



# DRAIN CLEANING ACCESSORIES

High Pressure. Cleaner Solutions.



EQUIPMENT • PARTS & SPARES • SERVICING • TRAINING

**FLOWPLANT**

## Focussed on Your Jetting Needs

Flowplant has been creating innovative, high pressure drain and sewer cleaning equipment for over 40 years, selling thousands of high quality and reliable machines throughout the UK and exporting to over 50 countries around the world.

Through our nationwide network of service and distribution centres, we offer a complete range of keenly priced drain jetters and accessories that get the job done, are affordable within your budget and will continue to operate efficiently and cost effectively for many years.



Quality Products



Parts & Servicing

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## General Drain Jet Characteristics

Number of holes	Pulling	Cleaning	Surface coverage	Descaling ability	Unblocking
3 rear	Good	Good	Average	Good	Poor
3 rear 1 forward	Average	Average	Average	Average	Good
6 rear	Good	Good	Good	Average	Poor

## Standard Drain Jet

A low cost drain cleaning nozzle suitable for use on most van and trailer mounted drain cleaning machines with ½" jetting hose diameter. Available as both rear facing or rear and forward facing.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056097	½" BSP M	75-150 (3-6)	60 (13)	415 (6000)	3r	30°	No
056413	½" BSP M	75-150 (3-6)	60 (13)	415 (6000)	3r1f	30°	No
056582	½" BSP M	75-150 (3-6)	60 (13)	415 (6000)	4r	30°	No
056583	½" BSP M	75-150 (3-6)	60 (13)	415 (6000)	4r1f	30°	No
056584	½" BSP M	75-150 (3-6)	60 (13)	415 (6000)	6r	30°	No
056585	½" BSP M	75-150 (3-6)	60 (13)	415 (6000)	6r1f	30°	No

## High Efficiency Drain Jet

Easy to clean high efficiency stainless steel two piece drain jet with drilled jet holes that produce a more powerful and concentrated jet pattern. The jet body has a ½" BSP female port but it can be supplied with either ½" or ¾" male adaptors to suit most common jet hoses.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056670	½" BSP F	100-225 (4-9)	100 (22)	700 (10000)	3r	30°	No
056671	½" BSP F	100-225 (4-9)	100 (22)	700 (10000)	3r1f	30°	No
056672	½" BSP F	100-225 (4-9)	100 (22)	700 (10000)	4r	30°	No
060133	½" BSP F	100-225 (4-9)	100 (22)	700 (10000)	6r	30°	No

## Mini Jet (Ball)

For use with ¼" mini jet hoses these jets are ideal for cleaning small bore pipework, sink wastes and pipes with tight bends.

The nozzles are available as a 3 rear jet or 3 rear 1 forward and can also be bought as part of a mini jet kit complete with the jetting hose.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056126	¼" BSP M	50-100 (2-4)	40 (9)	415 (6000)	3r	30°	No
056412	¼" BSP M	50-100 (2-4)	40 (9)	415 (6000)	3r1f	30°	No

## Plough Jet

Fitted with two rear facing fan jets the small plough jet nozzle is great for desilting drains and sewers. The heavy brass construction keeps the jet firmly planted in the base of the pipe where the silt deposits collect and blasts them back towards the manhole. A larger version with 4 jets is available for the more powerful Flowplant machines.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056044	½" BSP F	100-300 (4-12)	60 (13)	415 (6000)	2r	2 @ 15°	No
056042	¾" BSP F	225-450 (9-18)	100 (22)	350 (5000)	4r	2 @ 15° / 2 @ 30°	No

## Rocket Jet

The rocket jet is ideal for desilting and cleaning larger diameter sewers with smaller trailer and van mounted jetting units. Like a plough it sits in the bottom of the pipe but additional jets provide cleaning power towards the pipe crown making it a versatile tool.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056845	½" BSP F	150-450 (6-18)	60 (13)	415 (6000)	4r	4 @ 15°	No
056041	¾" BSP F	225-450 (9-18)	100 (22)	350 (5000)	8r	8 @ 15°	No

