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2018-19

Sewer cleaning hose assemblies

without nozzle

QSC : male thread + O-ring			Plug : male thread + O-ring				
M22 : 1/8"	M22 : 1/4"	M21 : 1/8"	KW : 1/8"	KW : 1/4"	KW : 1/8"	K : 1/8"	K : 1/8"
							

Hoses with single wire braid and *smooth* cover

TYP	DN	P	℃	↔	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.
Flexy	6	300 bar	100 °C	10 m	420 300 010	420 301 010	420 315 010	420 335 010	420 336 010	420 330 010	420 345 010	
				15 m	420 300 015	420 301 015	420 315 015	420 335 015	420 336 015	420 330 015	420 345 015	
				20 m	420 300 020	420 301 020	420 315 020	420 335 020	420 336 020	420 330 020	420 345 020	
				25 m	420 300 025	420 301 025	420 315 025	420 335 025	420 336 025	420 330 025	420 345 025	
				30 m	420 300 030	420 301 030	420 315 030	420 335 030	420 336 030	420 330 030	420 345 030	

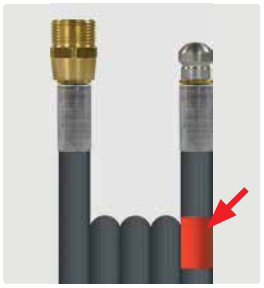
Plastic hoses with single fabric braid

TYP	DN	P	℃	↔	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.
Polya	5	200 bar	20 °C	10 m	410 000 010		410 015 010	410 035 010		410 030 010		410 045 010
				15 m	410 000 015		410 015 015	410 035 015		410 030 015		410 045 015
				20 m	410 000 020		410 015 020	410 035 020		410 030 020		410 045 020
				25 m	410 000 025		410 015 025	410 035 025		410 030 025		410 045 025
				30 m	410 000 030		410 015 030	410 035 030		410 030 030		410 045 030
Polya	5	120 bar	20 °C	10 m	400 000 010		400 015 010	400 035 010		400 030 010		400 045 010
				15 m	400 000 015		400 015 015	400 035 015		400 030 015		400 045 015
				20 m	400 000 020		400 015 020	400 035 020		400 030 020		400 045 020
				25 m	400 000 025		400 015 025	400 035 025		400 030 025		400 045 025
				30 m	400 000 030		400 015 030	400 035 030		400 030 030		400 045 030

without nozzle

M : M + O-ring		M thread + O-rings	
M22 : 1/8"	M22 : 1/4"	1/8" : 1/8"	1/4" : 1/4"
			

As required our sewer cleaning hoses have a safety clearance marking directly on the hose which is placed 0.5 m of the nozzle.



Hoses with single wire braid and *smooth* cover

TYP	DN	P	℃	↔	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.
Flexy	6	300 bar	100 °C	10 m	420 310 010	420 311 010	420 340 010	420 342 010
				15 m	420 310 015	420 311 015	420 340 015	420 342 015
				20 m	420 310 020	420 311 020	420 340 020	420 342 020
				25 m	420 310 025	420 311 025	420 340 025	420 342 025
				30 m	420 310 030	420 311 030	420 340 030	420 342 030

Plastic hoses with single fabric braid

TYP	DN	P	℃	↔	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.
Polya	5	200 bar	20 °C	10 m	410 010 010		410 040 010	
				15 m	410 010 015		410 040 015	
				20 m	410 010 020		410 040 020	
				25 m	410 010 025		410 040 025	
				30 m	410 010 030		410 040 030	
Polya	5	120 bar	20 °C	10 m	400 010 010		400 040 010	
				15 m	400 010 015		400 040 015	
				20 m	400 010 020		400 040 020	
				25 m	400 010 025		400 040 025	
				30 m	400 010 030		400 040 030	

Sewer cleaning hose assemblies

with nozzle

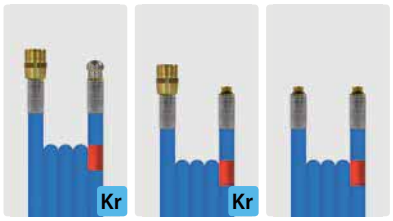
					Quick screw couplings		Plug				Male thread	
					M22 : 1/8"	M21 : 1/8"	KW : 1/8"	KW : 1/8"	K : 1/8"		M22 : 1/8"	
					 K	 W	 A	 A	 K	 K	 Kr	
Hoses with single wire braid and *smooth* cover												
TYP	DN	P	℃	↔	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.
Flexy	6	300 bar	100 °C	10 m	420 302 010	420 317 010	420 337 010	420 332 010	420 347 010		420 312 010	
				15 m	420 302 015	420 317 015	420 337 015	420 332 015	420 347 015		420 312 015	
				20 m	420 302 020	420 317 020	420 337 020	420 332 020	420 347 020		420 312 020	
				25 m	420 302 025	420 317 025	420 337 025	420 332 025	420 347 025		420 312 025	
				30 m	420 302 030	420 317 030	420 337 030	420 332 030	420 347 030		420 312 030	
Plastic hoses with single fabric braid												
TYP	DN	P	℃	↔	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.
Polya	5	200 bar	20 °C	8 m	410 002 008	410 017 008	410 037 008	410 032 008		410 047 008	410 012 008	
				10 m	410 002 010	410 017 010	410 037 010	410 032 010		410 047 010	410 012 010	
				15 m	410 002 015	410 017 015	410 037 015	410 032 015		410 047 015	410 012 015	
				20 m	410 002 020	410 017 020	410 037 020	410 032 020		410 047 020	410 012 020	
				25 m	410 002 025	410 017 025	410 037 025	410 032 025		410 047 025	410 012 025	
				30 m	410 002 030	410 017 030	410 037 030	410 032 030		410 047 030	410 012 030	
				40 m	410 002 040	410 017 040	410 037 040	410 032 040		410 047 040	410 012 040	
Polya	5	120 bar	20 °C	10 m	400 002 010	400 017 010	400 037 010	400 032 010		400 047 010	400 012 010	
				15 m	400 002 015	400 017 015	400 037 015	400 032 015		400 047 015	400 012 015	
				20 m	400 002 020	400 017 020	400 037 020	400 032 020		400 047 020	400 012 020	
				25 m	400 002 025	400 017 025	400 037 025	400 032 025		400 047 025	400 012 025	
				30 m	400 002 030	400 017 030	400 037 030	400 032 030		400 047 030	400 012 030	

