# JetCleaner™ HOSE CLEANING SYSTEM



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## JetCleaner Cobra



### JetCleaner Cobra

Art. No	Description
JC2010	JetCleaner Cobra Gun. Semi automatic, theromoplastic cleaning gun.
	Ergnomically designed. Weight 0,3kg



### JetCleaner Cobra - Mixset

Art. No	Description
JC2055	JetCleaner Cobra - Portable mixset Including: Gun and 11optional nozzles in a



### JetCleaner Cobra - Hoseset

Art. No	Description
JC2030	JetCleaner Cobra—Portable hose set Including: Gun and 11 Standard nozzles
	in a handy carrying case



### JetCleaner Cobra - Tubeset

Art. No	Description
JC2060	JetCleaner Cobra - Portable tube set Including: Gun and 11optional nozzles in a handycarrying case
JC2040	Carrying case suits JetCleaner Cobra and 11 nozzles

## JetCleaner Cobra



### JetCleaner Cobra - Hose nozzles

Art. No	Hose dimension (inch)	
JC2090	3/16	
JC2100	1/4	
JC2110	5/16	
JC2120	3/8	
JC2130	1/2	
JC2140	5/8	
JC2150	3/4	
JC2160	1	
JC2170	1 1/4	
JC2180	1 ½	
JC2190	2	



JetCleaner Cobra - hose nozzles



### Nozzle seal

Art.No	Tube dimension (tum)	
JC2200	3/16—1 1/4	
JC2201	1 1/2—2	



Nozzle seal (silicone free)

Art.No	Tube dimension (tum)
JC2200	3/16—1 1/4

## JetCleaner Cobra



### JetCleaner Cobra - Tubenozzles

Art.No	Tube dim. OD*T (mm)	
JC30610	6*1.0	
JC30615	6*1.5	
JC30810	8*1.0	
JC30815	8*1.5	
JC31010	10*1.0	
JC31015	10*1.5	
JC31020	10*2.0	
JC31025	10*2.5	
JC31215	12*1.5	
JC31220	12*2.0	
JC31425	14*2.5	
JC31515	15*1.5	
JC31520	15*2.0	
1003/35	1/+1.5	
JC31615	16*1.5	
JC31620	16*2.0	
JC31630	16*3.0	
JC31815	18*1.5	
JC31820	18*2.0	
JC31830	18*3.0	
0052050	10 3.0	
JC32015	20*1.5	
JC32020	20*2.0	
JC32030	20*3.0	
	20 3.0	

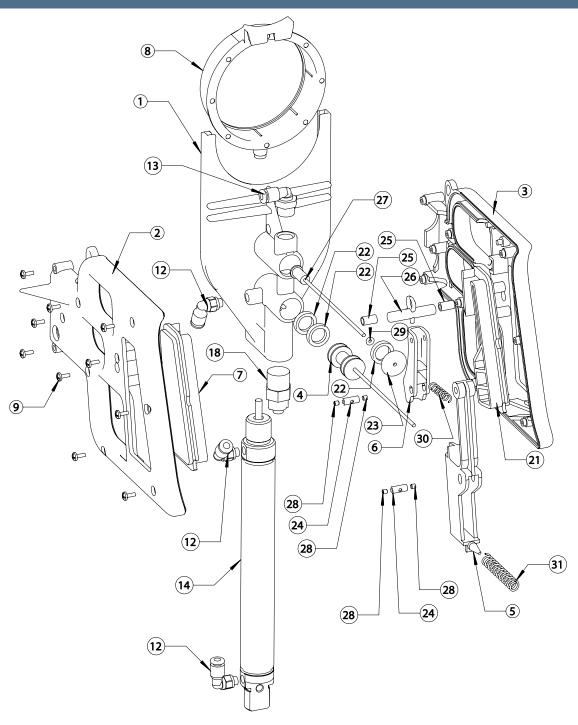
Art.No	Tube dim. OD*T (mm)	
JC32215	22*1.5	
JC32220	22*2.0	
JC32230	22*3.0	
JC32520	25*2.0	
JC32525	25*2.5	
JC32530	25*3.0	
JC32540	25*4.0	
JC32820	28*2.0	
JC32830	28*3.0	
JC33020	30*2.0	
JC33030	30*3.0	
JC33050	30*5.0	
JC33520	35*2.0	
JC33530	35*3.0	
JC33540	35*4.0	
	-0.0	
JC33825	38*2.5	
JC33830	38*3.0	
JC33840	38*4.0	
JC33850	38*5.0	
JC33860	38*6.0	
JC34220	42*2.0	
JC34230	42*3.0	
JC34240	42*4.0	
JC34250	42*5.0	
JC35030	50*3.0	
JC35050	50*5.0	
JC35060	50*6.0	
JC36030	60*3.0	
JC36050	60*5.0	

