

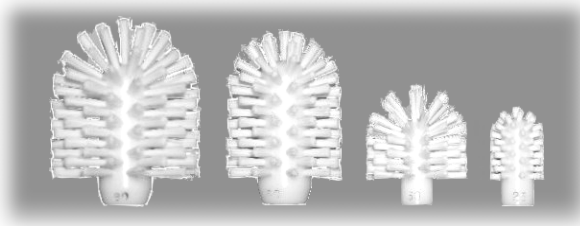
20.1 for the application on MAXI PHARMA, MIDI PHARMA, MINI PHARMA, Handles

Specifications Quick lock st. st. grade 316, bristles straight - * = bristles crimped

Item no.	Description		
E-08663	Brush head Ø 32 x 55 mm	Body POM white, Ø 17 mm	Bristles: Polyester white, Ø 0.15 mm
E-07288	Brush head Ø 34 x 55 mm	Body POM white, Ø 17 mm	Bristles: PA 6/12 white, Ø 0.15 mm
E-07235	Brush head Ø 45 x 50 mm	Body POM white, Ø 17 mm	Bristles: PA 6/12 white, Ø 0.15 mm
E-05090	Brush head Ø 45 x 50 mm	Body POM white, Ø 25 mm	Bristles: PA 6/12 white, Ø 0.20 mm
E-19391	Brush head Ø 52 x 54 mm	Body POM white, Ø 25 mm	Bristles: PA 6/12 white, Ø 0.25 mm
E-05088	Brush head Ø 55 x 55 mm	Body POM white, Ø 25 mm	Bristles: PA 6/12 white, Ø 0.25 mm
E-08321	Brush head Ø 75 x 60 mm	Body POM white, Ø 35 mm	Bristles: PA 6/12 white, Ø 0.30 mm
E-05089	Brush head Ø 80 x 68 mm	Body POM white, Ø 25 mm	Bristles: PA 6/12 white, Ø 0.40 mm
E-11128	Brush head Ø 80 x 105 mm	Body POM white, Ø 50 mm	Bristles: PA 6/12 white, Ø 0.30 mm
E-05188	Brush head Ø 105 x 75 mm	Body POM white, Ø 35 mm	Bristles: PA 6/12 white, Ø 0.40 mm
E-07313	Brush head Ø 130 x 70 mm	Body POM white, Ø 35 mm	Bristles: PA 6/12 white, Ø 0.50 mm
E-11718	Brush head Ø 135 x 120 mm	Body POM white, Ø 50 mm	Bristles: PA 6/6 white, Ø 0.55 mm *
E-08899	Brush head Ø 155 x 130 mm	Body POM white, Ø 50 mm	Bristles: PA 6/12 white, Ø 0.30 mm

20.2 for the application on MAXI PHARMA, MIDI PHARMA, MINI PHARMA, Handles - conductive


Item no.	Description		
E-07840	Brush head Ø 27 x 53 mm	Body POM black, Ø 17 mm	Bristles: Nylon 6/12 and Condux Ø 0.15 and 0.13 mm combined
E-07839	Brush head Ø 42 x 57 mm	Body POM black, Ø 17 mm	Bristles: Nylon 6/12 and Condux Ø 0.15 and 0.25 mm combined
E-07838	Brush head Ø 52 x 63 mm	Body POM black, Ø 25 mm	Bristles: Nylon 6/12 and Condux Ø 0.15 and 0.25 mm combined