without nozzle

					QSC : male thread + O-ring		M : M + O-rings	Plug KW : M thread + O-ring		M : M + O-ring	with nozzle	rotating nozzle
					M22 : 1/8"	M21 : 1/8"	1/8" : 1/8"	KW : 1/8"		M22 : 1/8"	Plug KW	
					 K	 W		 A			KW : 1/8"	
Plastic hoses with single wire braid												
TYP	DN	P	℃	↔	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.	R+M Nr.
R+M 1	4	300 bar	99 °C	10 m	411 000 010	411 015 010	411 040 010	411 035 010		411 010 010	411 037 010	411 038 010
				15 m	411 000 015	411 015 015	411 040 015	411 035 015		411 010 015	411 037 015	411 038 015
				20 m	411 000 020	411 015 020	411 040 020	411 035 020		411 010 020	411 037 020	411 038 020
				25 m	411 000 025	411 015 025	411 040 025	411 035 025		411 010 025	411 037 025	411 038 025
				30 m	411 000 030	411 015 030	411 040 030	411 035 030		411 010 030	411 037 030	411 038 030

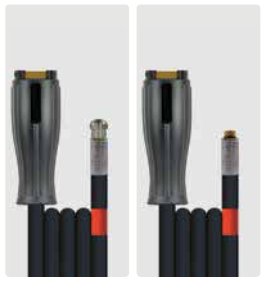
Symbols DN nominal diameter P pressure ℃ temperature ↔ length TYP type

Sewer cleaning hose assemblies



Plastic hoses with single fabric braid

TYP	DN	P	℃	↔	with nozzle Male thread M22 : 1/8" R+M Nr.	without nozzle M thread + O-ring 1/8" : 1/8" R+M Nr.	without nozzle M thread + O-ring M22 : 1/8" R+M Nr.
Polya	5	200 bar	20 °C	8 m	412 012 008	412 010 008	412 040 008
				10 m	412 012 010	412 010 010	412 040 010
				15 m	412 012 015	412 010 015	412 040 015
				20 m	412 012 020	412 010 020	412 040 020
				25 m	412 012 025	412 010 025	412 040 025
				30 m	412 012 030	412 010 030	412 040 030
				40 m	412 012 040	412 010 040	412 040 040



Hoses with single wire braid and *smooth* cover

TYP	DN	P	℃	↔	with nozzle QSC M22 : 1/8" R+M Nr.	no nozzle QSC : m + O-ring M22 : 1/8" R+M Nr.
Flexy	6	300 bar	100 °C	10 m	420 302 321 0	420 300 321 0
				15 m	420 302 321 5	420 300 321 5
				20 m	420 302 322 0	420 300 322 0
				25 m	420 302 322 5	420 300 322 5
				30 m	420 302 323 0	420 300 323 0

High pressure hoses with *smooth* cover - 500 bar

Hoses with double wire braid and *smooth* cover

TYP	DN	P	℃	↔	without nozzle Fittings stainless steel QSC : Male thread M22 : 1/8" R+M Nr.	without nozzle Fittings stainless steel QSC : Male thread M22 : 1/4" R+M Nr.	without nozzle Fittings stainless steel M thread : M thread 1/4" : 1/4" R+M Nr.
Flexy	6	500 bar	150 °C	10 m	424 300 010 9	424 301 010 9	424 344 010 9
				15 m	424 300 015 9	424 301 015 9	424 344 015 9
				20 m	424 300 020 9	424 301 020 9	424 344 020 9

Sewer cleaning hose assemblies with mini-nozzle

R+M Nr.	DN	D	P	℃	↔
495 334 000 5	2	03	350 - 500 bar	60 °C	0.5 m
495 334 002 0	2	03	350 - 500 bar	60 °C	2.0 m
495 334 005 0	2	03	350 - 500 bar	60 °C	5.0 m
495 334 008 0	2	03	350 - 500 bar	60 °C	8.0 m
495 334 010 0	2	03	350 - 500 bar	60 °C	10.0 m
495 334 015 5	2	03	350 - 500 bar	60 °C	15.5 m
495 334 020	2	03	350 - 500 bar	60 °C	20.0 m
495 334 025	2	03	350 - 500 bar	60 °C	25.0 m

Heat exchangers in thermal power stations or conveyor pipes in the food industry are often sewers of 10 to 12 mm in diameter. In order to clean them effectively from the inside a device for sewer cleaning with small diameters and high pressures is required.

We have also in this case the best possible solution for you!

"small" as desired and "powerful" with great performance.

We are talking about the new mini-device for sewer cleaning. Being only 9 mm in diameter the nozzle withstands the working pressure of up to 500 bar. Completely sensational or what do you think? The nozzle for sewer cleaning is made out of stainless steel and equipped with three jet outlets to the back and one forward.

The mini-nozzle for sewer cleaning is supplied with a black plastic hose with a nominal diameter of 2 and assembled with 1/8" M. The device is so suitable for all common high pressure cleaner.

Sewer cleaning hose assemblies

sewerclean365+ **PU-sewer cleaning hose**

» cut- and abrasion-resistant
» extremely long operating life
» highly tearproof by two-fold braid of aramid fibres and polyurethane surface
» good swimming features
» ageing resistant and weather-resistant surface
» -40 °C - +60 °C, -40 °F - +140 °F

DKR : M

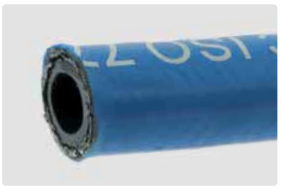
1/2" : 1/2"

All hoses are supplied together with a test certificate according to EN 10204.3.1.1.

