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For all your service needs!



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2020-2021

PRODUCTS MANUAL

TIANJIN FLUID MECHANICAL & ELECTRICAL EQUIPMENT Co.,Ltd.
MANUFACTURER OF WATER BLASTING TOOLS & ACCESSORIES

TIANJIN FLUID

WATER JETTING TECHNOLOGY





Company introduction

Tianjin FLUID Mechanical & Electrical Equipment Co., Ltd. was founded in October 2012, and located at Shuanggang Science & Technology Industrial Park , Jinnan District ,Tianjin city, China. FLUID specializes in the design, engineering, as well as servicing of high pressure water jetting technology. It is an integrated enterprise of manufacturing and sales of high pressure water jetting tools and accessories. Meanwhile, it provides tailor-made design for specific applications as per customer's request.



Overview of production workshop

Excellent equipment and advanced technology



- 1** High precision CNC machine
- 2** Max.3000bar dynamic pressure and Max.5000bar static pressure test center
- 3** The assembly area
- 4** Spare parts store
- 5** Exhibition hall of the products
- 6** Training center

C

TIANJIN FLUID WATER JETTING TECHNOLOGY

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RBD nozzles



Surface Cleaning Nozzles



Falcon Series



Wild Boar Series



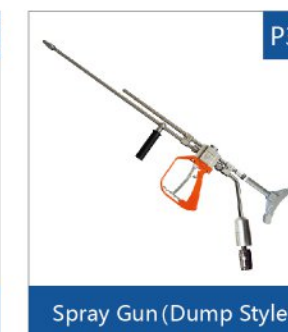
Cheetah Series



Cheetah Series



Dark Storm Series



Spray Gun (Dump Style)



Spray Gun (Shut in Style)



Air Rotational Guns



Foot Valve



Swiveling Connection



Rotary Swivels



Surface/floor Cleaner



Rotary Unit For High Pressure Hose



Hose Storage Reel



Hose Storage Reel



Swiveling/rotating Hose Reel



Nozzles holders



Tailor-made products

1、SELF-ROTATING NOZZLES DESIGNED FOR INTERNAL TUBE CLEANING

1.1 RBD nozzles Type: RBD11/14/17/20/25



RBD Nozzles Pressure(bar) / Flow rate(l/min)

■ Inlet connection without back jets.

Nozzle type	O.D./ Length	Head type	Inlet type	500 bar	1000 bar	1250 bar	1500 bar
RBD11	11mm 92mm	H11-2A	C11-*	6	9	11	12
		H11-2B	C11-*	8	13	14	16
		H11-2C	C11-*	11	16	19	21
		H11-2D	C11-*	14	20	24	26
		H11-5A	C11-*	11	16	19	21
		H11-5B	C11-*	13	20	22	24
		H11-5C	C11-*	14	20	23	25
		H11-5D	C11-*	16	23	27	29
RBD14	14mm 104mm	H14-2A	C14-*	6	9	11	12
		H14-2B	C14-*	8	13	14	16
		H14-2C	C14-*	11	16	19	21
		H14-2D	C14-*	14	21	24	26
		H14-2E	C14-*	18	26	28	32
		H14-5A	C14-*	11	16	19	21
		H14-5B	C14-*	13	20	22	24
		H14-5C	C14-*	14	20	23	25
RBD17	17mm 118mm	H14-5D	C14-*	16	23	27	29
		H14-5E	C14-*	19	27	31	34
		H17-2A	C17-*	7	10	12	13
		H17-2B	C17-*	9	14	15	17
		H17-2C	C17-*	12	17	20	22
		H17-2D	C17-*	15	22	24	27
		H17-2E	C17-*	18	27	30	33
		H17-2F	C17-*	22	32	36	40
		H17-5A	C17-*	12	17	20	22
		H17-5B	C17-*	14	21	24	26
		H17-5C	C17-*	17	24	28	30
		H17-5D	C17-*	19	28	32	35
		H17-5E	C17-*	22	33	37	40
		H17-5F	C17-*	26	37	42	46

NOTE: "-*" means "inlet thread", for example, C14-4, means inlet type C14-4 with connection thread is "M8", See: Inlet Thread and Code.

RBD Nozzles Pressure(bar) / Flow rate(l/min)

■ Inlet connection with 3 back jets.