20.4 M 10 for the use with handle


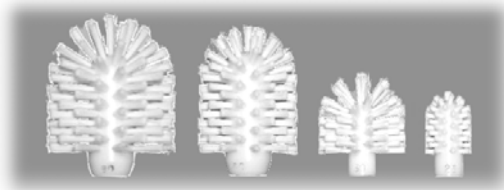
Item no.	Description
E-09549	Brush head Ø 22 x 47 mm Body POM white, Ø 15 mm Bristles: PA 6/12 white, Ø 0.15 mm
E-09346	Brush head Ø 27 x 50 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.20 mm
E-09341	Brush head Ø 32 x 53 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.20 mm
E-08961	Brush head Ø 35 x 55 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.20 mm
E-09347	Brush head Ø 37 x 56 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.25 mm
E-09342	Brush head Ø 42 x 58 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-11304	Brush head Ø 42 x 58 mm Body POM white, Ø 17 mm Bristles: PP transparent, Ø 0.30 mm
E-09344	Brush head Ø 46 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-09343	Brush head Ø 52 x 63 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-11305	Brush head Ø 52 x 63 mm Body POM white, Ø 17 mm Bristles: PP transparent, Ø 0.30 mm
E-21534	Brush head Ø 53 x 63 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-09345	Brush head Ø 54 x 63 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-09348	Brush head Ø 56 x 65 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-09349	Brush head Ø 62 x 100 mm Body POM white, Ø 30 mm Bristles: PA 6/12 white, Ø 0.40 mm
E-11306	Brush head Ø 67 x 100 mm Body POM white, Ø 30 mm Bristles: PP transparent, Ø 0.40 mm
E-08683	Brush head Ø 67 x 100 mm Body POM white, Ø 30 mm Bristles: Polyester white, Ø 0.50 mm
E-21535	Brush head Ø 69 x 99 mm Body POM white, Ø 30 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-08685	Brush head Ø 72 x 102 mm Body POM white, Ø 30 mm Bristles: Polyester white, Ø 0.50 mm
E-09387	Brush head Ø 82 x 106 mm Body POM white, Ø 30 mm Bristles: PA 6/12 white, Ø 0.40 mm
E-08684	Brush head Ø 82 x 105 mm Body POM white, Ø 30 mm Bristles: Polyester white, Ø 0.50 mm
E-09350	Brush head Ø 102 x 116 mm Body POM white, Ø 30 mm Bristles: PA 6/12 white, Ø 0.50 mm
E-21536	Brush head Ø 105 x 117 mm Body POM white, Ø 30 mm Bristles: PA 6/12 white, Ø 0.40 mm
E-12090	Brush head Ø 155 x 130 mm Body POM white, Ø 50 mm Bristles: PA 6/12 white, Ø 0.50 mm
E-21537	Brush head Ø 168 x 139 mm Body POM white, Ø 50 mm Bristles: PA 6/12 white, Ø 0.50 mm

20.5 Flexible cleaning rods with external M 10 thread

Specifications Polyamide (PA) 6 nature with black ball handle

Item no.	Description
100'500'311	Cleaning rod Ø 10 x 500 mm
100'600'311	Cleaning rod Ø 10 x 600 mm
101'000'311	Cleaning rod Ø 10 x 1,000 mm
101'300'311	Cleaning rod Ø 10 x 1,300 mm
101'500'311	Cleaning rod Ø 10 x 1,500 mm
102'000'311	Cleaning rod Ø 10 x 2,000 mm

20.6 M 5 for the use with handle



Brush head

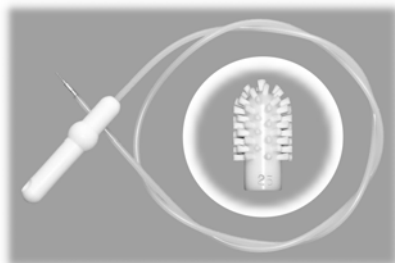


Tube brush

Specifications Internal thread Ensaf M 5 st. st. grade 304, bristles straight
 Tube brush with internal thread M 5 st. st. grade 304, bristles: PA 6/12 white, straight,
 Total length 135 mm