## Turbo Jet

The turbo jet is a rotating nozzle and is excellent for the removal of hard scale deposits. It can be used at up to 690 bar (10,000 psi) but it will provide a good standard of clean anywhere from 280 bar (4,000 psi) upwards. The front mounted pulling ring allows a draw rope to be attached so that the turbo can be winched back and forward through the pipe until the required standard of clean has been achieved.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056323	½" BSP F	100-225 (4-9)	60 (13)	700 (10000)	2r	2 @ 15°	Yes

## Chain Flail

Designed to remove light scale and roots, the Spider 50 is a low cost chain flail with drive jets and a water lubricated bearing. It is suitable for use on most small and medium jetting units up to 350 bar and operates in pipes from 80 to 150mm diameter. The rotor can be fitted with replaceable chain links or wire brushes.

The larger Spider 60 is designed for pipes up to 225mm and works well on machines up to 300 bar.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056982	½" BSP F	80-150 (3.5-6)	60 (13)	350 (5000)	Chain link	N/A	Yes
056725	¾" BSP F	150-225 (6-9)	80 (17)	300 (4300)	Chain link	N/A	Yes

## Root Cutter Saw

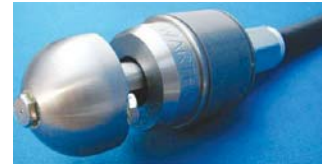
This powerful saw blade root cutter can power through the toughest tap roots in drains up to 225mm diameter. It comes in its own carry case with tools and 3 skids (100, 150 and 225mm) and it can be powered by any jetter providing 50-70 l/min at only 140 bar.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056981	½" BSP F	100-225 (4-9)	70 (15)	140 (2000)	Saw blade	N/A	Yes
056989	N/A	100 (4)	N/A	N/A	Saw blade	N/A	Yes
056967	N/A	150 (6)	N/A	N/A	Saw blade	N/A	Yes
056968	N/A	225 (9)	N/A	N/A	Saw blade	N/A	Yes

## Warthog

The popular Warthog nozzle provides consistent and powerful cleaning performance. The slow speed controlled rotation allows the jet stream time to blast at the blockage clearing everything from soft scale to soft bulky blockages and grease deposits.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056707	½" BSP F	100-225 (4-9)	30 (7)	350 (5000)	2r1f	2r @ 15° / 1f @ 30°	Yes

## Aquaspin 40mm

The Aquaspin is a 40mm diameter rotary jet suitable for descaling and general cleaning in pipes up to 225mm in diameter. It has a very high working pressure and has even been used on high pressure machines for cutting out damaged liners. The rotary body can be had with either 4 jets at 90° which is excellent for cleaning hard deposits from the pipe wall or 2 jets at 90° and 2 jets at 45° making it ideally suited for cleaning and pulling longer distances.



Part No	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056645	½" BSP F	100-225 (4-9)	90 (20)	1000 (14500)	7	3 fixed, 2 @ 90°, 2 @ 45°	Yes
056653	½" BSP F	100-225 (4-9)	90 (20)	1000 (14500)	7	3 fixed, 4 @ 90°	Yes

## Jet Inserts

Part No	Thread	Size mm	Type
A140646	M4	0.9	Sapphire
A140647	M4	1.0	Sapphire
056657	M4	1.1	Sapphire
056655	M4	1.2	Sapphire
056658	M4	1.3	Sapphire
056659	M4	1.4	Sapphire
056660	M4	1.5	Sapphire
056661	M4	1.6	Sapphire
056663	M6	0.7	Sapphire
056664	M6	0.8	Sapphire

Part No	Thread	Size mm	Type
056654	M6	0.9	Sapphire
A140656	M6	1.0	Sapphire
A140657	M6	1.1	Sapphire
056656	M6	1.2	Sapphire
056665	M6	1.3	Sapphire
056666	M6	1.4	Sapphire
056667	M6	1.5	Sapphire
056668	M6	1.6	Sapphire
056669	M6	1.7	Sapphire
056676	M6	Blank	Stainless Steel

# Main Jetting Hose

## Standard Jetting Hose

A standard wire reinforced rubber hydraulic hose assembly meeting BS EN 1829:2 suitable for sewer jetting applications. Available in shorter lengths to avoid the need to replace 90m when damaged.



