

Injection System VME plus

for post-installed rebar connection



Reinforcement Bars BSSt 500 S



NEW



Cartridge VME plus 440
Side-by-side cartridge
Content: 440ml

NEW



Cartridge VME plus 585
Side-by-side cartridge
Content: 585ml

Description

The Injection System VME plus also has the European Technical Assessment for post-installed rebar connection. Reinforcement Bars with diameters from 8mm to 40mm as well as tension anchors from M12 to M24 with a setting depth of up to 2m can be fixed.

By using the hollow drill bit SB the drilling dust is sucked off during drilling directly at the point of origin. This reduces pollution and dust load of the respiratory tract to a minimum. Subsequent well cleaning - brushing and blowing out - is also no longer necessary.

Advantages

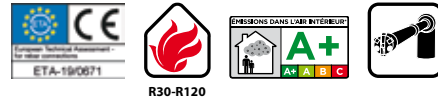
- Long processing time, therefore ideal for large embedment depths and for high temperatures
- Wide range of application, as up to 40mm rebar diameter allowed
- Drill hole creation with hammer drill, compressed air drill or hollow drill bit
- When using the hollow drill bit SB the subsequent cleaning of the borehole is not necessary
- Approved for installation in dry and wet concrete
- Approved for use under fire exposure
- Opened cartridges can be reused with a new static mixer
- Tie rods ZA with connecting thread M12 - M24 can be supplied in individual lengths on request

Applications for post-installed rebar connection:

Subsequent connection of stairs, balconies, walls or columns, closing of wall and ceiling openings

Application examples tension anchor:

Anchoring of railing posts and of supports subject to bending loads, anchoring of cantilevered components



Injection Cartridge VME plus



- ➔ Long processing time
- ➔ No shrinkage

Description	Ref. No.	Content ml	Content of master box pcs.	Weight per master box kg	Weight per piece kg
Cartridge VME plus 440	28258001	440	12	9,79	0,78
Cartridge VME plus 585	28258243	585	12	12,28	1,02
Static mixer VM-XHP	28305301	-	12	0,18	0,01

One static mixer VM-XHP comes with each cartridge

Curing Time Injection Adhesive VME plus

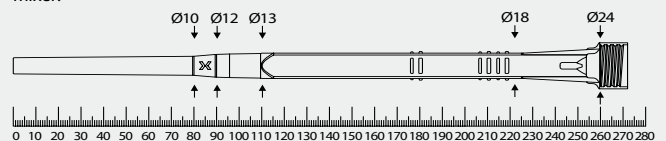
- ➔ Cartridge temperature when installing +5°C to +40°C

Temperature (°C) of the base material	maximum working time	minimum curing time	
		dry base material	wet base material
+5°C to +9°C	80 min	48 h	96 h
+10°C to +14°C	60 min	28 h	56 h
+15°C to +19°C	40 min	18 h	36 h
+20°C to +24°C	30 min	12 h	24 h
+25°C to +34°C	12 min	9 h	18 h
+35°C to +39°C	8 min	6 h	12 h
+40°C	8 min	4 h	8 h

Usable length static mixer VM-XHP

Drill holes must always be filled from the bottom of the hole to ensure no air pockets are trapped in the adhesive. This is only possible when the tip of the mixing nozzle reaches the very bottom of the drill hole before injecting the adhesive. If the mixing nozzle does not reach the bottom of the drill hole, a mixer extension tube must be used.

Outer diameter mixer:



