



















2020

## Legend

	Connecting thread (inch)
	Application range (inch)
	min. G/Min. at 1450 psi   min. G/Min. at 14'500/22'000 psi
	Rotating nozzles
	Thrust jet
	Front jet
	Jet angle backward
	Jet angle forward
	Measures [inch]
	Weight [lb.]
	Recycling
	Maximum pressure (psi)
	optional front jet
	Pass (inch)
	Wrench size (inch)
	Available bore diameter (inch)

# General terms of sale and delivery

## General Information

enz® usa inc. / enz® technik ag offers a large range of high quality pipe cleaning tools. Since 1985, through innovative designs, we have assisted the sewer and pipe cleaning industry to remain on the forefront of new and creative technologies. This ensures superior quality and gives you, the customer, a product that is efficient and durable. We are interested in being your Partner and helping you find the best solution for your problems. With our know-how and efforts we will accept any new challenges to help keep you on the forefront of the newest techniques available.

## The enz® products

All enz® tools are calibrated to Customer specific Pump and Hose specifications with our own JetCalc® Software to optimize the performance of your tool.

The enz® rotating nozzles are remarkable for their tremendous cleaning efficiency, which is based on a worldwide patented Drive and Brake jets design which increases and decreases the rotational speed with every half rotation therefore limiting the rotational speed.

The resulting pressure vibrations essentially contribute to the disintegration of the deposits. We also carry a complete line of Rotating Chain Scrapers and Percussion Milling Cutters. Our ceramic orifice inserts ensure that enz® tools have an outstanding durability. Our products are covered by International patents.

## Warranty / Safety / Liability

enz® Pipe and Canal Cleaning Tools are designed for highest possible performance. The materials and the heat treatment processes are selected for wear resistance and long life. enz® is applying the most up to date manufacturing and quality assurance methods.

The enz® organization is ISO 9001 and ISO 14001 compliant.

General Tool Warranty: enz® warrants the quality of all tools supplied for the duration of 12 months from date of purchase. The warranty is limited to the replacement of faulty parts or the in house repair of faulty tools. No warranty is accepted if tools are not used or maintained in strict compliance with the operating manual supplied by enz®.

Warranty on ceramic nozzle inserts: The orifice diameters of enz® ceramic nozzles are warranted for wear for the duration of 5 years from the date of purchase when used with potable water. And 2 years from the date of purchase when used with recycled water. The warranty is limited to the free of charge exchange of worn inserts.

Warranty on Bulldog® nozzles: enz® warrants the internal mechanics of the Bulldog® nozzles for 1 year. No warranty on excessive wear of head or skid body due to prolonged or abusive use. Despite all due care, this documentation may contain errors. enz® technik ag and/or its Subsidiaries shall not be liable for any consequential damage. Technical modifications are reserved.

Our Distributor Network covers the United States and Canada

enz® usa inc  
1585 Beverly Ct.  
Unit 115  
Aurora, IL 60502  
Tel. 630-692-7880  
Fax 630-692-7885  
salesusa@enz.com  
www.enz.com

**STANDARD NOZZLES**

**5**

**ROTATING NOZZLES**

**27**

**ULTRA HIGH PRESSURE**

**64**

**WIRE ROPE AND CHAIN SCRAPERS**

**84**

**CUTTERS**

**95**

**ACCESSORIES**

**108**



# Standard cleaning nozzles

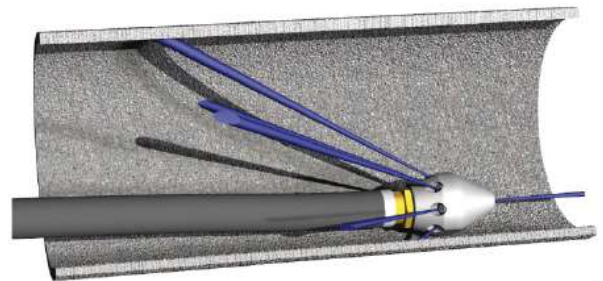
Made of wear-resistant, hardened steel, provided with front jet insert and blind plug (interchangeable). Angle of jet backwards, sturdy wall thickness, long service life and a minimum of wear and tear.

All nozzles from art. 30.038 onward are provided with steelceramic inserts.

Because of this, the efficiency is considerably higher compared with those nozzles with drilled holes and the service life is several times longer.












## Applications

- Appropriate for removal of sludge deposits and cloggings














**Silverline standard cleaning nozzles 1/8" NPT**



											
30.012NSL10	1/8" NPT	0.8 - 4	2.6	4 x 0.75	-	25°		0.5 x 0.7	0.02	-	5,000
30.012NSL10F	1/8" NPT	0.8 - 4	2.6	4 x 0.75	1 x 0.60	25°	0°	0.5 x 0.7	0.02	-	5,000
30.012NSL15	1/8" NPT	0.8 - 4	4	4 x 0.90	-	25°		0.5 x 0.7	0.02	-	5,000
30.012NSL15F	1/8" NPT	0.8 - 4	4	4 x 0.90	1 x 0.60	25°	0°	0.5 x 0.7	0.02	-	5,000












**Silverline standard cleaning nozzles 1/4" NPT**



											
30.0253NSL10F	1/4" NPT	1.2 - 4.3	2.6	3 x 0.80	1 x 0.80	25°	0°	0.7 x 0.8	0.04	-	5,000
30.0253NSL15	1/4" NPT	1.2 - 4.3	4	3 x 1.10	-	25°	-	0.7 x 0.8	0.04	-	5,000
30.0253NSL15F	1/4" NPT	1.2 - 4.3	4	3 x 1.10	1 x 0.80	25°	0°	0.7 x 0.8	0.04	-	5,000
30.0253NSL20F	1/4" NPT	1.2 - 4.3	5.3	3 x 1.20	1 x 0.80	25°	0°	0.7 x 0.8	0.04	-	5,000
30.0256NSL30	1/4" NPT	1.2 - 4.3	8	6 x 1.10	-	25°	-	0.7 x 0.8	0.04	-	5,000
30.0256NSL30F	1/4" NPT	1.2 - 4.3	8	6 x 1.00	1 x 0.80	25°	0°	0.7 x 0.8	0.04	-	5,000












**Silverline standard cleaning nozzles 3/8" NPT**



											
30.038NSL40	3/8" NPT	1.6 - 5.9	11	6 x 1.30	-	25°	-	1.0 x 0.9	0.15	-	5,000
30.038NSL60	3/8" NPT	2 - 6	16	6 x 1.50	-	25°	-	1.0 x 0.9	0.13	-	5,000












**Silverline standard cleaning nozzles 1/2"**



											
30.050SL40	1/2"	2 - 8	11	6 x 1.2	-	30°	-	1.2 x 1.1	0.26	-	5,075
30.050SL40F	1/2"	2 - 8	13	6 x 1.2	1 x 1.1	30°	-	1.2 x 1.1	0.26	-	5,075
30.050SL70	1/2"	2 - 8	18	6 x 1.6	-	30°	-	1.2 x 1.1	0.26	-	5,075
30.050SL70F	1/2"	2 - 8	21	6 x 1.6	1 x 1.4	30°	-	1.2 x 1.1	0.26	-	5,075
35.050SL40	1/2"	2 - 8	11	6 x 1.1	3 x 1.00	30°	15°	1.2 x 1.1	0.26	-	5,075
35.050SL70	1/2"	2 - 8	18	6 x 1.4	4 x 1.1	30°	15°	1.2 x 1.1	0.26	-	5,075

**Standard cleaning nozzles 3/8" NPT - 1 1/4"**



											
30.038N	3/8" NPT	2 - 6	3	6 x M4	1 x M4	30°	-	1.0 x 1.5	0.15	ok	5,000
30.050	1/2"	2 - 8	8	6 x M6	1 x M6	30°	-	1.2 x 1.9	0.26	ok	5,075
30.050EI	1/2"	2 - 8	8	6 x M6	1 x M6	25°	-	1.6 x 1.9	0.55	ok	5,075
30.075	3/4"	2 - 10	13	8 x M6	1 x M6	30°	-	1.5 x 2.4	0.53	ok	5,075
30.100	1"	6 - 14	32	8 x M8	1 x M8	30°	-	2.4 x 3.3	1.55	ok	3,625
30.100SP20	1"	6 - 14	32	8 x M8	1 x M8	20°	-	2.4 x 3.3	1.55	ok	3,625
30.125	1 1/4"	8 - 16	53	8 x M8	1 x M8	30°	-	2.7 x 4.1	3.02	ok	3,625
35.038N	3/8" NPT	2 - 6	3	6 x M4	4 x M4	30°	15°	1.0 x 1.6	0.15	ok	5,000
35.050	1/2"	2 - 8	13	6 x M6	3 x M4, 1 x M6	30°	15°	1.2 x 1.9	0.26	ok	5,075
35.050EI	1/2"	2 - 8	13	6 x M6	4 x M4	25°	15°	1.6 x 1.9	0.55	ok	5,075
35.100	1"	6 - 14	32	8 x M8	4 x M8	30°	15°	2.4 x 3.3	1.55	ok	3,625



# Grenade-bomb

This enz® jet nozzle is made of wear-resistant hardened steel. The "grenade" and the "bomb" are joined in the same nozzles. Different jet angles perform together strong traction and effective cleaning. The high efficiency is reached by appropriate water guidance.











Applications

- For removal of loose rubble stone, gravel and soft deposits
- For a previous cleaning before the use of chain flail head or cutter













## Grenade-bombs 1/4" NPT



										
40.025N-10	1/4" NPT	1 - 4	3	4 x 0.80	1 x M4	20°	1.0 x 1.6	0.22	-	5,075
40.025N-30	1/4" NPT	1 - 4	8	4 x 0.80	1 x M4	20°	1.0 x 1.6	0.22	-	5,075
40.025N-40	1/4" NPT	1 - 4	10	4 x 0.80	1 x M4	20°	1.0 x 1.6	0.22	-	5,075











## Grenade-bombs 3/8" NPT - 3/4"



										
40.038N	3/8" NPT	2 - 4	3	6 x M6	1 x M6	25°	1.5 x 3.2	1.15	ok	5,075
40.050	1/2"	2 - 6	8	6 x M8	1 x M8	25°	1.9 x 3.5	1.89	ok	5,075
40.050-SP10	1/2"	3 - 6	8	6 x M8	1 x M8	10°	1.9 x 3.5	1.9	ok	5,075
40.075A	1/2"	3 - 8	26	8 x M8	1 x M8	10° + 30°	2.3 x 4.6	3.37	ok	5,000
40.075A-SP30	1/2"	3 - 8	26	8 x M8	1 x M8	30°	2.3 x 4.6	3.37	ok	5,075
40.075B	3/4"	3 - 8	26	8 x M8	1 x M8	10° + 30°	2.3 x 4.6	3.37	ok	5,000
40.075B-SP30	3/4"	3 - 8	26	8 x M8	1 x M8	30°	2.3 x 4.6	3.37	ok	5,075











## Grenade-bombs 1"



										
40.100A	1"	5 - 12	40	10 x M10	1 x M10	10° + 30°	3.1 x 6.9	10.80	ok	3,625
40.100A-SP10	1"	5 - 12	40	10 x M10	1 x M10	10°	3.1 x 6.9	10.80	ok	3,625
40.100A-SP30	1"	5 - 12	40	10 x M10	1 x M10	30°	3.1 x 6.9	10.80	ok	3,625
40.100B	1"	6 - 16	40	10 x M10	1 x M10	10° + 30°	3.9 x 8.1	17.64	ok	3,625
40.100B-SP10	1"	6 - 16	40	10 x M10	1 x M10	10°	3.9 x 8.1	17.64	ok	3,625
40.100B-SP30	1"	6 - 16	40	10 x M10	1 x M10	30°	3.9 x 8.1	17.64	ok	3,625






**Grenade-bombs 1 1/4"**



										
40.100C	1 1/4"	6 - 16	53	10 x M10	1 x M10	10° + 30°	3.9 x 7.7	17.64	ok	3,625
40.100C-SP10	1 1/4"	6 - 16	53	10 x M10	1 x M10	10°	3.9 x 7.7	17.64	ok	3,625
40.100C-SP20	1 1/4"	6 - 16	53	10 x M10	1 x M10	20°	3.9 x 7.7	17.64	ok	3,625
40.125A	1 1/4"	12 - 24	79	5 x M10, 5 x M10	1 x M10	10° + 30°	4.3 x 8.7	23.15	ok	3,625
40.125A-SP10	1 1/4"	12 - 24	79	10 x M10	-	10°	4.3 x 8.7	23.15	ok	3,625

**Accessory and wearing parts grenade-bombs**



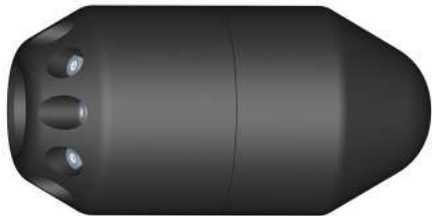
				
40.1004A		Cage with skids (for grenade-bombs up to 10.3 lbs)	7 - 12	2.91
40.1004B		Cage with skids (for grenade-bombs up to 17.8 lbs)	8 - 16	3.35

# 360° Grenade-bombs

This enz® jet nozzle is made of wear-resistant hardened steel. The "grenade" and the "bomb" are joined in the same nozzles. Different jet angles perform together strong traction and effective cleaning. The high efficiency is reached by appropriate water guidance. For optimal all-around cleaning all nozzles are equipped with fan-jet ceramic-steel inserts.











## Applications

- For removal of loose rubble stone, gravel and soft deposits
- For a previous cleaning before the use of chain flail head or cutter
- For an all-around cleaning













## 360° Grenade-bombs 1/2" - 3/4"



										
42.050	1/2"	2 - 6	8	3 x M8, 3 x FanJet M8	1 x M8	25°	1.9 x 3.5	1.89	ok	5,075
42.075A	1/2"	3 - 8	39.6	4 x M8, 4 x FanJet M8	1 x M8	10° + 30°	2.3 x 4.6	3.37	ok	5,075
42.075B	3/4"	3 - 8	39.6	4 x M8, 4 x FanJet M8	1 x M8	10° + 30°	2.3 x 4.6	3.37	ok	5,075

## 360° Grenade-bombs 1" - 1 1/4"



										
42.100A	1"	5 - 12	40	5 x M10, 5 x FanJet M10	1 x M10	10° + 30°	3.1 x 6.9	10.80	ok	3,625
42.100B	1"	6 - 16	40	5 x M10, 5 x FanJet M10	1 x M10	10° + 30°	3.9 x 8.1	17.64	ok	3,625
42.100C	1 1/4"	6 - 16	53	5 x M10, 5 x FanJet M10	1 x M10	10° + 30°	3.9 x 7.7	17.64	ok	3,625
42.125A	1 1/4"	12 - 24	79	5 x M10, 5 x FanJet M10	1 x M10	10° + 30°	4.3 x 8.7	23.15	ok	3,625

# Drainage channel nozzles

The enz® drainage channel nozzle is suited for cleaning drainage gutters and systems, for example along motorways, in pedestrian zones or parkings.

The 0° jets deploy all the cleaning power to the rear, thus preventing contamination of the environment or passing vehicles.

Advantages of the drainage channel nozzle

- No discharge of water from drainage channels
- Optimal flushing performance
- No cleaning of the area after the fact
- The nozzle functions in any position











Applications

- Cleaning of channels with gutters, flushing out of debris, gravel, leaves, straw, etc.



**Drainage channel nozzles 1/2" - 1 1/4"**



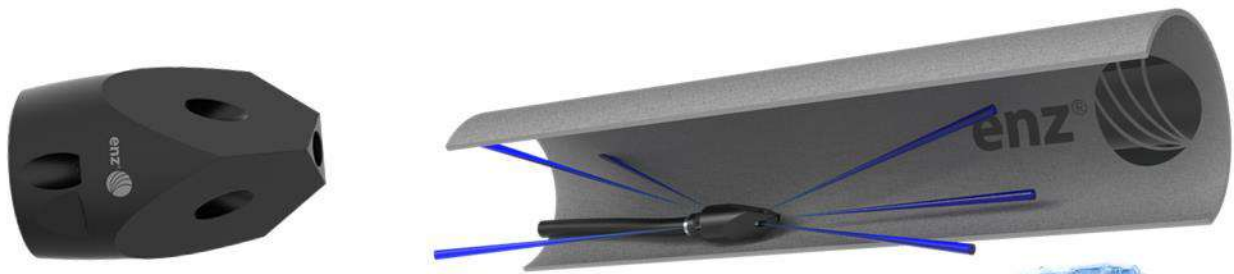
										
40.050-SP0	1/2"	3 - 8	13	6 x M8	1 x M8	0°	1.9 x 3.5	1.75	ok	5,075
40.075A-SP0	1/2"	3 - 8	26	8 x M8	1 x M8	0°	2.3 x 4.6	3.3	ok	5,075
40.075B-SP0	3/4"	3 - 8	26	8 x M8	1 x M8	0°	2.3 x 4.6	3.3	ok	5,075
40.100A-SP0	1"	6 - 12	40	10 x M10	1 x M10	0°	3.1 x 6.9	10.4	ok	3,625
40.125A-SP0	1 1/4"	12 - 34	73	10 x M10	1 x M10	0°	4.3 x 8.7	23.15	ok	3,625

# Chisel point nozzles

Concentrated powerful advance by means of 4 front jet nozzles. The sharp edges cut, break and penetrate through every kind of blockage. Made of wear-resistant, hardened steel. All nozzles from art. 60.050 onward are provided with ceramic inserts. Because of this, the efficiency is considerably higher compared with those nozzles with drilled holes and the service life is several times longer.