DN	P	⌀	⌀	BP	↔	R+M Nr.
12	275 bar	12.7 mm	23.4 mm	840 bar	40 m	432 457 120 040
					60 m	432 457 120 060
					80 m	432 457 120 080
					100 m	432 457 120 100
					120 m	432 457 120 120

sewerstar365+ **Gummi-Kanalspülschläuche**

» highly abrasion-resistant with an extremely long operating life
» high flexibility by especially developed rubber compound
» extremely abrasion-resistant, ageing resistant and weather-resistant surface
» easy handling by low weight
» excellent pressure resistance and tensile strength
» very low bending radius
» wire braid for high stability
» interior and surface are made out of NR/SBR
» -40 °C - +150 °C, -40 °F – +302 °F



DKR : M

1/2" : 1/2"

3/8" : 3/8"

3/8" : 1/4"

DN	P	⌀	⌀	BP	↔	R+M Nr.	R+M Nr.	R+M Nr.
08	500 bar	7.9 mm	15.0 mm	1,260 bar	40 m		432 558 080 040	432 556 080 040
					80 m		432 558 080 080	432 556 080 080
10	280 bar	9.8 mm	16.9 mm	740 bar	40 m	432 557 100 040	432 558 100 040	
					60 m	432 557 100 060	432 558 100 060	
					80 m	432 557 100 080	432 558 100 080	
					100 m	432 557 100 100	432 558 100 100	
					120 m	432 557 100 120	432 558 100 120	
12	250 bar	12.7 mm	22.6 mm	640 bar	40 m	432 557 120 040		
					60 m	432 557 120 060		
					80 m	432 557 120 080		
					100 m	432 557 120 100		
					120 m	432 557 120 120		

Symbols DN nominal diameter ⌀ internal diameter ⌀ diameter P pressure BP burst pressure ℃ temperature shipment by truck D nozzle

ST-71 hose reel with sewer cleaning hose

The ST-71 hose reel is equipped with a 15 m Flexy sewer cleaning hose DN 6. The frame of the reel is made out of stainless steel and the reel is made out of plastic.

The space-saving and orderly solution can either be hung up at the wall or refitted in high pressure cleaner.

The hose can be used as extension of high pressure hoses or as sewer cleaning hose.

Max. 300 bar / 100 °C

R+M Nr.	⟲	⟜
200 071 615	1/4" M	M22 M
200 071 620	1/8" M	M22 M
200 071 625	M22 F	M22 M
200 071 630	plug ⌀ 8.8	M22 M

ST-540 foot valves

Incl. HP-gun ST-2605. Material housing powdercoated steel. Rubber feet.
Max. 350 bar / 45 l/min / 150 °C

R+M Nr.	⟲	⟜
200 540 500	1/4" M	3/8" F

Incl. HP-gun ST-2750. Material housing powdercoated steel. Rubber feet.
Max. 500 bar / 30 l/min / 150 °C

R+M Nr.	⟲	⟜
200 540 550	1/4" M	3/8" F

ST-33 high Pressure Filter

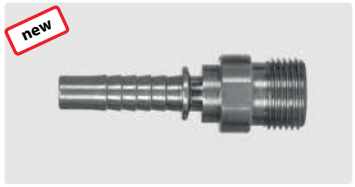
Brass with stainless steel filter. Bidirectional.
Max. 400 bar / 40 l/min. / 150 °C

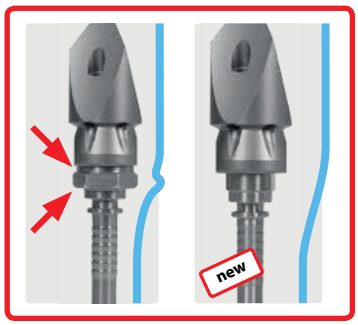
R+M Nr.	↕	○	○
200 033 855	45.6 mm	1/4" M	1/4"F

Crimp nipples

Stainless steel. Flat sealing

R+M Nr.	DN	○
315 393	8	1/4"
315 593	8	3/8"
315 693	10	3/8"
315 663	12	1/2"





Protective clothing is shown on the pages 497 - 499.

Symbols D nozzle DN nominal diameter ⟲ outlet ⟜ inlet ⌀ diameter ○ thread ↕ height

Suttner nozzles for sewer cleaning ST-49

Nozzles without centric hole

With 3 or 4 rear jets (30°) for maximum thrust and simultaneously, a flushing away of the waste material. Stainless steel.

1/8" F. ⌀ 15 mm. Stainless steel

1/4" F. ⌀ 19 mm. Stainless steel

3/8" F. ⌀ 24 mm. Stainless steel

D	R+M Nr.	R+M Nr.	R+M Nr.
035	650 01	651 05	
04	650 05	651 04	
045	650 00	651 00	
05		651 08	
055	650 09	651 16	
06	650 10	651 10	
07			651 84
090	650 40	651 40	
12		651 48	

Nozzles with centric hole

Cleaning of clogged pipes. With centric front jet and 3 or 4 rear jets (30°).
Front jet for penetrating of completely clogged pipes and frozen pipelines, rear jets for flushing away of the waste material.
Stainless steel.

1/8" F. ⌀ 15 mm. Stainless steel

1/4" F. ⌀ 19 mm. Stainless steel

3/8" F. ⌀ 24 mm. Stainless steel

D	R+M Nr.	R+M Nr.	R+M Nr.
035	120 155 375		
04	122 370 170	651 14	651 88
045		651 12	
05	650 60	651 13	
055	650 50	651 15	651 87
06	650 55	651 18	
065	650 56		651 89
075	650 20	651 20	
08			651 86
090		651 25	
10	650 30	651 30	651 85
11		651 46	
12			651 83
15			651 82
20			651 81

Suttner rotating nozzles for sewer cleaning ST-49.1

Rotating nozzles ST-49.1 without centric hole

1/8" F. ⌀ 19 mm

D	R+M Nr.
04	
045	200 049 825
05	200 049 830
055	200 049 835
06	200 049 840
07	200 049 845
08	200 049 850
090	
10	
12	
15	
20	

1/4" F. ⌀ 19 mm

R+M Nr.
200 049 794
200 049 795
200 049 800
200 049 805
200 049 810
200 049 815
200 049 820
651 61 *
651 62 **

3/8" F. ⌀ 24 mm

R+M Nr.
200 049 860
200 049 870
200 049 880
200 049 890
200 049 891
200 049 892
200 049 893
200 049 894
200 049 895

ST-49.1 with centric hole

3/8"F. ⌀ 24 mm

D	R+M Nr.
10	200 049 896
12	200 049 897
15	200 049 898
18	200 049 899

Suttner mini rotating nozzles for sewer cleaning ST-49.3

1/8“ F. Nozzle with thrust. ⌀ 12 mm.
Ideal for cleaning or flushing out pipes as well as adjoining lateral pipes at any angle. Small pump capacities required, only.
2 rotating radial jets (90°) to the pipe wall for best cleaning results.
2 rotating rear jets (45°) for forward thrust and flushing away of the waste material.
Suitable for pipes from 14 - 50 mm.
Hardened stainless steel.
Max. 500 bar

Applications:
» Cleaning of deposits
» Cleaning of grease, fat and organic deposits
» To clean heat exchangers

R+M Nr.	D
200 049 950	05
200 049 970	07

* Two side jets
** Additional two side jets and three front jets. Reduced thrust, only.