Chemical Anchors

Accessories Injection System VME plus for post-installed rebar connection

Rebar Ø	Tension Anchor	Drill Bit Ø	Blow-out pump / Air gun ¹⁾	Cleaning brush RB ¹⁾	Retaining washer VM-IA ²⁾	Extension tube ²⁾³⁾	Maximum permissible drilling depth for dispenser		
							VM-P 585 Standard, VM-P 585 Profi, VM-P 585 Akku	VM-P 585 Pneumatic	VM-P 585 Pneumatic
mm		mm					mm	mm	mm
8		10	VM-ABP 200	RB 10 M6		VM-XE 10	250	250	250
8		12	VM-ABP 200 DLS with RS, RS25	RB 12 M6 RB 12 M8		VM-XE 10	700	800	800
10		12	VM-ABP 200 DLS with RS, RS25	RB 12 M6 RB 12 M8		VM-XE 10	250	250	250
10		14	VM-ABP 200 DLS with RS, RS25	RB 14 M6 RB 14 M8	VM-IA 14	VM-XE 10	700	1000	1000
12	ZA-M12	14	VM-ABP 200 DLS with RS, RS25	RB 14 M6 RB 14 M8	VM-IA 14	VM-XE 10	250	250	250
12	ZA-M12	16	VM-ABP 200 / 1000 DLS with RS, RS25	RB 16 M6 RB 16 M8	VM-IA 16	VM-XE 10	700	1300 ¹⁾	1200 ¹⁾
14		18	VM-ABP 200 / 250 / 500 / 1000 DLS with RS, RS25	RB 18 M6 RB 18 M8	VM-IA 18	VM-XE 10 VM-XLE 16	700	1300 ¹⁾	1400 ¹⁾³⁾
16	ZA-M16	20	VM-ABP 200 / 250 / 500 / 1000 DLS with RS, RS25	RB 20 M6 RB 20 M8	VM-IA 20	VM-XE 10 VM-XLE 16	700	1300 ¹⁾	1600 ¹⁾³⁾
20	ZA-M20	25 ⁴⁾	VM-ABP 250 / 500 / 1000 DLS with RS, RS25	RB 25 M8 ⁴⁾	VM-IA 25	VM-XE 10 VM-XLE 16	500	1000	2000 ¹⁾³⁾
22		28	VM-ABP 250 / 500 / 1000 DLS with RS, RS25	RB 28 M6	VM-IA 28	VM-XE 10 VM-XLE 16	500	1000	2000 ¹⁾³⁾
24/25	ZA-M24	32	VM-ABP 250 / 500 / 1000 DLS with RS, RS35	RB 32 M6 RB 32 M8	VM-IA 32	VM-XE 10 VM-XLE 16	500	1000	2000 ¹⁾³⁾
28		35	VM-ABP 250 / 500 / 1000 DLS with RS, RS35	RB 35 M6 RB 35 M8	VM-IA 35	VM-XE 10 VM-XLE 16	500	1000	2000 ¹⁾³⁾
32		40	VM-ABP 250 / 500 / 1000 DLS with RS, RS35	RB 40 M6	VM-IA 40	VM-XE 10 VM-XLE 16	500	1000	2000 ¹⁾³⁾
34		40	VM-ABP 250 / 500 / 1000 DLS with RS, RS35	RB 40 M6	VM-IA 40	VM-XE 10 VM-XLE 16		1000	2000 ¹⁾³⁾
36		45	VM-ABP 250 / 500 / 1000 DLS with RS, RS35	RB 45 M6	VM-IA 45	VM-XE 10 VM-XLE 16		1000	2000 ¹⁾³⁾
40		55	VM-ABP 250 / 500 / 1000 DLS with RS, RS35	RB 55 M6	VM-IA 55	VM-XE 10 VM-XLE 16		1000	2000 ¹⁾³⁾
See page			169	170	172	171	172 / 173	173	173

¹⁾When using the hollow drill SB the subsequent cleaning of the borehole is not necessary (drill-Ø d₀ ≤ 40 mm, drill hole depth h₁ ≤ 1.000 mm)

²⁾If the static mixer does not reach the bottom of the borehole (see usable length of static mixer), a extension tube must be used. From a drill-Ø d₀ ≥ 14 mm, retaining washer and extension tube must be used for horizontal and overhead installation and for drill hole depths > 240 mm.