### JetCleaner Cobra - Tubenozzles

Tubenozzles non-standard dimenision

JC3050	Max tube OD 60mm	

## JetCleaner Cobra—Spare part list



### JetCleaner Cobra - Spare part list

Nr.	Art.No	Description	Pcs.	
1	CX 1050	Valve body	1	
2	CX 1010	Left half	1	
3	CX 1010	Right half	1	
4	CX 1051	Piston	1	
5	CX 1031	Trigger U	1	
6	CX 1030	Trigger 0	1	
7	CX 1013	Grip dome L	1	
8	CX 1040	Nozzle housing	1	
9	CX 1000	Phillips screw	10	
12	CX 1007	Nipple 5mm	3	
13	CX 1006	Nipple 1-8	1	
14	CX 1020	Cylinder	1	

Nr.	Art.No	Description	Pcs.	
18	CX 1061	House coupling	1	
21	CX 1012	Grip dome R	1	
22	CX 1002	Seal	3	
23	CX 1053	Trigger plug	1	
24	CX 1032	Trigger nipple	2	
25	CX 1036	Rubber spring	2	
26	CX 1035	Lock block	1	
27	CX 1052	Valve cone	1	
28	CX 1033	Socket screw	4	
29	CX 1001	0-ring	1	
30	CX 1004	Spring S	1	
31	CX 1005	Spring B	1	



JetCleaner Classic

Art. No	Description
2010	JetCleaner Clssic Gun - a robust cleaning gun for the toughest environments. For
	internal dimensions up to 55mm.
	Weight 0,7kg



JetCleaner Classic - Hoseset

Art. No	Description
2030	JetCleaner Classic—portable hose set. Including: Gun, benchstand and 11 standard



JetCleaner Classic - Benchstand

Art. No	Description
2050	Benchstand



JetCleaner Classic - Hoseset (Steel)

Art. No	Description
\$2030	JetCleaner Classic — portable hose set. (steel) Including: Gun, benchstand, 1 adapter and 11 standard nozzles in a handy carrying case
2040	Carrying case suts Gun, Bench and 12 nozzles.



JetCleaner Classic - Tubeset

Art. No	Description
2060	JetCleaner Classic—portable tubeset Including: Gun,benchstand,adapter and
	11 optional standard nozzles in a handy carrying case



JetCleaner Classic - Hosenozzle

Art.No	Hose dimension (inch)
2090	3/16
2100	1/4
2110	5/16
2120	3/8
2130	1/2
2140	5/8
2150	3/4
2160	1
2170	1 1/4
2180	1 1/2
2190	2



JetCleaner Classic - Mixed set

Art. No	Description
2055	JetCleaner Classic—portable tubeset Including: Gun,benchstand,adapter and 11 optional standard nozzles in a handy carrying case



JetCleaner Classic - Hosenozzle (Steel)

Art.No	Hose dimension (inch)	
S 2090	3/16	
S 2100	1/4	
S 2110	5/16	
S 2120	3/8	
S 2130	1/2	
S 2140	5/8	
S 2150	3/4	
S 2160	1	
S 2170	1 1/4	
S 2180	1 ½	
S 2190	2	

Note that nozzles with art.no S 2090-S2170 requires an adapter (Art. No. 3000)