Item no.	Description
E-14677	Brush head Ø 22 x 52 mm Body POM white, Ø 15 mm Bristles: PA 6/12 white, Ø 0.15 mm
E-13628	Brush head Ø 27 x 51 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.20 mm
E-07643	Brush head Ø 36 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.25 mm
E-13629	Brush head Ø 40 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-20336	Brush head Ø 48 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-07365	Brush head Ø 50 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.30 mm
E-12272	Brush head Ø 51 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.40 mm
E-08500	Brush head Ø 67 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.40 mm
E-08562	Brush head Ø 72 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.50 mm
E-08563	Brush head Ø 82 x 60 mm Body POM white, Ø 17 mm Bristles: PA 6/12 white, Ø 0.60 mm
8'072'221'011	Tube brush Ø 11 x 100 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.20 mm
8'072'221'013	Tube brush Ø 13 x 90 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.20 mm
8'072'221'022	Tube brush Ø 22 x 100 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.20 mm
8'072'421'027	Tube brush Ø 27 x 90 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.30 mm
8'072'621'028	Tube brush Ø 28 x 100 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.50 mm
8'072'421'037	Tube brush Ø 37 x 90 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.30 mm
8'072'521'042	Tube brush Ø 42 x 90 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.40 mm
8'072'721'042	Tube brush Ø 42 x 100 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.60 mm
8'072'521'062	Tube brush Ø 62 x 100 mm, twisted in from the front, Wire st. st. Ø 2.0 mm Bristles: Ø 0.40 mm

20.7 Flexible cleaning rods with external M 5 thread

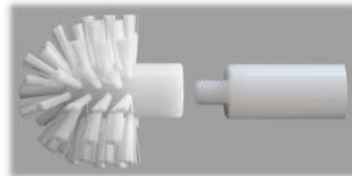


Cleaning rod Ø 6 mm with handle



Cleaning rod Ø 8 mm with ball handle

Item no.	Description
051'200'121	Rod POM white Ø 5 x 1,200 mm with ball handle and external thread M 5 scissored
E-14676	Rod PA white Ø 6 mm, length selectable up to 1,500 mm and external thread M 5, st. st. 304
081'000'321	Rod PA 6 nature Ø 8 x 1,000 mm with ball handle and external thread M 5, st. st. 304
E-09550	Adapter for cleaning rod with external thread M 10 and internal thread M 5 - POM white Ø 10 mm With it small brushes can be applied with M 10 internal thread (not shown)

20.8 and internal M 10 thread


Specifications Internal M 10 thread and water channel \varnothing 3 / 2 x 2 mm

Item no. **Description**

E-10615 Brush head \varnothing 56 x 61.5 mm Body POM white, \varnothing 20 mm Bristles: Polyester white, \varnothing 0.15 mm

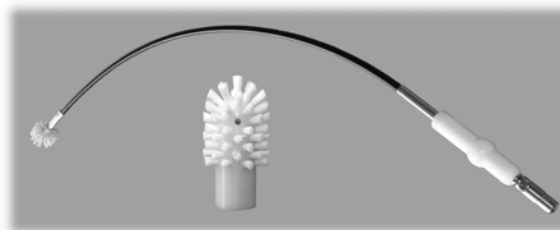
20.9 Inflexible cleaning rods with external M 10 thread and water channel


Specifications External M 10 thread for brush coupling with water channel \varnothing 4 mm, suitable for brushes with \varnothing 20-90 mm

Item no. **Description**

150'300'112 Cleaning rod POM white, \varnothing 15 x 300 mm with hose tail fitting st. st. grade 304 for clamping of the hose with \varnothing 10-12 mm

150'300'113 Cleaning rod POM white, \varnothing 15 x 300 mm with quick lock st. st. grade 304 complete for connection to the mains water supply for clamping of hose with \varnothing 10-12 mm

20.10 and internal M 8 thread - flexible cleaning rod with water channel


Specifications Flexible shaft black with external M 8 thread st. st. grade 304 and handle with quick lock
Tube brush and brush heads with internal M 8 thread st. st. grade 304 and water channel \varnothing 2 mm