³⁾From an anchoring depth of l_v > 1300 mm only the mixer extension VM-XLE 16 is permitted

⁴⁾Hammer- or suction drilling. Pneumatic drilling: drill-Ø 26, Cleaning Brush RB 26 M6

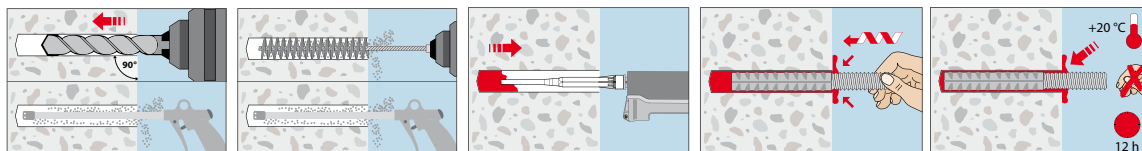


Extract from Permissible Service Conditions of European Technical Assessment ETA-19/0671 for post-installed Rebar Connections with VME plus

Rod diameter		Ø8	Ø8	Ø10	Ø10	Ø12	Ø12	Ø14	Ø16	Ø20	Ø22	Ø24	Ø25	Ø28	Ø32	Ø34	Ø36	Ø40
Tension Anchor ZA / threaded stud							ZA M12		ZA M16	ZA M20		ZA M24						
Drill hole diameter	d ₀ [mm]	10	12	12	14	14	16	18	20	25	28	32	32	35	40	40	45	55
Design value of bond strength ¹⁾ f _{bd,PIR} [N/mm ²]																		
Concrete strength	C12/15 f _{bd,PIR} [N/mm ²]	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,5	1,5
	C16/20 f _{bd,PIR} [N/mm ²]	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	1,9	1,8
	C20/25 f _{bd,PIR} [N/mm ²]	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,2	2,1
	C25/30 f _{bd,PIR} [N/mm ²]	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,6	2,5
	C30/37 f _{bd,PIR} [N/mm ²]	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	2,9	2,9	2,8
	C35/45 f _{bd,PIR} [N/mm ²]	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,3	3,3	3,1
	C40/50 f _{bd,PIR} [N/mm ²]	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,6	3,6	3,4
	C45/55 f _{bd,PIR} [N/mm ²]	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	3,9	3,8	3,7
	C50/60 f _{bd,PIR} [N/mm ²]	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,3	4,2	4,1	4,0
Installation parameters reinforcing steel B500B																		
Amount of adhesive /100 mm setting depth	[ml]	4,16	8,46	5,07	10,12	5,97	11,78	13,44	15,09	23,11	30,40	44,65	40,03	44,22	57,32	44,88	72,11	138,47
Installation parameters Tension Anchor ZA																		
Tension Anchor ZA / threaded stud							ZA M12		ZA M16	ZA M20		ZA M24						
Clearance hole in the fixture	d _f [mm]						14		18	22		26						
Effective setting depth	l _v [mm]									according to static calculation								
Installation torque	T _{inst} ≤ [Nm]						50		100	150		150						
Width across nut	SW [mm]						19		24	30		36						
Amount of adhesive /100 mm setting depth	[ml]						11,78		15,09	23,11		44,65						
Different tension anchors see page							167		167	167		on request						

¹⁾The values for f_{bd,PIR} are valid for good bonding conditions according to EN 1992-1-1:2004

Installation



Tension Anchor ZA



Thread: M12, M16, M20
Range of Concrete Quality: C12/15–C50/60
Material: Stainless steel A4
On request: Stainless steel HCR

Description

The Tension Anchor ZA consists of a connection thread made of stainless steel A4 or HCR which is welded to a reinforcement bar B 500 B. It is part of the European Technical Assessments for post-installed reinforcement connections of the injections systems VMH, VMU plus, VME plus and VME and may be used in cracked and non-cracked concrete. The absorbable tensile force or the required anchorage length can be determined according to EN 1992-1 (EC2). If the full anchorage depth is not required, the reinforcement bar end can be shortened.

Applications

- Connection of structural elements to reinforced concrete
- Introduction of highest tensile loads with minimal edge distances
- Fastening of brackets, canopies, traffic signs, stairs

Tension Anchor ZA



- Stainless steel A4
- Approved for cracked and non-cracked concrete

Description	Ref. No.	Drill-hole-Ø mm	max. setting depth mm	Fixture thickness t_{ix} mm	Anchor length mm	Weight per piece kg
ZA M12-60/975 A4	85306501	16	900	60	975	0,9
ZA M12-200/1115 A4	85320501	16	900	200	1115	1,0
ZA M16-60/1180 A4	85506501	20	1100	60	1180	1,9
ZA M16-200/1320 A4	85520501	20	1100	200	1320	2,1
ZA M20-60/1485 A4	85606501	25	1400	60	1485	3,7
ZA M20-200/1625 A4	85620501	25	1400	200	1625	4,0

Stainless steel HCR and other lengths on demand.