### **JetCleaner Classic - Tubenozzles**

Art. No	Tube dim. OD*T. (mm)	
30610	6*1.0	
30615	6*1.5	
30810	8*1.0	
30815	8*1.5	
31010	10*1.0	
31015	10*1.5	
31020	10*2.0	
31025	10*2.5	
31215	12*1.5	
31220	12*2.0	
31425	14*2.5	
31515	15*1.5	
31520	15*2.0	
31615	16*1.5	
31620	16*2.0	
31630	16*3.0	
31815	18*1.5	
31820	18*2.0	
32020	20*2.0	
32025	20*2.5	
32030	20*3.0	
32040	20*4.0	

Art.Nr	Tube dim. OD*T. (mm)	
32215	22*1.5	
32220	22*2.0	
32230	22*3.0	
32520	25*2.0	
32525	25*2.5	
32530	25*3.0	
32540	25*4.0	
32550	25*5.0	
32820	28*2.0	
32830	28*3.0	
33020	30*2.0	
33030	30*3.0	
33050	30*5.0	
JJ050	30 3.0	
33520	35*2.0	
33530	35*3.0	
33540	35*4.0	
22025	20*2 5	
33825	38*2.5	
33830	38*3.0	
33840	38*4.0	
33850	38*5.0	
33860	38*6.0	
34220	42*2.0	
34230	42*3.0	
34240	42*4.0	
34250	42*5.0	
35030	50*3.0	
35050	50*5.0	
35060	50*6.0	
36030	60*3.0	
36050	60*5.0	

### JetCleaner Classic - Tubenozzles

Non-standard dimension

3050 Max tube 0D 60mm	3050	Max tube OD 60mm	
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### **JIC Nozzles**

Art.No	Coupling dim. (Inch)	
2090J	3/16"	
2100J	1/4"	
2110J	5/16"	
2120J	3/8″	
2130J	1/2"	
2140J	5/8"	
2150J	3/4″	
2160J	1"	
2170J	1 1/4"	
2180J	1 1/2"	
2190J	2"	



JetCleaner Classic - Adapter

Art. NO	Description
3000	Adapter, for using tube nozzles. 30610—33850 With JetCleaner Classic gun.



JetCleaner Alligator

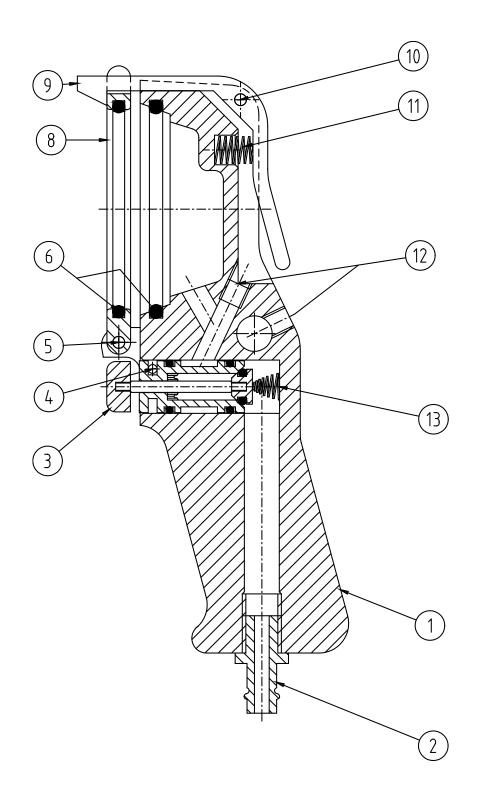
JetCleaner Alligator UNV 120

Art.No	Tube dim. OD*T (mm)	
UNV 80	30-80	
UNV 120	70-120	



JetCleaner Alligator UNV 80

## JetCleaner Classic—Spare part list



### JetCleaner Classic - Spare part list

Nr.	Art.No	Description	Pcs.
1	C1013	Handle	1
2	J1061	Nipple	1
3	J1050	Valve	1
4	C1051	Pin	1
5	C1034	Pin	1
6	C1024	0-ring	2

Nr.	Art.No	Description	Pcs.	
8	C1040	Nozzle housing	1	
9	C1030	Latch	1	
10	C1034	Pin	1	
11	C1032	Spring	1	
12	C1025	Set screw	2	
13	J1031	Spring	1	