Nozzle type	O.D./ Length	Head type	Inlet type	500 bar	1000 bar	1250 bar	1500 bar
RBD11	11mm 92mm	H11-2A	C11+0.5-*	14	20	23	25
		H11-2B	C11+0.5-*	16	23	26	29
		H11-2C	C11+0.5-*	19	27	31	34
		H11-2D	C11+0.5-*	22	32	35	39
		H11-5A	C11+0.5-*	19	27	31	34
		H11-5B	C11+0.5-*	21	31	34	37
		H11-5C	C11+0.6-*	25	37	41	45
		H11-5D	C11+0.6-*	27	39	45	48
RBD14	14mm 104mm	H14-2A	C14+0.5-*	13	20	23	25
		H14-2B	C14+0.5-*	16	24	26	29
		H14-2C	C14+0.5-*	19	27	31	34
		H14-2D	C14+0.5-*	22	32	35	38
		H14-2E	C14+0.5-*	26	37	41	45
		H14-5A	C14+0.5-*	19	27	31	34
		H14-5B	C14+0.5-*	21	31	34	37
		H14-5C	C14+0.6-*	25	36	41	44
RBD17	17mm 118mm	H14-5D	C14+0.6-*	27	39	45	48
		H14-5E	C14+0.6-*	30	43	49	53
		H17-2A	C17+0.5-*	15	21	24	26
		H17-2B	C17+0.5-*	17	25	27	30
		H17-2C	C17+0.5-*	20	28	32	35
		H17-2D	C17+0.5-*	23	33	36	40
		H17-2E	C17+0.5-*	26	35	42	46
		H17-2F	C17+0.5-*	30	43	48	53
		H17-5A	C17+0.5-*	20	28	32	35
		H17-5B	C17+0.6-*	25	37	42	45
		H17-5C	C17+0.6-*	28	40	46	49
		H17-5D	C17+0.6-*	30	44	50	54
		H17-5E	C17+0.6-*	33	49	55	59
		H17-5F	C17+0.6-*	37	53	60	64

RBD Nozzles Pressure(bar) / Flow rate(l/min)

■ Inlet connection without back jets.

Nozzle type	O.D./ Length	Head type	Inlet type	500 bar	1000 bar	1250 bar	1500 bar
RBD20	20mm 132mm	H20-2A	C20-*	7	11	12	13
		H20-2B	C20-*	9	14	16	17
		H20-2C	C20-*	12	18	20	22
		H20-2D	C20-*	15	22	25	27
		H20-2E	C20-*	19	27	30	33
		H20-2F	C20-*	23	33	37	40
		H20-5A	C20-*	12	18	20	22
		H20-5B	C20-*	15	22	24	27
		H20-5C	C20-*	17	25	28	31
		H20-5D	C20-*	20	29	32	35
		H20-5E	C20-*	23	33	38	41
		H20-5F	C20-*	26	38	43	47
		H20-5G	C20-*	30	43	48	53
RBD25	25mm 149mm	H25-2A	C25-*	8	12	14	16
		H25-2B	C25-*	10	16	18	20
		H25-2C	C25-*	13	19	22	25
		H25-2D	C25-*	16	23	27	30
		H25-2E	C25-*	19	29	32	36
		H25-2F	C25-*	23	34	39	43
		H25-2G	C25-*	28	40	46	50
		H25-5A	C25-*	13	19	22	25
		H25-5B	C25-*	15	23	26	29
		H25-5C	C25-*	18	26	30	33
		H25-5D	C25-*	20	30	34	38
		H25-5E	C25-*	24	35	40	44
		H25-5F	C25-*	27	39	45	49
		H25-5G	C25-*	30	44	50	55
		H25-5H	C25-*	34	50	56	62

RBD Nozzles Pressure(bar) / Flow rate(l/min)

■ Inlet connection with 3 back jets.

Body type	O.D./ Length	Head type	Inlet type	500 bar	1000 bar	1250 bar	1500 bar
RBD20	20mm 132mm	H20-2A	C20+0.5-*	15	22	24	26
		H20-2B	C20+0.5-*	17	25	28	30
		H20-2C	C20+0.5-*	20	29	32	35
		H20-2D	C20+0.5-*	23	33	37	40
		H20-2E	C20+0.5-*	27	38	42	46
		H20-2F	C20+0.5-*	31	44	49	53
		H20-5A	C20+0.5-*	20	29	32	35
		H20-5B	C20+0.6-*	26	38	42	46
		H20-5C	C20+0.6-*	28	41	46	50
		H20-5D	C20+0.6-*	31	45	50	54
		H20-5E	C20+0.7-*	38	54	62	67
		H20-5F	C20+0.7-*	41	59	67	73
		H20-5G	C20+0.7-*	45	64	72	79
RBD25	25mm 149mm	H25-2A	C25+0.5-*	16	23	26	30
		H25-2B	C25+0.5-*	18	27	30	33
		H25-2C	C25+0.5-*	21	30	34	38
		H25-2D	C25+0.5-*	24	34	39	43
		H25-2E	C25+0.5-*	27	40	44	49
		H25-2F	C25+0.5-*	31	45	51	56
		H25-2G	C25+0.5-*	36	51	58	63
		H25-5A	C25+0.5-*	21	30	34	38
		H25-5B	C25+0.6-*	26	39	44	48
		H25-5C	C25+0.6-*	29	42	48	52
		H25-5D	C25+0.6-*	31	46	52	57
		H25-5E	C25+0.7-*	39	56	64	70
		H25-5F	C25+0.7-*	42	60	69	75
		H25-5G	C25+0.7-*	45	65	74	81
		H25-5H	C25+0.7-*	49	71	80	88