## Applications












- Penetrating of completely clogged pipes
- Opening of interlaced roots
- Opening of frozen pipelines
- Flushing out at hydraulic thrust boring
















## Silverline chisel point nozzles 1/8" NPT - 3/4"



											
60.012NSL15	1/8" NPT	1 - 2	4	3 x 0.95	4 x 0.50	25°	15°	0.6 x 1.0	0.04	-	5,075
60.025NSL15	1/4" NPT	1 - 2	4	3 x 0.90	4 x 0.60	25°	15°	0.8 x 1.3	0.06	-	5,075
60.025NSL30	1/4" NPT	1 - 2	8	3 x 1.35	4 x 0.70	25°	15°	0.7 x 1.3	0.06	-	5,075
60.038NSL40	3/8" NPT	1 - 4	11	3 x 1.45	4 x 0.70	20°	15°	1.0 x 1.7	0.15	-	5,075
60.038NSL60	3/8" NPT	1 - 4	16	3 x 1.70	4 x 0.80	20°	15°	1.0 x 1.6	0.15	-	5,075
60.050SL100	1/2"	2 - 6	26	3 x 2.40	4 x 1.10	25°	15°	1.3 x 2.2	0.31	-	5,075
60.050SL40	1/2"	2 - 6	11	3 x 1.50	4 x 0.80	25°	15°	1.3 x 2.2	0.31	-	5,075
60.050SL70	1/2"	2 - 6	18	3 x 1.80	4 x 0.90	25°	15°	1.3 x 2.2	0.31	-	5,075
60.075SL160	3/4"	3 - 10	42	3 x 2.70	4 x 1.80	25°	15°	1.5 x 3.1	0.71	-	5,075
60.075SL200	3/4"	3 - 10	53	3 x 3.10	4 x 1.90	25°	15°	1.5 x 3.1	0.71	-	5,075












## Chisel point nozzles 3/8" NPT - 1 1/4"



											
60.038N	3/8" NPT	1.1 - 3.9	8	3 x M4	4 x M4	20°	15°	1 x 1.7	0.18	ok	5,000
60.050	1/2"	2 - 6	13	3 x M6	4 x M4	25°	15°	1.3 x 2.2	0.31	ok	5,000
60.075	3/4"	2 - 10	26	3 x M6	4 x M4	25°	15°	1.5 x 3.2	0.71	ok	5,075
60.100	1"	4 - 12	40	6 x M6	4 x M6	25°	15°	1.9 x 3.5	1.21	ok	3,625
60.100L	1"	6 - 16	53	6 x M10	4 x M8	25°	15°	2.7 x 7.4	5.95	ok	3,625
60.100L80	1"	6 - 20	53	6 x M10	4 x M8	10°	15°	3.1 x 8.6	10.32	ok	3,625
60.125	1 1/4"	6 - 16	53	6 x M6	4 x M6	20°	15°	2.3 x 3.9	2.12	ok	3,600
60.125L	1 1/4"	8 - 32	79	6 x M10	4 x M8	10°	15°	3.9 x 10.2	18.52	ok	3,625

## Chisel point nozzles with centre spire 1/2" - 1 1/4"



											
61.050	1/2"	2 - 6	13	3 x M6	3 x M4	25°	15°	1.3 x 3.2	0.32	ok	5,075
61.075	3/4"	2 - 10	26	3 x M6	3 x M4	25°	15°	1.5 x 4.1	0.72	ok	5,075
61.100	1"	4 - 12	40	6 x M6	3 x M6	25°	15°	1.9 x 4.9	1.24	ok	3,625
61.100L	1"	6 - 16	53	6 x M10	3 x M8	25°	15°	2.7 x 8.7	5.96	ok	3,625
61.100L80	1"	6 - 20	53	6 x M10	3 x M8	10°	15°	3.1 x 10.2	10.37	ok	3,625
61.125	1 1/4"	6 - 16	53	6 x M6	3 x M6	20°	15°	2.3 x 5.2	2.07	ok	3,625

# Chisel point nozzles



61.125L	1 1/4"	8 - 32	79	6 x M10	3 x M8	10°	15°	3.9 x 11.8	18.57	ok	3,625

## Accessory and wearing parts chisel point nozzles



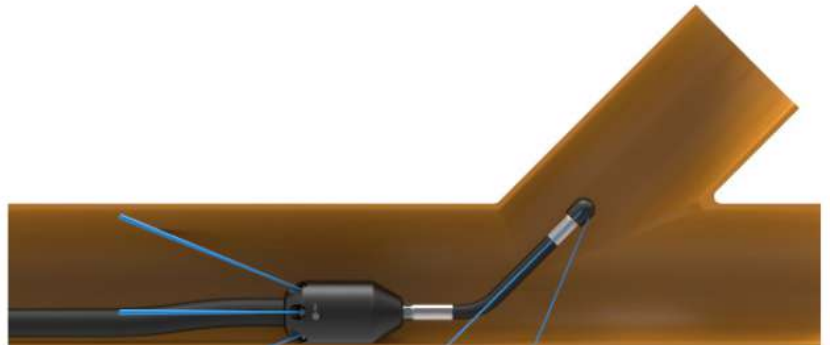
0061.1004		Centre spire for Pointed Nozzle 60.100	M6	0.4 x 1.3	0.22
0061.1254		Centre spire for Pointed Nozzle 60.100L80,	M8	0.4 x 2.0	0.22
0061.0504		Centre spire for Pointed Nozzle 60.050	M4	0.2 x 1.0	0.22

# Guiding nozzles standard

The enz® guiding nozzles standard were developed specifically for targeted cleaning of pipe inlets. They are used in searching for connections in ground lines and can thus prevent the need for cleaning via a household connection, for example. Entrance into the connection is made using a head nozzle on a flexible hose.







## Applications

- For removal of loose rubble stone, gravel and soft deposits





**Guiding nozzles standard 1/2"**



									 max
17.050-001	1/2"	2.4 - 5.9	13	6 x M8	-	1.89 x 10.51	2.09	-	5,075

**Accessory and wearing parts guiding nozzles standard**



95.001		Steering Set to 17.040A/44AE							0.25
--------	---	------------------------------	--	--	--	--	---	--	------

# Flounder

This enz® tool is especially suited to clean flat pipes and channels. The flat design combined with the rounded corners and edges provides the tool with ideal gliding properties.

Ceramic inserts and an optimized flow reversal create compact and aggressive water jets.

The low and compact design facilitates access to a wide variety of pipes and channels.











Applications

- Appropriate for removing mud and loose rubble in flat pipes and channels, e.g. run-off gutters



**Flounder 1/2" - 1 1/4"**



										
70.050	1/2"	6 - 10	16	S1: 2 x M8, S2: 2 x M8	*	S1: 15°, S2: 7.5°	7.7 x 3.5 x 1.4	5.73	ok	3,625
70.075	3/4"	8 - 16	26	S1: 2 x M8, S2: 4 x M8	*	S1: 15°, S2: 0°	7.7 x 3.9 x 2.0	7.06	ok	3,625
70.100	1"	12 - 24	43	S1: 2 x M10, S2: 2 x M10, S3: 4 x M10	*	S1: 15°, S2: 7.5°, S3: 0°	13.4 x 6.3 x 2.2	27.12	ok	3,625
70.125	1 1/4"	16 - 32	66	S1: 2 x M10, S2: 4 x M10, S3: 4 x M10	*	S1: 15°, S2: 7.5°, S3: 0°	15.0 x 7.4 x 2.8	41.89	ok	3,625

# enz®-Bulldozer

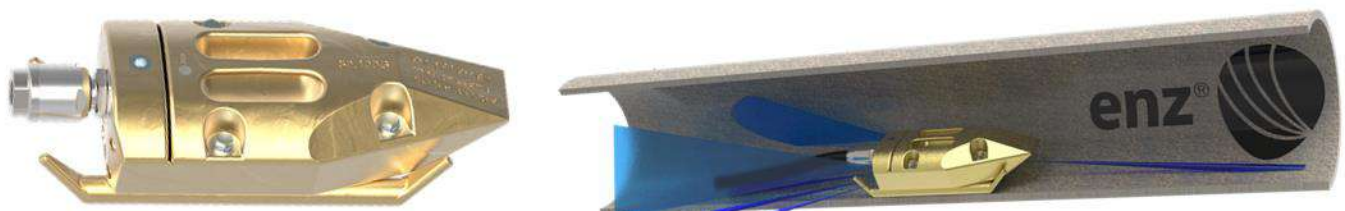
The enz®-Bulldozer nozzles for channels and pipes (8 inch and larger) are setting new performance benchmarks. The tools in the new Scraper system are equipped with a water chamber. The chamber reduces the water turbulence, which is then supplied to the nozzle inserts. The result is a compact, aggressive and most effective water jet not attained up to now.

## Characteristics

- Enormous flushing capacity = reduced water consumption
- Big water acceleration = superb flushing effect
- No swimming-up of the tool = very good cleaning of ground in channels with large water passage










## Applications

- The low and compact construction allows various uses in heavily polluted pipes












## enz®-Bulldozer 3/4" - 1 1/4"



									
50.075G	3/4"	8 - 20	26	4 x M10, 2 x FanJet M10	1 x M10	15.8 x 5.9 x 4.3	26.46	ok	3,625
50.100G	1"	12 - 59	40	6 x M10, 2 x FanJet M10	1 x M10	19.1 x 7.9 x 5.1	56.22	ok	3,625
50.125G	1 1/4"	16 - 98	79	6 x M10, 2 x FanJet M10	1 x M10	23.8 x 9.8 x 6.5	82.67	ok	3,625













## enz®-Bulldozer 1 1/2"



									
50.150	1 1/2"	20 - 177	106	8 x M10, 2 x FanJet M10	1 x M10	27.8 x 11.8 x 6.7	119.05	ok	3,625

## Accessory and wearing parts enz®-Bulldozer



				
0050.1253G		Skid for Scraper 1 1/4"		9.68
0050.0753G		Skid for Scraper 3/4"		2.59
0050.1003G		Skid for Scraper 1"		5.95
0050.15032		Skid right for Scraper 1 1/2"		11.60
0050.07510		Bulldozer flat skid 3/4"		13.01
0050.10010G		Bulldozer flat skid 1"		14.33
0050.12510G		Bulldozer flat skid 1 1/4"		29.98
0050.10012G		Enlargement plate for 50.100G		14.55
0050.1005G		Roll bar	11.7 x 10.8 x 9.1	6.20

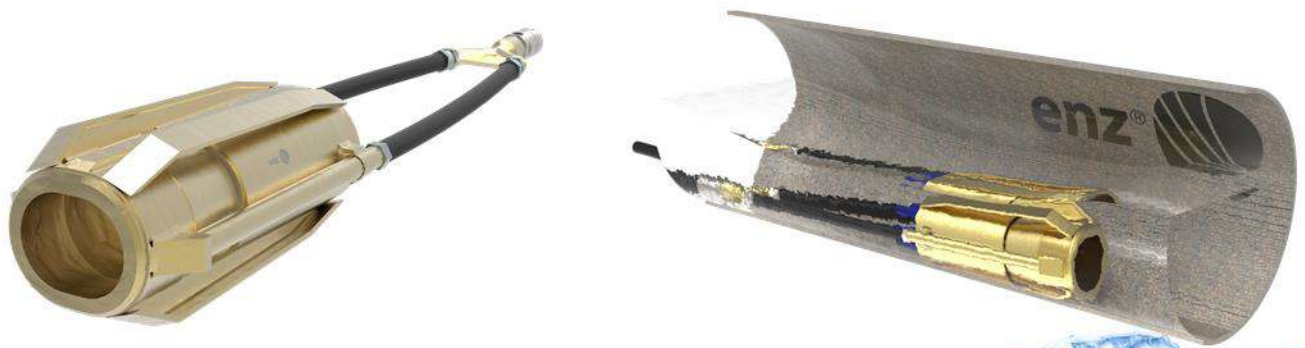


# Ejector nozzles

These enz® tools are outstanding in their enormous flushing capacity. Their main application is cleaning large fully surcharged pipes and drains bigger than Ø19 inch. The specific arrangement of the nozzle inserts ensures that cleaning is done carefully because the nozzle jets do not work directly against the pipe wall. As a result, this tool is also appropriate for cleaning older channel systems. It integrates the heavy water flow in pipes and channels into the flushing and cleaning process. In this way the water volume usable for cleaning is enhanced to five times the actual pump capacity. A pump of 80 gpm increase the flushing capacity of the nozzle to 400 gpm. As a result enormous quantities of sand and gravel can be removed fast and efficiently.

## Applications

- For enormous flushing capacity



**Ejector nozzles 1" - 1 1/4"**



80.100	1"	8 - 20	53	6 x M6	11.8 x 6.3 x 4.7	16.31	ok	2,900
80.100A	1"	16 - 59	79	6 x M10	16.0 x 10.2 x 9.8	49.6	ok	2,900
80.125B	1 1/4"	24 - 79	79	10 x M10	18.9 x 11.8 x 9.8	68.34	ok	2,900
80.125D	1 1/4"	39 - 118	160	10 x M10	22.8 x 14.2 x 12.2	100.31	ok	2,900

**Accessory and wearing parts Ejector nozzles**



0080.10002		Y - Connection 1" - 2 x 1/2"	1" - 2 x 1/2"	0.99
0080.100A02		Y - Connection 1" - 2 x 3/4"	1" - 2 x 3/4"	1.01
0080.125B02		Y - Connection 1 1/4" - 2 x 1"	1 1/4" - 2 x 1"	3.00
0080.10003		HP hose 1/2" - for 80.100	1/2"	4.19
0080.100A03		HP hose 3/4" - for 80.100A	3/4"	4.19
0080.125B03		HP hose 1" - for 80.100B/D	1"	4.19
0080.10001		Swivel Joint for 80.100/A	1"	2.09
0080.12501		Swivel Joint for 80.125B/D	1 1/4"	3.40

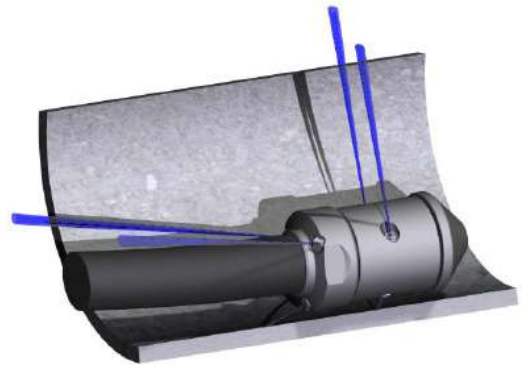
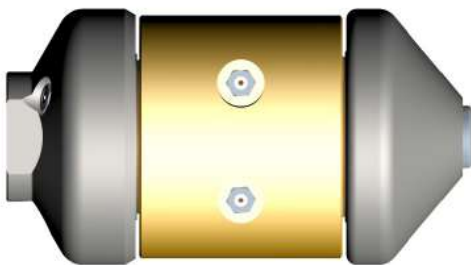


## RGS nozzles

The radial rotating nozzles enz® are equipped with 4 radial jets of 75° for the pipe cleaning and 3 thrust jets for the advance which at the same time flush away the loosened residues. As a result, pipe ducts of all kinds, even with vertical borings etc., will be cleaned. The moving part of the enz® nozzle rotates at a limited speed. These water jets hit the pipe wall directly with great impact, striking every corner, every dead end, every lateral pipe.











### Applications

- Cleaning of drain pipes
- Cleaning of lateral pipes
- Removal of solid deposits



## RGS nozzles 1/4" NPT - 1 1/4"



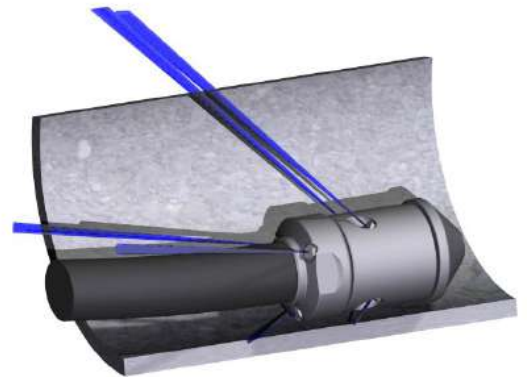
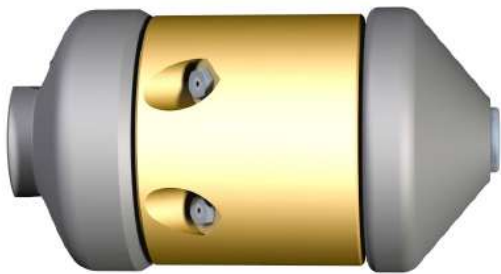
										
01.028N	1/4" NPT	2 - 4	5	4 x M4	3 x M4	*	1.1 x 2.2	0.44	-	5,075
01.040	1/2"	3 - 6	11	4 x M6	3 x M6	*	1.6 x 3.2	1.24	-	5,075
01.050A	1/2"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	5,075
01.050B	3/4"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	3,625
01.060	1"	4 - 12	26	4 x M8	3 x M8	*	2.4 x 4.4	3.53	-	3,625
01.100A	1"	8 - 24	53	4 x M10	3 x M10	*	2.9 x 7.1	16.31	-	3,625
01.100B	1 1/4"	8 - 24	53	4 x M10	3 x M10	*	3.9 x 7.1	16.31	-	3,625

# HRH nozzles

The semi-radial rotating enz® nozzles with their 4 retroacting cutting-jets at an angle of approx. 45° cause simultaneously the cleaning procedure and the thrust for the forward move of the tool i.e. the jets combine rotation and thrust in one function resulting in a low water consumption. With sufficient water capacity, optional thrust jets can facilitate upward cleaning.












## Applications

- Cleaning of pipes before TV-recordings
- To remove mineral deposits in pipes
- To remove roots up to Ø 0.2 inch














## HRH nozzles 1/8" NPT - 3/4"



											
02.016A08N	1/8" NPT	1 - 2	3	2 x 0.8 - 2 x 0.7	-	*	0.6 x 1.2	0.07	-	5,075	
02.016A13N	1/8" NPT	1 - 2	3	2 x 1.3 - 2 x 1.1	-	*	0.6 x 1.2	0.07	-	5,075	
02.016B08N	1/4" NPT	1 - 2	3	2 x 0.8 - 2 x 0.7	-	*	0.6 x 1.2	0.07	-	5,075	
02.016B13N	1/4" NPT	1 - 2	3	2 x 1.3 - 2 x 1.1	-	*	0.6 x 1.2	0.07	-	5,075	
02.028AN	1/4" NPT	2 - 4	2	4 x M4	-	*	1.1 x 2.2	0.45	-	5,075	
02.028ASN	1/4" NPT	2 - 4	3	4 x M4	3 x M4	*	1.1 x 2.2	0.45	-	5,075	
02.028BN	3/8" NPT	2 - 4	2	4 x M4	-	*	1.1 x 2.2	0.45	-	5,075	
02.040A	1/2"	3 - 6	4	4 x M6	-	*	1.6 x 3.2	1.24	-	5,075	
02.040AS	1/2"	3 - 6	11	4 x M6	3 x M6	*	1.6 x 3.2	1.24	-	5,075	
02.040B	3/4"	3 - 6	4	4 x M6	-	*	1.6 x 3.2	1.24	-	3,625	
02.050A	1/2"	4 - 8	11	4 x M6	-	-	2.0 x 3.9	2.43	-	5,075	
02.050AS	1/2"	4 - 8	11	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	5,075	
02.050B	3/4"	4 - 8	11	4 x M6	-	-	2.0 x 3.9	2.43	-	3,625	
02.050BS	3/4"	4 - 8	11	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	3,625	

## HRH nozzles 1" - 1 1/4"



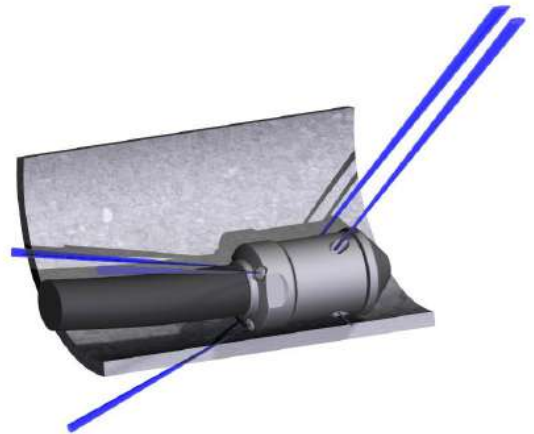
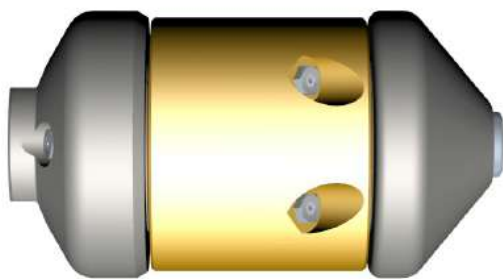
											
02.060	1"	4 - 12	16	4 x M8	3 x M8	*	2.4 x 4.4	3.53	-	3,625	
02.100A	1"	8 - 24	53	4 x M10	3 x M10	*	2.9 x 7.1	16.31	-	3,625	
02.100B	1 1/4"	8 - 24	53	4 x M10	3 x M10	*	3.9 x 7.1	16.31	-	3,625	

# HRV nozzles

enz® nozzles with forward impact angle of approx.  $45^\circ$  on the pipe wall as well as a front jet (on request) and 3 retro-thrust jets cause a cork-screw-like advance through the clogged pipe. While the front nozzles loosens and the semi-radial nozzles disintegrate the residues, the thrust nozzles are driving the nozzle head forwards and simultaneously pushing the waste material backwards.