Part No	Thread	Outer Cover	Length m (ft)	Hose bore mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)
055021	½" BSP F	Rubber	90 (300)	12.5 (½)	72	350 (5000)
055018	½" BSP F	Rubber	60 (200)	12.5 (½)	72	350 (5000)
055015	½" BSP F	Rubber	30 (100)	12.5 (½)	72	350 (5000)

## Tuffskin

A new Tuffskin lightweight thermoplastic sewer jetting hose weighing 50% less than standard rubber hose and with a significantly longer jetting life. The Tuffskin has super smooth outer and inner covers allowing for runs of over 200m with a Harben jump jet kit system and minimal pressure drop giving much greater jetting power at the drain cleaning nozzle.



Part No	Thread	Outer Cover	Length m (ft)	Hose bore mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)
0551229	½" BSP F	Tuffskin Thermoplastic	90 (300)	12.5 (½)	72	350 (5000)

## Stauffshield

The Stauffshield UHMW hose represents the latest rubber technology and delivers substantially better wear resistance, less weight and very low friction levels all adding up to a highly versatile long lasting hose with all the flexibility associated with softer rubber products. Tests have shown that when compared to standard jetting hose, the Stauffshield showed no measureable wear even after 1,000,000 rubbing cycles (EN ISO 6945). The hose also travels longer distances when compared to standard rubber types.



Part No	Thread	Outer Cover	Length m (ft)	Hose bore mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)
0551580	½" BSP F	UHMW Rubber	90 (300)	12.5 (½)	72	350 (5000)
0551623	½" BSP F	UHMW Rubber	30 (100)	12.5 (½)	72	350 (5000)

## Safety Leader Hose

Supplied as a 3m length of blue coloured hose the leader hose connects directly to the end of the main jetting hose and acts as a warning to the operator that the jetting nozzle is close to the manhole entry and care should be taken. For nozzles with a female port use 0551616 directly into the port to avoid long connecting ferrules.



Part No	Thread	Outer Cover	Length m (ft)	Hose bore mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)
055998	¾" BSP F x ¾" BSP M	Rubber	3 (10)	9.5 (3/8)	40	350 (5000)
055093	½" BSP F x ½" BSP M	Rubber	3 (10)	12.5 (1/2)	72	350 (5000)
0551616	½" BSP M x ½" BSPT M	Rubber	3 (10)	12.5 (1/2)	72	350 (5000)

## Mini Jet Kit

The ¼" bore mini jet kits come complete with a small ball jet suitable for travelling around the tight bends encountered in gulleys and traps. They are available with either 3 rear or a 3 rear 1 forward configuration suitable for unblocking chokes. The adaptor supplied allows the mini jet kit to be connected directly to the ½" safety leader hose.



Part No	Thread	Length m (ft)	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
023220	½" BSP M	6 (20)	50-100 (2-4)	40 (9)	415 (6000)	3r1f	3r @ 30°, 1f	No
023227	½" BSP M	6 (20)	50-100 (2-4)	40 (9)	415 (6000)	3r	3r @ 30°	No
023275	½" BSP M	15 (50)	50-100 (2-4)	40 (9)	415 (6000)	3r	3r @ 30°	No

## Micro Mini Jet Kit

The 5mm bore micro mini jet kit comes complete with a small button jet suitable for travelling around the tight bends encountered in urinal waste pipes and other small bore drainage systems. The kit comes with an adaptor so that it can be connected directly to the ½" safety leader hose.

Part No	Thread	Length m (ft)	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
032601	½" BSP M	6 (20)	25-50 (1-2)	30 (6)	300 (4300)	3r1f	3r @ 30°, 1f	No

## Tiger Tail

Supplied as a 0.9m length of flexible smooth yellow polyethylene hose with special inserts and hard wearing black spirals this "Tiger Tail" hose feed guide protects the high pressure jetting hose as it passes around tight bends and manhole exits. Complete with a guide rope it is easy to use and aids placement of the jetting nozzle into the drain entrance. It is available in two sizes accepting nozzles up to 50mm and 75mm in diameter.