Symbols D nozzle ⌀ diameter ⌲ inlet

ST-49 nozzles for sewer cleaning

Sewer cleaning nozzles with male thread

Due to its conical front design this is the ideal solution to make its way through tight bends and traps. Ideal for hobby and semi-professional use. 3 rear jets for maximum thrust. Nozzle drillings as stepped bore for protection against mechanical impact.
Outside ⌀ 15 mm.
Brass.
Max. 210 bar / 16 l/min

R+M Nr.	G	D
121 000 360	1/4" M	035

Due to its conical front design this is the ideal solution to make its way through tight bends and traps. 3 rear jets for maximum thrust and high cleaning impact. Front jet to blast through roots and scale or de-icing. Nozzle drillings as stepped bore for best protection against mechanical impact.
Outside ⌀ 15 mm.
Stainless steel.
Max. 350 bar / 17 l/min

R+M Nr.	G	D
121 160 360	1/4" M	040

Due to its conical front design this is the ideal solution to make its way through tight bends and traps. 8 rear jets for maximum thrust and best wall coverage. Front jet to blast through roots and scale or de-icing. Nozzle drillings as stepped bore for best protection against mechanical impact. 3 rear jets for maximum thrust and best wall coverage.
Outside ⌀ 17 mm.
Stainless steel.
Max. 350 bar / 25 l/min

R+M Nr.	G	D
123 160 860	3/8" M	060

Compact and heavy construction with 3 rear jets.
For standard cleaning and desilting applications.
Outside ⌀ 25 mm. Stainless steel.
Max. 500 bar / 40 l/min

R+M Nr.	G	D
120 000 312	1/2" M	080

Drain cleaning nozzle suitable for use on most van and trailer mounted cleaning machines. 4 rear jets (30°) for higher thrust. Conical head for tight bends and offsets. Outside ⌀ 24.2 mm. Stainless steel.
Max. 500 bar / 45 l/min

R+M Nr.	G	D
120 110 410	1/2" M	090

Sewer cleaning nozzles with female thread

Due to its very compact design this is the ideal solution for tight elbows. 3 rear jets for maximum thrust and powerful cleaning impact.
Front jet to blast through roots and scale or de-icing.
Outside ⌀ 15 mm.
Hardened stainless steel.
Max. 500 bar / 17 l/min

R+M Nr.	G	D
120 155 375	1/8" F	035

Due to its very compact design this is the ideal solution for tight elbows. 3 rear jets for maximum thrust and powerful cleaning impact.
Front jet to blast through roots and scale or de-icing.
Outside ⌀ 22 mm.
Hardened stainless steel.
Max. 500 bar / 30 l/min.

R+M Nr.	G	D
120 163 391	1/4" F	050

Due to its very compact design this is the ideal solution for tight elbows. 6 rear jets for maximum thrust and best wall coverage.
Outside ⌀ 22 mm.
Hardened stainless steel.
Max. 500 bar / 30 l/min

R+M Nr.	G	D
120 000 675	1/4" F	060

Due to its conical front design this is the ideal solution to make its way through tight bends and traps. 3 rear jets for maximum thrust and powerful cleaning impact.
Front jet to blast through roots and scale or de-icing.
Outside ⌀ 22 mm.
Hardened stainless steel.
Max. 500 bar / 25 l/min

R+M Nr.	G	D
120 163 390	1/4" F	045

ST-49 nozzles for sewer cleaning

Sewer cleaning nozzles with female thread

Outside ⌀ 22 mm.
Hardened stainless steel.
Max. 500 bar / 35 l/min.

R+M Nr.	⟃	D
120 460 385	1/4" F	070

Outside ⌀ 22 mm.
Hardened stainless steel.
Max. 500 bar / 32 l/min.

R+M Nr.	⟃	D
120 163 392	1/4" F	065

Outside ⌀ 25 mm.
Hardened stainless steel.
Max. 500 bar / 32 l/min.

R+M Nr.	⟃	D
120 163 393	3/8" F	065

Grease ball

8 rear jets 0.6 mm for extreme thrust and highest wall coverage of the pipe. Designed for the ability to clean grease off the sidewall of pipes but has proven to be great on root chokes, too. Completely spherical shape.
Nozzle drilling as stepped bore for best protection against mechanical impact.
Hardened stainless steel.
Max. 500 bar

R+M Nr.	⟃	D
120 000 860	1/4" F	080

Root rat

Equipped with 3 rear jets (30°) for maximum thrust and 3 additional nozzles (45°) right behind its nose for better cleaning results and wall coverage the nozzle has proven to be ideal on root chokes.
Hardened stainless steel.
Max. 500 bar / 30 l/min

R+M Nr.	⟃	D
120 155 672	1/4" F	060

Mini-nozzles for sewer cleaning

Heat exchangers in thermal power stations or conveyor pipes in the food industry are often sewers of 10 to 12 mm in diameter. In order to clean them effectively from the inside a device for sewer cleaning with small diameters and high pressures is required.

Being only 9.8 mm in diameter the nozzle withstands the working pressure of up to 500 bar.
Together with our R+M 1 / Bronze hose (30420) the complete sewer cleaning unit will be rated up to 300 bar and 100° C

Crimp nipple.
DN 4.
M7 M.
Stainless steel.
Max. 500 bar

R+M Nr.	↔
040 001 946	22

M7 F. 3 rear jets for maximum thrust and powerful cleaning impact.
Outside ⌀ 9.8 mm.
Stainless steel.
Max. 500 bar

R+M Nr.	D
120 000 380	030
120 001 380	065

M7 F. 3 rear jets for maximum thrust. Additional 3 side jets (90°) for powerful cleaning impact and optimal wall coverage.
Outside ⌀ 9.8 mm. Stainless steel.
Max. 500 bar

R+M Nr.	D
120 373 373	065

Symbols D nozzle ⌀ diameter ⟃ outlet ↔ length mm

Milling Type Nozzles ST-49

With its 3 to 4 very strong concentrated forward jets and the sharp cutting edges the milling type nozzles will tear through almost any kind of blo-ckage. The sharp edges cut, break and penetrate through every kind of blockage. Made out of wear-resistant, hardened stainless steel.
All nozzles are equipped with replaceable hardened stainless steel rear and centric front jets. Due to this feature the efficiency is considerably higher compared to those nozzles with drilled holes and the service life is several times longer.
Max. 300 / 350 bar