## **Customized nozzles**



### JetCleaner Classic - Customized nozzle

Art.Nn	Special nozzles	Price Euro
Special	Customized items. For examples, oval tubes, rectangular tubes and atlas clutch	On request

## Launching stations



Price Euro
On request

### JetCleaner 2000SA

Description
Semi automatic easy to use machine.Intended for use as a
permanent cleaning station at production or maintenance
units. It is with front release or a foot pedal. Total weight
25kg. Adjustable "blow time" from 0,1 to 99 sec. For
inside pipe and hose dimensions of 6 - 60 mm. It can be
equipped with adevise to hold the objects to be cleand .



### **JetCleaner 5000SA**

Description	Price Euro
Principally the same as 2000 SA, but this unit is akways equipped with a devise to hold the object to be cleand. For inside pipe/hose dimensions of 50 - 115 mm,(4 1/2").  Total weight 150 kg. max projectile size 130 mm.	On request



### JetCleaner 2500 APC

Art. No	Description	Price Euro
JCAPC2500	Our first fully automated station for cleaning of tube and hose the machine is built after the costomers needs, it can (beside from cleaning) also be adjusted for i.e lubriction of tubes/hose. It has a built in magazine with space for 25 - 700 projectiles depending on the projectile diameter (9 - 45 mm).	On request



### JetCleaner Cobra - Projectile Control

Art. No	Description	Price Euro
JCP2010	Semi automated cleaning gun with blowthrough confirmation—gives a clear alarm if the cleaning projectiles gets stuck.  Easy to change sack.	On request

### Hydro-Jet & Power-Jet Cleaner



Hydro-Jet Cleaner is a system for removing losse particles and problematic deposits from the inside of pipes and hose. The system is based on an air - powered gun being used (in the same way as a power drill) to rotate brushes, drills and buffing tools inside pipes and hose. The cleaning tools are fitted to one end of a hollow shaft. By joining a number of these shafts together, the desired length can be obtained.

Introduced via the shaft a jet of water flushes all the dislodged material away and keeps the tools clean. Water quntity is controlled separately from the gun.

### **Hydro-Jet Cleaner**

Art. No	Rec. pipe (mm)	Weight (kg)	Air pressure min.	Air pressure max	Price Euro
C-10	4,8-25,4	2,6kg	60psi/16cfm	90psi/16cfm	On request
CP-315	22,2-51,0	3,0kg	90psi/20cfm	90psi/40cfm	On request
C-10 set	The Hydro-Jet Cleaner C-10 set contains a cleaning gun, tow shafts and connectors and three brushes of				On request



Power-Jet Cleaner is a portable , air - powered cleaning Station. It can be used for both straight and bent pipes. It is ideal where the use of electrical equipment is hazardous. To fit a range of pipes. Power JetCleaner has a number of flexible shafts and cleaning tools in various dimensions. Flusing takes place during operation and use water. A foot pedal regulates rotational speed and water flow. The speed can be regulated between 300 and 3000 rpm.

### Power-Jet Cleaner

Art. No	Rec. Pipe ID (mm)	Weight(kg)	Air pressure min.	Air pressure max.	Price Euro
ATC-100	6,4-51	12kg	60psi/16cfm	100psi/16cfm	On request

### Cleaningprojectiles - EC. Flexible



### EC Flexible - Standard packages

Art. No	Rec. Tube — ID (mm)	Items/pkg	
04-060	2-3	<b>300</b> pcs	
05-060	2,5-4	300pcs	
07-060	3,5-5	300pcs	
08-060	4-6	300pcs	
09-060	4,5-7	300pcs	
10-060	5-8	300pcs	
12-060	6-9	300pcs	
14-060	7-11	300pcs	
16-060	8-12	300pcs	
18-060	9-14	300pcs	
20-060	10-15	300pcs	
22-060	11-17	100pcs	
24-060	12-18	100pcs	
26-060	13-19	100pcs	
28-060	14-21	100pcs	
30-060	15-23	100pcs	
33-060	16,5-25	100pcs	
35-060	17,5-27	50pcs	
38-060	19-28	50pcs	
40-060	20-31	50pcs	
45-060	22-35	50pcs	
48-060	24-37	50pcs	
50-060	25-40	50pcs	
55-060	27-45	50pcs	
60-060	30-50	25pcs	
65-060	32-55	25pcs	

#### **EC FLEXIBLE**

EC Flexible projectiles are made of medium density Polyurthane foam. The material is homogenieous and do not leave fibrous. The cleaning resultat is very good. Will negotiate right angel bends, coils and pipe reductions. Exrtremely copressible, up to 50%.

