

SVC

SPEED MAJOR CLEANING



Introduction

SMC Group has initiated its work in water jet industry with the purpose of providing the best innovations since 2014.

Our engineering team has managed to produce different types of water jet accessories up to 2800 bar with using full-automatic machineries.

Adherence to three main principles: innovation, quality, commitment with benefitting from various types of nozzles and connectors has enabled us to produce extraordinary products to perform washing and descaling operations in different industries with the highest efficiency.

As a result, it has been decided to be fully-focused on producing a wide range of such products.

Speed, accuracy, safety, and international production network are controlled by a single technology so that our customers could have easy access and convenience. This factor is one of the most important SMC's superiority in water jet industry.





High Pressure Nozzles

Using and controlling water energy make many impossible things possible in the industry.

Descaling heat exchanger tubes and washing tanks are one of the main mind obsessions of the equipment maintenance team. By the passage of time, carbon, polymer, salt, and oils change into hard materials which cause blockage to reduction the performance.

We supply various fixed nozzles up to 2800 bar to remove sediments. Designing and producing a proper nozzle appropriate for the type of sediment, increasing the wash speed, and decreasing the equipment depreciation in the work environment are the most significant targets of SMC. Our various types of nozzles, installable on different type of gun, lance, and rigid lances facilitates a safe and high-quality cleaning operation.

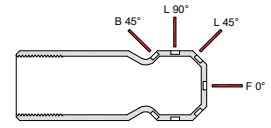


The most powerful high pressure SMC nozzles with the highest efficiency.

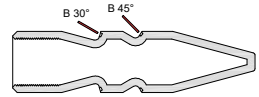
High Pressure Nozzles



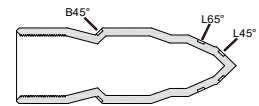
Nozzle Type	W.P.		Connection
	bar	psi	
Classic	700	10000	NPT
	1500	22000	BSP
			Metric



Nozzle Type	W.P.		Connection
	bar	psi	
Missile	700	10000	NPT
	1500	22000	BSP
	2800	40000	UNF



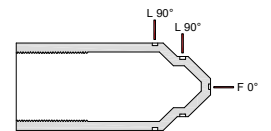
Nozzle Type	W.P.		Connection
	bar	psi	
Rhino	700	10000	NPT
	1500	22000	BSP
			Metric



Nozzle Type	W.P.		Connection
	bar	psi	
Rapid	2800	40000	UNF

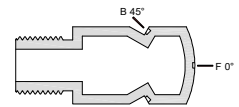


Nozzle Type	W.P.		Connection
	bar	psi	
Falcon	700	10000	NPT
	1500	22000	BSP

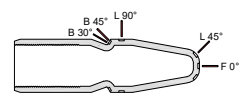




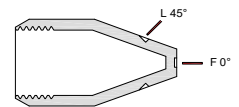
Nozzle Type	W.P.		Connection
	bar	psi	
<i>Dish head</i>	1500	22000	BSPP
			Metric



Nozzle Type	W.P.		Connection
	bar	psi	
<i>Rocket</i>	700	10000	NPT



Nozzle Type	W.P.		Connection
	bar	psi	
	<i>Pointed</i>	1500	22000
BSPP			
UNF			



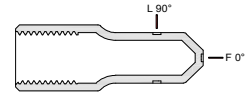
Nozzle Type	W.P.		Connection
	bar	psi	
<i>Crocointed</i>	700	10000	NPT



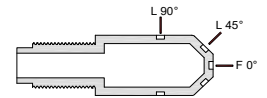
High Pressure Nozzles



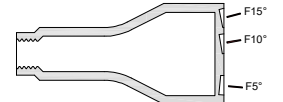
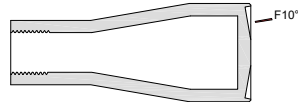
Nozzle Type	W.P.		Connection
	bar	psi	
Convertor	700	10000	NPT
	1500	22000	BSPB
			Metric