## Applications











- Core-flushing of the steel pipes during hydraulic thrust-boring
- Cleaning of house connecting pipework from inside to the drain system
- Removal of ice in manholes





**HRV nozzles 1/4" NPT - 1 1/4"**



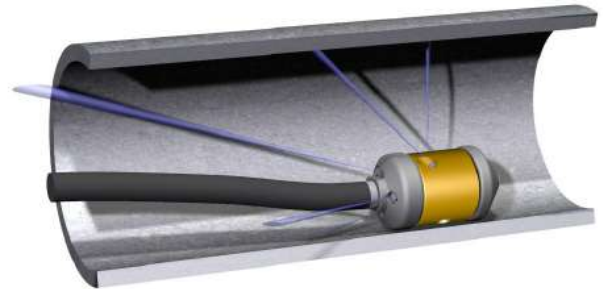
										
03.028N	1/4" NPT	2 - 4	8	4 x M4	3 x M4	*	1.1 x 2.2	0.45	-	5,075
03.040	1/2"	3 - 6	13	4 x M6	3 x M6	*	1.6 x 3.2	1.24	-	5,075
03.050A	1/2"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	5,075
03.050B	3/4"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	3,625
03.060	1"	4 - 12	26	4 x M8	3 x M8	*	2.4 x 4.4	3.53	-	3,625
03.100A	1"	8 - 24	53	4 x M10	3 x M10	*	3.9 x 7.1	16.31	-	3,625
03.100B	1 1/4"	8 - 24	53	4 x M10	3 x M10	*	3.9 x 7.1	16.31	-	3,625

# KBR nozzles

This all round enz® combination nozzle is excellent for flushing out pipes as well as adjoining lateral pipes at any angle. It only requires a very small pump capacity and uses 2 radial jets at a 90° angle to the pipe wall and 2 semi-radial retro-jets at a 45° angle. This combination allows both, a forward thrust of the nozzle and simultaneously, a flushing away of the waste material.











## Applications

- To remove organic deposits
- To clean heat exchangers
- Cleaning of fat deposits













## KBR nozzles 1/8" NPT



										
04.016A07N	1/8" NPT	1 - 2	3	4 x 0.7	-	*	0.6 x 1.2	0.07	-	5,075
04.016A08N	1/8" NPT	1 - 2	3	4 x 0.80	-	*	0.6 x 1.2	0.07	-	5,075
04.016A09N	1/8" NPT	1 - 2	3	4 x 0.90	-	*	0.6 x 1.2	0.07	-	5,075
04.016A10N	1/8" NPT	1 - 2	3	4 x 1.00	-	*	0.6 x 1.2	0.07	-	5,075
04.016A11N	1/8" NPT	1 - 2	3	4 x 1.10	-	*	0.6 x 1.2	0.07	-	5,075
04.016AS07N	1/8" NPT	1 - 2	6	4 x 0.70	3 x 0.80	-	0.6 x 1.2	0.05	-	5,075
04.016AS08N	1/8" NPT	1 - 2	6	4 x 0.80	3 x 0.80	-	0.6 x 1.2	0.05	-	5,075







## KBR nozzles 1/4" NPT



										
04.016B04N	1/4" NPT	1 - 2	3	4 x 0.70	-	*	0.6 x 1.2	0.07	-	5,075
04.016BV07N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 0.70, 45°: 2 x 0.70	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV08N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 0.80, 45°: 2 x 0.80	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV09N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 0.90, 45°: 2 x 0.90	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV10N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 1.00, 45°: 2 x 1.00	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV11N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 1.10, 45°: 2 x 1.10	-	*	0.6 x 1.2	0.06	-	5,000











## KBR nozzles 3/8" NPT



										
04.028BN	3/8" NPT	1 - 4	3	4 x M4	-	*	1.1 x 2.2	0.44	-	5,075











## KBR nozzles 1/2"



										
04.040A	1/2"	3 - 6	5	4 x M6	-	*	1.6 x 3.2	1.19	-	5,075
04.040AS	1/2"	3 - 6	11	4 x M6	3 x M6	*	1.6 x 3.2	1.24	-	5,075
04.050A	1/2"	4 - 8	18	4 x M6	-	-	2.0 x 3.9	2.43	-	5,075
04.050AS	1/2"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	5,075











## KBR nozzles 3/4"



										
04.040B	3/4"	3 - 6	5	4 x M6	-	*	1.6 x 3.2	1.19	-	3,625
04.050B	3/4"	4 - 8	18	4 x M6	-	-	2.0 x 3.9	2.43	-	3,625
04.050BS	3/4"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.9	2.43	-	3,625

## KBR nozzles 1" - 1 1/4"



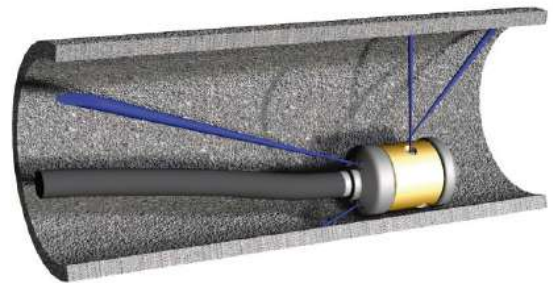
										
04.060	1"	4 - 12	21	4 x M8	3 x M8	*	2.4 x 4.4	3.53	-	3,625
04.100A	1"	8 - 24	53	4 x M10	3 x M10	*	3.9 x 6.9	16.09	-	3,625
04.100B	1 1/4"	8 - 24	53	4 x M10	3 x M10	*	3.9 x 6.9	16.09	-	3,625

# KBRV nozzles

The nozzle enz® KBRV is provided with 2 semi-radial jets directed forward in an angle of 45°. As a result, this nozzle must either be equipped with extra thrust jets or be mounted on a lance. The forward jets desintegrate most any residue and flush the debris ahead of the nozzle.











## Applications

- To remove plastic deposits
- To clean heat exchangers
- Cleaning of fat deposits
- Flushing of the pipes from the house toward the main line













## KBRV nozzles 1/8" - 1/4"



										
04.012NV	1/8" NPT	0.5 - 1.2	3	90°: 2 x 0.85, 45°: 2 x 0.90	-	*	0.5 x 1.2	0.04	-	5,000
04.016AV07N	1/8" NPT	0.7 - 2.4	3	90°: 2 x 0.70, 45°: 2 x 0.70	-	*	0.6 x 1.2	0.06	-	5,000
04.016AV08N	1/8" NPT	0.7 - 2.4	3	90°: 2 x 0.80, 45°: 2 x 0.80	-	*	0.6 x 1.2	0.06	-	5,000
04.016AV09N	1/8" NPT	0.7 - 2.4	3	90°: 2 x 0.90, 45°: 2 x 0.90	-	*	0.6 x 1.2	0.06	-	5,000
04.016AV10N	1/8" NPT	0.7 - 2.4	3	90°: 2 x 1.00, 45°: 2 x 1.00	-	*	0.6 x 1.2	0.06	-	5,000
04.016AV11N	1/8" NPT	0.7 - 2.4	3	90°: 2 x 1.10, 45°: 2 x 1.10	-	*	0.6 x 1.2	0.06	-	5,000
04.016AVS04N	1/8" NPT	0.7 - 2.4	5	90°: 2 x 0.40, 45°: 2 x 0.40	3 x 0.80	*	0.6 x 1.2	0.06	-	5,000
04.016AVS07N	1/8" NPT	0.7 - 2.4	6	90°: 2 x 0.70, 45°: 2 x 0.70	3 x 0.80	*	0.6 x 1.2	0.06	-	5,000
04.016AVS08N	1/8" NPT	0.7 - 2.4	6	90°: 2 x 0.80, 45°: 2 x 0.80	3 x 0.80	*	0.6 x 1.2	0.06	-	5,000
04.016BV07N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 0.70, 45°: 2 x 0.70	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV08N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 0.80, 45°: 2 x 0.80	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV09N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 0.90, 45°: 2 x 0.90	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV10N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 1.00, 45°: 2 x 1.00	-	*	0.6 x 1.2	0.06	-	5,000
04.016BV11N	1/4" NPT	0.7 - 2.4	3	90°: 2 x 1.10, 45°: 2 x 1.10	-	*	0.6 x 1.2	0.06	-	5,000
04.016BVS04N	1/4" NPT	0.7 - 2.4	5	90°: 2 x 0.40, 45°: 2 x 0.40	3 x 0.80	*	0.6 x 1.2	0.06	-	5,000
04.016BVS07N	1/4" NPT	0.7 - 2.4	6	90°: 2 x 0.70, 45°: 2 x 0.70	3 x 0.80	*	0.6 x 1.2	0.06	-	5,000
04.016BVS08N	1/4" NPT	0.7 - 2.4	6	90°: 2 x 0.80, 45°: 2 x 0.80	3 x 0.80	*	0.6 x 1.2	0.06	-	5,000
04.028AVN	1/4" NPT	1.2 - 3.9	5	90°: 2 x M4, 45°: 2 x M4	3 x M4	*	1.1 x 2.2	0.45	-	5,000

## KBRV nozzles 1/2" - 1 1/4"



										
04.040AV	1/2"	3 - 6	8	90°: 2 x M6, 45°: 2 x M6	3 x M6	*	1.6 x 3.2	1.19	-	5,000
04.050AV	1/2"	4 - 8	18	90°: 2 x M6, 45°: 2 x M6	3 x M6	-	2.0 x 3.9	2.43	-	5,000
04.050BV	3/4"	4 - 8	18	90°: 2 x M6, 45°: 2 x M6	3 x M6	-	2.0 x 3.9	2.43	-	3,600
04.060V	1"	4 - 12	26	90°: 2 x M8, 45°: 2 x M8	3 x M8	*	2.4 x 4.4	3.53	-	3,600
04.100AV	1"	8 - 24	53	90°: 2 x M10, 45°: 2 x M10	3 x M10	*	3.9 x 6.9	16.09	-	3,600
04.100BV	1 1/4"	8 - 24	53	90°: 2 x M10, 45°: 2 x M10	3 x M10	*	3.9 x 6.9	16.09	-	3,600

# Bulldog®

The enz® Bulldog® rotating nozzle has been designed for operation with recycling water and fresh water. The cleverly built sliding bearing allows the use of every kind of recycled water. An integrated oil-free braking system results in a low wear and tear operation and in controlled numbers of rotation. In this way a most efficient and economic pipe cleaning is achieved. The bore of the nozzle insert determines the admissible size of the dirt particles up to a maximum Ø 0.05 inch. Transport and water costs are noticeably reduced.

## Characteristics

- Easy to handle
- The tool is practically maintenance-free












## Applications

- To remove fat, roots and harder incrustations
- For operation with recycling water and fresh water





























**Bulldog® low flow 1/4" NPT - 1/2"**

											
408.037	1/2"	1.6 - 5.9	6.3	50°: 2 x M6	-	1 x M6	10°	1.5 x 3.5	0.88	ok	2,900
408.037AN	1/4" NPT	1.6 - 3.9	6.3	50°: 2 x M6	-	1 x M6	10°	1.5 x 3.5	0.88	ok	2,900
408.037BN	3/8" NPT	1.6 - 3.9	6.3	50°: 2 x M6	-	1 x M6	10°	1.5 x 3.5	0.88	ok	2,900

**Bulldog® 1/2" - 3/4"**

												
400.037	1/2"	2 - 8	13	30°: 6 x M6	-	1 x M6		10°	1.5 x 3.4	0.88	ok	2,900
400.037C	3/4"	2 - 8	13	30°: 6 x M6	-	1 x M6		10°	1.5 x 3.5	0.96	ok	2,900
400.037S	1/2"	2 - 8	24	30°: 6 x M6	3 x M4	1 x M6	30°	10°	1.5 x 3.4	0.9	ok	2,900

**Bulldog® with skid 1/2" - 3/4"**

												
401.037	1/2"	2.4 - 8	6.6	80°: 3 x M6	-	-		15°	2.3 x 4.9	1.63	ok	2,900
401.037S	1/2"	2.4 - 8	13.2	80°: 3 x M6	3 x M4	-	30°	15°	2.3 x 4.9	1.63	ok	2,900
404.037	1/2"	2.4 - 8	13	30°: 3 x M6, 80°: 3 x M6	-	-		15°	2.3 x 4.9	1.63	ok	2,900
404.037C	3/4"	2.4 - 8	13	30°: 3 x M6, 80°: 3 x M6	-	-		15°	2.3 x 4.9	1.63	ok	2,900
404.037S	1/2"	2.4 - 8	21	30°: 3 x M6, 80°: 3 x M6	3 x M4	-	30°	15°	2.3 x 4.9	1.63	ok	2,900
406.037	1/2"	2.4 - 8	16	30°: 6 x M6	-	2 x M6		15° + 30°	2.3 x 4.9	1.63	ok	2,900
406.037C	3/4"	2.4 - 8	16	30°: 6 x M6	-	2 x M6		15° + 30°	2.3 x 4.9	1.63	ok	2,900

406.037S	1/2"	2.4 - 8	26	30°: 6 x M6	3 x M4	2 x M6	30°	15° + 30°	2.3 x 4.9	1.63	ok	2,900

**Accessory and wearing parts Bulldog® 1/4" - 3/4"**



00100.03720		Skid for Bulldog 37	# 400.037	1/2"	3 - 9	2.4 x 4.3	0.55
00100.037107		Head Bulldog 1/2" 3x2	# 408.037			1.3 x 0.8	0.13
00100.03720C		Skid for Bulldog 37	# 40x.037c	3/4"	3 - 9	2.4 x 4.3	0.55
00100.037101		Head Bulldog 1/2"	# 400.037, 400.037C, 400.037S			1.3 x 0.8	
00100.037104		Head KBR Bulldog 37	# 401.037, 401.037S, 404.037, 404.037S, 404.037C, 406.037, 406.037S, 406.037C			1.3 x 1.2	0.23

**Bulldog® 3/4" - 1"**



400.060A	3/4"	4 - 12	26	6 x M8	6 x M8	1 x M8	15°	2.4 x 6.0	4.63	ok	2,900
400.060B	1"	4 - 12	26	6 x M8	6 x M8	1 x M8	15°	2.4 x 6.0	4.63	ok	2,900
400.080SET100	1"	8 - 16	53	6 x M10	6 x M8	1 x M10	15°	5.9 x 10.2	12.82	ok	2,900
400.080SET150	1"	8 - 16	53	6 x M10	6 x M8	1 x M10	15°	5.9 x 10.2	12.82	ok	2,900
402.080LS100	1"	5 - 16	53	6 x M10	6 x M8	1 x M10	15°	3.9 x 8.7	8.16	ok	2,900
402.080LS150	1"	7 - 16	53	6 x M10	6 x M8	1 x M10	15°	5.9 x 10.2	12.72	ok	2,900
404.080HS100	1"	5 - 16	53	6 x M10	6 x M8	1 x M10	15°	3.9 x 8.7	8.16	ok	2,900
404.080HS150	1"	7 - 16	53	6 x M10	6 x M8	1 x M10	15°	5.9 x 10.2	12.72	ok	2,900

**Accessory and wearing parts Bulldog® 3/4" - 1"**



00100.0807		Skid guidance for Bulldog 80 / 60	# 400.060, 402.080, 404.080	1"	5 - 16	3.9 x 5.3	2.4	
00100.0808		Skid guidance for Bulldog 80/60	# 402.080, 404.080	1"	7 - 16	5.9 x 7.1	6.3	
00100.08073		Thrust stop with O-Ring and screw	# 402.080, 404.080				0.09	
00400.0605		Head Bulldog 60	# 400.060			2.0 x 1.7	0.71	
00402.0805-4		Head HRH Bulldog 80				2.5 x 2.1	1.48	
00404.0805-12		Head KBR Bulldog 80	# 404.080			2.5 x 2.1	1.52	
100.060300S		Scissors skid with steel wheels		3/4"	12 - 43	12 - 43 x 30	21.2	5,000
100.060300P		Scissors skid with polyurethane wheels		3/4"	12 - 43	12 - 43 x 30	22.2	5,000
100.060300JS		Scissors skid with steel wheels & hand lever		3/4"	12 - 43	12 - 43 x 30	20.4	5,000
100.060300JP		Scissors skid with polyurethane wheels		3/4"	12 - 43	12 - 43 x 30	21.4	5,000
100.060300J		Scissors skid with hand lever		3/4"	12 - 43	12 - 43 x 30	18.8	5,000
100.060300		Scissors skid		3/4"	12 - 43	12 - 43 x 30	19.6	5,000

**Bulldog® 1" - 1 1/4"**



400.101A	1"	10 - 24	53	35°: 3 x M10, 90°: 2 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900
400.101B	1 1/4"	10 - 24	53	35°: 3 x M10, 90°: 2 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900

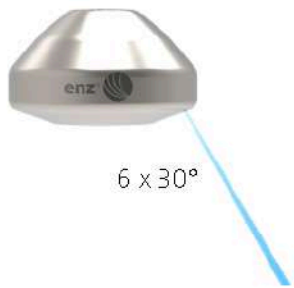
401.101AS	1"	10 - 24	53	80°: 6 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900
401.101BS	1 1/4"	10 - 24	53	80°: 6 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900
404.101AS	1"	10 - 24	53	80°: 3 x M10, 45°: 3 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900
404.101BS	1 1/4"	10 - 24	53	80°: 3 x M10, 45°: 3 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900

**Accessory and wearing parts Bulldog® 1" - 1 1/4"**



100.1019A		BULLDOG Skids for 400.100 8"	# 400.101	1 1/4" m -> 1" f 10 - 31 7.9 x 11.4 11
100.1019B		BULLDOG Skids for 400.100 8"	# 400.101	1 1/4" m -> 1" f 10 - 31 7.9 x 11.4 10.7
00400.1014		Head KBR Bulldog 100	# 400.101	3.1 x 3.0 2.7
00400.1015		Head RGS Bulldog 100	# 401.101, 404.101	3.0 x 3.0 2.4
100.10073		Thrust stop with O-Ring and screw	# 401.101AS/BS	
100.1004RA		Cage 16'		1 1/4" m - 1" f 16 - 39 15.0 x 22.8 22.05
100.1004RAW		Cage 16'		1 1/4" m - 1" f 16 - 39 13.4 x 19.7 21.16
100.1004RB		Cage 16"		1 1/4" m - > 1 1/4" f 16 - 39 15.0 x 22.8 22.05
100.1004RBW		Cage 16"		1 1/4" - 1 1/4" 16 - 39 13.4 x 19.7 21.16

40x.037



40x.101



# Bulldog® Antiblast

Cleaning sewer lines when near home installations brings the risk of pressure equalisation through toilets or stench traps. This comes from negative pressure arising ahead of the nozzle or excess pressure following the nozzle if the installation is not correct or venting is not working properly. It's a very unpleasant surprise when this effect unintentionally turns a toilet into a shower! For this reason, enz® collaborated with a prestigious technical institute to develop and test the Bulldog® Antiblast. The Bulldog® Antiblast prevents this unpleasant side effect and guarantees cleaning in all directions, right down to the pores.