Free of PVC, PTFE, Silicone and fluid.

Follow our recommendations to select right projectile or feel free to make your own choose of a larger projectile, up to 100% of the innerdiameter to obtain best possible resultat.

Also used as coupling projectile.

### EC Flexible - Standard packages

Art. No	Rec. Tube — ID (mm)	Items/pkg	
70-060	42-60	10pcs	
75-060	45-65	10pcs	
80-060	48-70	10pcs	
85-060	51-75	10pcs	
90-060	54-80	10pcs	
95-060	57-85	10pcs	
100-060	70-90	5pcs	
105-060	73-95	5pcs	
110-060	77-100	5pcs	
115-060	80-105	5pcs	
120-060	84-110	5pcs	
125-060	87-115	5pcs	
130-060	91-120	5pcs	
140-060	98-130	5pcs	
150-060	105-140	5pcs	
160-060	112-150	5pcs	
170-060	119-160	5pcs	
180-060	126-170	5pcs	

## Cleaningprojectiles - EC. Flexible



### EC Flexible - Large packages

Art. No	Rec. Tube — ID (mm)	Items/pkg	
04-0600	2-3	10,000pcs	
05-0600	2,5-4	10,000pcs	
07-0600	3,5-5	10,000pcs	
08-0600	4-6	10,000pcs	
09-0600	4,5-7	10,000pcs	
10-0600	5-8	10,000pcs	
12-0600	6-9	10,00pcs	
14-0600	7-11	10,000pcs	
16-0600	8-12	10,000pcs	
18-0600	9-14	10,000pcs	
20-0600	10-15	5,000pcs	
22-0600	11-17	5000pcs	
24-0600	12-18	5000pcs	
26-0600	13-19	5000pcs	
28-0600	14-21	3000pcs	
30-0600	15-23	3000pcs	
33-0600	16,5-25	3000pcs	
35-0600	17,5-27	1,500pcs	
38-0600	19-28	1,500pcs	
40-0600	20-31	1,500pcs	
45-0600	22-35	1,000pcs	
48-0600	24-37	1,000pcs	
50-0600	25-40	1,000pcs	
55-0600	27-45	500pcs	
60-0600	30-50	500pcs	
65-0600	32-55	500pcs	

#### **EC FLEXIBLE**

EC Flexible projectiles are made of medium density Polyurthane foam. The material is homogenieous and do not leave fibrous. The cleaning resultat is very good. Will negotiate right angel bends, coils and pipe reductions. Exrtremely copressible, up to 50%.

Free of PVC, PTFE, Silicone and fluid.

Follow our recommendations to select right projectile or feel free to make your own choose of a larger projectile, up to 100% of the innerdiameter to obtain best possible resultat.

Also used as coupling projectile.

### Cleaningprojectiles - Super Standard



### Super standard projectiles - Standard packages

Art. No	Rec. Tube — ID (mm)	Items/pkg	Price Euro
SS05	4	100pcs	On request
SS07	5-6	100pcs	
SS10	7-8	100pcs	
SS12	9	100pcs	
SS14	10-11	100pcs	
SS16	12	100pcs	
SS18	13-14	100pcs	
SS20	15	100pcs	
SS22	16-17	100pcs	
SS24	17-18	50pcs	
SS26	19-21	50pcs	
SS30	22-23	40pcs	
SS33	24-26	40pcs	
SS36	27-28	30pcs	
SS40	29-31	30pcs	
SS45	32-35	20pcs	
SS50	36-40	20pcs	
SS55	41-45	15pcs	
SS60	46-50	15pcs	
SS65	51-55	15pcs	
SS70	56-60	10pcs	
SS75	61-65	10pcs	
SS80	66-70	10pcs	
SS85	71-75	10pcs	
SS90	76-80	10pcs	
SS95	81-84	10pcs	

#### **SUPER STANDARD PROJECTILES**

Super standard projectiles are made of high desity polyurethane foam. Typical applications are hose and tubes without restrictions and the manufacturing industy for product recovery of extremly viscous materials such as chocolate, glue etc. Will negotiate right angle bends and coils.