Part No	Outer Cover	Length m (ft)	Bore size mm (inches)
055147	PE	0.9 (3)	50 (2)
0551443	PE	0.9 (3)	75 (3)

## Drain Jet Extension

The drain jet extension is vital safety equipment and must be connected between the jetter nozzle and safety leader hose when jetting in larger diameter sewers or culverts. Choose a size that is at least equal to the diameter of the pipe being cleaned to stop the possibility of the jet nozzle turning in the pipe and heading back towards the operator.



Part No	Thread	Length m (inches)	Max pressure bar (psi)
033085	½" BSP F x ½" BSP M	0.20 (9)	350 (5000)
033086	½" BSP F x ½" BSP M	0.30 (12)	350 (5000)
033087	½" BSP F x ½" BSP M	0.45 (18)	350 (5000)

## Foot Control Valve

The mechanical foot control valve enables the operator to control the flow of water to the jet whilst remote from the jetting unit. The valve is connected into the high pressure supply line and is fitted with an inlet, outlet and dump port.



Part No	Thread	Configuration	Max pressure bar (psi)	Flow l/min (gpm)
031043	½" BSP M	In/Out/Dump	415 (6000)	72 (16)
033274	½" BSP M	In/Out/Dump	700 (10000)	100 (22)
033318	½" BSP M	In/Out/Dump	1000 (15000)	100 (22)

## High Pressure Guns

Harben high pressure dump guns are the safest way to control hand jetting applications. The dump barrel system prevents pressure being trapped in the gun when the trigger is released therefore stopping dangerous accidental discharges. The



pressure barrel can be fitted with a variety of cleaning nozzles for applications such as cleaning manholes, forecourts or other large flat areas. A shoulder stock kit (7001931) is available to help the operator safely control reaction forces and the gun should always be used with a safety shroud (7001679) to protect against hose bursts. The gun complies with BS EN 1829:1.

Part No	Thread	Barrel Configuration	Max pressure bar (psi)	Flow l/min (gpm)
031040	½" BSP M	High pressure/Dump	415 (6000)	54 (12)
033355	½" BSP M	High pressure/Dump	1000 (15000)	100 (22)
7001931	N/A	Shoulder stock	N/A	N/A

## Gun Safety Shroud

The gun safety shroud 7001679 can be retro-fitted to all Flowplant MkII guns (031040). It is manufactured from twin sleeve super de-aerated Polyamide 6. The sleeve material has been tested and approved to international standards and has been found to be very effective in reducing the concentrated stream of pinhole leaks. Other shrouds are available to suit pressure washers and smaller jetting machines.



Part No	Description	Thread	Length m	Max pressure bar (psi)	Flow l/min (gpm)
7001679	MkII Gun shroud	¾" BSP F x ½" BSP M	3	415 (6000)	54 (12)
7001905	Dry shut gun shroud (hot water)	¾" BSP F x ¾" BSP M	3	200 (3000)	40 (9)
7001687	Dry shut gun shroud (cold water)	¾" BSP F x ¾" BSP M	3	200 (3000)	40 (9)



## P&A Gun Spinning Nozzle

There are many different types of spinning jets for guns but the P&A is simple, effective and low cost. The spinning pencil jets produce a high pressure cone that cleans effectively over a wider path, combining the benefits of fan and pencil jets into a powerful cleaning tool. The P&A is a useful addition to any cleaning set up extending the use and productivity of your jetting gun.



Part No	Thread	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Nozzle Angle	Rotary
056326	½" BSP F	60 (13)	415 (6000)	2f	2 @ 15°	Yes

## Fan & Pencil Jets

Fan and pencil jets are used in numerous applications and are chosen to suit the particular flow and pressure of your machine and accessory. Fan jets produce a flat 15° fan shaped pattern suited to quick cleaning of lightly soiled surfaces. The pencil (or HV) jets are far more concentrated forcing all the jet power over a smaller cleaning area and they are capable of removing much harder deposits. To check the correct nozzle size for your jetter please visit [www.flowplant.com/drain-sewer/accessories/](http://www.flowplant.com/drain-sewer/accessories/)