Applications:
» Penetration of completely clogged pipes
» Opening of root masses
» Opening of frozen pipelines
» Hydraulic thrust boring flushing operations

350 bar. 1/4" F. For tubes > 30 mm.
Lateral front jets 0.5 mm drilled

R+M Nr.	D	Front	Rear
649 010 234 040	040	3	4
649 010 234 045	045	3	4
649 010 234 050	050	3	4
649 010 234 055	055	3	4
649 010 244 060	060	4	4
649 010 244 070	070	4	4
649 010 244 080	080	4	4
649 010 244 085	085	4	4
649 010 244 100	100	4	4
649 010 244 120	120	4	4
649 010 244 150	150	4	4
649 010 244 200	200	4	4

350 bar. 3/8" F. For tubes > 50 mm.
Lateral front jets with hardened stainless steel nozzle inserts

R+M Nr.	D	Front	Rear
649 010 336 055	055	3	6
649 010 346 070	070	4	6
649 010 346 080	080	4	6
649 010 346 100	100	4	6
649 010 346 120	120	4	6
649 010 346 150	150	4	6
649 010 346 200	200	4	6
649 010 346 250	250	4	6
649 010 346 270	270	4	6

350 bar. 1/2" F. For tubes > 60 mm
Lateral front jets with hardened stainless steel nozzle inserts

R+M Nr.	D	Front	Rear
649 010 446 100	100	4	6
649 010 446 120	120	4	6
649 010 446 150	150	4	6
649 010 446 200	200	4	6
649 010 446 250	250	4	6
649 010 446 270	270	4	6
649 010 446 310	310	4	6
649 010 446 495	495	4	6
649 010 446 580	580	4	6

300 bar. 3/4" F. For tubes > 60 mm
Lateral front jets with hardened stainless steel nozzle inserts

R+M Nr.	D	Front	Rear
649 010 546 120	120	4	6
649 010 546 150	150	4	6
649 010 546 180	180	4	6
649 010 546 200	200	4	6
649 010 546 250	250	4	6
649 010 546 270	270	4	6
649 010 546 310	310	4	6
649 010 546 450	450	4	6
649 010 546 495	495	4	6

ST-49 Ball type nozzle, 30°

Made out of wear-resistant, hardened stainless steel provided with front jet insert or blind plug (interchangeable). Angle of jet is 30°, sturdy wall thickness, long service life and a minimum of wear and tear. All nozzles are provided with hardened stainless steel inserts. Due to this feature the efficiency is considerably higher compared with those nozzles with drilled holes and the service life is several times longer.
Max. 500 bar

Applications:
- » Suitable for removal of sludge deposits
- » Desilting of pipes
- » Opening of frozen pipelines

1/4" F.
Outside ⌀ 25 mm.
6 rear jets, with front jet

R+M Nr.	D
649 030 216 060	060
649 030 216 080	080
649 030 216 100	100
649 030 216 120	120
649 030 216 150	150
649 030 216 200	200

3/8" F.
Outside ⌀ 30 mm.
4 rear jets, with front jet

R+M Nr.	D
649 030 314 060	060
649 030 314 080	080
649 030 314 100	100
649 030 314 120	120
649 030 314 150	150
649 030 314 200	200

3/8" F.
Outside ⌀ 30 mm.
6 rear jets, with front jet

R+M Nr.	D
649 030 316 060	060
649 030 316 080	080
649 030 316 100	100
649 030 316 120	120
649 030 316 150	150
649 030 316 200	200

1/2" M. MR cone.
Outside ⌀ 30 mm.
6 rear jets, with front jet

R+M Nr.	D
649 040 416 060	060
649 040 416 080	080
649 040 416 100	100
649 040 416 120	120
649 040 416 150	150
649 040 416 200	200

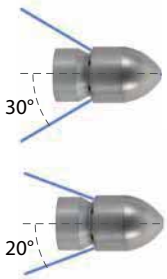
1/2" F.
Outside ⌀ 30 mm.
6 rear jets, with front jet

R+M Nr.	D
649 030 416 060	060
649 030 416 080	080
649 030 416 100	100
649 030 416 120	120
649 030 416 150	150
649 030 416 200	200
649 030 416 315	315

3/4" F.
Outside ⌀ 38 mm.
6 rear jets, with front jet

R+M Nr.	D
649 030 516 100	100
649 030 516 120	120
649 030 516 150	150
649 030 516 170	170
649 030 516 200	200
649 030 516 250	250

Jet angle INFO



30° = more efficient wall cleaning

20° = better traction

Symbols D nozzle outlet inlet

ST-49 Ball type nozzle, 20°

Made out of wear-resistant, hardened stainless steel provided with front jet insert or blind plug (interchangeable). Angle of jet is 20°, sturdy wall thickness, long service life and a minimum of wear and tear. All nozzles are provided with hardened stainless steel inserts. Due to this feature the efficiency is considerably higher compared with those nozzles with drilled holes and the service life is several times longer.
Max. 500 bar

Applications:
» Suitable for removal of sludge deposits
» Desilting of pipes
» Opening of frozen pipelines

1/4" F.
Outside ⌀ 25 mm.
6 rear jets

R+M Nr.	D
649 090 206 060	060
649 090 206 080	080
649 090 206 100	100
649 090 206 120	120
649 090 206 150	150
649 090 206 200	200

1/4" F.
Outside ⌀ 25 mm.
6 rear jets, with front jet

R+M Nr.	D
649 090 216 060	060
649 090 216 080	080
649 090 216 100	100
649 090 216 120	120
649 090 216 150	150
649 090 216 200	200

3/8" F.
Outside ⌀ 30 mm.
6 rear jets

R+M Nr.	D
649 090 306 060	060
649 090 306 080	080
649 090 306 100	100
649 090 306 120	120
649 090 306 150	150
649 090 306 200	200

3/8" F.
Outside ⌀ 30 mm.
6 rear jets, with front jet

R+M Nr.	D
649 090 316 060	060
649 090 316 080	080
649 090 316 100	100
649 090 316 120	120
649 090 316 150	150
649 090 316 200	200

Coupling-system ST-245

Nipple ST-245

1/4" M.
Stainless steel.
Max. 350 bar

R+M Nr.	↔
040 005 447	27.5

1/4" M.
Stainless steel.
Max. 350 bar

R+M Nr.	↔
040 005 446	33.5

1/4" M. Stainless steel. Max. 350 bar.
For wear cone

R+M Nr.	↔
040 005 445 **3**	42.0

ST-245 Coupling / wear cone ST-245

R+M Nr.	
200 245 500 **1**	1/4" F

R+M Nr.	
200 245 510 **1**	3/8" M

For 040 005 445

R+M Nr.	
040 005 431 **2**	

4

Suitable for all 1/4" F nozzles for sewer cleaning.