Nozzle Type	W.P.		Connection
	bar	psi	
Micro	700	10000	BSPB
			Metric

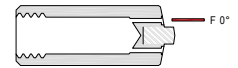


Nozzle Type	W.P.		Connection
	bar	psi	
Carrier	2800	40000	UNF

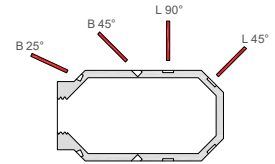




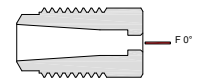
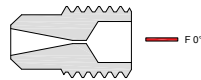
Nozzle Type	W.P.		Connection
	bar	psi	
<i>Diamond</i>	700	10000	BSPP



Nozzle Type	W.P.		Connection
	bar	psi	
<i>Fighter</i>	700	10000	NPT



Nozzle Type	W.P.		Thread
	bar	psi	
<i>Sapphire insert</i>	2800	40000	Metric
			UNF





Sewer Nozzles

One of the most important issues in cities is supplying a clean hygienic environment. As a result, planting and growing different types of trees in urban areas leads to fresh air increase.

The humidity of sewerage network area attracts the root of trees towards the pipes and lead to their damage and blockage. Transfer of Sand & stones through the pipes and their lack of movement due to the low-speed water flow are considered as the other reasons for sewerage network blockage.

Moreover, waste materials and rubbish existence in the pipes can also expand the blockage.

SMC nozzles, due to their long life, high resistance against corrosion and fast movement are the best choice for sewer pipes wash from 30 up to 2000 mm.



Powerful Sewer Nozzles are the smartest choice to perform the most effective cleaning operations in difficult conditions.

Sewer Nozzles

Bomb Nozzles



This nozzle is made of hardened stainless steel; due to the heavy weight and backward outlet jet patterns which are in two different angles (10° & 30°), the nozzle has great power and can easily pass through the pipes by hitting the materials inside the pipes.

When a sewerage network is almost blocked with various kinds of small and big stones, SMC Bomb nozzles can be the best choice to clean up the route.

The Bomb nozzles having single forward jet pattern can be used to open the blocked pipes.

Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
Bomb	250	3650	Female-1" BSPP	11	M10x1	4
			Female-1.1/4" BSPP			7



Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
Bomb	250	3650	Female-1" BSPP	10	M10x1	5.5
			Female-1.1/4" BSPP			8.5



Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Type	Weight (kg)
	bar	psi				
Bomb*	250	3650	Female-3/4" BSPP	10	Roundjet Fanjet	4



*Divider Included

Quanco Nozzles

While washing the sewer network, you may encounter the pipes which not only have a rather big diameter, thoroughly filled with sands and stones also outlet jet pattern with 45° are supposed to push the nozzle forward, Due to the big diameter the power of the backward outlet jet patterns is not strong enough to move the nozzle through the long line. Quanco nozzle with its exceptional body-shape can pass through this route rapidly and remove the blockage thanks to its unique body shape and backward outlet jet pattern with a 15° and almost parallel to the horizon line.

Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
Quanco	250	3650	Female-3/4" BSPP	7	M10x1.5	0.9
			Female-1" BSPP			2



Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
Quanco	250	3650	Female-3/4" BSPP	10	M10x1.5	0.8
			Female-1" BSPP			1.6



Curved Head Nozzles

Nozzle Type	W.P.		Connection	Holes No.
	bar	psi		
Curved Head	280	4000	Female-3/8" BSPP	4
			Female-1/2" BSPP	
			Female-3/4" BSPP	



Angle-Faced Nozzles



When the sewerage pipe is thoroughly blocked, the best device to remove the blockage is SMC Angle-faced nozzle.

These nozzles are designed and produced in two type of Triangle & Quadrangle types which could be opted based on the type of the blockage. Quadrangle nozzle with four forward outlet jet patterns 20° and a single forward outlet jet pattern 0° is appropriate to remove the blockage from large pipes; furthermore, Triangle nozzle with three forward outlet jet patterns 20° and a single forward outlet jet pattern 0° is more suitable for the blockage removal of small pipes.

Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
Quadrangle	250	3650	Female-1" BSPP	11	M10x1.5	2.5
			Female-1.1/4" BSPP	15	M10x1	7



Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
Triangle	250	3650	Female-3/4" BSPP	10	M8x1.25	0.7



Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
Triangle	250	3650	Female-1/2" NPT	7	FW: M4x0.7 BW: M6x1	0.2



Egg Nozzles



If tiny stones and some other fine materials slow down the water flow through the sewerage network, SMC Egg nozzles can be used for cleaning.

The light weight and egg-like shape of this nozzle increases its capability to have fast movement through the materials; this nozzle has been designed for moving at high speed and through long routes.

Egg nozzle is equipped with a divider which equally divides the water flow between the backward outlet jet patterns; the divider reduces the non-periodic slugging movements of the nozzle and constantly controls it to have a direct forward movement. The nitrogenized surface of the nozzle body causes the highest resistance against abrasion and corrosion.

Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
<i>Egg</i>	250	3650	Female-1/2" BSPP	6	M10x1.5	0.4



Piercing Nozzles



Tiny stones and soft tree roots with some wastes sometimes block the water flow route partially; one of the most practical solutions for clearance without damage is using Piercing nozzle.

due to its six backward outlet jet patterns and one forward jet pattern, this nozzle can easily clean the sewer pipes.

Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
<i>Piercing</i>	250	3650	Female-1" BSPP	7	M10x1.5	1
			Female-3/4" BSPP			0.5



Sewer Nozzles

Digger Nozzles



By the passage of time, some huge stones may sit on sand layers and narrow the channel route; this consequently leads to a blockage in the sewerage network.

SMC Digger nozzle functions like a heavy boat and easily moves through the sands, it passes them while encountering sands and stones.

Backward outlet jet patterns and swivel coupling reduce the possibility of an overturn for this nozzle.

Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
<i>Digger</i>	250	3650	Female-3/4" BSPP	12	M10x1	9



Flounder Nozzles



In the sewerage networks with a rather large diameter and many sands cluttered and settled in layers at the bottom of the channel and water flows in the channel, where the only access for clearance is from the opposite direction of the water flow, submarine Flounder nozzle is simply placed at the bottom of the channel among the sands.

Backward outlet jet patterns produce great power to move the nozzle so that it could tear the layers apart and move in the opposite direction of the water flow in the channel.

Nozzle Type	W.P.		Connection	Insert Nozzles No.	Insert Thread	Weight (kg)
	bar	psi				
<i>Flounder</i>	250	3650	Female-3/4" BSPP	6	M10x1	5

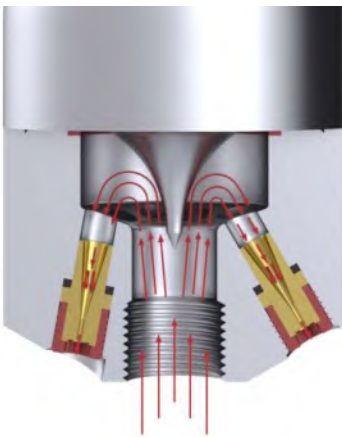


Ceramic Insert Nozzles

Nozzle Type	W.P.		Thread
	bar	psi	
Ceramic insert Allen screw	250	3650	M4x0.7 M6x1 M8x1.25 M10x1.5