## Advantages

- No pressure equalisation through stench traps or toilets
- Excellent streak-free, all-around cleaning
- Low maintenance, and compatible with recycled water
- Proven design
- Very simple to match to pump capacity
- Scientifically examined and tested



**Bulldog® Antiblast 1" - 1 1/4"**



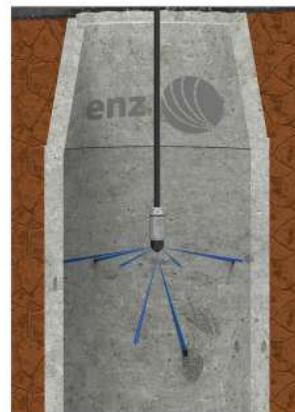
											
600.080	1"	8 - 16	48	6 x M10	6 x M8	1 x M10	15°	3.9 x 8.1	9.39	ok	1,160
600.100A	1"	10 - 24	53	6 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	16.76	ok	1,160
600.100B	1 1/4"	10 - 24	53	6 x M10	6 x M10	1 x M10	15°	5.1 x 10.2	16.76	ok	1,160

# Manhole nozzles

The enz® manhole nozzles are specifically designed for cleaning shafts and vertical pipes. The forward facing water jets provide circumferential cleaning without stripes. The nozzles are self-centering during operation and do not have protruding parts that can cause the nozzle to become wedged on the access ladder. They clean with a front jet on the floor as well and require little space in the cleaning vehicle. Additional advantages include the manhole nozzles having no water loss from leaks and require practically no maintenance. The arduous cleaning with a hand nozzle or a lance is history with the manhole nozzle. Likewise, conical shafts can be cleaned easily.

## Advantages

- Circumferential cleaning of vertical pipes such as shafts or fountains
- Thorough cleaning even of very deep shafts















**Manhole nozzles 1/2" - 3/4"**



										
403.060A	1/2"	24 - 59	26	6 x M8	-	2 x M6	2.4 x 6.1	4.56	ok	2,900
403.060B	3/4"	24 - 59	26	6 x M8	-	2 x M6	2.4 x 6.1	4.56	ok	2,900



**Manhole nozzles 1"**



										
01.100LS	1"	24 - 59	26	4 x M10	-	*	3.9 x 7.0	16.09	-	3,625

**Manhole nozzles 1" - 1 1/4"**



											
401.101A	1"	10 - 79	40	6 x M10	-	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900
401.101B	1 1/4"	10 - 79	40	6 x M10	-	1 x M10	15°	5.1 x 10.2	15.87	ok	2,900

# Rotopuls vibration nozzles

The enz® rotating nozzle is provided with an eccentrically supported rotor, which produces very fast vibrations and pulsating jets. The resulting pulsations become as strong that deposits up to 4 inch thickness are disintegrated.

Thanks to the application of the rotopuls nozzle, the more expensive work with the cutting tools or with the chain flail head can be avoided in many cases.

Important: Rotopuls nozzles develop strong hydraulic impacts and vibrations. This can possibly cause damage in some sort of pipes (e.g. earthenware pipes, thinwalled plastic pipes or badly-bedded PVC pipes).

## Applications

- The Rotopuls nozzles are conceived to remove middle-hard deposits in pipes of plastic, steel or concrete



**Rotopuls 16 1/8" NPT - 1/4" NPT**



04.016ANE08	1/8" NPT	2 - 4	4	4 x 0.8	-	-	0.8 x 1.1	0.06	-	5,075
04.016ANE10	1/8" NPT	2 - 4	4	4 x 1.0	-	-	0.8 x 1.1	0.06	-	5,075
04.016ANES08	1/8" NPT	2 - 4	7	4 x 0.8	3 x 0.8	-	0.8 x 1.2	0.06	-	5,075
04.016ANES10	1/8" NPT	2 - 4	7	4 x 1.0	3 x 0.8	-	0.8 x 1.2	0.06	-	5,075
04.016BNE08	1/4" NPT	2 - 4	4	4 x 0.8	-	-	0.8 x 1.1	0.06	-	5,075
04.016BNE10	1/4" NPT	2 - 4	4	4 x 1.0	-	-	0.8 x 1.1	0.06	-	5,075
04.016BNES08	1/4" NPT	2 - 4	7	4 x 0.8	3 x 0.8	-	0.8 x 1.2	0.06	-	5,075
04.016BNES10	1/4" NPT	2 - 4	7	4 x 1.0	3 x 1.0	-	0.8 x 1.2	0.06	-	5,075

**Rotopuls nozzles 1/4" NPT - 1 1/4"**



01.028ANE	1/4" NPT	2 - 4	3	2 x M4	3 x M4	*	1.1 x 2.2	0.42	-	5,075
02.028ANE	1/4" NPT	1 - 4	2	2 x M4	-	-	1.1 x 2.2	0.40	-	5,075
02.028BNE	3/8" NPT	1 - 4	2	2 x M4	-	-	1.1 x 2.4	0.44	-	5,075
04.040AE	1/2"	3 - 6	5	4 x M4	3 x M6	*	1.6 x 3.2	1.16	-	5,075
04.050AE	1/2"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.8	2.16	-	5,075
04.050BE	3/4"	4 - 8	18	4 x M6	3 x M6	-	2.0 x 3.8	2.16	-	3,625
04.060EK	1"	4 - 12	26	4 x M6	3 x M8	*	2.4 x 4.4	3.53	-	3,625
04.100BE	1 1/4"	8 - 24	53	4 x M10	3 x M10	*	3.9 x 6.9	15.87	-	3,625

**Rotopuls nozzles 3/8" NPT - 1/2"**



01.034ANE	3/8" NPT	1.8 - 6	5	2 x M4	3 x M4	*	1.3 x 2.3	0.49	-	5,075
01.034BE	1/2"	1.8 - 6	5	2 x M4	3 x M4	*	1.3 x 2.3	0.49	-	5,075
04.044AE	1/2"	3 - 6	5	4 x M4	3 x M6	*	1.7 x 3.6	1.32	-	5,075

**Turbopuls 1/2" - 3/4"**



410.060A	1/2"	4 - 8	16	1 x M6	3 x M8	-	2.5 x 7.1	5.29	ok	2,900
410.060B	3/4"	4 - 8	16	1 x M6	3 x M8	-	2.5 x 7.1	5.29	ok	2,900
410.080A	1/2"	6 - 12	21	1 x M6	3 x M8	-	3.1 x 8.3	9.48	ok	2,900
410.080A-G	1/2"	6 - 12	21	1 x M6	3 x M8	-	3.1 x 8.3	9.48	ok	2,900
410.080B	3/4"	6 - 12	21	1 x M6	3 x M8	-	3.1 x 8.3	9.48	ok	2,900
410.080B-G	3/4"	6 - 12	21	1 x M6	3 x M8	-	3.1 x 8.3	9.48	ok	2,900

**Turbopuls 1" - 1 1/4"**



410.120A	1"	8 - 39	40	1 x M8	6 x M10	-	4.7 x 12.6	31.97	ok	2,900
410.120A-W	1"	8 - 39	40	1 x M8	6 x M10	-	4.7 x 12.6	31.97	ok	2,900
410.120B	1 1/4"	8 - 39	40	1 x M8	6 x M10	-	4.7 x 12.6	31.97	ok	2,900
410.120B-W	1 1/4"	8 - 39	40	1 x M8	6 x M10	-	4.7 x 12.6	31.97	ok	2,900

**Accessory and wearing parts Turbopuls**



410.1209		Twinholder for 410.120		1" / 1 1/4"	from 16	2 x 39.63		14.2 15.43 x 27.6		2,900
Rep-410.080B- HS		Turbopuls 3.1"		3/4"	6 - 12	21	1 x M8 3 x M8	-	3.1 x 8.3	9.48 ok 2,900
00410.1205		Impact head standard						4.72 x 2.75	4.63	
00410.12051		Impact head soft		for PVC-pipes				4.72 x 2.75	4.63	
004.0444E		Centre spire for ROTOPULS 04.0444E						0.5 x 1.2	0.04	
00410.08010		Pointed center for Turbopuls Ø 80						0.6 x 2.4	0.15	

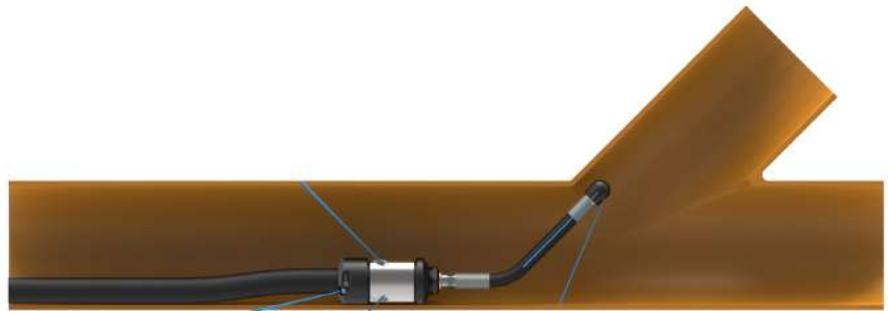
												
00410.12010		Pointed center for Turbopuls Ø 120mm									0.8	0.27
95.F100M075150		HP Textile-Hose	3/4"	m -	1" f						59.1	3.18

# Guiding nozzles rotative

The enz® guiding nozzles rotative were developed specifically for targeted cleaning of pipe inlets. They are used in searching for connections in ground lines and can thus prevent the need for cleaning via a household connection, for example. Entrance into the connection is made using a head nozzle on a flexible hose. The guiding nozzles rotative are available with and without vibration.











## Applications

- Removal of hard deposits in PE, steel and concrete pipes, such as trickle lines




**Guiding nozzle rotative 1/2"**



										
17.040A-001	1/2"	3 - 6	11	4 x M6	3 x M6	-	1.7 x 10.4	1.46	-	5,075

**Vibration guiding nozzle 1/2"**



										
17.044AE-001	1/2"	3 - 6	11	4 x M4	3 x M6	-	1.7 x 11.5	1.54	-	5,075

**Accessory and wearing parts guiding nozzles rotative**



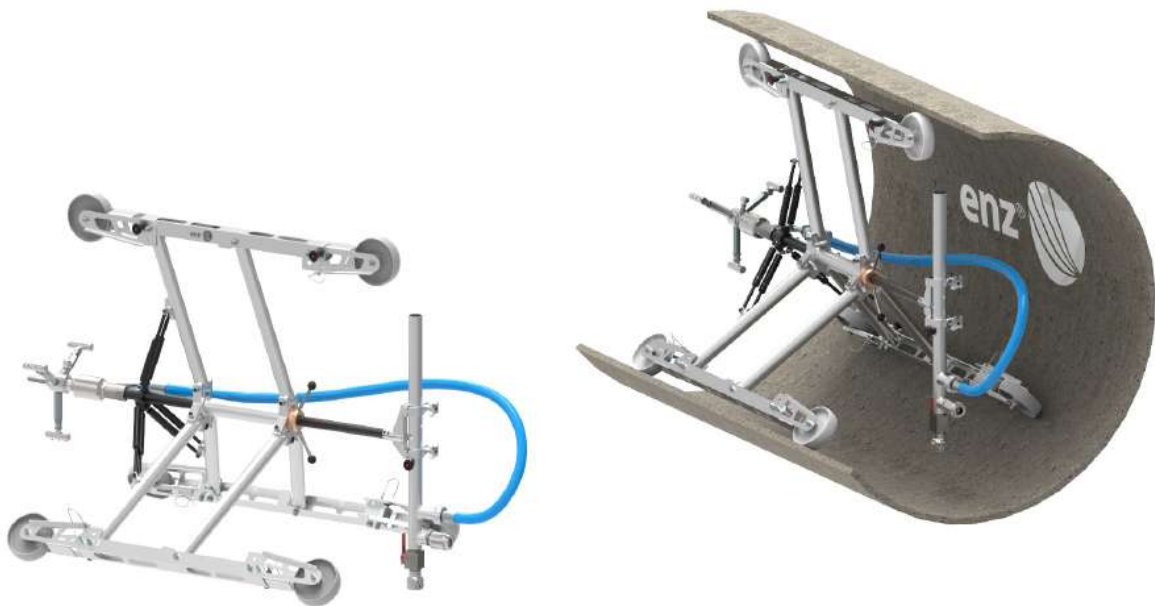
										
95.001								Steering Set to 17.040A/44AE		0.25

# Propeller nozzles

With this enz® tool large channels will be efficiently cleaned. They can be used for dimensions of Ø 24 - 120 inch. The skids are easy to adjust and can even be adapted to clean egg-shaped or oval pipe profiles. The propeller nozzles have been designed for the use of recycling-water, of course they can be used for fresh water as well.

## Applications









- For cleaning large channels





**Propeller nozzles 1" - 1 1/4"**



								
07.2500A	1"	24 - 118	66	10 x M10	7 x M10	132	ok	2,900
07.2500B	1 1/4"	24 - 118	66	10 x M10	7 x M10	132	ok	2,900

# Surface cleaner

## Surface cleaner

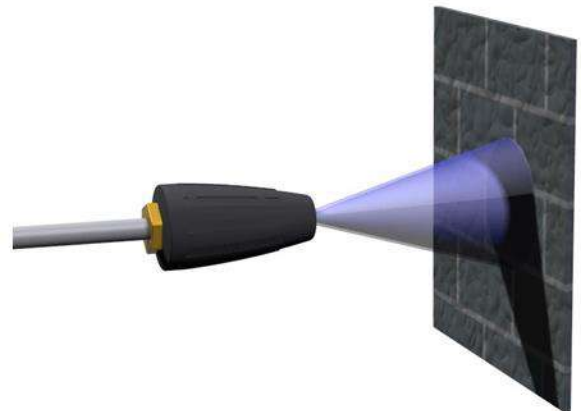
The rotating enz® nozzle for cleaning surfaces is remarkable for its high efficiency. It outperforms conventional flat jet or round jet nozzles with a large margin.

## Turbo Killer

This special nozzle for cleaning surfaces is rotated by the cleaning liquid by means of an impeller. The exhaust axis has an inclination against the central axis of the rotating nozzle, which results in a circular movement.

## Applications

- Surface Cleaner: To remove deposits of concrete-slurry, cleaning of store fronts, steps, walls, traffic signboards etc.
- Turbo Killer: for the cleaning of steps, walls, artificial surfaces, traffic signs, etc.



**Surface cleaner 3/8"**



18.040-NB-0	3/8" NPT	2.3 / 3.4	2 / 4 x M8	2.0 x 4.2	1.59	-	5,000

**Turbo killer 1/4"**



18.020135	1/4"	3	1.35	20°	2.3 x 4.5	1.7	-	5,000
18.020150	1/4"	4	1.50	20°	2.3 x 4.5	1.70	-	5,000
18.020170	1/4"	5	1.70	20°	2.3 x 4.5	1.70	-	5,000
18.020190	1/4"	5	1.90	20°	2.3 x 4.5	1.70	-	5,000

**Accessory and wearing parts Turbo killer**



66.0106.20050		Rebuild kit for 18.041135	0.05
66.0106.20065		Rebuild kit for 18.041150	0.05
66.0106.20080		Rebuild kit for 18.041170	0.05
66.0106.20100		Rebuild kit for 18.041190	0.05

## Rotodrill™












Made of wear-resistant, hardened steel, provided with front jet insert and blind plug (interchangeable). Angle of jet backwards, sturdy wall thickness, long service life and a minimum of wear and tear.

### Applications

- Appropriate for removal of sludge deposits and cloggings












**Rotodrill™ 1/4" NPT - 3/8" NPT**



											
36.025NiREV	1/4" NPT	3 - 6	4	1 x 1.50	-	25°	-	2.7 x 4.1	0.57	-	5,000
36.038NiREV	3/8" NPT	3 - 6	4	1 x 1.50	-	25°	-	2.7 x 4.1	0.57	-	5,000






**Rotodrill™ 3/8" NPT - 1"**



											
36.050	1/2"	2 - 6	13	6 x M4	1 x 0.90 - 1.80	15°	7°	1.3 x 2.2	0.57	-	5,000
36.050-12	1/2"	2 - 6	8	6 x M4	1 x 1.20	15°	7°	1.3 x 2.2	0.57	-	5,075
36.075	3/4"	3 - 8	20	6 x M6	1 x 0.90 - 1.80	30°	7°	1.5 x 3.0	0.75	-	5,000
36.100	1"	4 - 10	27	6 x M8	1 x 2.70	25°	7°	2.2 x 3.7	1.91	-	3,600

**Accessory and wearing parts Rotodrill**



			
66.21040-040		Re-build kit for Rotodrill 36.0xx	0.06
66.21040-060		Re-build kit for Rotodrill 36.0xx	0.06
66.21060-200		Re-build kit for Rotodrill 36.100	0.11

# HydroX

Enz has a very strong range of monojet nozzles. The HydroX nozzle of enz has a very strong performance due to its unique tip. The water jet is very concentrated, resulting in minimal wear. The repair kit is very user friendly, thus allowing a simple repair.