Hollow drill bit SB



Description

The hollow drill bit SB combines two steps in one: it drills and at the same time removes the drilling dust from the hole. As a result, it significantly reduces the dust created, resulting in a cleaner work space and reduces air contamination. Contamination in the work area is also avoided, making it the ideal hammer drill for indoors. Many MKT injection systems eliminate the need for additional cleaning, increasing efficiency and installation safety. Thanks to its SDS shank and its 38mm suction pipe connection, it can be used universally and flexibly with any SDS hammer drill and industrial vacuum cleaners.

Advantages

- 98% less air borne dust than during conventional drilling processes
- Permitted for use with approved anchors
- The separate cleaning of the drill hole can be omitted if this is permitted in the ETA
- Easy handling, insert in a hammer drill and connect to an industrial vacuum cleaner
- Efficient dust extraction and drilling thanks to extra large vacuum holes
- Optimum health and safety at the workplace, reduce respiratory complaints of dust particles by using an industrial vacuum cleaner of the M-Class
- Save money and time: there is no dirt generated, so no need to clean up afterwards
- Can be used with all standard SDS-max and SDS-plus hammer drills in conjunction with commercial industrial vacuum cleaners

Applications

For dust-free drilling in concrete, solid brick, solid lime and stone and natural stone indoors and outdoors.

Hollow drill bit with SDS-plus shank

→ 2-cutter with big vacuum holes for a fast drilling

Description	Ref.No.	Ø mm	Drilling depth mm	Total length mm	Adaptor	Type	Pkg. Content pcs.	Weight per pcs. kg
Hollow drill bit SB plus 8x270	50235501	8	150	270	SDS-plus	2-cutter	1	0,21
Hollow drill bit SB plus 10x270	50245501	10	150	270	SDS-plus	2-cutter	1	0,24
Hollow drill bit SB plus 12x320	50256001	12	200	320	SDS-plus	2-cutter	1	0,31
Hollow drill bit SB plus 14x370	50266501	14	250	370	SDS-plus	2-cutter	1	0,39
Hollow drill bit SB plus 16x370	50286501	16	250	370	SDS-plus	2-cutter	1	0,43
Hollow drill bit SB plus 18x370	50296501	18	250	370	SDS-plus	2-cutter	1	0,53
Hollow drill bit SB plus 20x370	50306501	20	250	370	SDS-plus	2-cutter	1	0,64
Hollow drill bit SB plus 24x370	50326501	24	250	370	SDS-plus	2-cutter	1	0,81

Hollow drill bit with SDS-max shank

→ Y-Cutter for more stable drilling

Description	Ref.No.	Ø mm	Drilling depth mm	Total length mm	Adaptor	Type	Pkg. Content pcs.	Weight per pcs. kg
Hollow drill bit SB max 18x600	50698001	18	400	600	SDS-max	Y-cutter	1	0,99
Hollow drill bit SB max 24x600	50728001	24	400	600	SDS-max	Y-cutter	1	1,21
Hollow drill bit SB max 25x600	50738001	25	400	600	SDS-max	Y-cutter	1	1,23
NEW Hollow drill bit SB max 26x600	50748001	26	400	600	SDS-max	Y-cutter	1	1,25

Suction bell ASG



Description	Ref.No.	Connection diameter to a vacuum cleaner Ø [mm]	Suitable for drill hole Ø [mm]	Pkg. Content pcs.	Weight per pc. kg
Suction bell ASG	29980001	30-38	6-32	1	0,06

Description

For removing drilling dust when drilling or cleaning holes.