When selecting the correct projectile choose one approximately 20% larger the internal diameter of the hose or tube to be cleaned.

Free of chlorine.

### Super standard projectiles - Standard packages

Art. No	Rec. Tube — ID (mm)	Items/pkg	Price Euro
SS100	85-90	5pcs	On request
SS110	91-100	5pcs	
SS120	101-110	5pcs	
SS130	111-115	5pcs	
SS140	115-120	5pcs	
SS150	125-130	5pcs	

## **Cleaningprojectiles - Abrasive**



### Abrasive Projectiles - Standard packages

Art. No	Rec. Tube — ID (mm)	Items/pkg	Price Euro
A05	4	100pcs	On request
A07	5-6	100pcs	
A10	7-8	100pcs	
A12	9	100pcs	
A14	10-11	100pcs	
A16	12	100pcs	
A18	13-14	100pcs	
A20	15	100pcs	
A22	16-17	100pcs	
A24	17-18	50pcs	
A26	19-21	50pcs	
A30	22-23	40pcs	
A33	24-26	40pcs	
A36	27-28	30pcs	
A40	29-31	30pcs	
A45	32-35	20pcs	
A50	36-40	20pcs	
A55	41-45	15pcs	
A60	46-50	15pcs	
A65	51-55	15pcs	

#### **ABRASIVE PROJECTILES**

Abrasive projectiles are made of high density polyuretahne foamwith an abrasive pad on the front end. Ideal for removing rust and mill scale from metal pipes. Used for the cleaning of boiler tubes, condeser tubes, carbon deposit from oil feed lines etc. Will negotiate right angle bends and coils.

When selecting the correct projectile choose one approximately 20% larger than the inner diameter of the hose or tube to be cleaned.

### **Abrasive Projectiles - Standard packages**

Art. No	Rec. Tube — ID (mm)	Items/pkg	Price Euro
A70	56-60	10pcs	On request
A75	61-65	10pcs	
A80	66-70	10pcs	
A85	71-75	10pcs	
A90	76-80	10pcs	
A95	81-84	10pcs	
A100	85-90	5pcs	
A110	91-100	5pcs	
A120	101-110	5pcs	
A130	111-115	5pcs	
A140	115-120	5pcs	
A150	125-130	5pcs	

## Cleaningprojectlies - Grinding



### **Projektiler Grinding - Standard packages**

Art. No	Rec. Tube — ID (mm)	Items/pkg	Price Euro
GR07	5-7	100pcs	On request
GR10	8-10	100pcs	
GR12	10-12	100pcs	
GR14	12-14	100pcs	
GR16	14-16	100pcs	
GR18	16-18	100pcs	
GR20	17-20	100pcs	
GR22	19-22	100pcs	
GR24	20-24	50pcs	
GR26	22-26	50pcs	
GR30	25-30	40pcs	
GR33	28-33	40pcs	
GR36	31-36	30pcs	
GR40	35-40	30pcs	
GR45	39-45	20pcs	
GR50	44-50	20pcs	
GR55	49-55	15pcs	
GR60	53-60	15pcs	
GR65	58-65	15pcs	

### **GRINDING PROJECTILES**

Grinding projectiles are high density polyurethane foam coated with an aluminumoxide. Very aggressive, used for heavy duty cleaning of metal tubes and pipes to remove heavy rust etc. Will not easily negotiate sharp bends, best suited to straight tube or swept bends.

When selecting projectile choose one as near to the internal diameter as possible, maximum 5% over size, follow our recommendations.