NOTE: "-*" means "inlet thread", for example, C20+0.5-8, means inlet type C20+0.5 with connection thread is "1/4BSPP", See: Inlet Thread and Code.

FLUID RBD-Nozzle inlet connection thread:

Inlet Thread and Code:

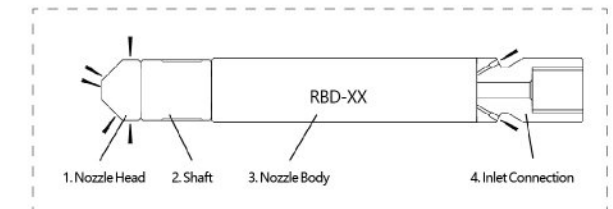
RBD11	M8X1	-3
Inlet connection	M8	-4
	M7	-2
	1/4-28LH	-1L
	1/4-28RH	-1R
RBD14	M8X1	-3
Inlet connection	M8	-4
	M10X1	-7
	1/8BSPP	-6
	1/4-28LH	-1L
	1/4-28RH	-1R
	3/8-24LH	-5L
	3/8-24RH	-5R
RBD17	1/8-BSPP	-6
Inlet connection	3/8-24LH	-5L
	3/8-24RH	-5R
	M10X1	-7
	1/4NPT	-9
RBD20	M10X1	-7
Inlet connection	1/4BSPP	-8
	1/4NPT	-9
	9/16-18LH	-10L
	9/16-18RH	-10R
	M20X1.5	-12



2 jet Polisher connected with rigid lance ONLY



2+3 back jets Polisher



5 jet Universal connected with rigid lance ONLY



5+3 back jets Universal

1.2 RT nozzles

Type: RT11/13/15/20/25



① Nozzle Body :
Pressure(bar) / Flow rate(l/min)
■ with 4 jets on Body

RT-Nozzle type	O.D	Body type	Connection thread	500 bar	1000 bar	1200 bar
RT11	11mm	B11A	M8	9	14	15
		B11B		14	20	22
RT13	13mm	B13A	M10*1	10	15	17
		B13B		14	21	23
RT15	15mm	B15A	M10*1	11	17	20
		B15B		15	23	27
RT20	20mm	B20A	M14*1.5	12	19	22
		B20B		16	25	29
		B20C		21	32	37
RT25	25mm	B25A	M16*1.5	12	20	23
		B25B		16	26	30
		B25C		21	33	38
		B25D		27	41	47

② Thruster:
Pressure(bar) / Flow rate(l/min)
■ with 3 back jets on Thruster

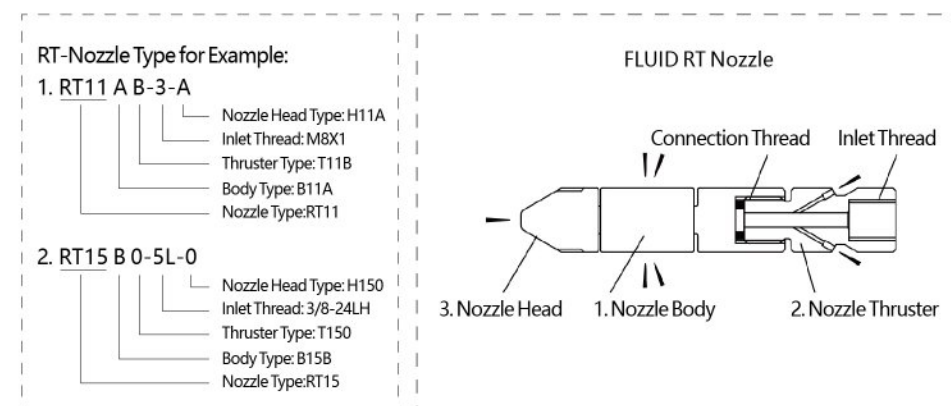
Thruster type	500 bar	1000 bar	1200 bar
T11A-*	15	21	23
T11B-*	23	33	37
T13A-*	15	21	23
T13B-*	23	33	37
T15A-*	15	21	23
T15B-*	23	33	37
T20A-*	15	21	23
T20B-*	23	33	37
T20C-*	34	48	53
T25A-*	15	21	23
T25B-*	23	33	37
T25C-*	34	48	53
T25D-*	46	65	71