Part No	Size	Thread	Flow l/min (gpm)	Max pressure bar (psi)	Nozzle Angle
056001	1502	¼" NPT M	Use jet sizer	700 (10000)	15°
056002	1503	¼" NPT M	Use jet sizer	700 (10000)	15°
056003	1504	¼" NPT M	Use jet sizer	700 (10000)	15°
056004	1505	¼" NPT M	Use jet sizer	700 (10000)	15°
056005	1506	¼" NPT M	Use jet sizer	700 (10000)	15°
056006	1507	¼" NPT M	Use jet sizer	700 (10000)	15°
056007	1508	¼" NPT M	Use jet sizer	700 (10000)	15°
056008	1509	¼" NPT M	Use jet sizer	700 (10000)	15°
056009	1510	¼" NPT M	Use jet sizer	700 (10000)	15°
056180	15125	¼" NPT M	Use jet sizer	700 (10000)	15°
056011	1515	¼" NPT M	Use jet sizer	700 (10000)	15°
056012	1520	¼" NPT M	Use jet sizer	700 (10000)	15°
N08490	1.0mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08488	1.1mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08489	1.2mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08491	1.3mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08492	1.4mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08493	1.5mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08494	1.6mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08495	1.7mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08496	1.8mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08497	1.9mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08498	2.0mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08499	2.2mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08500	2.3mm	¼" NPT M	Use jet sizer	700 (10000)	0°
N08501	2.4mm	¼" NPT M	Use jet sizer	700 (10000)	0°

## Jet Pumps

A simple and very effective venturi type pump that will work directly off the main jetting hose. The Harben jet pump will handle any solids small enough to enter the inlet tube and with no moving parts there is very little to wear out. It is ideal for removing water from flooded manholes or basements and even a small van pack jetter can drive a 40mm version pumping up to 230 l/min a height of 5m through 9m of delivery hose.



Model	Jetting Unit Input			Jet Pump Output (typical)		
mm (inches)	Part No	Pressure bar (psi)	Flow l/min (gpm)	Output l/min (gpm)	Pumping height m (ft)	Delivery hose length m (ft)
75 (3)	012075	280 (4000)	90 (20)	385 (85)	8 (26)	11 (35)
75 (3)	012075	280 (4000)	90 (20)	680 (150)	6 (20)	11 (35)
50 (2)	039001	280 (4000)	54 (12)	250 (55)	7 (23)	11 (35)
50 (2)	039001	280 (4000)	54 (12)	320 (70)	5 (17)	11 (35)
40 (1.5)	032121	200 (3000)	45 (10)	200 (45)	7 (23)	9 (30)
40 (1.5)	032121	200 (3000)	45 (10)	230 (50)	5 (17)	9 (30)

Approximate output loss of 75 litres/m (5 g/ft) delivery hose

## Hoverclean

The Harben Hoverclean floor cleaner is perfect for jet cleaning large flat surfaces quickly and safely. It can operate at up to 420 bar and it is ideally suited to Flowplant's range of 30hp plus jetting machines. Stadiums, garage forecourts and artificial running tracks are just some of the areas that can be brought back to pristine condition by the Hoverclean.



Part No	Ports	Selector Valve	Cleaning width m	Max pressure bar (psi)	Flow l/min (gpm)
023228	½" BSP M	High pressure/Dump	0.7	350 (5000)	54 (12)

## Whirlaway

The Whirlaway floor cleaner can be used on both dump type and dry shut systems making it an ideal accessory for smaller pressure washers. It can operate with water at up to 80c and can be used for removing oil, chewing gum and other stubborn deposits from floors. Smaller or larger versions are available.



Part No	Ports	Selector Valve	Cleaning width m	Max pressure bar (psi)	Flow l/min (gpm)
057102	¾" BSP M	High pressure	0.45	280 (4000)	30 (6.5)

## Jetting Helmet Set

This complete fully adjustable helmet set is designed to provide high pressure water jetting operators with the highest level of face and head protection. In line with the Water Jetting Association Code of Practice the helmet is fitted with a visor, chin guard and ear muffs.