Small plough jet nozzle

For 2 fan jets 1/4" M NPT

Fitted with two rear facing fan jets the small plough jet nozzle is great for desilting drains and sewers. The heavy forged brass construction keeps the jet firmly planted in the base of the pipe where the silt deposits collect and blasts them back towards the manhole.
Width approx. 72 mm. Weight 1.5 kg.
Max. 420 bar / 150° C / 80 l/min.
1/4"-nozzles need to be assembled under 45° to achieve best cleaning results. Select nozzle size according to pressure and flow rate of the machine.

R+M Nr.		
010 000 399	1/2" F	2 x 1/4" F NPT

For 2 ST-357 rotating nozzles

Fitted with two rear facing ST-357 rotating nozzles the small plough jet nozzle is the ideal solution for desilting drains and sewers.
The heavy forged brass construction keeps the jet firmly planted in the base of the pipe where the silt deposits collect and blasts them back towards the manhole.
Width approx. 88 mm. Weight 2.5 kg.
Max. 350 bar / 90° C / 80 l/min.
Select rotor nozzle size symmetric according to pressure and flow rate of the machine.

R+M Nr.		
200 049 410	3/8" F	2 x 1/4" M

Our rotating nozzles are on page 269.

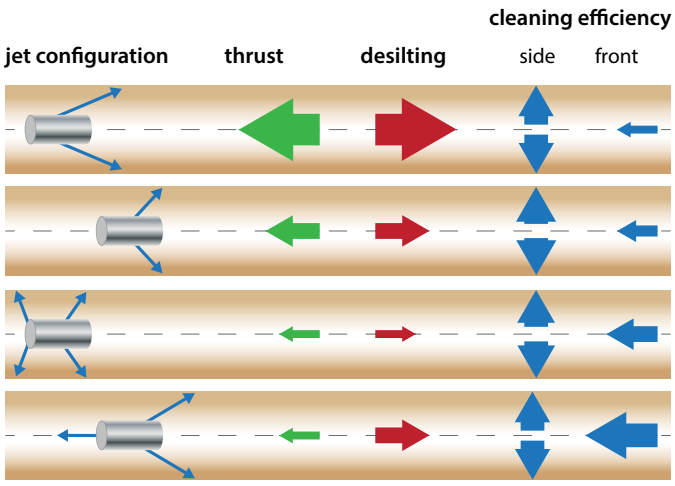
Rotating nozzle adaptor

Designed for connecting the ST-357 rotating nozzle to a sewer cleaning hose. Hardened stainless steel body with extra sharp edges.
Max. 400 bar

For ST-357 rotating nozzle

R+M Nr.		
200 049 400	1/4" F	1/4" M

Possible jet configurations



Jetter Valves

Jetter valves are special valve assemblies which allow to shut off one particular intake valve.
The jetter valve cuts off the flow of one of the three pistons of the jetter pump. Due to this the pump starts pulsating which causes significant vibrations at the nozzle and an increased cleaning effect at a reduced flow rate (approx. -1/3 of the full flow rate of the pump).
Jetter valves create vibrations to help the hose sliding around tight bends in small lines.
Jetter valves should not be combined with pulsation dampers in one jetter unit.
Pulsation can be started or stopped by a lever or hand wheel at the jetter valve.

R+M Nr.	TYP
170 402 35	XT, XM
170 401 61	RK
170 402 36	XW

Tip cleaner

High speed steel (HSS) with aluminium shaft.
↔ 42 mm

R+M Nr.	⌀
200 049 042	0.5

Drain jet extension

Lance with female thread

1/4" M : 1/4" F BSP. Drain jet extension for cleaning pipes and shafts of large diameter to prevent reversal in direction of travel.
Max. 400 bar

R+M Nr.	↔	M
070 000 097	100 mm	stainless steel
070 000 098	150 mm	stainless steel
070 000 099	200 mm	stainless steel
070 000 095	250 mm	stainless steel
070 000 101	350 mm	stainless steel

Sting extension

Hardened stainless steel.
For M5 nozzle bodies

R+M Nr.	○
040 075 090	M5 M

Functional principle

Symbols ⟲ outlet ⟳ inlet ⌀ diameter TYP type ↔ length M material

ST-49.2 Rotating nozzles

Stainless steel. Brazen rotating body. Excellent cleaning by rotating nozzle jets. Exchangeable inserts included.

Excellent pulling power by min. 4 return beams specially placed. Pressure max. 350 bar.

1/4" F. 4 rear jets. 3 side jets.
Outside ⌀ 30 mm.
317 g.

R+M Nr.	D	↔
649 050 234 060	060	69 mm
649 050 234 080	080	69 mm
649 050 234 105	105	69 mm
649 050 234 130	130	69 mm
649 050 234 150	150	69 mm
649 050 234 200	200	69 mm

3/8" F. 4 rear jets. 3 side jets.
Outside ⌀ 30 mm.
307 g.

R+M Nr.	D	↔
649 050 334 080	080	69 mm
649 050 334 105	105	69 mm
649 050 334 130	130	69 mm
649 050 334 150	150	69 mm
649 050 334 200	200	69 mm
649 050 334 250	250	69 mm

1/2" F. 5 rear jets. 3 side jets.
Outside ⌀ 38 mm.
585 g.

R+M Nr.	D	↔
649 050 435 100	100	84 mm
649 050 435 120	120	84 mm
649 050 435 150	150	84 mm
649 050 435 200	200	84 mm
649 050 435 250	250	84 mm
649 050 435 300	300	84 mm

3/4" F. 6 rear jets. 3 side jets.
Outside ⌀ 38 mm.
554 g.

R+M Nr.	D	↔
649 050 536 130	130	84 mm
649 050 536 150	150	84 mm
649 050 536 200	200	84 mm
649 050 536 250	250	84 mm
649 050 536 300	300	84 mm
649 050 536 375	375	84 mm

ST-49.2 VIBRA Rotating nozzles

Stainless steel. Brazen rotating body. Excellent cleaning by rotating nozzle jets and vibration for the reduction of the friction between hose and pipe wall. Exchangeable inserts included.