③ Nozzle head:
Pressure(bar) / Flow rate(l/min)
■ with 1 front jet on Nozzle Head

Nozzle Head type	500 bar	1000 bar	1200 bar
H11A	5	7	8
H11B	8	11	12
H13A	5	7	8
H13B	8	11	12
H15A	5	7	8
H15B	8	11	12
H20A	5	7	8
H20B	8	11	12
H20C	11	16	18
H25A	5	7	8
H25B	8	11	12
H25C	11	16	18
H25D	15	22	24

NOTE:

- Total flow rate $Q = ① + ② + ③$ (Item ② and Item ③ are options).
- Thruster type will be named "T110-*; T130-*; T150-*; T200-*; T250-*", when no back jets on thruster.
- Head type will be named "H110; H130; H150; H200; H250", when no front jet on nozzle head.
- In thruster type, "-*" means thruster inlet thread.
- Nozzle head type "H25D" can't be matched with Thruster type "T25A" when using flexible lance!



2. SURFACE CLEANING AND PREPARATION

2.1 RWT-OS16



FEATURES:

- Magnetic speed control, maintenance free.
- Leak-free seal design
- Replaceable sapphire nozzles.

Technical Specifications:

Max. operating pressure: 1600bar	Flow range: 10~30 l/min
Rotation Speed: 500~2500 rpm	Diameter: ϕ 37 mm
Total length: 168mm	Approx. weight: 0.78 kg
Connection thread: M20*1.5 female Or custom-made as per client requirement	
Sapphire nozzle : 2* M10*1.5	

Nozzles size mm*	Min.pressure bar	Max.pressure bar	Flow range l/min
ϕ 0.6*2	800	1600	10~14
ϕ 0.7*2	600	1500	11~18
ϕ 0.8*2	500	1400	13~22
ϕ 0.9*2	400	1000	15~24
ϕ 1.0*2	300	800	16~27
ϕ 1.1*2	250	600	18~28
ϕ 1.2*2	200	500	19~30

Inlet Thread and Code:

RT11 Thruster inlet thread	M8X1	-3
	M8	-4
	M7	-2
	1/4-28LH	-1L
RT13 Thruster inlet thread	1/4-28RH	-1R
	M8X1	-3
	M8	-4
	M10X1	-7
RT15 Thruster inlet thread	1/8BSPP	-6
	1/4-28LH	-1L
	1/4-28RH	-1R
	3/8-24LH	-5L
RT20 Thruster inlet thread	3/8-24RH	-5R
	M10X1	-7
	M10X1	-7
	1/4BSPP	-8
RT25 Thruster inlet thread	1/4NPT	-9
	9/16-18LH	-10L
	9/16-18RH	-10R
	M20X1.5	-12

2.2 RWT-OF18



■ FEATURES:

- Magnetic speed control, maintenance free.
- Leak-free seal design.
- Replaceable sapphire nozzles.
- Select two jets for hard-hitting deeper penetration or four jets for thin, hard surface removal.

Technical Specifications:

Max. Operating pressure: 1800bar	Flow range: 15~38 l/min
Rotation speed: 500~2500 rpm	Diameter: ϕ 49 mm
Total length: 200 mm	Approx. weight: 1.52 kg
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Sapphire nozzle : 4*M10*1.5(Or 2 sapphire nozzles + 2 plugs)	

Nozzles size mm*	Min.pressure bar	Max.pressure bar	Flow range l/min
ϕ 0.6*2 (A) + ϕ 0.6*2 (B)	800	1600	19~27
ϕ 0.7*2 (A) + ϕ 0.7*2 (B)	600	1400	26~34
ϕ 0.8*2 (A) + ϕ 0.8*2 (B)	500	1000	27~38
ϕ 0.8*2 (A)	800	1800	17~25
ϕ 0.9*2 (A)	650	1500	19~29
ϕ 1.0*2 (A)	600	1200	23~32
ϕ 1.1*2 (A)	500	1000	25~36
ϕ 1.2*2 (A)	400	800	27~38

Note: (A) means at 20°jet angle; (B) means at 15°jet angle;

2.3 RWT-OF28S



■ FEATURES:

- Magnetic speed control, easy maintenance.
- Rotation speed can be adjusted by changing the position of adjustable rings with respect to magnet.
- Leak-free seal design.
- Replaceable sapphire nozzles.