Advantages

- Easy handling, connection to a vacuum cleaner is sufficient
- No mounting is necessary, because the suction bell sticks tight to floor, wall and ceiling by a strong vacuum
- Prevents contamination and provides a clear visibility due to almost dust-free drilling
- Reduce respiratory complaints due to tiny dust particles by using a vacuum cleaner of the M-Class

Accessories for MKT Injection Systems

Blow-out pump VM-AP



- For assessment-compliant drill hole cleaning of many anchor systems
- For best drill hole cleaning, the hose must reach the bottom of the drill hole

Description	Ref. No.	For drill hole Ø mm	Max. drill hole depth ¹⁾ mm	Length mm	Pkg. cont. pcs.	Weight per piece kg
Blow-out pump VM-AP 270	29990002	12 - 20	200	270	1	0,22
Blow-out pump VM-AP 360	33200101	8 ²⁾ - 20	330	360	1	0,27

¹⁾For through fastening: Maximum drill hole depth through fixture

²⁾With extension tube Ø6 x 100mm

Air gun VM-ABP



- For assessment-compliant drill hole cleaning with compressed air for drill holes with a diameter larger than 6 mm
- For best drill hole cleaning, the nozzle of the air gun must reach the bottom of the drill hole

Description	Ref. No.	Nozzle-ø mm	For drill hole Ø mm	Max. drill hole depth ¹⁾ mm	Pkg. cont. pcs.	Weight per piece kg
VM-ABP 200	33090101	5	6-20	240	1	0,55
VM-ABP 250	33100101	16	18-40	240	1	1,00
VM-ABP 500	33106101	16	18-40	480	1	1,30

¹⁾For through fastening: Maximum drill hole depth through fixture

Air gun VM-ABP 1000



- For assessment-compliant drill hole cleaning with compressed air for drill holes with a diameter larger than 16 mm
- For best drill hole cleaning, the nozzle of the air gun must reach the bottom of the drill hole

Description	Ref. No.	Nozzle-ø mm	For drill hole Ø mm	Max. drill hole depth ¹⁾ mm	Pkg. cont. pcs.	Weight per piece kg
VM-ABP 1000	85806101	14	16-40	1000	1	0,32

¹⁾For through fastening: Maximum drill hole depth through fixture

Compressed Air System DLS

- For blowing out drill holes up to 3 m deep
- The connection set RS for connection to a compressor, an air hose RS and, for the injection system VME, the corresponding blow-out nozzle RD are required

Air Valve RS



- Connection set RS with manual slide valve with air valve and connector for connection to a compressor

Air hose RS



- Air hose RS, pre-assembled with connectors for connection between connection set RS and blow-out nozzle RD

Blow-out nozzle RD



- Blow-out nozzles RD for optimum cleaning of the drill hole and the drill hole walls
- Fits on the air hose RS

Description	Ref. No.	For drill hole Ø mm	Max. drill hole depth ¹⁾ mm	Length mm	Pkg. cont. pcs.	Weight per piece kg
Air hose RS	85890101	12 - 35	-	-	1	0,42
Air Valve RS 25	85802101	12 - 28	2000	2000	1	0,11
Air Valve RS 35	85804101	30 - 35	3000	3000	1	0,44
Blow-out nozzle RD 12/14	85852101	12 - 14	-	-	1	0,01
Blow-out nozzle RD 16/18	85854101	16 - 18	-	-	1	0,02
Blow-out nozzle RD 20/25	85856101	20 - 25	-	-	1	0,03
Blow-out nozzle RD 30/35	85858101	30 - 35	-	-	1	0,05

¹⁾For through fastening: Maximum drill hole depth through fixture

Cleaning Brush RB M6

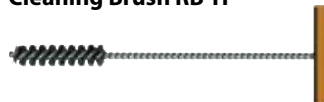

- For machine cleaning of drill holes
- Stainless steel trim for a long service life
- With connection thread M6
- For drilling machines with keyed chuck
- SDS plus adapter for use in a hammer drill
- Use brush extensions according to the drilling depth. Several brush extensions can be screwed together for further extension.