Excellent pulling power by min. 4 return beams specially placed. Pressure max. 350 bar.

1/4" F. 4 rear jets. 3 side jets.
Outside ⌀ 30 mm.
314 g.

R+M Nr.	D	↔
649 070 234 060	060	69 mm
649 070 234 080	080	69 mm
649 070 234 105	105	69 mm
649 070 234 130	130	69 mm
649 070 234 150	150	69 mm
649 070 234 200	200	69 mm

3/8" F. 4 rear jets. 3 side jets.
Outside ⌀ 30 mm.
305 g.

R+M Nr.	D	↔
649 070 334 080	080	69 mm
649 070 334 105	105	69 mm
649 070 334 130	130	69 mm
649 070 334 150	150	69 mm
649 070 334 200	200	69 mm
649 070 334 250	250	69 mm

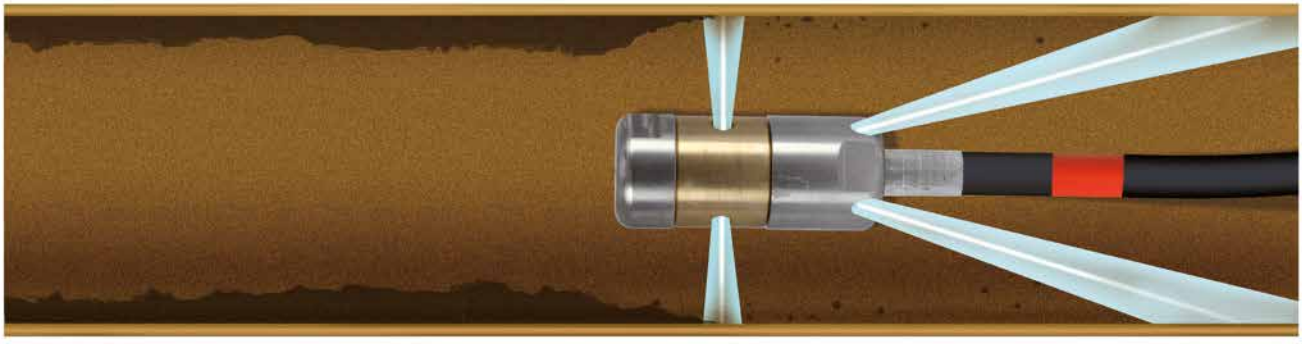
1/2" F. 5 rear jets. 3 side jets.
Outside ⌀ 38 mm.
580 g.

R+M Nr.	D	↔
649 070 435 100	100	84 mm
649 070 435 130	130	84 mm
649 070 435 150	150	84 mm
649 070 435 200	200	84 mm
649 070 435 250	250	84 mm
649 070 435 300	300	84 mm

3/4" F. 6 rear jets. 3 side jets.
Outside ⌀ 38 mm.
550 g.

R+M Nr.	D	↔
649 070 536 130	130	84 mm
649 070 536 150	150	84 mm
649 070 536 200	200	84 mm
649 070 536 250	250	84 mm
649 070 536 300	300	84 mm
649 070 536 375	375	84 mm

Functional principle



Driver for rotating nozzles

Rotor nozzle driver and rotor nozzles are the perfect combination for drilling through blockages with its rotary forward facing jet. Driven up to the blockage by 6 powerful rear facing hardened stainless steel nozzles the high speed forward facing spinning jet creates a cone shape that has enough cutting force to blast through roots and scale. It is also ideal for cutting up and shredding tissue and fat deposits

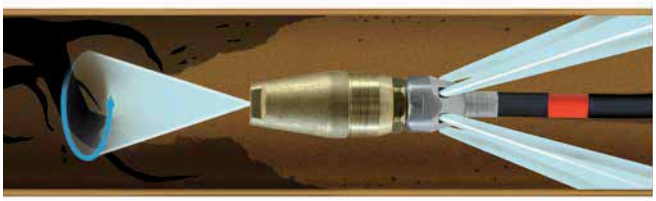
For ST-357/ST-456 rotating nozzles. Hardenened stainless steel. Max. 350 bar. 1/4" M and 6 M5 threads for nozzle inserts (see table below).

R+M Nr.	
040 075 200	1/4" F
040 075 205	3/8" F

For ST-458/ST-559 rotating nozzles. Hardenened stainless steel. Max. 500 bar. 1/4" M and 6 M5 threads for nozzle inserts (see table below).

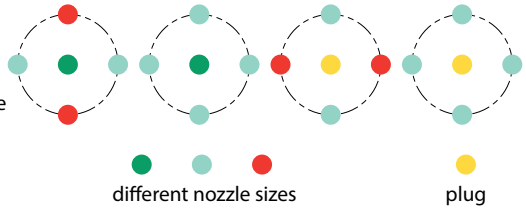
R+M Nr.	
040 075 210	3/8" F
040 075 215	1/2" F

Functional principle



Nozzle configuration

Nozzle inserts for sewer cleaning nozzles and nozzle driver have to be installed **symmetrically.**



Nozzle Inserts

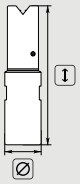
Full jet. 500 bar.
Hex for allen key 2.5 mm.
Hardened stainless steel

R+M Nr.	TYP	hole-⌀	nozzle size
040 075 000	M5	plug	0
040 075 005	M5	0.5 mm	0066
040 075 006	M5	0.6 mm	0085
040 075 007	M5	0.7 mm	0117
040 075 008	M5	0.8 mm	0133
040 075 009	M5	0.9 mm	0161
040 075 010	M5	1.0 mm	0237
040 075 012	M5	1.2 mm	0293
040 075 015	M5	1.5 mm	0458
040 075 020	M5	2.0 mm	0885

Symbols TYP type weight ⌀ diameter height length inlet D nozzle

Sewer cleaning nozzles

Rotating nozzles RT . 1,000 bar

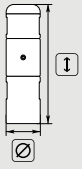


TYP	↕	⌀	⚖
RT 100	50	12	35 g

Stainless steel. Rotating body hp-bronze. Compact model, universally applicable. Extreme cleaning performance, removes hard deposits.
Pressure max. 1,000 bar