Technical Specifications:

Max. Operating pressure: 2800 bar	Flow range: 10~18 l/min
Rotation speed: 800~2500 rpm	Diameter: ϕ 49mm
Total length: 189 mm	Approx. weight: 1.30 kg
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Sapphire nozzle: 4* M10*1.5	

Size mm*	High speed Min.~Max.pressure bar	Mid-speed Min.~Max.pressure bar	Low speed Min.~Max.pressure bar	Flow range l/min
ϕ 0.38*4	1500~2800	×	×	11~14
ϕ 0.40*4	1400~2000	1600~2500	1700~2800	12~16
ϕ 0.45*4	1200~1500	1500~2000	1600~2200	13~18

× means: Not recommended to operate in this position.

2.4 RWT-OF/SA30-4



■ FEATURES:

- Magnetic speed control, easy maintenance.
- Rotation speed can be easily adjusted by hand; Brakes are adjusted by simply moving the protective sleeve.
- Leak-free seal design.
- Replaceable sapphire nozzles.

Technical Specifications:

Max. Operating pressure: 3000 bar	Flow range: 10~20 l/min
Rotation speed: 1000~2500 rpm	Diameter: ϕ 62mm
Total length: 208mm	Approx. weight: 1.65 kg
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Sapphire nozzle: 4* M10*1.5	

Size mm*	High speed ⑩ Min.~Max.pressure bar	Mid-speed ⑤ Min.~Max.pressure bar	Low speed ① Min.~Max.pressure bar	Flow range l/min
ϕ 0.4*4	1000~1500	1200~2000	1400~3000	10~16
ϕ 0.4*2+0.5*2	700~1200	900~1500	1200~2000	10~17
ϕ 0.5*4	600~1000	800~1200	1000~1600	12~19

Note: □ ⑩ means at the fastest rotation speed; ① means at the slowest rotation speed

2.5 RWT-OF/SA30-3



■ FEATURES:

- Magnetic speed control, easy maintenance.
- Rotation speed can be easily adjusted by hand; Brakes are adjusted by simply moving the protective sleeve.
- Leak-free seal design.
- Replaceable sapphire nozzles.

Technical Specifications:

Max. Operating pressure: 3000 bar	Flow range: 12~20 l/min
Rotation speed: 1000~2500 rpm	Diameter: ϕ 62mm
Total length: 208mm	Approx. weight: 1.65 kg
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Sapphire nozzle: 3 * M10*1.5	

Size mm*	High speed ⑩ Min.~Max.pressure bar	Mid-speed ⑤ Min.~Max.pressure bar	Low speed ① Min.~Max.pressure bar	Flow range l/min
ϕ 0.55-A	1100~1700	1400~2500	1500~3000	12~19
ϕ 0.50-B				
ϕ 0.45-C				
ϕ 0.55-A	1200~1800	1500~2600	1600~3000	10~17
ϕ 0.50-B				
ϕ 0.30-C				

Note: □ ⑩ means at the fastest rotation speed; ① means at the slowest rotation speed

□ Total three jet angle: (A)-10°; (B)-15°; (C)-15°

3. INTERNAL PIPE CLEANING ROTARY NOZZLES

3.1 FALCON SERIES STRAIGHT PIPE CLEANING

① RWT-FC55 SERIES



■ FEATURES:

- Magnetic speed control, easy maintenance.
- Designed with an eddy-current braking system which controls rotation speed for maximum cleaning power and minimum wear.
- Leak-free seal design

①-1 RWT-FC55-16M**

Note: The first “*” means the jet orifice number. The second “*” means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical specifications:

Max. Operating pressure: 1600 bar	Max. Flow rate: 75 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 55mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC55-16M4* (Polisher)

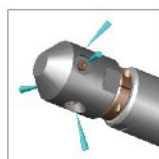
With four 1/4-28 sapphire nozzles screwed in nozzle head Two at 90 degrees, two back jets.

RWT-FC55-16M5* (Unplugging)

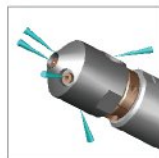
With five 1/4-28 sapphire nozzles screwed in nozzle head Three forward jets, two back jets.

RWT-FC55-16M7* (Universal)

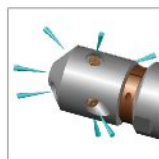
With seven 1/4-28 sapphire nozzles screwed in nozzle head Three forward jets, two at 90 degrees, two back jets.



4 jet (Polisher)



5 jet (Unplugging)



7 jet (Universal)

①-2 RWT-FC55-30M**

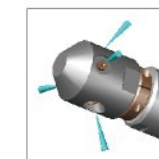
Note: The first “*” means the jet orifice number. The second “*” means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical specifications:

Max. Operating pressure: 3000 bar	Max. Flow rate: 42 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 55mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

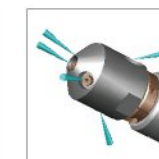
RWT-FC55-30M4* (Polisher)

With four 1/4-28 sapphire nozzles screwed in nozzle head Two at 90 degrees, two back jets.