Description	Ref. No.	Suitable for drill hole Ø mm	Length mm	Filling length mm	Pkg. cont. pcs.	Weight per piece kg
RB 10 M6	33510101	10	130	80	1	0,03
RB 12 M6	33512101	12	140	80	1	0,03
RB 14 M6	33514101	14	180	80	1	0,04
RB 16 M6	33516101	16	200	100	1	0,05
RB 18 M6	33518101	18	200	100	1	0,06
RB 20 M6	33520101	20	220	100	1	0,10
RB 22 M6	33522101	22	220	100	1	0,10
RB 24 M6	33524101	24	250	100	1	0,11
RB 26 M6	33526101	25 / 26	290	100	1	0,12
RB 28 M6	33528101	28	260	100	1	0,11
RB 30 M6	33530101	30	350	100	1	0,12
RB 32 M6	33532101	32	350	100	1	0,13
RB 35 M6	33535101	35	350	100	1	0,14
RB 40 M6	33537101	40	350	100	1	0,15
RB 45 M6	on request	45	-	-	1	-
RB 55 M6	on request	55	-	-	1	-
Brush extention RBL M6	33968101	-	150	-	1	0,09
SDS Plus adapter RBL M6 SDS	33350101	-	110	-	1	0,06

Cleaning Brush RB M8


- Extra sturdy construction for machine cleaning of particularly deep drill holes
- Stainless steel trim for a long service life
- With connection thread M8
- For drilling machines with keyed chuck
- SDS plus adapter for use in a hammer drill
- Use brush extensions according to the drilling depth. Several brush extensions can be screwed together for further extension.

Description	Ref. No.	Suitable for drill hole Ø mm	Length mm	Filling length mm	Pkg. cont. pcs.	Weight per piece kg
RB 12 M8	85812101	12	180	140	1	0,05
RB 14 M8	85814101	14	180	140	1	0,05
RB 16 M8	85816101	16	180	140	1	0,05
RB 18 M8	85818101	18	180	140	1	0,05
RB 20 M8	85820101	20	180	140	1	0,05
RB 25 M8	85825101	25	180	140	1	0,06
RB 32 M8	85832101	32	180	140	1	0,08
RB 35 M8	85835101	35	180	140	1	0,08
Brush extention RBL M8	85871101	-	550	-	1	0,32
SDS Plus adapter RBL M8 SDS	85881101	-	110	9	1	0,07

Cleaning Brush RB-H


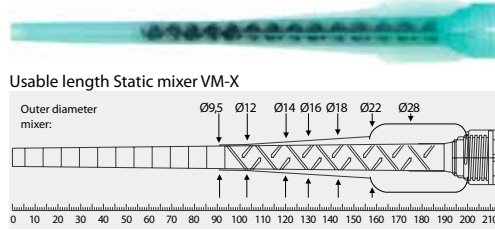
- For manual drill hole cleaning of non-approved systems in solid and perforated masonry
- Nylon trim
- With wooden handle

Description	Ref. No.	Suitable for drill hole Ø mm	Length mm	Pkg. cont. pcs.	Weight per piece kg
RB-H 12/250	29914501	8-12	250	1	0,04
RB-H 18/250	29918501	10-18	250	1	0,04
RB-H 18/400	33618101	10-18	400	1	0,05
RB-H 28/280	29928501	20-28	280	1	0,05
RB-H 28/400	33628101	20-28	400	1	0,06

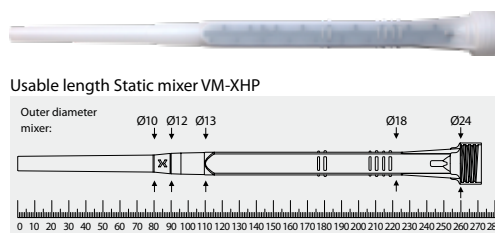
Static mixer

- ➔ To mix the two components of the injection adhesive
- ➔ Before each application, squeeze out an approx. 10cm long strand (initial strand). The initial strand is not suitable for fastening. (See European Technical Assessment and Installation Instructions)
- ➔ Usable length static mixer: Drill holes must always be filled from the bottom of the hole to ensure no air pockets are trapped in the adhesive. This is only possible when the tip of the mixing nozzle reaches the very bottom of the drill hole before injecting the adhesive. If the mixing nozzle does not reach the bottom of the drill hole, a mixer extension tube must be used.