**HydroX 3/8" NPT - 1/2"**



36.038HE235N	3/8" NPT	7	-	2.35	-	7°	1.3 x 2.2	.57	-	5,000
36.050HE235	1/2"	7	-	2.35	-	7°	1.3 x 2.2	.57	-	5,000

**Chisel point nozzle without thrust 1/2"**



60.050WT	1/2"	1.6	-	-	15°	1.3 x 2.2	0.32	ok	5,000

**Accessory HydroX**

66.21040HE-235	Re-build kit for HydroX	0.06

**MJ4**



550.04001	3/8" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04002	3/8" NPT	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04003	1/2" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04004	1/2" NPT	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04005	1/4" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04011	9/16" - 18 UNF LH	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04012	M14 x 1.5 LH	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04015	M26 x 1.5	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500



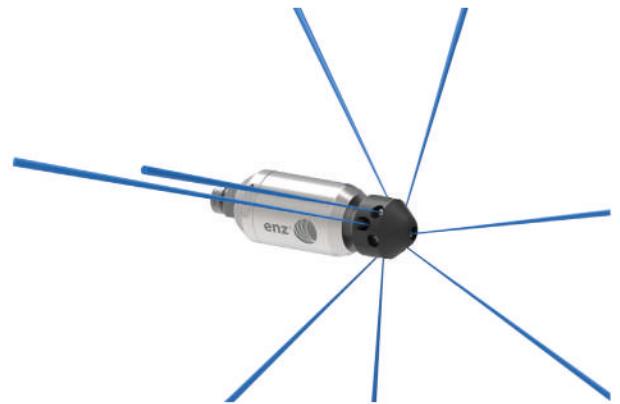


# Bulldog® UHP

The enz® Bulldog® 14,500 psi rotating nozzle is specially designed for internal pipe cleaning up to 14,500 psi. It is suitable for removing even the most stubborn deposits from the pipe walls. Thanks to its clever bearing system, the Bulldog® is virtually leak-free, resulting in higher efficiency. In addition, the forward-facing cross-jet cuts out the material from the blocked pipe like a milling cutter.

## Applications

- Cleaning of heat exchangers in chemical and nuclear plants
- General industrial cleaning
- All in one nozzle: unplugging, polisher, universal



**Bulldog® 37 UHP**



504.037	M24 x 1.5	1.6 - 3.9	6.5	45°: 3 x M6, 75°: 3 x M6	-	-	1.5 x 4.4	1.10	-	14,500
504.037N	1/2" NPT	1.6 - 3.9	6.5	45°: 3 x M6, 75°: 3 x M6	-	-	1.5 x 4.4	1.10	-	14,500
506.037	M24 x 1.5	1.6 - 3.9	6.5	45°: 3 x M6, 75°: 3 x M6	2 x M4	-	1.5 x 4.4	1.10	-	14,500
506.037N	1/2" NPT	1.6 - 3.9	6.5	45°: 3 x M6, 75°: 3 x M6	2 x M4	-	1.5 x 4.4	1.10	-	14,500

**Accessory and wearing parts Bulldog® 37 UHP**



00500.0375	Head UHP Bulldog 37		1.2 x 1.2	0.26
500.037100	Cage for Bulldog 37UHP	3.9 - 9.8	3.0 x 3.5	0.800

**Bulldog® 60 UHP**



501.060	M24 x 1.5	3 - 6	11	80°: 6 x M6	-	-	2.4 x 7.3	5.3	-	14,500
501.060N	1/2" NPT	3 - 6	11	80°: 6 x M6	-	-	2.3 x 7.3	5.31	-	14,500
504.060	M24 x 1.5	3 - 6	11	80°: 3 x M6, 45°: 3 x M6	-	-	2.4 x 7.3	5.31	-	14,500
504.060N	1/2" NPT	3 - 6	11	80°: 3 x M6, 45°: 3 x M6	-	-	2.3 x 7.3	5.31	-	14,500
506.060	M24 x 1.5	3 - 6	11	80°: 3 x M6, 45°: 3 x M6	-	2 x M6	2.4 x 7.3	5.31	-	14,500
506.060N	1/2" NPT	3 - 6	11	80°: 3 x M6, 45°: 3 x M6	-	2 x M6	2.3 x 7.3	5.31	-	14,500

**Accessory and wearing parts Bulldog® 60 UHP**

00500.0608N	M24 x 1.5, 1/2" NPT		6 x M6	1.5 x 2.5	0.69
500.060100		6 - 12		5.3 x 5.5	1.69
00500.06051				2.0 x 1.7	0.827

**UB360**



505.060	M24 x 1.5	11.8 - 43.3	11	6 / 3 x M8	-	-	1.5 x 4.4	5.31	-	14,500

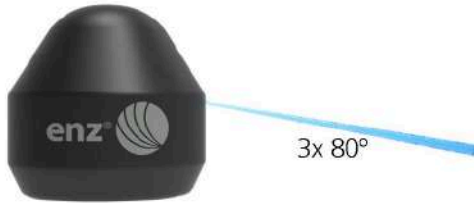
**Accessory and wearing parts UB360**



00500.06009050							
00500.06009120							
00500.06009200							
00500.06009300							
00500.06009400							
00500.0605003					11	14,500	
00500.0605007					21.1	14,500	

00500.0605012		Propeller head RGS 11.5mm UHP Bulldog 60						37	14,500
00500.0609		Triangle strut							
500.060300		Scissors skid UHP	M24 x 1.5	12 - 43		12 - 43 x 30	22		15,000
500.060300J		Scissors skid UHP with hand lever	M24 x 1.5	12 - 43		12 - 43 x 30	21.1		15,000
500.060300JP		Scissors skid UHP with polyurethane wheels	M24 x 1.5	12 - 43		12 - 43 x 30	23.8		15,000
500.060300JS		Scissors skid UHP with steel wheels	M24 x 1.5	12 - 43		12 - 43 x 30	22.5		15,000
500.060300P		Scissors skid UHP with polyurethane wheels	M24 x 1.5	12 - 43		12 - 43 x 30	24.7		15,000
500.060300S		Scissors skid UHP with steel wheels	M24 x 1.5	12 - 43		12 - 43 x 30	23.3		15,000
C360		Pulling eye M10							
500.06009050		Set propeller tube UHP 2"		5.5 - 12					15000 14
500.06009120		Set propeller tube UHP 4.7"		12 - 18					15000 14
500.06009200		Set propeller tube UHP 7.8"		18 - 26					15000 14
500.06009300		Set propeller tube UHP 11.8"		26 - 34					15000 14
500.06009400		Set propeller tube UHP 15.7"		34 - 47					15000 14

50x.0xx



501.xx



504.xx



506.xx

## RGS, HRH, KBR, KBRV UHP









The maximum pressure rotating nozzles enz® are most efficient in cleaning the inside wall of pipes with a pressure up to 1000 bar. They are most appropriate to remove harder deposits from the pipe walls and are for tube and pipe cleaning.

Applications









- Cleaning of heat exchangers in chemical and nuclear plants and for general industrial pipe cleaning











**RGS nozzles UHP**









								
05.0281N	1/4" NPT	1.2 - 1.6	8	75°: 4 x M4	1.1 x 2.2	0.44	-	14,500
05.0401	M24 x 1.5	1.7 - 2.1	11	75°: 4 x M6	1.6 x 4.2	1.54	-	14,500
05.0501	M24 x 1.5	2.1 - 3	11	75°: 4 x M6	2.0 x 4.8	2.76	-	14,500

**HRH nozzles UHP**









								
05.0282N	1/4" NPT	1.2 - 1.6	8	45°: 4 x M4	1.1 x 2.2	0.44	-	14,500
05.0402	M24 x 1.5	1.7 - 2.1	11	45°: 4 x M6	1.6 x 4.2	1.54	-	14,500
05.0502	M24 x 1.5	2.1 - 3	11	45°: 4 x M6	2.0 x 4.8	2.76	-	14,500

**KBR nozzles UHP**









								
05.011N	1/16" NPT	0.5 - 0.7	12	45°: 2 x 0.90, 90°: 2 x 0.85	0.4 x 1.2	0.04	-	14,500
05.011N05	1/16" NPT	0.5 - 0.7	5.3	45°: 2 x 0.50, 90°: 2 x 0.50	0.4 x 1.2	0.04	-	14,500
05.011N07	1/16" NPT	0.5 - 0.7	7.6	45°: 2 x 0.70, 90°: 2 x 0.70	0.4 x 1.2	0.04	-	14,500
05.012N	1/8" NPT	0.5 - 0.7	12	45°: 2 x 0.90, 90°: 2 x 0.85	0.5 x 1.2	0.04	-	14,500
05.012N05	1/8" NPT	0.5 - 0.7	5.3	45°: 2 x 0.50, 90°: 2 x 0.50	0.5 x 1.2	0.04	-	14,500
05.012N07	1/8" NPT	0.5 - 0.7	7.6	45°: 2 x 0.70, 90°: 2 x 0.70	0.5 x 1.2	0.04	-	14,500
05.016N	1/8" NPT	0.7 - 1.2	12	45°: 2 x 1.00, 90°: 2 x 0.90	0.6 x 1.6	0.09	-	14,500
05.016N05	1/8" NPT	0.7 - 1.2	5.3	45°: 2 x 0.50, 90°: 2 x 0.50	0.6 x 1.6	0.09	-	14,500
05.016N07	1/8" NPT	0.7 - 1.2	7.6	45°: 2 x 0.70, 90°: 2 x 0.70	0.6 x 1.6	0.09	-	14,500
05.0283	1/4"	1.2 - 1.6	8	45°: 4 x M4	1.1 x 2.2	0.44	-	14,500
05.0283N	1/4" NPT	1.2 - 1.6	8	45°: 4 x M4	1.1 x 2.2	0.44	-	14,500

								
05.0284N	1/4" NPT	1.2 - 1.6	8	45°: 2 x M4, 90°: 2 x M4	1.1 x 2.2	0.44	-	14,500
05.0404	M24 x 1.5	1.7 - 2.1	11	45°: 2 x M6, 90°: 2 x M6	1.6 x 4.2	1.54	-	14,500
05.0504	M24 x 1.5	2.1 - 3	11	45°: 2 x M6, 90°: 2 x M6	2.0 x 4.8	2.77	-	14,500

**KBRV nozzles UHP**

								
05.011NV	1/16" NPT	0.5 - 0.7	12	90°: 2 x 0.85, 45°: 2 x 0.90	0.4 x 1.2	0.04	-	14,500
05.011NV05	1/16" NPT	0.5 - 0.7	5.3	90°: 2 x 0.50, 45°: 2 x 0.50	0.4 x 1.2	0.04	-	14,500
05.011NV07	1/16" NPT	0.5 - 0.7	7.6	90°: 2 x 0.70, 45°: 2 x 0.70	0.4 x 1.2	0.04	-	14,500
05.012NV	1/8" NPT	0.5 - 0.7	12	90°: 2 x 0.85, 45°: 2 x 0.90	0.5 x 1.2	0.04	-	14,500
05.012NV05	1/8" NPT	0.5 - 0.7	5.3	90°: 2 x 0.50, 45°: 2 x 0.50	0.5 x 1.2	0.04	-	14,500
05.012NV07	1/8" NPT	0.5 - 0.7	7.6	90°: 2 x 0.70, 45°: 2 x 0.70	0.5 x 1.2	0.04	-	14,500
05.0285N	1/4" NPT	1 - 2	8	4 x M4	1.1 x 2.2	0.44	-	14,500
05.0405	M24 x 1.5	1.7 - 2.1	11	4 x M6	1.6 x 4.2	1.54	-	14,500
05.0505	M24 x 1.5	2.1 - 3	11	4 x M6	2.0 x 4.8	2.77	-	14,500

**Brazil nozzles**

								
05.022SPEZ	1/4" BSPP	1 - 1	4	2 x M4	0.9 x 2.2	0.27	-	14,500
05.028SPEZ	1/2" BSPP	1.2 - 1.6	5	2 x M4	1.1 x 2.6	0.50	-	14,500
05.031SPEZ	1/2" BSPP	1 - 2	5	2 x M4	1.2 x 2.9	0.60	-	14,500
05.033SPEZ	1/2" BSPP	1 - 2	6.5	2 x M4	1.3 x 2.9	0.75	-	14,500
05.040SPEZ	1/2" BSPP	1.7 - 2.1	6.5	2 x M4	1.6 x 3.2	1.32	-	14,500
05.050SPEZ	1/2" BSPP	2.1 - 3	6.5	2 x M4	2.0 x 3.8	2.54	-	14,500



# UR nozzles

The maximum pressure rotating nozzles enz® are most efficient in cleaning the inside wall of tubes with a pressure up to 36,000 psi. They are most appropriate to remove harder deposits from the tube walls. The rotational speed of the nozzle is controlled by a magnetic brake.

## Characteristics

- Speed control
- Low leakage
- Durability










## Applications

- Cleaning of heat exchangers in chemical and nuclear plants and for general industrial pipe cleaning



**UR19**



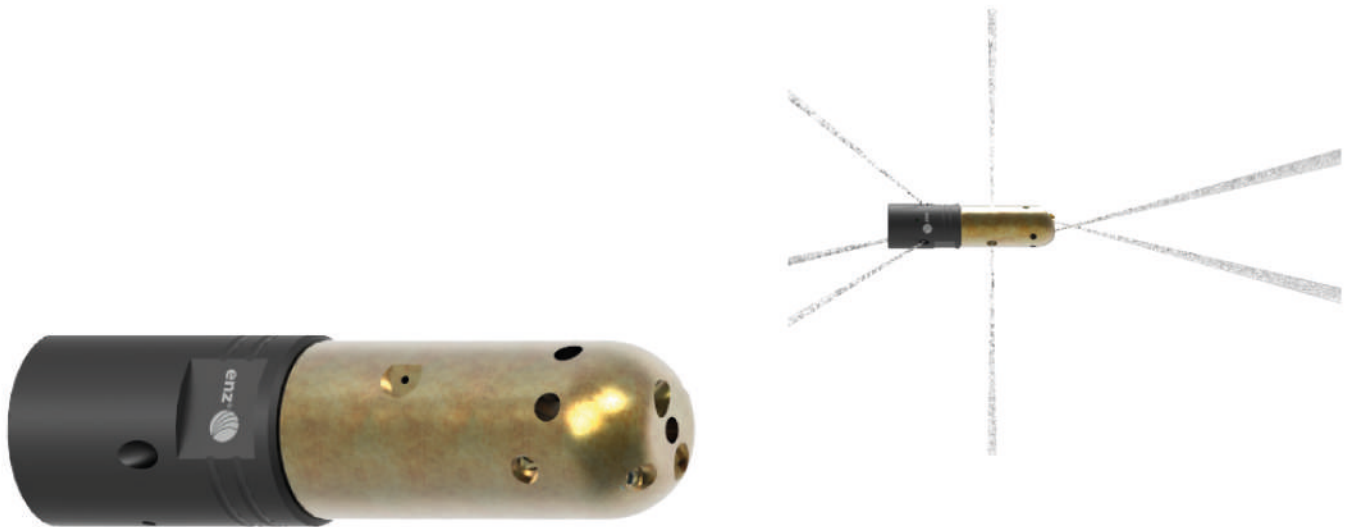
									
525.019A	9/16" UNF LH	0.9 - 1.3	7	2 x M3	*	0.8 x 3.2	0.31	-	36,000
525.019B	M14 x 1.5 LH	0.9 - 1.3	7	2 x M3	*	0.8 x 3.2	0.31	-	36,000

# UC nozzles

The UC nozzles enz® nozzle (with brake jet) are applied for industrial cleaning of heat exchangers and completely clogged pipes. The cross jet, which is directed to the front, cuts the material in the completely clogged pipe like a milling cutter. Simultaneously 2 radial jets of 60° - 90° clean the pipe wall. Through the same effect the removed material is flushed away. The cross jet causes a reaction force which, in many cases, makes it necessary to set the nozzle on a lance. The UC nozzles are available with or without thrust. Through all that, the UC nozzle has become a tool for universal use.











## Applications

- For industrial cleaning of heat exchangers and completely clogged pipes













## UC09













										
06.009-18-M-2	M7	0.5 - 0.7	4 / 5	90°: 2 x 0.45	-	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500 / 22,000
06.009-18-MS-2	M7	0.5 - 0.7	8 / 10	90°: 2 x 0.45	3 x 0.60	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500 / 22,000
06.009-18-N-1	1/16" NPT	0.5 - 0.7	4	90°: 2 x 0.45	-	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500
06.009-18-NS-1	1/16" NPT	0.5 - 0.7	8	90°: 2 x 0.45	3 x 0.60	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500
06.009-18-U-2	1/4" x 28UNF	0.5 - 0.7	4 / 5	90°: 2 x 0.45	-	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500 / 22,000
06.009-18-UL-2	1/4" x 28UNF LH	0.5 - 0.7	4 / 5	90°: 2 x 0.45	-	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500 / 22,000
06.009-18-ULS-2	1/4" x 28UNF LH	0.5 - 0.7	8 / 10	90°: 2 x 0.45	3 x 0.60	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500 / 22,000
06.009-18-US-2	1/4" x 28UNF	0.5 - 0.7	8 / 10	90°: 2 x 0.45	3 x 0.60	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500 / 22,000
06.009-18-Ub-2	5/16" x 24 UNF (male)	0.5 - 0.7	4 / 5	90°: 2 x 0.45	-	45°: 2 x 0.45	0.4 x 1.4	0.04	-	14,500 / 22,000

## UC13























										
06.013-18-2	1/8" BSPP	0.6 - 0.8	4.2 / 5	90°: 2 x 0.50	-	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-N-1	1/8" NPT	0.6 - 0.8	4.2	90°: 2 x 0.50	-	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500
06.013-18-NS-1	1/8" NPT	0.6 - 0.8	7.4	90°: 2 x 0.50	3 x 0.60	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500
06.013-18-S-2	1/8" BSPP	0.6 - 0.8	7.4 / 9.5	90°: 2 x 0.50	3 x 0.60	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-UA-2	1/4" x 28UNF	0.6 - 0.8	4.2 / 5	90°: 2 x 0.50	-	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-UAL-2	1/4" x 28UNF LH	0.6 - 0.8	4.2 / 5	90°: 2 x 0.50	-	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-UALS-2	1/4" x 28UNF LH	0.6 - 0.8	7.4 / 9.5	90°: 2 x 0.50	3 x 0.60	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-UAS-2	1/4" x 28UNF	0.6 - 0.8	7.4 / 9.5	90°: 2 x 0.50	3 x 0.60	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-UB-2	3/8" x 24UNF	0.6 - 0.8	4.2 / 5	90°: 2 x 0.50	-	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-UBL-2	3/8" x 24UNF LH	0.6 - 0.8	4.2 / 5	90°: 2 x 0.50	-	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-18-UBLS-2	3/8" x 24UNF LH	0.6 - 0.8	7.4 / 9.5	90°: 2 x 0.50	3 x 0.60	45°: 2 x 0.50	0.4 x 1.9	0.06	-	14,500 / 22,000