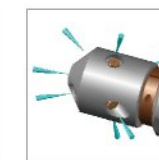
RWT-FC55-30M5* (Unplugging)

With five 1/4-28 sapphire nozzles screwed in nozzle head Three forward jets, two back jets.



RWT-FC55-30M7* (Universal)

With seven 1/4-28 sapphire nozzles screwed in nozzle head Three forward jets, two at 90 degrees, two back jets.



② RWT-FC70 SERIES



3 jet-T type



4 jet-T type



6 jet-S type



7 jet-U type

②-1 RWT-FC70-10M**

Note: The first “**” means the jet orifice number. The second “**” means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical specifications:

Max. Operating pressure: 1000 bar	Max. Flow rate: 168 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 70mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC70-10M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions“ T” and back jets.

RWT-FC70-10M4*

With four M10*1.5 sapphire nozzles screwed in nozzle extensions“ T” Two at 90 degrees, two back jets.

RWT-FC70-10M6*

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions“ S”. Two forward jets, two at 90 degrees ,two back jets.

RWT-FC70-10M7*

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.

②-2 RWT-FC70-20M**

Note: The first “**” means the jet orifice number. The second “**” means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical specifications:

Max. Operating pressure: 2000 bar	Max. Flow rate: 117 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 70mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC70-20M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions“ T” and back jets.



RWT-FC70-20M4*

With four M10*1.5 sapphire nozzles screwed in nozzle extensions“ T” Two at 90 degrees ,two back jets.



RWT-FC70-20M6*

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions“ S”. Two forward jets, two at 90 degrees ,two back jets.



RWT-FC70-20M7*

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.



②-3 RWT-FC70-30M**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 3000 bar	Max. Flow rate: 75 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 70mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC70-30M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions "T" and back jets.



RWT-FC70-30M4*

With four M10*1.5 sapphire nozzles screwed in nozzle extensions "T" Two at 90 degrees, two back jets.



RWT-FC70-30M6*

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions "S". Two forward jets, two at 90 degrees, two back jets.



RWT-FC70-30M7*

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.



③ RWT-FC90 SERIES



③-1 RWT-FC90-12M**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 1200 bar	Max. Flow rate: 230 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 90mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC90-12M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions "T" and back jets.

RWT-FC90-12M4*

With four M10*1.5 sapphire nozzles screwed in nozzle extensions "T" Two at 90 degrees, two back jets.

RWT-FC90-12M6*

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions "S". Two forward jets, two at 90 degrees, two back jets.

RWT-FC90-12M7*

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.

③-2 RWT-FC90-20M**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 2000 bar	Max. Flow rate: 168 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 90mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC90-20M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions "T" and back jets.

**RWT-FC90-20M4***

With four M10*1.5 sapphire nozzles screwed in nozzle extensions "T" Two at 90 degrees, two back jets.

**RWT-FC90-20M6***

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions "S". Two forward jets, two at 90 degrees ,two back jets.

**RWT-FC90-20M7***

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.



③-3 RWT-FC90-30M**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 3000 bar	Max. Flow rate: 117 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 90mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC90-30M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions "T" and back jets.

**RWT-FC90-30M4***

With four M10*1.5 sapphire nozzles screwed in nozzle extensions "T" Two at 90 degrees,two back jets.

**RWT-FC90-30M6***

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions "S". Two forward jets, two at 90 degrees ,two back jets.

**RWT-FC90-30M7***

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.



④ RWT-FC/SR88 SERIES (ROTATION SPEED ADJUSTABLE)



④-1 RWT-FC/SR88-10M**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 1000 bar	Max. Flow rate: 168 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 88mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC/SR88-10M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions" T" and back jets.

RWT-FC/SR88-10M4*

With four M10*1.5 sapphire nozzles screwed in nozzle extensions" T" Two at 90 degrees , two back jets.

RWT-FC/SR88-10M6*

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions" S". Two forward jets, two at 90 degrees ,two back jets.

RWT-FC/SR88-10M7*

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.

④-2 RWT-FC/SR88-20M**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 2000 bar	Max. Flow rate: 117 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 88mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC/SR88-20M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions" T" and back jets.

RWT-FC/SR88-20M6*

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions" S".
Two forward jets, two at 90 degrees ,two back jets.

RWT-FC/SR88-20M4*

With four M10*1.5 sapphire nozzles screwed in nozzle extensions" T" Two at 90 degrees , two back jets.

RWT-FC/SR88-20M7*

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.

④-3 RWT-FC/SR88-30M**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles, different eccentric distance and different nozzle threads.