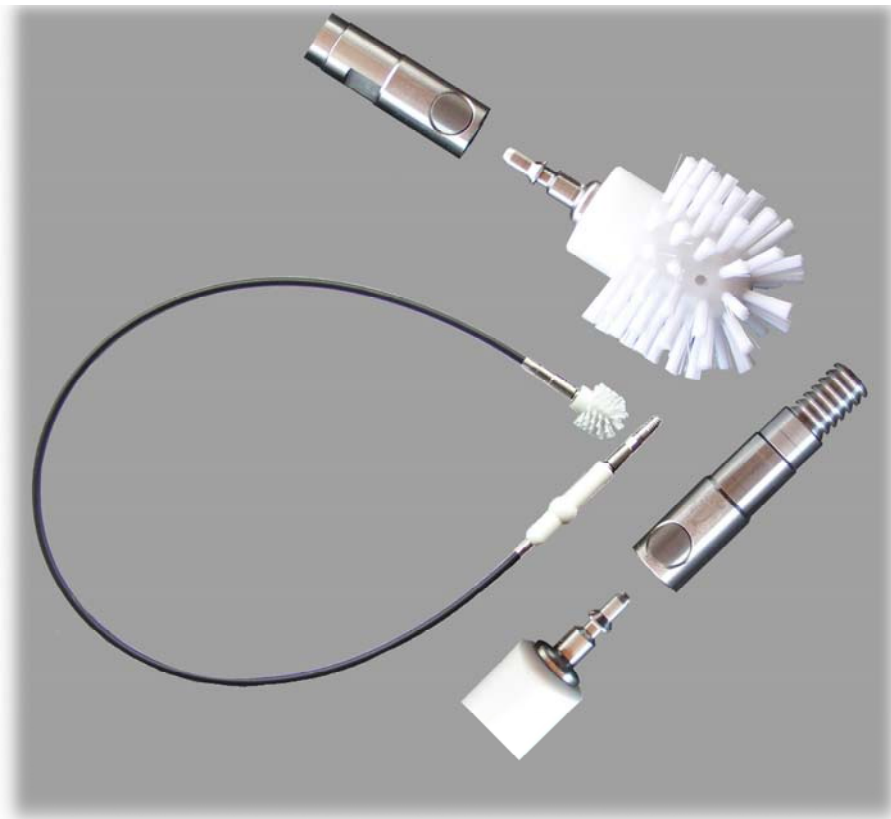
Item no. **Description**

E-09249 Tube brush \varnothing 17 x 90 mm Twisted wire st. st. grade 304 Bristles: PA 6/12 white, \varnothing 0.20 mm

E-09248 Brush head \varnothing 27 x 54 mm Body POM white, \varnothing 17 mm Bristles: PA 6/12 white, \varnothing 0.10 mm

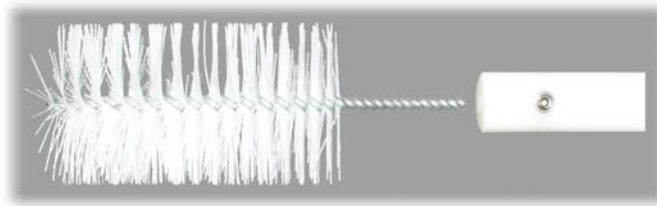
E-09247 Brush head \varnothing 50 x 62 mm Body POM white, \varnothing 17 mm Bristles: PA 6/12 white, \varnothing 0.20 mm

E-08518 Flexible shaft \varnothing 10 x 1,000 mm with water channel 3 mm, brush coupling with external M 8 thread st. st. grade 304, plastic handle and quick lock complete for connection to the mains water supply

20.11 and quick lock - flexible cleaning rod with water channel and quick lock


Specifications Black flexible shaft with handle and quick lock for connection to the mains water supply.
Brush heads with quick lock and water channel

