF ORBIS™ 8.7-19-X	19	8,7	132	4,2	3,2	7,2	13600 - 3150
ACF ORBIS™ 10-24	24	10	156	5,4	3,2	8,8	13600 - 2010
ACF ORBIS™ 10-24-X	24	10	156	5,4	3,2	8,8	13600 - 3101
ACF ORBIS™ 12-24	24	12	183	5,4	3,2	15,8	13600 - 2012
ACF ORBIS™ 12-24-X	24	12	183	5,4	3,2	15,8	13600 - 3102

ACF-Cartridges, 50 ml

ACF-coded 50 ml Cartridges feature

- Mixing ratios 1:1, 2:1, 4:1, 10:1
- High performance raw materials PA6, PBT, PP
- ACF-coded Helix and ORBIS™ mixers
- Patented SUPERIOR self-bleeding pistons (1:1)
- Self-venting pistons (2:1, 4:1, 10:1)
- Patented interface cartridge/mixer
- Patented interface cartridge/closure plug
- Separated parallel outlet bores preventing cross-contamination



ACF-Cartridges, 50 ml

Article	Mixing ratio	Material cartridge	Piston Design	Reference
ACF 50 ml	1:1	PBT	superior	16340 - 0003
ACF 50 ml	1:1	PP	superior	16340 - 0001
ACF 50 ml	2:1	PA	self-venting	16340 - 0022
ACF 50 ml	2:1	PP	self-venting	16340 - 0021
ACF 50 ml	4:1	PBT	self-venting	16340 - 0043
ACF 50 ml	4:1	PP	self-venting	16340 - 0041
ACF 50 ml	10:1	PBT	self-venting	16340 - 0103
ACF 50 ml	10:1	PP	self-venting	16340 - 0101

Mixing Nozzles, 50 ml



Helix mixer, 50 ml

ORBIS™ mixer, 50 ml

ACF-Mixing Nozzles, 50 ml

Article	Elements	Ø Tube in mm	Length in mm	Ø Outer Outlet in mm	Ø Inner Outlet in mm	Retained Volume in ml	Reference
ACF Helix 3.2-13-S	13	5,3	54	2,0	1,0	0,266	16333 - 0131
ACF Helix 3.2-17-S	17	5,3	65	2,0	1,0	0,334	16333 - 0171
ACF Helix 4.2-17-S	17	6,2	80	2,3	1,5	0,707	16334 - 0171
ACF Helix 5.4-16-T	16	7,0	90	3,2	1,5	1,261	16335 - 0163
ACF ORBIS™ 6.0-16	16	7,9	83	4,2	1,6	1,682	16336 - 0160
ACF ORBIS™ 6.0-24	24	7,9	114	4,2	1,6	2,445	16336 - 0240
ACF ORBIS™ 6.0-16-X	16	7,9	83	4,2	1,6	1,682	16336 - 0162
ACF ORBIS™ 6.0-24-X	24	7,9	114	4,2	1,6	2,445	16336 - 0242



Adapter mixing ratio 1:1

Adapter mixing ratio 10:1

Adapter for small ACF-Mixing Nozzles on ACF Cartridge 200–490 ml

Article	Mixing ratio	Reference
ACF Cartridges 200 - 400 ml	1:1	13502 - 0011
ACF Cartridges 250 - 490 ml	10:1	13502 - 0101

Ritter is one of the world's leading manufacturers of cartridges for adhesives and sealants. We will be happy to provide more detailed product information and consultancy.

Suppliers of Dispensing Tools:

Soraton, www.soraton.com

Beyer&Otto, www.beyer-otto.de

Innotech, www.innotech-rot.de

Changes may be made to technical details. Different cartridge designs and auxiliary equipment as well as scale drawings are available on request. The dimensions given are for information only and cannot be applied for any Quality Control.

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