Technical Specifications:

Max. Operating pressure: 3000 bar	Max. Flow rate: 75 l/min
Rotation speed: approx. 200~1500rpm	Max. Outer diameter: 88mm
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

RWT-FC/SR88-30M3*

With three M10*1.5 sapphire nozzles screwed in nozzle extensions" T" and back jets.

RWT-FC/SR88-30M4*

With four M10*1.5 sapphire nozzles screwed in nozzle extensions" T" Two at 90 degrees, two back jets.

RWT-FC/SR88-30M6*

With total six M10*1.5 sapphire nozzles screwed in nozzle head or nozzles extensions" S".
Two forward jets, two at 90 degrees ,two back jets.

RWT-FC/SR88-30M7*

With total seven sapphire nozzles screwed in nozzle head
Three 1/4-28 nozzles forward jets, two M10*1.5 nozzles at 90 degrees, two M10*1.5 nozzles back jets.

⑤ RWT-FC/MP68-5/12/15M** (MUNICIPAL PIPELINE CLEANING)

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.



Technical Specifications:

Max. Operating pressure and Max.flow rate :	
A:: 500 bar/230 l/min; B: 1200bar/168 l/min; C: 1500bar/117 l/min	
Rotation speed: approx. 200~1000rpm	Max. Outer diameter: 68mm
Total Length :Approx.240mm	
Connection thread: M36*2 female; or custom-made (One adapter will be supplied)	

A: RWT-FC/MP68-5M9* (Max.500bar/230 l/min)

With nine 1/8 NPT nozzles screwed in nozzle head. One front jet at 15 degree, and two back jets at 80 degree, two back jets at 60 degree, and four back jets at 30 degree.

B: RWT-FC/MP68-12M9* (Max.1200bar/168 l/min)

With nine 1/8 NPT nozzles screwed in nozzle head. One front jet at 15 degree, and two back jets at 80 degree, two back jets at 60 degree, and four back jets at 30 degree.

C: RWT-FC/MP68-15M9* (Max.1500bar/117 l/min)

With nine 1/8 NPT nozzles screwed in nozzle head. One front jet at 15 degree, and two back jets at 80 degree, two back jets at 60 degree, and four back jets at 30 degree.

⑥ RWT-FC/MP80-5/12/15M** (MUNICIPAL PIPELINE CLEANING)

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.



Technical Specifications:

Max. Operating pressure and Max.flow rate :	
A:: 500 bar/468 l/min; B: 1200bar/230 l/min; C: 1500bar/168 l/min	
Rotation speed: approx. 200~1000rpm	Max. Outer diameter: 80mm
Total Length :Approx.270mm	
Connection thread: M36*2 female; or custom-made (One adapter will be supplied)	

A: RWT-FC/MP80-5M9* (Max.500bar/468 l/min)

With nine 1/4 NPT nozzles screwed in nozzle head. One front jet at 15 degree, and two back jets at 80 degree, two back jets at 60 degree, and four back jets at 30 degree.

B: RWT-FC/MP80-12M9* (Max.1200bar/230 l/min)

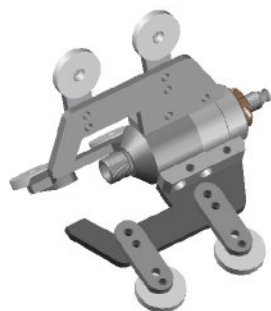
With nine 1/4 NPT nozzles screwed in nozzle head. One front jet at 15 degree, and two back jets at 80 degree, two back jets at 60 degree, and four back jets at 30 degree.

C: RWT-FC/MP80-15M9* (Max.1500bar/168 l/min)

With nine 1/4 NPT nozzles screwed in nozzle head. One front jet at 15 degree, and two back jets at 80 degree, two back jets at 60 degree, and four back jets at 30 degree.

FALCON SERIES CENTRALIZERS:

Type: A



Type: B



Type A: suitable for i/d 130~400 (total length: approx. 180 mm weight: 4.50 kg);

Type B: suitable for i/d 400~800 (total length: approx. 600 mm weight: 26.0 kg);

3.2 WILD BOAR SERIES CURVED PIPE CLEANING

■ FEATURES:

- Magnetic speed control, easy maintenance.
- Leak-free seal design
- Replaceable sapphire nozzles

① RWT-W16 SERIES

①-1 RWT-W16M3*

Note: The "*" means the type of nozzle heads which has different jet angles etc.



Technical Specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 58 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 68 mm
Length: 148 mm	
Connection thread: M24*1.5 male Or custom-made as per client requirement	
Number of nozzles: 7 ;three (1/4-28) forward jets, four (M10*1.5) back jets.	

①-2 RWT-W16MS*

Note: The "*" means the type of nozzle heads which has different jet angles etc.