Item no.	Description
E-21633	Brush head Ø 21 x 48 mm Body: POM white, Ø 15 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.15 mm
E-12939	Brush head Ø 34 x 78 mm Body: POM white, Ø 20 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.20 mm
E-21636	Brush head Ø 42 x 58 mm Body: POM white, Ø 15 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.20 mm
E-12940	Brush head Ø 50 x 84 mm Body: POM white, Ø 25 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.25 mm
E-21638	Brush head Ø 52 x 63 mm Body: POM white, Ø 15 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.20 mm
E-12941	Brush head Ø 60 x 89 mm Body: POM white, Ø 25 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.30 mm
E-21640	Brush head Ø 63 x 61 mm Body: POM white, Ø 30 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.30 mm
E-21643	Brush head Ø 104 x 82 mm Body: POM white, Ø 30 x 45 mm Quick lock st. st. grade 316 Bristles: PA 6/12 white, Ø 0.30 mm
E-12938	Flexible shaft Ø 10 x 1,500 mm with water channel quick lock st. st. grade 316 Ø 5.2/15 mm and quick lock st. st. grade 316 Ø 15/16 x 60 mm
E-12953	Quick lock with hose tail fitting, st. st. grade 316 Ø 15/16 x 70 mm to E-12938 for connection to the mains water supply

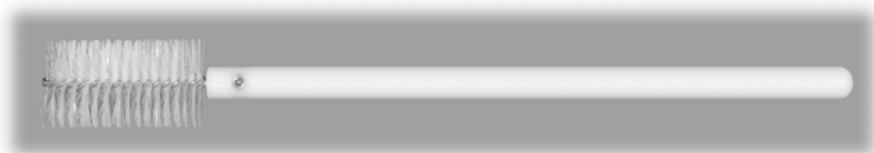
20.12 for clamping in cleaning rods with lateral allen screw

Specifications Wire st. st. grade 304 twisted in from the front with straight end, for cleaning rods with bore Ø 3.8 mm

Item no.	Description
3'072'221'013	Tube brush Ø 13 x 90 mm Total length 120 mm Bristles: PA 6/12 white, straight, Ø 0.20 mm
3'072'221'022-50	Tube brush Ø 22 x 50 mm Total length 90 mm Bristles: PA 6/12 white, straight, Ø 0.20 mm
3'072'221'022-100	Tube brush Ø 22 x 100 mm Total length 140 mm Bristles: PA 6/12 white, straight, Ø 0.20 mm
3'072'421'027	Tube brush Ø 27 x 90 mm Total length 120 mm Bristles: PA 6/12 white, straight, Ø 0.30 mm
3'072'521'035	Tube brush Ø 35 x 100 mm Total length 140 mm Bristles: PA 6/12 white, straight, Ø 0.40 mm
3'072'421'037	Tube brush Ø 37 x 90 mm Total length 120 mm Bristles: PA 6/12 white, straight, Ø 0.30 mm
3'072'521'042	Tube brush Ø 42 x 90 mm Total length 120 mm Bristles: PA 6/12 white, straight, Ø 0.40 mm
3'072'721'053	Tube brush Ø 53 x 100 mm Total length 140 mm Bristles: PA 6/12 white, straight, Ø 0.60 mm

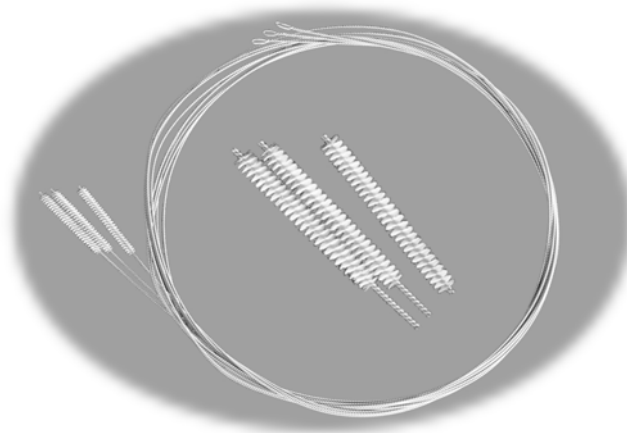
Specifications Zinc coated wire twisted in from the front with straight end, for cleaning rods with bore Ø 4.5 mm

Item no.	Description
3'091'521'055	Tube brush Ø 55 x 100 mm Total length 143 mm Bristles: PA 6/12 white, straight, Ø 0.40 mm
3'091'521'065	Tube brush Ø 65 x 100 mm Total length 143 mm Bristles: PA 6/12 white, straight, Ø 0.40 mm
3'091'621'085	Tube brush Ø 85 x 100 mm Total length 143 mm Bristles: PA 6/12 white, straight, Ø 0.50 mm