										
06.013-18-UBS-2	3/8" x 24UNF	0.6 - 0.8	7.4 / 9.5	90°: 2 x 0.50	3 x 0.60	45°: 2 x 0.50	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-2	1/8" BSPP	0.6 - 0.8	6.3 / 8	90°: 2 x 0.70	-	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-N-1	1/8" NPT	0.6 - 0.8	6.3	90°: 2 x 0.70	-	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500
06.013-30-NS-1	1/8" NPT	0.6 - 0.8	11	90°: 2 x 0.70	3 x 0.60	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500
06.013-30-S-2	1/8" BSPP	0.6 - 0.8	11 / 14	90°: 2 x 0.70	3 x 0.60	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-UAL-2	1/4" x 28UNF LH	0.6 - 0.8	6.3 / 8	90°: 2 x 0.70	-	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-UALS-2	1/4" x 28UNF LH	0.6 - 0.8	11 / 14	90°: 2 x 0.70	3 x 0.60	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-UAS-2	1/4" x 28UNF	0.6 - 0.8	11 / 14	90°: 2 x 0.70	3 x 0.60	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-UB-2	3/8" x 24UNF	0.6 - 0.8	6.3 / 8	90°: 2 x 0.70	-	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-UBL-2	3/8" x 24UNF LH	0.6 - 0.8	6.3 / 8	90°: 2 x 0.70	-	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000
06.013-30-UBLS-2	3/8" x 24UNF LH	0.6 - 0.8	11 / 14	90°: 2 x 0.70	3 x 0.60	45°: 2 x 0.70	0.5 x 1.0	0.06	-	14,500 / 22,000
06.013-30-UBS-2	3/8" x 24UNF	0.6 - 0.8	11 / 14	90°: 2 x 0.70	3 x 0.60	45°: 2 x 0.70	0.5 x 1.9	0.06	-	14,500 / 22,000

## UC18













										
06.018-30-A-2	1/8" BSPP	0.9 - 1.0	7 / 8	90°: 2 x 0.50	-	45°: 2 x 0.50	0.7 x 2.6		-	14,500 / 22,000
06.018-30-AS-2	1/8" BSPP	0.9 - 1.0	11 / 13	90°: 2 x 0.50	3 x M3	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-30-B-2	1/4" BSPP	0.9 - 1.0	7 / 8	90°: 2 x 0.50	-	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-30-BS-2	1/4" BSPP	0.9 - 1.0	11 / 13	90°: 2 x 0.50	3 x M3	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-30-NB-1	1/4" NPT	0.9 - 1.0	7	90°: 2 x 0.50	-	45°: 2 x 0.50	0.7 x 2.6	0.20	-	14,500
06.018-30-NBS-1	1/4" NPT	0.9 - 1.0	11	90°: 2 x 0.50	3 x M3	45°: 2 x 0.50	0.7 x 2.6	0.20	-	14,500
06.018-30-UBL-2	3/8" x 24UNF LH	0.9 - 1.0	7 / 8	90°: 2 x 0.50	-	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-30-UBLS-2	3/8" x 24UNF LH	0.9 - 1.0	11 / 13	90°: 2 x 0.50	3 x M3	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-30-UC-2	9/16" x 18UNF	0.9 - 1.0	7 / 8	90°: 2 x 0.50	-	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-30-UCL-2	9/16" x 18UNF LH	0.9 - 1.0	7 / 8	90°: 2 x 0.50	-	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000

										
06.018-30-UCLS-2	9/16" x 18UNF LH	0.9 - 1.0	11 / 13	90°: 2 x 0.50	3 x M3	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-30-UCS-2	9/16" x 18UNF	0.9 - 1.0	11 / 13	90°: 2 x 0.50	3 x M3	45°: 2 x 0.50	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-A-2	1/8" BSPP	0.9 - 1.0	13	90°: 2 x 0.75	-	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-AS-2	1/8" BSPP	0.9 - 1.0	16.4 / 20	90°: 2 x 0.75	3 x M3	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-B-2	1/4" BSPP	0.9 - 1.0	13	90°: 2 x 0.75	-	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-BS-2	1/4" BSPP	0.9 - 1.0	16.4 / 20	90°: 2 x 0.75	3 x M3	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-NB-1	1/4" NPT	0.9 - 1.0	12	90°: 2 x 0.75	-	45°: 2 x 0.75	0.7 x 2.6	0.20	-	14,500
06.018-50-NBS-1	1/4" NPT	0.9 - 1.0	16.4	90°: 2 x 0.75	3 x M3	45°: 2 x 0.75	0.7 x 2.6	0.20	-	14,500
06.018-50-UBL-2	3/8" x 24UNF LH	0.9 - 1.0	13	90°: 2 x 0.75	-	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-UBLS-2	3/8" x 24UNF LH	0.9 - 1.0	16.4 / 20	90°: 2 x 0.75	3 x M3	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-UC-2	9/16" x 18UNF	0.9 - 1.0	13	90°: 2 x 0.75	-	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-UCL-2	9/16" x 18UNF LH	0.9 - 1.0	12 / 13	90°: 2 x 0.75	-	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-UCLS-2	9/16" x 18UNF LH	0.9 - 1.0	16.4 / 20	90°: 2 x 0.75	3 x M3	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-50-UCS-2	9/16" x 18UNF	0.9 - 1.0	16.4 / 20	90°: 2 x 0.75	3 x M3	45°: 2 x 0.75	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-B-2	1/4" BSPP	0.9 - 1.0	15.9 / 18	90°: 2 x 0.90	-	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-BS-2	1/4" BSPP	0.9 - 1.0	23.8 / 29	90°: 2 x 0.90	3 x M3	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-NB-1	1/4" NPT	0.9 - 1.0	15.9	90°: 2 x 0.90	-	45°: 2 x 0.90	0.7 x 2.6	0.20	-	14,500
06.018-70-NBS-1	1/4" NPT	0.9 - 1.0	23.8	90°: 2 x 0.90	3 x M3	45°: 2 x 0.90	0.7 x 2.6	0.20	-	14,500
06.018-70-UBL-2	3/8" x 24UNF LH	0.9 - 1.0	15.9 / 18	90°: 2 x 0.90	-	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-UBLS-2	3/8" x 24UNF LH	0.9 - 1.0	23.8 / 29	90°: 2 x 0.90	3 x M3	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-UC-2	9/16" x 18UNF	0.9 - 1.0	15.9 / 18	90°: 2 x 0.90	-	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-UCL-2	9/16" x 18UNF LH	0.9 - 1.0	15.9 / 18	90°: 2 x 0.90	-	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-UCLS-2	9/16" x 18UNF LH	0.9 - 1.0	23.8 / 29	90°: 2 x 0.90	3 x M3	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000
06.018-70-UCS-2	9/16" x 18UNF	0.9 - 1.0	23.8 / 29	90°: 2 x 0.90	3 x M3	45°: 2 x 0.90	0.7 x 2.6	0.17	-	14,500 / 22,000











## UC22



										
06.022-A-2	1/4" BSPP	1.0 - 1.1	6.5 / 8	90°: 2 x M4	-	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500 / 22,000
06.022-AS-2	1/4" BSPP	1.0 - 1.1	11 / 13	90°: 2 x M4	3 x M4	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500 / 22,000
06.022-NA-1	1/4" NPT	1.0 - 1.1	6.5	90°: 2 x M4	-	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500
06.022-NAS-1	1/4" NPT	1.0 - 1.1	11	90°: 2 x M4	3 x M4	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500
06.022-NB-1	3/8" NPT	1.0 - 1.1	6.5	90°: 2 x M4	-	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500
06.022-NBS-1	3/8" NPT	1.0 - 1.1	11	90°: 2 x M4	3 x M4	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500
06.022-UB-2	9/16" x 18UNF	1.0 - 1.1	6.5 / 8	90°: 2 x M4	-	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500 / 22,000
06.022-UBL-2	9/16" x 18UNF LH	1.0 - 1.1	6.5 / 8	90°: 2 x M4	-	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500 / 22,000
06.022-UBLS-2	9/16" x 18UNF LH	1.0 - 1.1	11 / 13	90°: 2 x M4	3 x M4	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500 / 22,000
06.022-UBS-2	9/16" x 18UNF	1.0 - 1.1	11 / 13	90°: 2 x M4	3 x M4	45°: 2 x M4	0.9 x 2.8	0.29	-	14,500 / 22,000

## UC28



										
06.028-A-2	1/4" BSPP	1.2 - 1.6	6.5 / 8	90°: 2 x M4	-	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000
06.028-AS-2	1/4" BSPP	1.2 - 1.6	11 / 13	90°: 2 x M4	3 x M4	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000
06.028-B-2	3/8" BSPP	1.2 - 1.6	6.5 / 8	90°: 2 x M4	-	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000
06.028-BS-2	3/8" BSPP	1.2 - 1.6	11 / 13	90°: 2 x M4	3 x M4	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000
06.028-NB-1	3/8" NPT	1.2 - 1.6	6.5	90°: 2 x M4	-	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500
06.028-NBS-1	3/8" NPT	1.2 - 1.6	11	90°: 2 x M4	3 x M4	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500
06.028-UB-2	9/16" x 18UNF	1.2 - 1.6	6.5 / 8	90°: 2 x M4	-	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000
06.028-UBL-2	9/16" x 18UNF LH	1.2 - 1.6	6.5 / 8	90°: 2 x M4	-	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000
06.028-UBLS-2	9/16" x 18UNF LH	1.2 - 1.6	11 / 13	90°: 2 x M4	3 x M4	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000
06.028-UBS-2	9/16" x 18UNF	1.2 - 1.6	11 / 13	90°: 2 x M4	3 x M4	45°: 2 x M4	1.1 x 3.3	0.46	-	14,500 / 22,000

# Surface cleaner UHP

The rotating enz® nozzle for cleaning surfaces is remarkable for its high efficiency. It outperforms conventional flat jet or round jet nozzles with a large margin.

## Applications

- To remove deposits of concrete-slurry, cleaning of store fronts, steps, walls, traffic signboards etc.

## Additional info

- Other thread types are available on request.
- The MJ4ST can accommodate water temperatures of up to 150° C/ 300° F.





**Surface cleaner UHP**



18.040-B-2	3/8" BSPP	5.5 / 6.9	2 / 4 x M8	2.0 x 4.2	1.59	-	22,000
18.040-MB-2	M26 x 1.5	5.5 / 6.9	2 / 4 x M8	2.0 x 4.2	1.59	-	22,000
18.040-NB-1	3/8" NPT	4.2 / 5.3	2 / 4 x M8	2.0 x 4.2	1.59	-	14,500
18.040-UBL-2	9/16" UNF LH	5.5 / 6.9	2 / 4 x M8	2.0 x 4.2	1.59	-	22,000

**MJ6**











550.06001	3/8" BSPP	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06002	3/8" NPT	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06003	1/2" BSPP	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06004	1/2" NPT	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06005	1/4" BSPP	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06011	9/16" - 18 UNF LH	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06012	M24 x 1.5 LH	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06015	M26 x 1.5	1.45	0.6 - 2.8	30°	1.7 x 4.3	1.10	-	7,500
550.06016	M26 x 1.5	2.64	0.9 - 2.8	30°	1.7 x 4.3	1.10	-	7,500

**MJ4**











550.04001	3/8" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04002	3/8" NPT	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04003	1/2" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04004	1/2" NPT	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04005	1/4" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04011	9/16" - 18 UNF LH	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04012	M14 x 1.5 LH	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04015	M26 x 1.5	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500









**MJ4ST**

								
550.04001ST	3/8" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04002ST	3/8" NPT	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04003ST	1/2" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04004ST	1/2" NPT	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500
550.04005ST	1/4" BSPP	1.45	0.6 - 2.8	22°	1.7 x 4.3	1.10	-	7,500

**MJ3**

								
550.03001	3/8" BSPP	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03002	3/8" NPT	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03003	1/2" BSPP	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03004	1/2" NPT	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03005	1/4" BSPP	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03011	9/16" - 18 UNF LH	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03012	M14 x 1.5 LH	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03013	M24 x 1.5 RH	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03017	M26 x 1.5	1.72	0.6 - 2.8	20°	1.7 x 4.3	1.46	-	11,500
550.03018	M26 x 1.5	3.30	0.9 - 2.8	20°	1.7 x 4.3	1.46	-	11,500

**MJ2**

								
550.02001	9/16" - 18 UNF LH	1.98	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	15,000
550.02002	M14 x 1.5 LH	1.98	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	15,000
550.02007	3/8" BSPP	1.98	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	15,000
550.02008	3/8" NPT	1.98	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	15,000
550.02009	1/2" BSPP	1.98	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	15,000
550.02010	1/2" NPT	1.98	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	15,000
550.02011	1/4" BSPP	1.98	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	15,000

**MJ1**



550.01001	9/16" - 18 UNF LH	2.38	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	22,000
550.01002	M14 x 1.5 LH	2.38	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	22,000
550.01003	M24 x 1.5 LH	2.38	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	22,000
550.01007	M26 x 1.5	2.38	0.6 - 2.8	20°	1.9 x 5.2	2.76	-	22,000

**MJ25**



550.25001	9/16" - 18 UNF LH	3.04	0.6 - 2.8	20°	1.9 x 5.2	2.86	-	36,000
550.25002	M14 x 1.5 LH	3.04	0.6 - 2.8	20°	1.9 x 5.2	2.86	-	36,000
550.25005	M26 x 1.5	3.04	0.6 - 2.8	20°	1.9 x 5.2	2.86	-	36,000

**Accessory and wearing parts MJ nozzles**



550.99006		Repair Kit for MJ 1, MJ2, MJ 3 & MJ 25	0.044
550.99007		Repair Kit for MJ 4 & MJ 6	0.044
550.99007ST		Repair Kit for MJ 4 ST	0.044

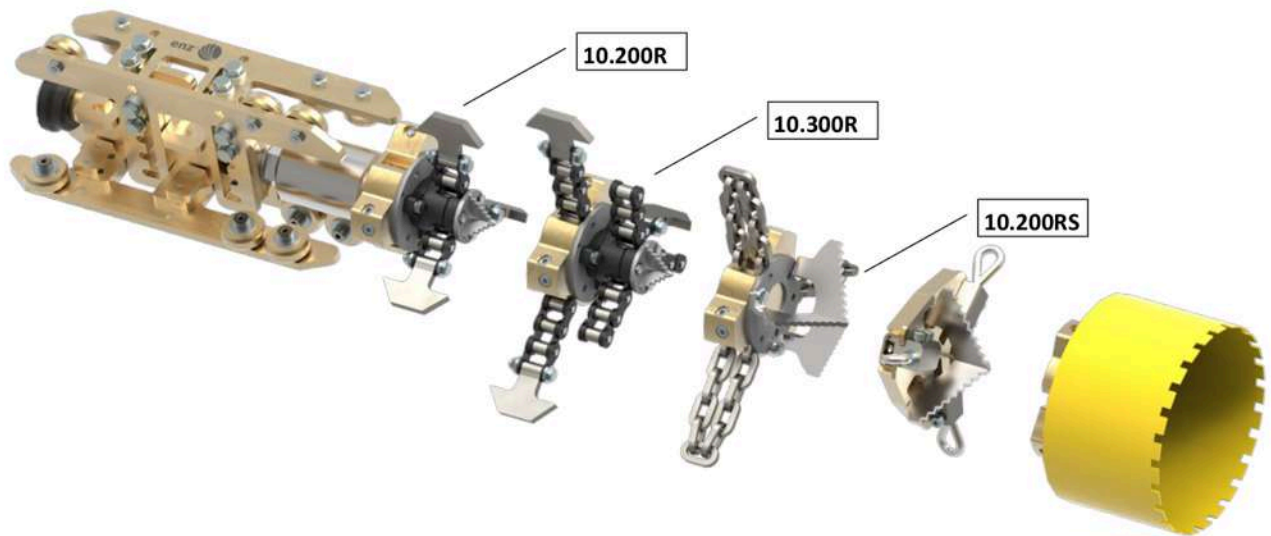


# Wire rope and chain scrapers

The Chain scraper enz® is an apparatus which has many uses and is simple in handling and maintenance. Several different pipe diameters can be cleaned with the same tool. Layers of mineral deposits and concrete residues are efficiently removed.