### Projektiler Grinding - Standard packages

Rec. Tube — ID (mm)	Items/pkg	Price Euro
63-70	10pcs	On request
68-75	10pcs	
73-80	10pcs	
78-85	10pcs	
83-90	10pcs	
88-95	10pcs	
92-100	5pcs	
100-110	5pcs	
110-120	5pcs	
120-130	5pcs	
130-140	5pcs	
140-150	5pcs	
	63-70 68-75 73-80 78-85 83-90 88-95 92-100 100-110 110-120 120-130 130-140	63-70 10pcs 68-75 10pcs 73-80 10pcs 78-85 10pcs 83-90 10pcs 88-95 10pcs  92-100 5pcs 100-110 5pcs 110-120 5pcs 120-130 5pcs 130-140 5pcs



#### How do you remove a projectile that is stuck due a restriction?

Place the Cleaning gun at the other side of the HTP without a projectile, fire the unit. This should remove the wedged projectile. Providing the restriction is not too great, fire a smaller projectile through to complete the cleaning process. If the restriction is too large, dismantling will need to occur.

### What happens when access to the HTP is limited to one end ( i.e., area I to small for the cleaning gun)?

Make sure the HTP is consistent in diameter for the full length. Fire the cleaning gun without a projectile to make sure it is not blocked and there is a good air flow. Fire a smaller then recommended projectile. If comfortable use the recommended size.

#### What happens if the projectile will not expel from the nozzle?

If the projectile does not expel from the nozzle , remove the nozzle with the projectile, turn and place the outlet of the nozzle on to the air hole one the cleaning gun and depress the trigger. Make sure it is pointed in a safe direction prior firing. Then select a smaller projectile or correct nozzle.

#### Why would a projectile break up (EC-Flexible or NC-Projectile)?

If a projectile emerges from the HTP and is broken up, it is an indication that the internal wall of the HTP is damaged. Dip the projectile in water and then fire through. If the projectile still appears shredded, it confirms the fact. The water adds a friction modifier as in some cases the HTP can become extremely dry, which in turn tends to shred the projectile. There could also be sharp object such as a burr inside the HTP. Hydraulic hose may have a broken wire protruding through the hose wall.

### Can projectiles be washed and reused?

No it is not recommended. When one has fired the projectile through a HTP, it is full of metal shavings and other contaminants which are likely to bring into the HTP again.

### Can projectiles damage the internal surface of the application?

EC-Flexible and NC-Projectiles projectiles will not damage the surface, however, grinding projectiles may cause some scratching. (and in some case even the abrasive projectile)

### How do you clean a clogged HTP?

There isn't a fast method to clean a clogged HTP prior to cleaning with the system. Blow some air through to see if you have a passage. Once this has been established, send through

Smaller than recommended projectile and upon its exit gradually increase the projectile size.

If at the outset the contamination build-op is too great to obtain a passage through with air, a chemical may be introduced to soften the contamination. Once this has been established, continue in the normal way with the system.

#### Will the projectile go through 90, 180, 360 degree bends?

Yes the EC-Flexible, NC -Soft and our standard projectile will handle tight bends and the abrasive and grinding projectile will handle sweeping bends.

#### How far will the projectile travel in the HTP?

In the past demonstrations, the projectile will travel hundreds of meters depending of the I.D of the HTP and the pressure and the volume of your air sours. As long there is sufficient volume of air behind the projectile, it will keep traveling through the HTP.

### Will the projectile clean out mud, slurry and moisture from the line?

Yes. This can be achieved using the EC-Flexible, NC-Soft or the standard projectile, although if the build-up has hardened, it will probably require an abrasive or grinding projectile.

#### Will the projectile go through couplings or hose to tube to hose?

Yes. Select the right nozzle to suit the coupling then select the right projectile. (EC-Flexible or NC-Soft projectile) And fire through the line

#### Will the projectile go through valves?

Yes. However, this will only occur with full port ball and gate valves and similar designs.

The projectile will not go through a non return valve or butterfly valve or similar designs.

#### Will the projectile go through a tee?

Yes. There are some important rules when dealing with a tee section. The projectile must be fired into the cross section while at the same time blocking one end of the cross section. Next either reverse the blocked end on the cross section or open both ends of the cross section and block the tube into the cross section.