R+M Nr.	TYP	⟵	○	side jet	front jet
652 710 006	RT 100	6 l/100 bar	1/8" F	2	2
652 710 014	RT 100	14 l/100 bar	1/8" F	2	2

Rotating nozzles RH . 1,000 bar

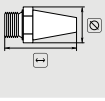


TYP	↕	⌀	⚖
RH 100	63	12	42 g

Stainless steel. Rotating body hp-bronze. Compact model, universally applicable. Extreme cleaning performance, removes hard deposits.
Pressure max. 1,000 bar

R+M Nr.	TYP	⟵	○	side jet
652 810 006	RH 100	6 l/100 bar	1/8" F	2
652 810 010	RH 100	10 l/100 bar	1/8" F	2
652 810 014	RH 100	14 l/100 bar	1/8" F	2

Cone shape nozzles LK . 500 bar *



TYP	↕	⌀	⚖
LK 200	57	17	60 g
LK 400	65	24	200 g
LK 500	75	32	300 g
LK 600	90	41	500 g

Stainless steel. Extremely high impact force. Long reach.
Pressure max. 500 bar. Applications: cleaning of shafts.
Delivery time of approx. 3 - 4 weeks

R+M Nr.	TYP	orifice ⌀	○
652 400 01	LK 200	2 - 5 mm	1/4" M
652 400 02	LK 400	3 - 6 mm	1/2" M
652 400 03	LK 500	3 - 7 mm	3/4" M
652 400 04	LK 600	4 - 8 mm	1" M

Nozzle inserts solid stream VS . 500 bar

TYP	↕	⬡
VS 200	6	2.5
VS 300	8	3.0
VS 400	10	4.0

Stainless steel.
Pressure max. 500 bar

R+M Nr.	TYP	orifice ⌀	○
652 600 02	VS 200	0.6 - 2.0 mm	M6
652 600 03	VS 300	0.6 - 2.5 mm	M8
652 600 04	VS 400	0.6 - 3.8 mm	M10

*** When placing an order, please state flow rate + pressure!**

Symbols TYP type ○ thread R pipe ⟵ flow ⚖ weight ⌀ diameter ↔ length mm ⟃ inlet ↕ height

Egg-type Radial-Nozzles

Best performing and most durable design for higher efficiency.
These are light and agile used as a great all around nozzle with replaceable inserts. They include a forward jet.
The egg-type radial nozzle is wear resistant and cost competitive. Great for sanitary applications. With unrivaled cleaning power on heavy encrusted grease and sludge, hardened stainless steel body and replaceable nozzle inserts for longer life.

The ideal tool for the toughest applications of hard grease and scale that may be encrusted on the interior wall of the pipe.
Material: Hardened stainless steel.
Max. 500 bar / 150 °C

1/4" F. 6x 75° 3x 30° +1x 0°.
25-70 l/min. For R ⌀ 75-150 mm.
Outside ⌀ 30 mm. 223 g.

R+M Nr.	D	↔
649 110 219 065	065	50
649 110 219 080	080	50
649 110 219 100	100	50
649 110 219 120	120	50
649 110 219 150	150	50
649 110 219 200	200	50

3/8" F. 6x 75° 3x 30° +1x 0°.
30-100 l/min. For R ⌀ 100-200 mm.
Outside ⌀ 35 mm. 314 g.

R+M Nr.	D	↔
649 110 319 065	065	55
649 110 319 080	080	55
649 110 319 100	100	55
649 110 319 120	120	55
649 110 319 150	150	55
649 110 319 200	200	55

1/2" F. 6x 75° 3x 30° +1x 0°.
80-140 l/min. For R ⌀ 120-250 mm.
Outside ⌀ 40 mm. 630 g.

R+M Nr.	D	↔
649 110 419 080	080	70
649 110 419 100	100	70
649 110 419 120	120	70
649 110 419 150	150	70
649 110 419 200	200	70
649 110 419 250	250	70

3/4" F. 6x 75° 3x 30° +1x 0°.
100-250 l/min. For R ⌀ 150-300 mm.
Outside ⌀ 50 mm. 1,367 g.

R+M Nr.	D	↔
649 110 519 100	100	100
649 110 519 120	120	100
649 110 519 150	150	100
649 110 519 200	200	100
649 110 519 250	250	100
649 110 519 300	300	100

Egg-type Nozzles

Best performing and most durable design for higher efficiency.
These are light and agile used as a great all around nozzle with replaceable inserts. They include a forward jet. The egg-type nozzle is wear resistant and cost competitive. Great for sanitary applications.

Threaded inserts can easily be serviced/replaced for longer life span.
Material: Hardened stainless steel.
Max. 500 bar / 150 °C

1/4" F. 6x 75° +1x 0°.
20-50 l/min. For R ⌀ 50-100 mm. Outside ⌀ 30 mm.
127 g.

R+M Nr.	D	↔
649 120 216 065	065	40
649 120 216 080	080	40
649 120 216 100	100	40
649 120 216 120	120	40
649 120 216 150	150	40
649 120 216 200	200	40

3/8" F. 6x 75° +1x 0°.
25-70 l/min. For R ⌀ 75-150 mm. Outside ⌀ 35 mm.
207 g.

R+M Nr.	D	↔
649 120 316 065	065	50
649 120 316 080	080	50
649 120 316 100	100	50
649 120 316 120	120	50
649 120 316 150	150	50
649 120 316 200	200	50

1/2" F. 6x 75° +1x 0°.
30-100 l/min. For R ⌀ 100-200 mm. Outside ⌀ 40 mm.
281 g.

R+M Nr.	D	↔
649 120 416 080	080	55
649 120 416 100	100	55
649 120 416 120	120	55
649 120 416 150	150	55
649 120 416 200	200	55
649 120 416 250	250	55

3/4" F. 6x 75° +1x 0°.
30-100 l/min. For R ⌀ 120-250 mm. Outside ⌀ 50 mm.
567 g.

R+M Nr.	D	↔
649 120 516 100	100	70
649 120 516 120	120	70
649 120 516 150	150	70
649 120 516 200	200	70
649 120 516 250	250	70
649 120 516 310	310	70

1" F. 8x 75° +1x 0°.
100-250 l/min. For R ⌀ 150-300 mm. Outside ⌀ 62 mm.
1,265 g.

R+M Nr.	D	↔
649 120 618 100	100	100
649 120 618 120	120	100
649 120 618 150	150	100
649 120 618 210	210	100
649 120 618 260	260	100
649 120 618 320	320	100