Nozzle Type	W.P.		Thread
	bar	psi	
Ceramic insert Hex screw	250	3650	M10x1

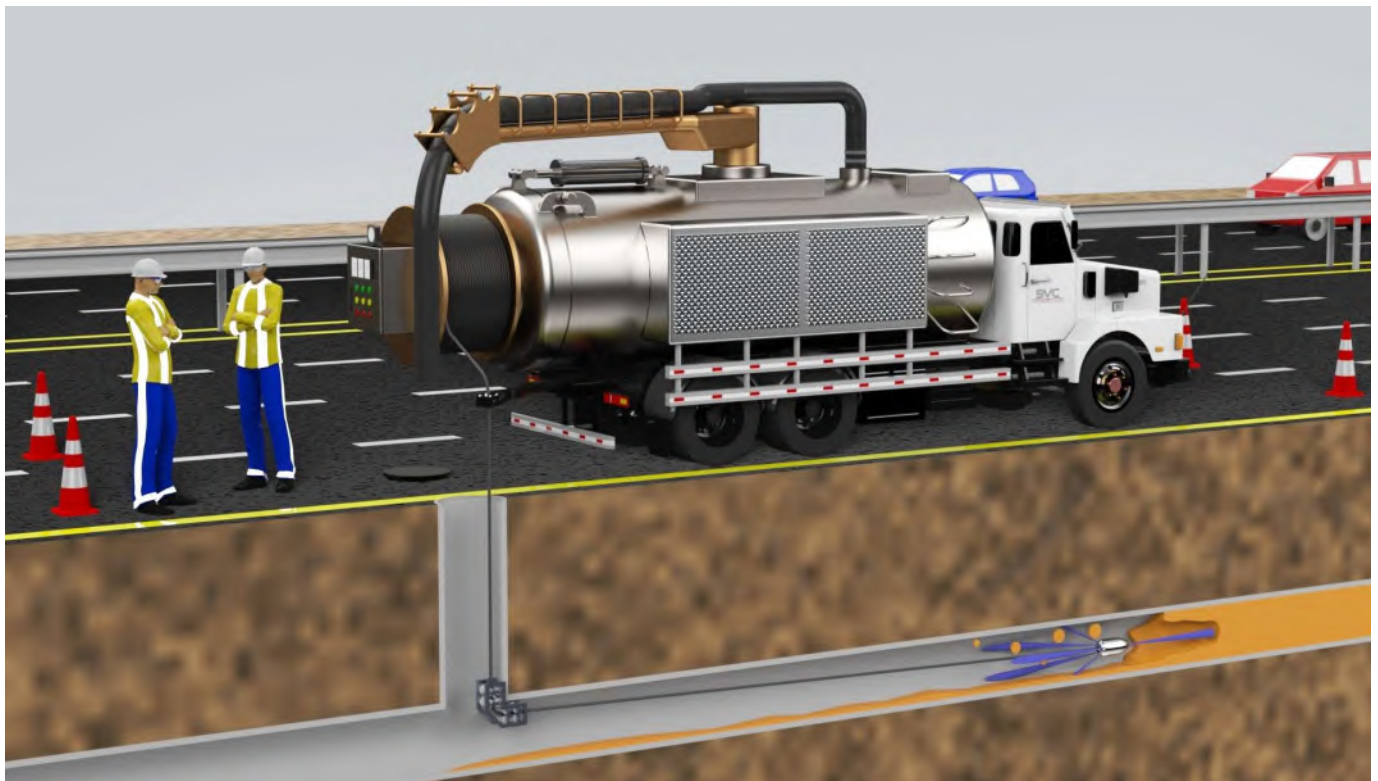


Old sewer pipes are usually worn out; so they break down when expose with pressure.

Therefore, pressure of nozzle outlet water must be completely controlled in order not to be damaged pipe and remove the stones from the channel path that caused blockage in the pipe.

One type of the Bomb nozzles has this feature.

This nozzle has a divider that divides water equally between back ward insert nozzles and slows down the water circulation. In this nozzle, threadless inserts are used to prevent any damages to the pipe body.





Connectors

We design and produce a wide range of connectors in different sizes and based on various standards up to 3200 bar. Choosing hardened stainless steel by cold forming method as the main basic raw material is a proper support for the production of high-quality connectors.

Having the highest pressure withstand, stretch and twist resistance are our priorities in the design and production of the connectors.

Production based on the international thread standards, naming BSP, NPT, and UNF increases the customers' power of choice and determines the safest function with the highest performance and efficiency.



Reliable, hard-wearing, specially designed SMC connectors deliver highest efficiency for your operations.