### Will the system clean a tube that branches into a tube (similar to a $\mathbf{Y}$ )?

Yes. Providing the unit is operated down one end of the Y (with the other seeled) and down the other end of the Y.

### Will the system clean a tube that braches into two and back into one?

No unless there is a method to blocking one of the branch lines.

#### Will the system clean a tube that has fins inside?

No. the projectile will simply jam onto the fin

(i.e., 20mm to 50mm to 20mm)?



### Will the system clean HTP if there are significant reductions and expansions

No. The difference cannot be greater than 25%

### Will the system clean HTP that is knotted, coiled or clamp joined with couplings or different configurations?

Yes. The projectile will travel through any configuration such at knots, but the hose must not be kinked more than 40% to 60% (depending on whether it is hose, tube or pipe). If it is kinked too much, the projectile will stop at that point and the Cleaning gun will be need to be fired from the other end using air only to remove the projectile from the end it entered.

### Will the system clean a tee if the cross section is larger than the pipe going into the cross section?

The projectile must be fired into the pipe going into the tee that is smaller than the cross section.

### Will the system clean a tube that has been flattened by about 40% to 60% along the duration of the tube?

Yes providing the restriction is not to great. This will depend on the size of the tube and the projectile. The smaller the tube, the less tolerance there will be. Also the constriction cannot occur at the beginning of the tube where the projectile is entering. The projectile must already be in the tube to cope whit this condition the EC-Flexible or NC-Soft would be our recommendation depending on the type of the internal contamination.

### What should you do if a projectile will not enter into a copper tube?

When copper tube is cut, the end is often burred or the opening is compressed from the cutting process. it is important the tube or pipe is square cut and deburred accordingly.

### What happens if the tube or pipe has a wall that is too thick for the nozzle?

You should always use a nozzle that fits the OD and ID of the tube/pipe.

If there is not a standard nozzle we can produce it according to your specifications.

### Will the JetCleaner system clean a pipe or tube that has a lot of teas or bleeders on it?

Yes providing they can be sealed of and the projectiles will enter correct way every time.

### What happens if the nozzle doesn't fit the particular application?

You should always use a nozzle that fits the OD and ID of the tube/pipe. If there is not a standard nozzle we can produce it according to your specifications.

#### Can the JetCleaner guns be operated at a higher pressure?

No. You should not use more pressure than 8 bars. And not less than 5 bars.

### Can chemicals and detergents be used to assist in the cleaning process?

Yes. These may assist the cleaning task when there is an excessive build up of contamination. One or two projectiles should follow this up. Whit regular maintenance using the cleaning system no further chemicals should be required.

Always use protective gear when using chemicals.

### What should be done if a good seal whit pipe or tube cannot be achieved?

If the pipe or tube has an uneven cut, and this can't be rectified by recutting, or there is weld splatter, wrap a piece of rubber sheet or cloth around the nozzle and seal the pipe or tube.

#### Will chemicals affect the projectile?

This will depend on the chemicals in question. The best method is to soak a projectile in the chemical and see the result prior to using on a application.

#### Can projectiles be soaked in chemicals and disinfectants?

Yes. Providing no breakdown occurs, it can assist the projectiles task e.g. in paint lines, the projectiles must be soaked in thinner prior to cleaning lines.

#### Why is air pressure so important when operating the system?

If the air pressure is too low, the correct sized projectile will possibly lodged in the HTP. As smaller projectile will need to be used resulting in greater use of projectiles than necessary.

The distance the projectile will travel is reduced and the time taken for the projectile to clean will be increased. Any restriction in the HTP will probably cause the projectile to jam when normally it would overcome these easily. Overall, it reduces the effectiveness of the cleaning system

If the air pressure is too high, the valve and trigger in the cleaning gun may not operate properly e.g. difficult to depress trigger and release air, or the trigger does not close and therefore air is difficult to turn of. If the trigger does not close, follow one of the following procedures.

- 1. Turn of the air supply source at most convenient point
- 2. Disconnect quick release coupling from the cleaning gun.
- 3. Tap the cleaning gun lightly against nearest firm object.