## Applications

- As preliminary operation before renovation with liners, coatings or by injections
- Complete root removal
- Removal of incrustations and deposits
- Removal of concrete residues in newly installed sewage pipelines prior to inspection



**Chain scraper 10.028 1/4" NPT**



10.028N	1/4" NPT	2 - 4	5	3 x M4	3 x M4	1.6 / 1.1 x 3.1	0.71	-	5,000

**Chain scrapers 10.060TR 3/8" NPT - 3/4" NPT**



10.060ATR-US	3/8" NPT			2 x M6	4 x M6		0.95	ok	
10.060BTR-US	1/2" NPT			2 x M6	4 x M6		2.88	ok	
10.060CTR-US	3/4" NPT			2 x M6	4 x M6		2.47	ok	

**Chain scrapers 10.061A/B 1/2" - 3/4"**



10.061A	1/2"	3 - 6	16	3 x M6	3 x M6	2.4 x 5.3	3.09	-	3,600
10.061B	3/4"	3 - 6	16	3 x M6	3 x M6	2.4 x 5.3	3.09	-	3,600

**Chain scrapers 10.125TR 1"**



10.125TR-100	1"	4	13	2 x M6	4 x M8	2.4 x 6	5.51	ok	3,625
10.125TR-125	1"	5	13	2 x M6	4 x M8	2.4 x 6	5.51	ok	3,625
10.125TR-150	1"	6	13	2 x M6	4 x M8	2.4 x 6	5.51	ok	3,625
10.125TR-150-US	1" NPT	6	13	2 x M6	4 x M8	2.4 x 6	5.56	ok	3,600
10.125TR-200	1"	8	13	2 x M6	4 x M8	2.4 x 6	5.51	ok	3,625

10.125TR-200-US	1" NPT	8	13	2 x M6	4 x M8	2.4 x 6	5.56	ok	3,600
10.125TR-225	1"	9	13	2 x M6	4 x M8	2.4 x 6	5.51	ok	3,625
10.125TR-250	1"	10	13	2 x M6	4 x M8	2.4 x 6	5.51	ok	3,625
10.125TR-250-US	1" NPT	4 - 10	13	2 x M6	4 x M8	2.4 x 6	5.56	ok	3,600
10.125TR-300	1"	12	40	2 x M6	4 x M8	2.4 x 6	5.51	ok	3,625

**Chain scrapers 10.150RL 1"**



10.150RL	1"	6 - 10	26	3 x M8	3 x M10	5.3 - 9.3 x 19.7	28.88	ok	2,900

**Wire rope and chain scrapers sets**



10.060ATR-SET-US	chain flail 2.36 - 6"	3/8"	3.8
10.060BTR-SET-CH	chain flail 2.36 - 6"	1/2"	6.83
10.060BTR-SET-US	chain flail 2.36 - 6"	1/2"	3.8
10.060CTR-SET-CH	chain flail 2.36 - 6"	3/4"	6.83
10.060CTR-SET-US	chain flail 2.36 - 6"	3/4"	3.8
10.125TR-SET-US	TurboJet rotating chain scraper 2.4"	1" NPT	14.5

**Wire rope and chain scrapers 10.200R/RS & 10.300R 1"**



10.200R	1"	7.8 - 16	53	3 x M10	3 x M10	7.3 - 15.2 x 22.1	77.16	ok	2,900
10.200RS	1"	7.8 - 16	53	3 x M10	3 x M10	7.3 - 15.2 x 22.0	77.16	ok	2,900
10.300R	1"	7.8 - 19.7	53	3 x M10	3 x M10	7.3 - 19.2 x 22.1	108	ok	2,900

**Wire rope and chain scrapers 10.400R/RS 1"**



10.400R	1"	16 - 32	79	3 x M10	3 x M10	15.2 - 30.9 x 24.6	103.62	ok	2,900
10.400RS	1"	16 - 32	79	3 x M10	3 x M10	15.2 - 30.9 x 24.6	104.44	ok	2'900

**Chain scrapers 10.800R 1 1/4"**







10.800R	1 1/4"	32 - 47	106	3 x M10	6 x M10	22.1 / 30.4 x 64.6	407.86	ok	2,900





**Accessory 10.028**








**10.028**

	<b>Pipe diameter</b>	<b>Ø 2 "</b>	<b>Ø 3 "</b>	<b>Ø 4 "</b>	<b>Ø per yard</b>
	Set Pin bolt chain	0010.028050G	0010.028075G	0010.028100G	0010.028G
	Set link chains	0010.028050K	0010.028075K	0010.028100K	0010.028K
	Cover with cutter	0010.0285M	0010.0285M	0010.0285M	
	Plastic guide	0010.0286	0010.0286	0010.0286	



Accessories 10.060



10.060ATR

	Pipe diameter	Ø 2 "	Ø 3 "	Ø 4 "	Ø 5 "	Ø 6 "	Ø 8 "	per yard
	Set Pin bolt chain with plates	0010.060060G	0010.060075G	0010.060100G	0010.060125G	0010.060150G	0010.060200G	11.G
	Set link chains	0010.040060K	0010.040075K	0010.040100K	0010.040125K	0010.040150K	0010.040200K	0010.040K
	Cover with cutter and screws	0010.0605TRM	0010.0605TRM	0010.0605TRM	0010.0605TRM	0010.0605TRM	0010.0605TRM	
	Cage for TurboJet 60	0010.0607TR	0010.0607TR	0010.0607TR	0010.0607TR	0010.0607TR	0010.0607TR	
	Plastic guide	0010.0407	0010.0407					
	Skid			0010.060710TR	0010.060712TR	0010.060715TR	0010.060720TR	
	Milling Cutter Head for 1.6"	0013.0405TR	0013.0405TR	0013.0405TR	0013.0405TR	0013.0405TR	0013.0405TR	



**Accessoires 10.061A/B**








**10.061A**

	<b>Pipe diameter</b>	<b>Ø 3 "</b>	<b>Ø 4 "</b>	<b>Ø 6 "</b>	<b>Ø 8 "</b>	<b>per yard</b>
	Set chains 0.18" - 7 links	11.07	11.09	11.11	11.13	11
	Cover with cutter and screws	0010.0605TRM	0010.0605TRM	0010.0605TRM	0010.0605TRM	



**Accessories 10.125TR**












**10.125TR**










	Pipe diameter	Ø 4 "	Ø 5 "	Ø 6 "	Ø 8 "	Ø 9 "	Ø 10 "	Ø 12 "	per yard
	Set Pin bolt chain with plates	0010.125100G	0010.125125G	0010.125150G	0010.125200G	0010.125225G	0010.125250G	0010.125300G	0010.125G
	Set link chains	0010.125100K	0010.125125K	0010.125150K	0010.125200K	0010.125225K	0010.125250K	0010.125300K	11
	Set wire brushes			0010.125150SE	0010.125200SE		0010.125250SE		
	Cover with cutter	0010.1254TR	0010.1254TR	0010.1254TR	0010.1254TR	0010.1254TR	0010.1254TR	0010.1254TR	
	Cage for 10.125TR		0010.1257TR	0010.1257TR	0010.1257TR	0010.1257TR	0010.1257TR	0010.1257TR	
	Skid for	0010.125710TR	0010.125712TR	0010.125715TR	0010.125720TR	0010.125722TR	0010.125725TR	0010.125730TR	
	Milling Cutter Head 2.4"	0013.0605TR	0013.0605TR	0013.0605TR	0013.0605TR	0013.0605TR	0013.0605TR	0013.0605TR	



**Accessories 10.200R/RS & 10.300R**

**10.200R**

	Pipe diameter	Ø 8 "	Ø 10 "	Ø 12 "	Ø 14 "	Ø 16 "	Ø 20 "	per yard
	Set Pin bolt chain with plate	12.200G	12.250G	12.300G	12.350G	12.401G	12.600G	12.G
	Set chains	12.03	12.07	12.09	12.11	12.13	12.17	12
	Pull part for 10.200 and 10.400	0010.2006	0010.2006	0010.2006	0010.2006	0010.2006	0010.2006	
	Set Chain plates	0010.2008R	0010.2008R	0010.2008R	0010.2008R	0010.2008R	0010.2008R	
	Cutter head (all Ø)	10.20043R	10.20043R	10.20043R	10.20043R	10.20043R	10.20043R	
	Universal tooth (all Ø)	15.ZU	15.ZU	15.ZU	15.ZU	15.ZU	15.ZU	
	Center tooth for center cap (all Ø)	15.ZS	15.ZS	15.ZS	15.ZS	15.ZS	15.ZS	
	Center head with 4 sets of link chain	0010.2004R	0010.2004R	0010.2004R	0010.2004R	0010.2004R		
	Wire rope head adaption kit	0010.2005	0010.2005	0010.2005	0010.2005	0010.2005		
	Set of wire rope loop	12.200S	12.250S	12.300S	12.350S	12.400S		
	Set of wire rope brush	12.200SE	12.250SE	12.300SE	12.350SE	12.400SE		

	Pipe diameter	Ø 8 "	Ø 10 "	Ø 12 "	Ø 14 "	Ø 16 "	Ø 20 "	per yard
	Diamond crown	0010.200D	0010.250D	0010.300D	0010.350D	0010.400D		
	Skid Front Chain Scraper	0010.20071R	0010.20071R	0010.20071R	0010.20071R	0010.20071R		
	Skid back Chain Scraper	0010.20072R	0010.20072R	0010.20072R	0010.20072R	0010.20072R		
	Cover with cutter	0010.1254TR	0010.1254TR	0010.1254TR	0010.1254TR	0010.1254TR	0010.1254TR	
	Root knife chain flail 10.200RS	0010.2509	0010.2509	0010.2509	0010.2509	0010.2509		
	Center head with 4 sets of link chain	0010.2004R1	0010.2004R1	0010.2004R1	0010.2004R1	0010.2004R1		
	Skid adapter 19.7"			10.2005R	10.2005R	10.2005R	10.2005R	
	Head 300R	0010.2005R	0010.2005R	0010.2005R	0010.2005R	0010.2005R	0010.2005R	
	Head 200RS	0010.2006R	0010.2006R	0010.2006R	0010.2006R	0010.2006R		



# Cutters without impacts

These enz® rotating cutters work without impacts. The cutter heads are equipped with hard metal plates, which are able to remove the most any kind of deposits.

Their field of application is versatile. Layers of mineral deposits, concrete or concrete sludges can be milled out with them as well as roots and wood.

## Applications

- Concrete or concrete sludges
- Layers of mineral deposits
- Roots, wood





**Cutters without impacts 1/4"**



13.028N	1/4" NPT	1.2	5	3 x M4	3 x M4	1.1 x 3.2	0.6	-	5,000

**Cutters without impacts 1/2" - 1"**



13.040TR	1/2"	1.7 - 2.4	8	2 x M6	4 x M6	-	1.6 x 4.3	1.65	ok
13.060TR	1"	2.4 - 3.1	13	2 x M6	4 x M8	-	2.4 x 5.1	4.40	ok

**Accessory and wearing parts cutters without impacts**



16.16Z		Carbide Insert with Screw	# 13.040TR	0.06
16.19Z		Carbide Insert with Screw	# 13.060TR	0.06
0013.0407TR-48		Wear ring for Milling Cutter 40 mm	# 13.040TR	0.23
0013.0404TR-48		Wear resistant ring for Milling Cutter 40 mm	# 13.040TR	0.15
0013.0607TR-68		Wear ring for Milling Cutter 60mm	# 13.060TR	0.28
0013.0604TR-68		Wear resistant ring	# 13.060TR	0.28
0013.0606TR		exchangeable centre for	# 13.060TR	0.022

# Cutting ball

The enz® cutting ball works without impact, but has the ability to switch in vibration. The cutting ball is equipped with a hard metal front cut for pipes that are more than 50% clogged. The side blades are self-sharpening and maintain their sharpness over their entire service life.

The cutting ball's area of application is diverse. Due to its spherical shape it goes easily around curves without damaging the pipe. The cutting ball is leakage-free and can be operated with recycling water.

## Applications

- Interlaced roots
- Mineral deposits
- Lime scale



# Cutting ball



## CB70 1/2"



420.070A	1/2"	3 - 5	15	6 x M6	-	-	2.67 x 3.6	2.43	ok	2,900
420.070AS	1/2"	3 - 5	21	6 x M6	3 x M4	-	2.67 x 3.6	2.43	ok	2,900

## CB90 1/2"



420.090A	1/2"	4 - 6	16	6 x M6	-	-	3.5 x 3.8	4.94	ok	2,900
420.090AS	1/2"	4 - 6	21	6 x M6	3 x M4	-	3.5 x 3.8	4.94	ok	2,900
425.090A	1/2"	4 - 6	16	6 x M6	-	-	3.5 x 3.8	4.94	ok	2,900
425.090AS	1/2"	4 - 6	21	6 x M6	3 x M4	-	3.5 x 3.8	4.94	ok	2,900

# Impact milling cutters

These tools are a radical innovation for milling-off deposits in pipes. The enz® impact milling cutters are designed to remove the most stubborn deposits like concrete, injection cement, mineral deposits etc. They work with a percussion system of 600-3000 impulses per minute and up to 12 tons of impact force.

Please ask for special equipment for plastic deposits!

When using the pull rod (drawing device) the cutters can be driven with half the water quantity (from 7.9 inch).

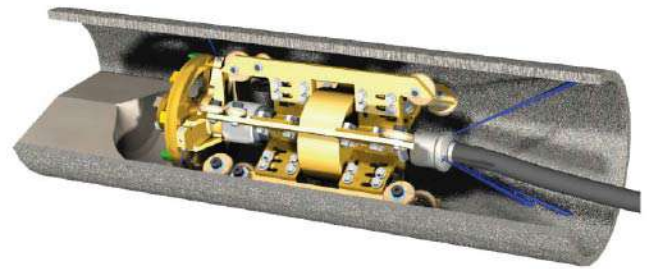
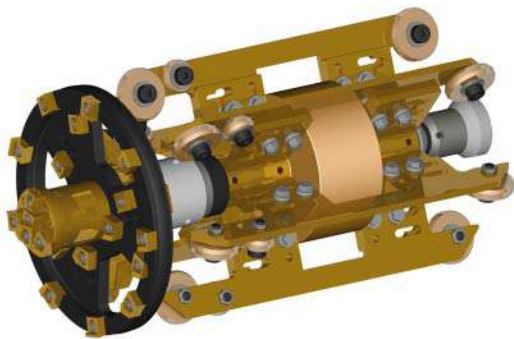
## Characteristics

- superior performance compared to other cutters
- extended tooth life
- easy handling
- low maintenance cost
- proven design

All impact milling cutters can be operated without impacts.

## Applications

- To remove concrete, injection cement, calcarious layers etc.
- Ø 3.9 - 23.6 inch



## Impact milling cutters



### Impact milling cutters 1"



14.100	1"	4	26	3 x M10	3 x M10	-	3.5 x 13.6	26.46	-	2,100
14.120	1"	5	23	3 x M10	3 x M10	-	4.3 x 13.6	30.20	-	2,100
14.150	1"	6	40	3 x M10	3 x M10	-	5.1 x 15.4	47.18	-	2,100

### Impact milling cutters 1" - 1 1/4"



14.400	1", 1 1/4"	16	79	3 x M10	3 x M10	-	14.8 x 22.0	196.21	-	2,100
14.450	1", 1 1/4"	18	106	3 x M10	3 x M10	-	16.7 x 28.0	235.90	-	2,100
14.500	1", 1 1/4"	20	119	3 x M10	3 x M10	-	18.7 x 28.0	244.71	-	2,100
14.600	1", 1 1/4"	24	132	3 x M10	3 x M10	-	22.6 x 28.0	264.56	-	2,100

### Accessory and wearing parts impact milling cutters



15ZK			
14.225K		Impact drilling cutter head 8.9"	8.16
14.250K		Impact drilling cutter head 9.8"	12.13
14.300K		Impact drilling cutter head 11.8"	16.54
14.200K		Impact drilling cutter head 7.9"	8.16





















Impact milling cutters







					
14.350K		Impact drilling cutter head 13.8"		14	21.83
14.375K		Impact drilling cutter head 14.76"		14.76	
14.400K		Impact drilling cutter head 15.7"		16	26.46
14.450K		Impact drilling cutter head 17.7"		18	29.76
14.500K		Impact drilling-cutter head 19.7"		20	37.48
14.600K		Impact drilling-cutter head 23.6"		24	41.89
0014.2007		Skid for cutter 7.8-9.8 inch		7.8 / 9.9	2.19
0014.2257		skid for cutter head Ø225mm			
14.200NA		Hub for impact drilling-cutter		8 - 10	14.33
14.300NA		Hub for impact drilling-cutter 11.8"		12 - 14	20.06
14.400NA		Hub for impact drilling-cutter 15.7"		16 - 18	26.46
14.500NA		Hub for impact drilling-cutter 19.7"		20	28.00
14.600NA		Hub for impact drilling-cutter 23.6"		24	28.00
14.450KU		Adapter plates for skids 17.7"		18 - 24	35.27
0014.100D		Diamond crown # 14.100		4	1.87
0014.150D		Diamond crown # 14.150		6	4.96

Impact milling cutters



					
0014.200D		Diamond crown	# 14.200	8	6.61
0014.250D		Diamond crown	# 14.250	10	6.83
0014.300D		Diamond crown	# 14.300	12	15.65
0014.350D		Diamond crown	# 14.350	14	
0014.400D		Diamond crown	# 14.400	16	34.52
14.2215ZS		Pull-rod M22x1.5 x 8"		8 - 24	2.21
15.ZKB		Center cap with bored hole			1.32
15.ZU		Universal tooth (all Ø)		4 - 24	0.18
15.ZHU		Carbide tooth for impact cutter		4 - 24	0.24
15.ZU-GSL		Impact segment tooth 25x25		4 - 24	0.11
15.Z1-100		Segment tooth for center for 14.100		4	0.13
15.Z1		Impact segment tooth for center		5 - 6	0.18
15.ZDSU-30		Diamond tooth (soft)		4 - 24	0.24
15.ZDSU-60		Diamond tooth (hard)		4 - 24	0.24
14.K04		Cam plate 0.15 inch per pc. with screws		till 6	1.01
14.K05		Cam plate 0.19 inch per pc. with screws		8 - 24	0.44
14.T1		Cup spring 0.14" - per pc.			0.22
14.G		Glide plate cutter 200 - 600			0.55

			⊘	📦
65212.08		Nord-Lock wedge lock washers M8		0.002
0014.30011		Extension for the shaft of impact milling		0.99
0014.3008		Additional weight to percussion milling cutter	12 - 24	14.88
14.D		Spacers for cutter heads per pair		0.65



# IMC

These tools are a radical innovation for milling-off deposits in pipes. The enz® im-pact milling cutters are designed to remove the most stubborn deposits like concrete, injection cement, mineral deposits etc. They work with a percussion system of 600-3000 impulses per minute and up to 12 tons of impact force.

Please ask for special equipment for plastic deposits!

When using the pull rod (drawing device) the cutters can be driven with half the water quantity (from 7.9 inch.

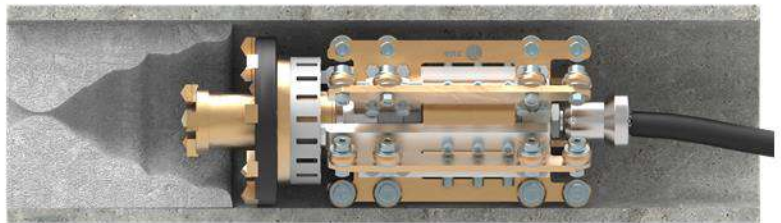
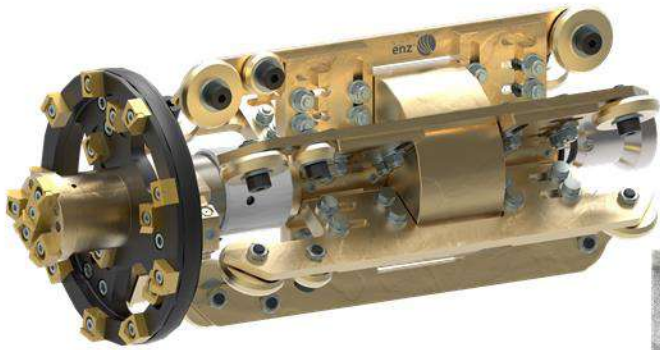
## Characteristics

- to use with recycling water
- superior performance compared to other cutters
- extended tooth life
- easy handling
- low maintenance cost
- proven design

All impact milling cutters can be operated without impacts.