20.13 Cleaning rods with lateral allen screw fixing

Specifications POM white with rounded end, bore with lateral thread Ensaf M 5 st. st. grade 304 and allen screw

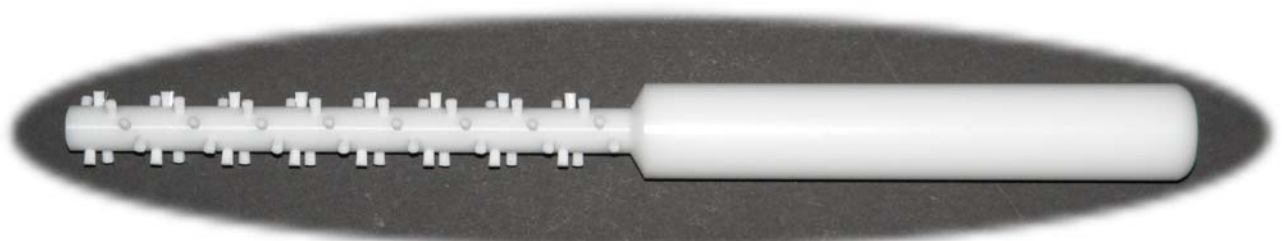
Item no.	Description
200'400'100	Cleaning rod Ø 20 x 400 mm with bore Ø 4.5 x 40 mm
200'400'150	Cleaning rod Ø 20 x 400 mm with bore Ø 3.8 x 40 mm

20.14 for Suspension hoses

Specifications Twisted wire st. st. grade 304

Item no.	Description
E-10054	Tube brush Ø 6.5 x 60 x 3,600 mm Bristles: PA 6/12, white straight, Ø 0.10 mm
E-11124	Tube brush Ø 7.0 x 60 x 3,600 mm Bristles: PA 6/12, white straight, Ø 0.10 mm
E-13537	Tube brush Ø 10.0 x 60 x 3,600 mm Bristles: PA 6/12, white straight, Ø 0.15 mm
E-10522	Tube brush Ø 15.0 x 60 x 3,600 mm Bristles: PA 6/12, white straight, Ø 0.20 mm
E-10523	Tube brush Ø 20.0 x 60 x 3,600 mm Bristles: PA 6/12, white straight, Ø 0.25 mm

20.15 for drive units (with shaft)


Item no.	Description
9'072'221'013	Tube brush with straight, white Nylon 6/12 bristles, Ø 0.20 mm, brush Ø 13 x 90 mm, total length 150 mm, wire st. st. grade 304, Ø 2.0 mm, twisted in from the front, shaft st. st. grade 304, Ø 6 x 50 mm

20.16 for sensitive tubes


Item no.	Description
E-18750	Cleaning rod special Ø 19.5 x 300 mm, Body: POM white Ø 12 / Ø 25 x 300 mm, Handle Ø 25 mm, Bristles: Nylon 6/12 white, straight, Ø 0.15 mm, double-row spiral trimming

20.17 for small pipe elbows



<i>Item no.</i>	<i>Description</i>
E-19233	Radial brushes-chain Ø 27 x 900 mm, Body: POM white Ø 17 / Ø 6 x 15 mm Link Ø 17/ Ø 6 x 12 mm, Bristles: Nylon 6/12 white, straight, Ø 0.10 mm, for tube-Ø 26 mm
E-19234	Radial brushes-chain Ø 34 x 900 mm, Body: POM white Ø 17 / Ø 6 x 15 mm Link Ø 17/ Ø 6 x 12 mm, Bristles: Nylon 6/12 white, straight, Ø 0.15 mm, for tube-Ø 32 mm
E-19195	Radial brushes-chain Ø 50.0 x 500 mm, Body: POM white Ø 25 / Ø 5.5 x 15 mm, Link: Ø 25 / Ø 6 x 8 mm, Bristles: Nylon 6/12 white, straight, Ø 0.30 mm, for tube-Ø 48 mm