Connectors

Nipple

Connector Type	Max. W.P.		Connection 1	Connection 2
	bar	psi		
<i>Nipple</i>	700	10000	NPT	NPT
			BSPT	BSPT
	2000	29000	BSPP	BSPP
			Metric	Metric



Adapter

Connector Type	Max. W.P.		Connection 1	Connection 2
	bar	psi		
<i>Adapter</i>	700	10000	NPT	NPT
			BSPP	NPT
			BSPT	BSPT
			Metric	NPT
			UNF	NPT
	1500	22000	Metric	UN
			Metric	Metric
	2000	29000	BSPP	Metric
			BSPP	BSPP
			Metric	UNF



Gland & Collar & Coupling

Connector Type	Max. W.P.		Connection
	bar	psi	
<i>Gland</i>	1500	22000	UN
	3200	46500	UNF

Connector Type	Max. W.P.		Connection
	bar	psi	
<i>Collar</i>	1500	22000	UNF
	3200	46500	

Connector Type	Max. W.P.		Connection
	bar	psi	
<i>Coupling</i>	2800	40000	UNF



Wafer Wyes

Connector Type	Max. W.P.		Connection
	bar	psi	
Wafer Wye	700	10000	NPT
	1500	22000	Metric
	2800	40000	UNF



Nozzle Holder

Connector Type	Max. W.P.		Connection
	bar	psi	
Nozzle Holder	1500	22000	UNF



Connector Type	Max. W.P.		Connection
	bar	psi	
Nozzle Holder	2800	40000	UNF





Equipment

Speed, accuracy, and safety are our most significant expectations in washing operation; choosing SMC equipment can meet these requirements in descaling process.

Using safe and simple mechanisms can make a contribution to choose a proper method and simplify the target process.

Our equipment is designed and produced in such a way that their assembly, repair & maintenance could be easily done in the shortest possible time.

Safety

The most basic and crucial principle in an industrial environment is benefiting from appropriate and standard safety equipment. "Hose bursting" or "Connection failure" from installed part are the most important accidents occurring during descaling operation.

Guns and foot valves are the most practical usable water jet equipment which transfers high pressure water, so their being too close to the operator during descaling operation can cause serious hazards.

Using SMC safety wires can considerably resist and reduce the hits resulted from hose disconnection from the connectors.



Our unique equipment and safety products provide the most comfortable and safest performance in water jet operations.

Rigid Holder



If it is required to use rigid lance and a special nozzle to carry out descaling operation, the most important issue is considering and obeying the safety principles; hence, it is essential for the operator to have sufficient proficiency over all equipment and good command of descaling operation.

SMC rigid holder is one of the best equipment connecting the hose to the rigid lance. The body of the rigid lance is designed in a way that it could be easily held in the operator's hand, so the operator can resume his work without any fatigue. The soft standard ribbed body prevents from any slip from the operator's hand while hitting during the descaling operation. We manage to plan a safe wash-up operation using safe and standard equipment.

Equipment Type	W.P.		Rigid Connection	Hose Connection
	bar	psi		
Rigid Holder	1500	22000	Female - 3/8"UNF	Male - M24x1.5
			Female - 9/16"UNF	
			Female - 1/8"BSPP	
			Female - 1/4"BSPP	



Centralizer



Centralizer is one of the equipment used for nozzle movement in the center of sewer pipes. Umbrella mechanism has been used in design of the centralizer to increase adjustment speed. To reduce the weight and prevent from the sparkles in the pipes due to the flammable gases, the equipment is made of Aluminum with a special anti-sparkle cover.



Equipment Type	W.P.		Inlet Connection	Outlet Connection	Weight (Kg)	Adjustable for Pipe Range (inch)
	bar	psi				
Centralizer	250	3650	Male - 1" BSPP	Male - 1" BSPP	7.5	11"-26"

Safety Wire



When a hose is detached from the connector, our powerful safety wire can reduce the hits to the operator. The overall spring on the safety wire keeps the holder rings around the hose tightly. Two-headed wire are manually woven to each other before being crimped. So that, these wires could withstand instant hits easily due to having the highest stretch endurance. A thorough control of all safety wires (one-by-one) before delivering to the customer is included as one of the mandatory conditions for our QC department.

Safety Wire Type	Breaking Load (N)	Connection Range Size (mm)	L (mm)
<i>Safety Wire With Spring</i>	12000	10-35	550



Safety Wire Type	Breaking Load (N)	Hose Outer Diameter Range Size (mm)	L (mm)
<i>Braided Safety Wire</i>	20000	20-25	800



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