Part No	Description
065013	Complete Helmet Set

## Jetting Safety Boots

These jetting boots have been specially designed to withstand a water jet up to 800 bar (11,600 psi) accidentally passing over the top of the foot (metatarsal), an area that is left exposed by many other wellington boot designs. Such accidents can happen when using a jetting gun for washing down or surface cleaning. They are resistant to oils, petrol, dilute acids and alkalis and have a slip resistant sole and energy absorbing heel. The boot is designed to meet EN345-54 and DIN 2 3329.



Part No	Description	Part No	Description
065076	Metatarsal safety boots size 6	065058	Metatarsal safety boots size 10
065061	Metatarsal safety boots size 7	065066	Metatarsal safety boots size 11
065060	Metatarsal safety boots size 8	065065	Metatarsal safety boots size 12
065057	Metatarsal safety boots size 9		

## Safety Sign

This 340mm x 500mm foldable water jetting safety sign warns against unauthorised entry into the prohibited jetting zone and meets current Water Jetting Association guidelines. Tough nylon eyelets make it easy to secure in place with ties or bungie straps.



Part No	Description
061054	Safety Sign (WJA)

## Safety Burst Discs & Holder

Safety burst discs are designed to rupture if the working pressure of the jetter rises significantly above the maximum working pressure, such as might occur when a jetting nozzle becomes blocked. A stock should always be kept with the jetter and only genuine replacement parts should be used in the pressure disc holder.

Part No	Pressure bar (psi)	Colour
011019	125 (1800)	Yellow
011020	140 (2000)	Blue
011021	175 (2500)	Red
011022	200 (3000)	Purple
011045	240 (3500)	Green
011046	280 (4000)	White
011047	350 (5000)	Black
011107	415 (6000)	Orange
013043	Pressure disc holder	



## Enz<sup>®</sup>

### What's in it for me? Enz efficiency drain jets.....

We are always being asked by our drain cleaning customers why they should pay more for drain cleaning drain jets with higher efficiency ratings. We all know that a washing machine with the A+ rating uses less electricity than one with a C rating and that must be a good thing because we save money. But what about a drain jet that is 90% efficient compared to one that is only 60% efficient. What is the benefit for the user?

Well actually it's quite straightforward. Say you start off with a jetter that can pump 3000 psi at 11 gpm. The name of the game is to get as much of this power hitting the side of the drain pipe as possible and that's where the drain jet comes in.

A drain jet with a low efficiency rating simply means that the water passing through it wastes a lot of the pump energy before it even leaves the hole.

Why does this happen? Because the holes are drilled directly into the jet body. As a result they will be quite rough and ragged and these rough surfaces slow down the water as it blasts out into the drain.

If the water is slowed down even before it leaves the jet hole it will have much less energy by the time it hits the side of the drain and much less ability to blast it clean.

In contrast to this the Enz high efficiency drain jet is manufactured with very smooth inside surfaces and the jet holes are made of ceramic, the same material that Formula 1 brake discs are made from. These inserts allow the water to pass through them at very high speed, hitting the side of the drain with maximum impact. To see the benefit of the Enz high efficiency drain jet over a standard drilled version take a look at the numbers below.

If we use a 200 bar jetter that pumps 50 l/min and we fit either a standard drain jet or a high efficiency drain jet the effect is clear. The standard 3 rear drain jet is about 60% efficient and the water passing through it will be travelling out of each hole at about 240 mph.

Use the same pump to power the Enz drain jet that is 90% efficient and the water passing through this jet will be travelling out of each insert at just over 400 mph! Remember, same pump, same pressure, same flow but 160 mph more jet speed!

Thanks to the laws of physics this extra speed packs nearly 3 times more cleaning energy into the water leaving the Enz high efficiency jet and that means longer drain runs can be cleaned quicker with the same machine. There is also the added advantage that the inserts in the Enz high efficiency jet are easily replaceable so the life of the drain jet can be several times longer.

Try for yourself and see how much more cleaning power you can get from your existing jetter for just a small investment in quality Enz high efficiency drain jets.