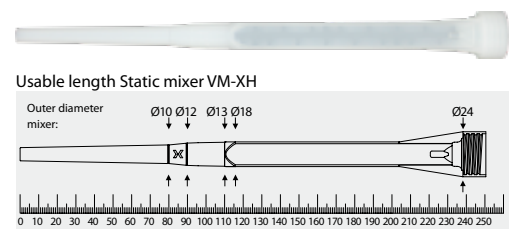
VM-X



VM-XHP



VM-XH



VM-XL



Description	Ref. No.	Suitable for Injection Systems / Cartridges	Length mm	Package content pcs.	Weight per pkg. kg
VM-X	28305111	VMZ: all Cartridges, VMU plus: 150ml, 280ml, 300ml, 345ml, 410ml VME plus Polar: all Cartridges VM-EA: all Cartridges VM-PY: all Cartridges	215	12	0,12
VM-XH	28304801	VMH: all Cartridges	250	12	0,16
NEW VM-XHP	28305301	VME plus: all Cartridges VMH: all Cartridges	272	12	0,18
VM-XL ¹⁾	28305201	VMU plus: all Cartridges VME: all Cartridges	245	10	0,28

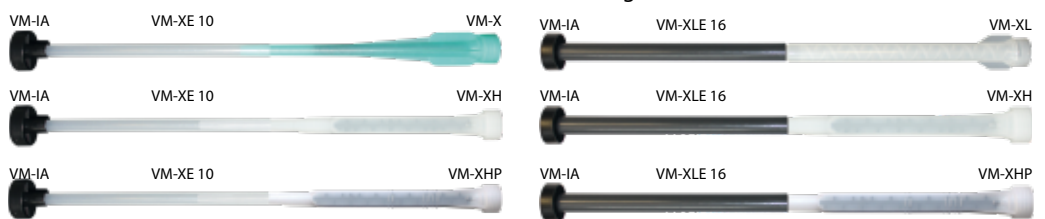
¹⁾Static mixer VM-XL comes with a reducers / extension tube. Suitable for drill holes from 12mm diameter.

Extension tubes



- ➔ Extension tubes for deeper drill holes
- ➔ Extension tubes VM-XE and VM-XLE can be cut to the required length

Possible combinations static mixer / Extension tube / Retaining Washer:



Description	Ref. No.	Diameter mm	Length mm	Drill hole-Ø mm	Suitable for static mixer	Package content pcs.	Weight per pkg. kg
VM-XE 10/200	28306011	10	200	12 - 40		12	0,12
VM-XE 10/500	85951101	10	500	12 - 40	VM-X	10	0,20
VM-XE 10/1000	85952101	10	1000	12 - 40	VM-XHP VM-XL	10	0,30
VM-XE 10/2000	85954101	10	2000	12 - 40		10	0,65
VM-XLE 16/250	85959101	16	250	18 - 55	VM-XHP	10	0,30
VM-XLE 16/1000	85956101	16	1000	18 - 55	VM-XH	10	1,15
VM-XLE 16/2000	85958101	16	2000	18 - 55	VM-XL	10	3,50

Retaining Washer VM-IA


→ For bubble-free filling of the drill hole

→ Suitable for extension tubes VM-XE 10 and VM-XLE 16

Description	Ref. No.	Suitable for drill hole Ø mm	Pkg. cont. pcs.	Weight per pkg. kg
VM-IA 14	85914201	14	20	0,04
VM-IA 16	85916201	16	20	0,04
VM-IA 18	85918201	18	20	0,04
VM-IA 20	85920201	20	20	0,06
VM-IA 22	85922201	22	20	0,06
VM-IA 24	85924101	24	20	0,06
VM-IA 25	85925201	25 / 26	20	0,06
VM-IA 28	85928101	28	20	0,06
VM-IA 30	on request	30	-	-
VM-IA 32	85932201	32	20	0,08
VM-IA 35	85935201	35	20	0,10
VM-IA 40	85938201	40	20	0,10
VM-IA 45	on request	45	-	-
VM-IA 55	on request	55	-	-