## Applications

- To remove concrete, injection cement, calcareous layers etc.
- Pipe diameter 7.9 - 13.7 inch



**IMC 1" - 1 1/4"**



14.200R	1", 1 1/4"	7.8	53	3 x M10	3 x M10	-	6.8 x 23.6	95.68	ok	2,100
14.225R	1", 1 1/4"	8.9	58.1	3 x M10	3 x M10	-	7.9 x 23.6	101.41	ok	2,100
14.250R	1", 1 1/4"	9.9	63.4	3 x M10	3 x M10	-	8.7 x 23.6	115.74	ok	2,100
14.300R	1", 1 1/4"	11.8	73.9	3 x M10	3 x M10	-	11.8 x 28	211.6	ok	2,100
14.350R	1", 1 1/4"	13.8	73.9	3 x M10	3 x M10	-	13.8 x 28	218.2	ok	2,100

**Accessory and wearing parts IMC**



14.ZS		Pull-rod M16 x1 .5 x 10"			
0014.ZSR1		Pull-rod M16 x 1.5 x 10"			
14.ZSR		Pull-rod M16 x 1.5 x 12.4"			
15.ZKBR		Center cap with bored hole		1.32	
14.300KR		Impact drilling cutter head 11.8"	12	16.54	
14.350KR		Impact drilling cutter head 13.8"	14	21.83	
14.375KR		Impact drilling cutter head 14.76"	14.76		
14.225K		Impact drilling cutter head 8.9"	9	8.16	
14.250K		Impact drilling cutter head 9.8"	10	12.13	
14.200K		Impact drilling cutter head 7.9"	8	8.16	

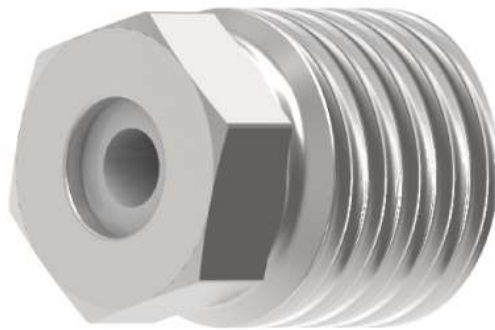
0014.200D		Diamond crown	# 14.200		8			6.61	
0014.250D		Diamond crown	# 14.250		10			6.83	
15.ZKB		Center cap with bored hole						1.32	
15.ZU		Universal tooth (all Ø)			4 - 24			0.18	
15.ZHU		Carbide tooth for impact cutter			4 - 24			0.24	
15.ZU-GSL		Impact segment tooth 25x25			4 - 24			0.11	
15.Z1		Impact segment tooth for center			5 - 6			0.18	
15.ZDSU-30		Diamond tooth (soft)			4 - 24			0.24	
15.ZDSU-60		Diamond tooth (hard)			4 - 24			0.24	
24.125S		Swivel joint with thrust jets		1" m - 1 1/4" f		3 x M10	3.2 x 5.0	4.08	3,600
14.99001		Torque wrench Stahlwille						0.24	
14.99002		Hex socket 3/4" SW 41						0.24	
14.99003		Socket adapter 3/4" - 1/2" with magnet						0.24	
14.99004		Hand lever grease gun Pressol						0.24	
14.KR35W		Cam plate to Impact Milling Cutter Recycling						0.79	
14.99005		Grease Motorex Plantogel 4000						0.24	

## ACCESSORIES

Round and flat jet nozzle inserts (enz® JetMax)	109
Bushings and Extensions	111
Swivel joints	114
Spray guns	116
Hose protection and accessories	118
Safetyliners and accessories	121
High pressure hoses and accessories	123
Maintenance	125
Toolboxes	128











## Round and flat jet nozzle inserts (enz® JetMax)

The stainless steel ceramic inserts stand out from the competition thanks to a very compact and aggressive water jet. The service life of a JetMax ceramic insert is many times longer than that of hardened steel nozzles or other hard materials. The inserts are available in a wide variety of diameters. The integrated jet stabilizer ensures a concentrated and high-energy water jet. The cleaning affect is greatly increased for the same amount of water and energy.












**Round jet**



					 max		
22.025		Jet insert Ø 0.4 - 0.16 inch	G 1/4"	0.022	7,250	14.0	1.0 - 3.0
22.04		Jet insert Ø 0,01 - 0,06 inch	M4	0.022	22,000	3.5	0.3 - 1.5
22.06		Jet insert Ø 0,01 - 0.2 inch	M6	0.022	14,500	5.0	0.3 - 3.0
22.08		Jet insert Ø 0,04 - 0.13 inch	M8	0.022	22,000	7.0	0.3 - 3.4
22.10		Jet insert Ø 0,04 - 0,15 inch	M10	0.022	7,250	10	1.0 - 4.0
22.K04							

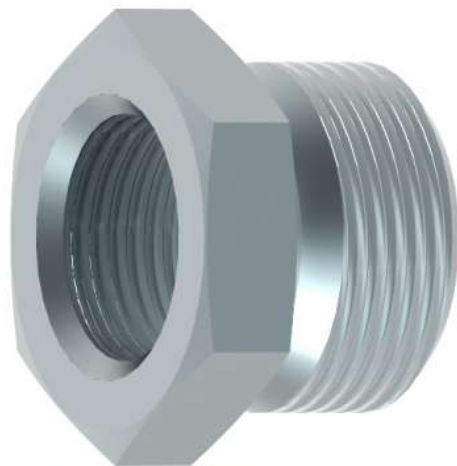
**Flat jet**



						 max		
22.08F		Jet insert flat jet	M8	30°	0.022	7,250	7.0	1.0, 1.5
22.10F		Jet insert fan jet	M10 x 1	30°	0.022	7,250	10.0	1.0, 1.5, 1.9, 2.2, 2.5, 2.8
22.025F		Jet insert fan jet	1/4"	30°	0.033	7,250	14.0	1.0, 1.5, 1.9, 2.2, 2.5, 2.8

# Bushings and Extensions

enz® expansions (extensions) and reductions of various thread sizes are all made of stainless steel.



**Bushings**












19.050038N		Bushing CrNi 1/2" m -> 3/8" f		1/2" m - 3/8" NPT f
19.100062		Bushing CrNi 1" m -> 5/8" f		1" m - 5/8" f
19.100A		Bushing CrNi 1" m -> 1/2" f		1" m - 1/2" f
19.100B		Bushing CrNi 1" m -> 3/4" f		1" m - 3/4" f
19.125		Bushing CrNi 1 1/4" m -> 1" f		1 1/4" m - 1" f
19.150A		Bushing CrNi 1 1/2" m -> 1" f		1 1/2" m - 1" f
19.050025N		Bushing 1/2" m -> 1/4" f NPT		1/2" m - 1/4" NPT f
19.075		Bushing CrNi 3/4" - 1/2"		3/4" - 1/2"

**Extensions**



19.050075		Extension CrNi 1/2" m -> 3/4" f		1/2" m - 3/4" f	
19.100125		Extension CrNi 1" m -> 5/4" f		1" m - 1 1/4" f	



				
C210		Extension 1/4" m -> 3/8" f	1/4" m - 3/8" f	
C211		Extension 1/4" m -> 1/2" f	1/4" m - 1/2" f	
C213		Extension 3/4" m -> 1" f	3/4" m - 1" f	
C214		Extension 1" m -> 1 1/2" f	1" m - 1 1/2" f	
C215		Extension 1 1/4" m -> 1 1/2" f	1 1/4" m - 1 1/2" f	
C217		Extension 1/2" m -> 1" f	1/2" m - 1" f	
C255		Extension 1/2" m -> 5/8" f	1/2" m - 5/8" f	
19.036050		Extension 3/8" -> 1/2"	3/8" - 1/2"	.19












# Swivel joints

Rust proof, sturdy execution, smooth operation, with excellent flow dynamic, suitable for larger channel cleaning and for operating cutters.



**Swivel joints 1/2" - 1 1/4"**



							 max
24.050		Swivel joint	1/2" m - 1/2" f	-	1.65 x 3.15	1.17	3,600
24.075		Swivel joint	3/4" m - 3/4" f	-	2.32 x 2.91	2.70	3,600
24.100		Swivel joint	1" m - 1" f	-	2.95 x 3.15	4.85	3,600
24.125		Swivel joint	1 1/4" m - 1 1/4" f	-	2.36 x 4.76	3.02	3,600
24.150		Swivel joint	1 1/2" m - 1 1/2" f	-	3.31 x 3.78	5.95	3,600
24.1251S							
24.125S		Swivel joint with thrust jets	1" m - 1 1/4" f	3 x M10	3.2 x 5.0	4.08	3,600










# Spray guns

Enz has multiple range of spray guns in its program. The jet can change from a pointed to flat jet, where you can trigger the flow very slowly or you can use a maximum flow. This can accommodate water temperatures of up to 300 °F.



**Spray guns**



						 max
18.41		Spray gun with swivel SG-41	1/2"	37.4	2.65	4,350
18.42		Spray gun with swivel SG-42	3/8"	46.5	3.97	4,350
18.43		Spray gun with swivel SG-43	1/2"	43.3	4.63	5,000
18.44		Spray gun with swivel SG-44	3/8"	42.1	4.19	2,900
18.45		Spray gun without swivel SG-45	1/2"	30.7	5.07	3,600












## Hose protection and accessories

enz® hose protection provides optimum protection for the hose's rubber or plastic coating against environmental influences. In addition to protective plastic hoses, enz® also sells rigid and flexible flex guides. Compared to traditional deflection slides and the plastic hose protection that cause heavy wear on the hoses, the rollers on the enz® flex guides last five times longer. These flex guides are also available in a flexible variant so that you do not always have to detach the nozzle.












**Hose protection**








					
91.05B		Flex guide for hoses with fix hanger	from 5.91	5.00 x 18.90	15.65
91.07B		Flex guide for hoses with fix hanger	from 11.81	5.0 x 24.02	20.50
91		Steel-Banane small	from 7.87	13.78 x 17.72	8.82
91A		Steel-Banane middle	from 7.87	23.62 x 26.38	11.33
91M		Steel-Banane extra small	from 5.91	11.81 x 14.57	5.6
91.05M		Flex guide miniatur for hoses	from 3.35	3.15 x 11.81	4.28
91.05		Flex guide for hoses with brackets	from 5.91	5.00 x 18.90	15.65
91.07		Flex guide for hoses	from 11.81	5.0 x 24.02	20.50

**Accessories for hose protection**



					
91.0515		Flex guide for hoses 91.05			
91.0715		Flex guide for hoses 91.07			
0091.0515		Adapter for flex guide hoses			
0090.02		Extension for Art. 90		39.37	4.5
0090.03		Quick Lock Element			4.68
90		Deflection device for lower edge		157.48	

					
93		Deflection device 18 - 34 inch	17.72 - 31.50		
93.7		Rope clip for upper deflection device			0.02



















## Safetyliners and accessories

The enz® safetyliners are based on a pipe-in-pipe solution and are designed in such a way that the threads cannot be screwed in with too much force. This has no impact on the water output. In many countries, it is actually mandatory to use safetyliners in order to prevent serious accidents during work.



**Safetyliners**



								
97.075-100		Safetyliner 3/4" - 3/4"	3/4"	max. 7.8	1.37 x 4.65	1.0	ok	5,000
97.075-200		Safetyliner 3/4" - 3/4"	3/4"	max. 15.6	1.37 x 8.55	1.6	ok	5,000
97.100-150		Safetyliner 1" - 1"	1"	max. 11.7	1.8 x 6.76	2.1	ok	5,000
97.100-200		Safetyliner 1" - 1"	1"	max. 15.6	1.8 x 8.71	2.6	ok	5,000
97.100-300		Safetyliner 1" - 1"	1"	max. 23.4	1.8 x 12.61	3.5	ok	5,000
97.125-150		Safetyliner 1 1/4" - 1 1/4"	1 1/4"	max. 11.7	2.08 x 6.84	1.2	ok	5,000
97.125-200		Safetyliner 1 1/4" - 1 1/4"	1 1/4"	max. 15.6	2.08 x 8.79	3.5	ok	5,000
97.125-300		Safetyliner 1 1/4" - 1 1/4"	1 1/4"	max. 23.4	2.08 x 12.7	4.7	ok	5,000
97.050-100		Safetyliner complete 1/2" -> 1/2"	1/2"	max. 7.8	1.06 x 4.57	0.70	ok	5,000
97.050-150		Safetyliner complete 1/2" -> 1/2"	1/2"	max. 11.7	1.06 x 6.52	0.9	ok	5,000

# High pressure hoses and accessories

enz® high pressure hoses were developed for high and ultra high pressure applications. They combine outstanding handling and a long service life with the highest level of safety. When working with short nozzles, short fittings are important in order to pass through all the bends, while enz® reels allow you to work in a tidy and efficient manner within buildings.



**High pressure hoses**



						 max
C173		HP Hose	1/8" m - 1/4" f	3/16" x 11yards	2.29	3,600
C174		HP hose	1/8" m - 1/4" f	3/16" x 16yards	3.39	3,600
C175		HP hose	1/8" m - 1/4" f	3/16" x 22yards	4.54	3,600
C176-20		HP hose	1/4" m - 1/2" f	1/4" x 22 yards	7.93	3,600
C176-30		HP hose	1/4" m - 1/2" f	1/4" x 33 yards	11.46	3,600
C177-30		HP hose	1/4" m - 1/2" f	5/16" x 33 yards	12.56	3,600

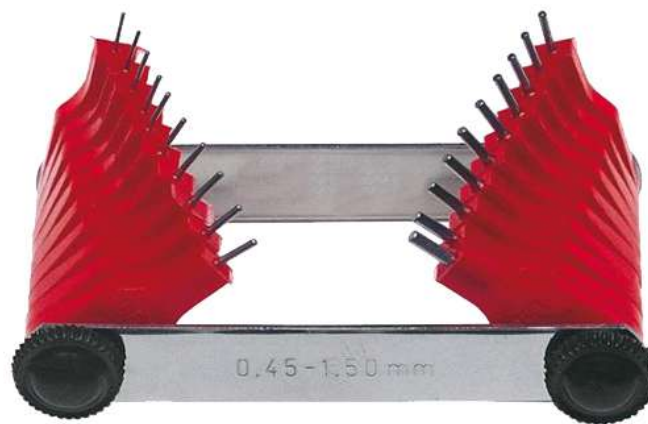
**Accessories for high pressure hoses**



							 max
A-22MF-04BM KAE		Hand adapter IG M22x1.5-AG 1/4"				0.22	
A-22MF-08BM KAE		Hand adapter IG M22x1.5-AG 1/2"				0.33	
C330		Hose Reel for Hose 1/4" and 1/8"	1/2"			9.7	
C331		Closure cap	1/4"			0.22	
C332		Closure cap	1/8"			0.22	






# Maintenance

Regular maintenance and cleaning the nozzles daily prevents interruptions in operations and extends the service life of the nozzles. enz® sells various tools and products that come in handy when doing so. Reamers should never be used for cleaning.

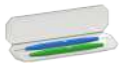







**Seal VDS**


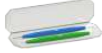






			
VDS-08		Seal VDS-08 1/2"	0.01
VDS-12		Seal VDS-12 3/4"	0.01
VDS-16		Seal VDS-16 1"	0.01
VDS-20		Seal VDS-20 5/4"	0.01

**Maintenance tools & nozzle care**



			
C104		Socket wrench 0.2 inch	0.15
C101		Socket wrench 0.2 inch	0.11
C131		Socket wrench 0.4 inch	0.05
C160		Socket wrench 0.3 inch	0.11
C149		Socket wrench 0.2 inch	0.15
C260		Socket wrench Futuro 0.28 inch	0.15
C261		Socket wrench 3.5 mm	0.11
C201		Nozzle gauge	0.44
C200		Nozzle gauge	0.66

			
C202		Set Nozzle Cleaning-Tool	0.06
C191		Oil Spray Bio, 500 ml	
C192		Loctite 243 - 50 ml	0.15
C109		Loctite 638 - 50 ml	-
C227		Loctite 270 - 50 ml	

# Toolboxes






Enz gives you the option to have a nozzle tool kit box for every jetter and water jetting truck. It's very flexible with the different types of nozzles and you can also add your logo on the lid. This option of organization can reduce the risk of lost or misplaced nozzles.





**Toolboxes 1/2" - 1 1/4"**



				
09.001		Tool Case 1/2 "	1/2 "	11.81 x 10.83 x 4.13
09.003		Tool Case 3/4 "	3/4 "	15.35 x 11.81 x 7.28
09.004		Tool Case 1 "	1 "	19.49 x 16.14 x 7.09



## JetCalc light

JetCalc light calculates the optimal match between the nozzle and the truck. Therefore, the nozzle will achieve it's best performance with the truck specifications. You get the JetCalc light version free by downloading it from [www.enzusainc.com](http://www.enzusainc.com).



## JetCalc full version

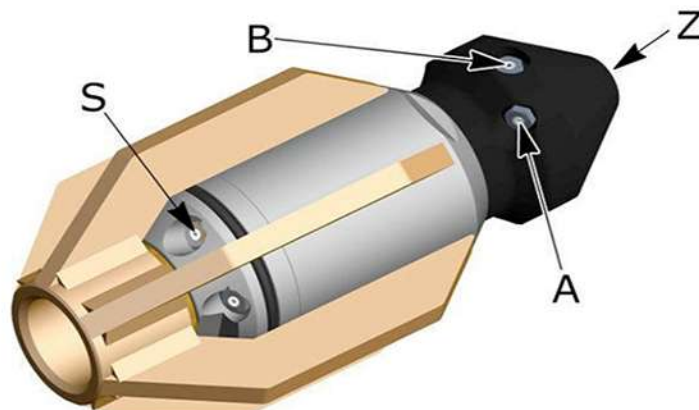
This JetCalc version calculates the optimal components for our nozzles and figures in the pressure loss. This program is specially for enz® products. Other nozzle brands can also be calculated with this program.



### JetCalc Nozzle Calculation Programm

Version 2.6.0 © 2016 ENZ USA INC, Aurora, IL 07.07.2017

<b>Article</b>	<b>400.101A/B</b>
<b>Pump capacity</b>	
Flow rate	100.0 US-G/min
Pressure	2'500.0 PSI
<b>Hose system</b>	
Without hose	
<b>Calculated values</b>	
Flow rate	99.2 US-G/min
Final pressure	2'500.0 PSI
Pressure loss	0.0 PSI
Traction approx.	144 lbs
Excess	0.8 US-G/min
<b>Assembly</b>	
	A = 3 x 1.7 mm
	B = 2 x 2.6 mm
	S = 6 x 1.9 mm
	Z = 0.0 mm
<b>Advice(s)</b>	
	All rotating tools must be tested!
	Rotational speed 3'000 - 7'000 r.p.m.





1585 Beverly Ct. - Unit 115, Aurora, IL 60502 - Phone 630-692-7880 / Fax 630-692-7885

Date: \_\_\_\_\_ Ship: \_\_\_\_\_ Purchase Order: \_\_\_\_\_  
 Ordered by: \_\_\_\_\_

Bill to Company: \_\_\_\_\_ Ship to Company: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

All merchandise returned due to customer error or without proper authorization will be subject to a 15% re-stocking fee.

Qty.	Item Number	Flowrate GPM	Pump Pressure PSI	Hose Rubber Plastic	Hose Length Feet	Hose Dia. Inch	Connecting Thread	Remarks	List Price Each	Qty. Price
Total Item Amount =										
Total Minus Discount =										
<b>All requests must have the GPM's, PSI, hose type and hose length for the order to be complete.</b>										

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

enz® usa inc.  
1585 Beverly Ct.  
Unit 115  
Aurora, IL 60502  
Phone 630-692-7880  
Fax 630-692-7885  
salesusa@enz.com  
www.enz.com