## Advantages of Enz high efficiency drain jets

- Up to 3 times more cleaning power from the same jetter
- Can clean longer drain runs with the same jetter
- Replaceable inserts give longer life
- Uses less water - can be jetted to give same cleaning power as a standard drain with less water usage
- Faster turnaround time on job sites
- Better camera survey results
- More productive and more invoiced jobs per day

There are many different kinds of Enz nozzles and here we have detailed those that are most popular with our customers for use on van pack and trailer mounted machines.

### Enz Standard Cleaning Nozzle

The Enz standard cleaning nozzle fitted with ceramic inserts is 90% efficient and can be configured with several jet patterns to suit your task. Most popular is the 3 rear 1 forward and the 6 rear offering blocking and cleaning power superior to any other similar nozzles.



Part No	Description	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Insert Type	Nozzle Angle	Rotary
0561051	Standard Cleaning Nozzle	½" BSP F	50-200 (2-8)	From 40 (9)	350 (5000)	3r, 6r, 3r1f or 6r1f	Ceramic-steel	30°	No

### Enz Grenade Bomb

The Enz Grenade Bomb cleaning nozzle is the perfect partner for van and trailer mounted jetting units when cleaning in larger diameter pipes. The flat rear angle maximises the pulling power of the nozzle and keeps the jet stream at the bottom of the pipe where silt deposits collect. Some customers have reported success in sewers up to 1000mm diameter with only 60 l/min at 280 bar!



Part No	Description	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Insert Type	Nozzle Angle	Rotary
0561053	Grenade Bomb	½" BSP F	100-300 (4-12)	From 40 (9)	350 (5000)	6r or 6r1f	Ceramic-steel	25°	No

### Enz Chain Flail

The Enz Chain Flail uses highly efficient turbine technology to spin the high speed rotor with minimal flows right down to 30 l/min. This means that root cutting and pipe descaling can now be carried out with the smallest machines in the Flowplant range enhancing productivity to levels not seen before. (See video clip on website)



Part No	Description	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Insert Type	Nozzle Angle	Rotary
0561052	Turbine Chain Flail	½" BSP F	60-200 (2.5-8)	30 (7)	350 (5000)	Flails	Ceramic-steel	~	Yes

## Enz Gliding Nozzle

The Enz Gliding nozzle is designed to clean the entire surface of pipes from 80 to 400mm diameter. The unique extended hose clip forces the jet to hug the pipe wall keeping the cleaning jet in very close contact with the surface. The result is an extremely good level of clean with the minimum of flow rates. (See video clip on website)



Part No	Description	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Insert Type	Nozzle Angle	Rotary
0561055	Gliding Nozzle	¼" BSP F	80-400 (3-16)	10 (2.5)	350 (5000)	2r, 1@90°	Ceramic-steel	~	Yes
0561056	Spare hose clip								

## Enz Rotopuls

The Enz Rotopuls nozzle is designed with an off centre rotor that makes the complete nozzle vibrate at high frequency when being used in plastic, steel or concrete pipes. (See video clip on website). The vibrations are so strong that hard scale deposits can be fractured and then flushed free by the water jets. NB. The high vibration forces developed by the Rotopuls can damage fragile pipes e.g. clay, thin wall plastic or badly bedded PVC.



Part No	Description	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Insert Type	Nozzle Angle	Rotary
0561099	Rotopuls	¼" BSP F	50-100 (2-4)	30 (7)	350 (5000)	3r, 2@90°	Ceramic-steel	~	Yes

## Enz Rotodrill

The Enz Rotodrill is perfect for drilling through blockages with its clever rotary forward facing jet. Driven up to the blockage by 6 powerful rear facing ceramic nozzles the high speed forward facing spinning jet creates a cone shape that has enough cutting force to blast through roots and scale. It is also ideal for cutting up and shredding tissue and fat deposits. (See video clip on website)



Part No	Description	Thread	Pipe size mm (inches)	Flow l/min (gpm)	Max pressure bar (psi)	Nozzles	Insert Type	Nozzle Angle	Rotary
0561100	Rotodrill	½" BSP F	50-150 (2-4)	50 (11)	350 (5000)	6r, 1f@7°	Ceramic-steel	~	Yes



# Servicing & Maintenance

Our nationwide network of service centres and mobile engineers are always on hand to offer expert advice on all aspects of maintaining your water jetting systems, pumps and equipment. A full range of spares is readily available within 24 hours.