Dispenser VM-P Standard


→ For occasional use, metal version

→ Piston rod with adjusting screw

Description	Ref. No.	Suitable for cartridge	Pkg. cont.	Weight per piece kg
VM-P 345 Standard	28350505	150ml, 280ml, 300ml, 345ml also suitable for silicone cartridges	1	1,00
VM-P 380 Standard	28353005	380ml, 410ml, 420ml	1	1,15
VM-P 385 Standard	28353010	385ml	1	1,33
VM-P 585 Standard	28352151	385ml, 440ml, 585ml	1	1,60

Dispenser VM-P Profi


→ Professional dispenser with an ideal center of gravity for more comfortable working

→ Automatic pressure release for minimum adhesive overrun

Description	Ref. No.	Suitable for cartridge	Pkg. cont.	Weight per piece kg
VM-P 345 Profi	28350511	150ml, 280ml, 300ml, 345ml also suitable for silicone cartridges	1	1,00
VM-P 380 Profi	28351001	380ml, 410ml, 420ml	1	1,10
VM-P 385 Profi	28353015	385ml	1	1,20

Dispenser VM-P 585 Profi


→ Professional dispenser with an ideal center of gravity for more comfortable working

→ Combi-tool for many different types of cartridges

→ Automatic pressure release for minimum adhesive overrun

Description	Ref. No.	Suitable for cartridge	Pkg. cont.	Weight per piece kg
VM-P 585 Profi	28353201	280ml, 300ml, 330ml, 380ml, 385ml, 410ml, 420ml, 440ml, 585ml also suitable for silicone cartridges	1	1,67

Dispenser VM-P Akku



- Professional, solid battery cartridge dispenser
- Repeat function, for retrieving the last fill quantity
- Stepless variable pressing speed
- Overrun-quantity-stop by automatic return after release of the dispensing switch

Description	Ref. No.	Suitable for cartridge	Press-out force kN	Weight ¹⁾ kg	Dimensions ¹⁾ L x B x H mm	Pkg. cont.	Weight pro pcs. kg
VM-P 345 Akku	28350801	345ml	5,0	3,53	395 x 180 x 285	1	7,72
VM-P 380 Akku	28352601	380ml, 410ml, 420ml	3,95	3,62	375 x 180 x 285	1	7,80
VM-P 585 Akku	28353301	385ml, 440ml, 585ml	5,0	3,86	440 x 180 x 285	1	8,05
VM-P 825 Akku	28353501	825 ml	5,0	4,14	410 x 180 x 285	1	8,34
Accessories (for all models)							
Replacement battery	28352411		18 V/2,0 Ah			1	1,00
Shoulder strap	28359991		adjustable			1	0,18

¹⁾ with Akku 18V/2,0 Ah

Dispenser VM-P Pneumatic



VM-P 345
Pneumatic Eco



VM-P 380 /
585 Pneumatic



VM-P 1400
Pneumatic

- Professional air tool with an optimum center of gravity and quick cartridge exchange
- Automatic pressure release system reduces adhesive overrun to a minimum
- Single-hand pressure regulation to adjust the piston speed
- With compressed air connection nipple
- VM-P 825 Pneumatic and VM-P 1400 Pneumatic with additional handle

Description	Ref. No.	Suitable for cartridge	Maximum working pressure bar	Maximum Luftverbrauch l/min	Maximum Press-out force kN	Pkg. cont. pcs	Weight per piece kg
VM-P 345 Pneumatic Eco	28351601	280ml, 300ml, 345ml	6,8	40	2,2	1	2,55
VM-P 380 Pneumatic	28352002	380ml, 410ml, 420ml	8	40	4,0	1	2,80
VM-P 585 Pneumatic	28352101	385ml, 440ml, 585ml	8	40	4,0	1	3,20
VM-P 825 Pneumatic	28352110	825ml	8	40	4,0	1	5,00
VM-P 1400 Pneumatic	28352201	1400ml	8	40	8,3	1	7,00