Our Service Division can advise you or your engineering staff plus undertake servicing, repairs and remedial work in the field, from our fleet of mobile vans, or at our service centres.

We offer a range of servicing and maintenance packages to suit your requirements, ensuring your equipment is always operating reliably, efficiently and safely.

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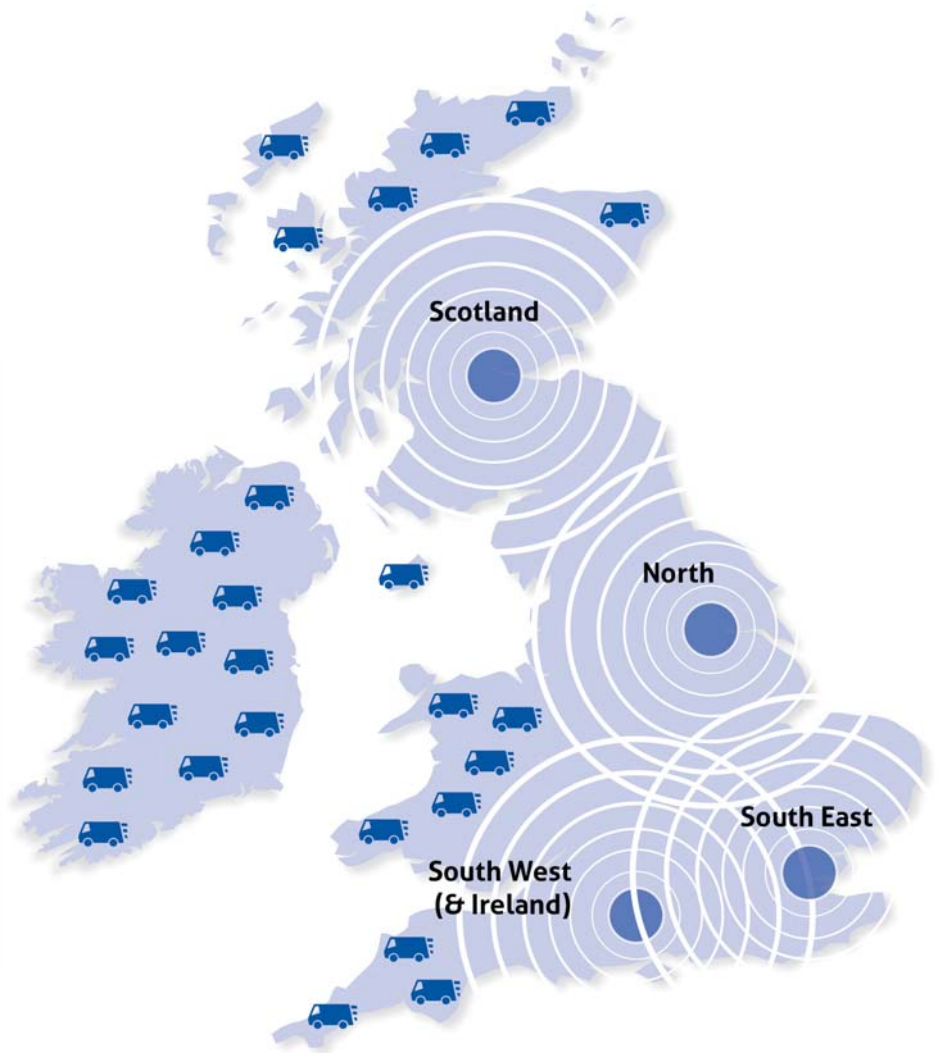
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Visit the Flowplant website to view the wide range of high pressure water jetting equipment we manufacture, links to brochures, manuals and online videos.

[www.flowplant.co.uk](http://www.flowplant.co.uk)



Flowplant standard terms and conditions of sale apply.

Due to our policy of continued improvement, Flowplant reserves the right to change prices and specifications without notice.

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