Technical Specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 58 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 68 mm
Length: 140 mm	
Connection thread: M24*1.5 male Or custom-made as per client requirement	
Number of nozzles: 4 (M10*1.5) back jets	

①-3 RWT-W16L3*

Note: The "*" means the type of nozzle heads which has different jet angles etc.



Technical specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 117 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 78 mm
Length: 156 mm	
Connection thread: M24*1.5 male Or custom-made as per client requirement	
Number of nozzles: 7; three (1/4-28) forward jets, four (M10*1.5) back jets.	

①-4 RWT-W16LS*

Note: The "*" means the type of nozzle heads which has different jet angles etc.



Technical specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 117 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 78 mm
Length: 148 mm	
Connection thread: M24*1.5 male Or custom-made as per client requirement	
Number of nozzles: 4* (M10*1.5) back jets.	

①-5 RWT-W16XL3*

Note: The " *" means the type of nozzle heads which has different jet angles etc.

**Technical specifications:**

Max. Operating pressure: 1600bar	Max. Flow rate: 168 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 100mm
Length: approx.167 mm	
Connection thread: M36*2 male Or custom-made as per client requirement	
Number of nozzles: 7; three (1/4-28) forward jets, four (M10*1.5) back jets.	

①-6 RWT-W16XLS*

Note: The " *" means the type of nozzle heads which has different jet angles etc.

**Technical specifications:**

Max. Operating pressure: 1600bar	Max. Flow rate: 168 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 100 mm
Length: 162 mm	
Connection thread: M36*2 male Or custom-made as per client requirement	
Number of nozzles: 4* (M10*1.5) back jets.	

② RWT-W28 SERIES

②-1 RWT-W28M3*

Note: The " *" means the type of nozzle heads which has different jet angles etc.

**Technical specifications:**

Max. Operating pressure: 2800bar	Max. Flow rate: 42 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 68 mm
Length: 145 mm	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzles: 7; three (1/4-28) forward jets, four (M10*1.5) back jets.	

②-2 RWT-W28MS*

Note: The " *" means the type of nozzle heads which has different jet angles etc.

**Technical specifications:**

Max. Operating pressure: 2800bar	Max. Flow rate: 42 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 68 mm
Length: 138 mm	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzles: 4* (M10*1.5) back jets.	

②-3 RWT-W28L3*

Note: The" *" means the type of nozzle heads which has different jet angles etc.



Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 75 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 78 mm
Length: 148 mm	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzles: 7; three (1/4-28) forward jets, four (M10*1.5) back jets.	

②-4 RWT-W28LS*

Note: The" *" means the type of nozzle heads which has different jet angle etc.



Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 75 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 78 mm
Length: 139 mm	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzles: 4 (M10*1.5) back jets.	

②-5 RWT-W28XL3*

Note: The" *" means the type of nozzle heads which has different jet angles etc.



Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 117 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 100 mm
Length: 158 mm	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzles: 7; three (1/4-28) forward jets, four (M10*1.5) back jets.	

②-6 RWT-W28XLS*

Note: The" *" means the type of nozzle heads which has different jet angles etc.



Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 117 l/min
Rotation speed: 200~1500rpm	Max. Outer diameter: 100 mm
Length: 163 mm	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzles: 4 (M10*1.5) back jets.	

3.3 CHEETAH SERIES

① RWT-S22-20/28MN**

【Outer Diameter is only ϕ 22 mm with magnetic speed control 】



Note: The first" *" means the jet orifice number. The second" *" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 42 l/min
Rotation speed: 500~1500rpm	Max. Outer diameter: 22 mm
Length: 137 mm	
Connection thread: M18*1.5 female Or custom-made as per client requirement	

Nozzle Heads:

Three standard head designs are available with M4 hardened steel nozzles (Max.2000bar) or M4 sapphire nozzles (Max.2800bar) . The universal head has total seven nozzles, three forward jet, two jets at 90 degrees and another two back jets; the polisher head has four nozzles, two at 90 degrees and another two back jet; the unplugging head has five nozzles, three forward jet and two back jet.

①-1 RWT-S22-20MN4* (POLISHER) Max.2000bar

①-2 RWT-S22-28MN4* (POLISHER) Max.2800bar

①-3 RWT-S22-20MN5* (UNPLUGGER) Max.2000bar

①-4 RWT-S22-28MN5* (UNPLUGGER) Max.2800bar

①-5 RWT-S22-20MN7* (UNIVERSAL) Max.2000bar

①-6 RWT-S22-28MN7* (UNIVERSAL) Max.2800bar

② RWT-S29-20/28MN**

【Outer Diameter is only ϕ 29 mm with magnetic speed control 】



Note: The first" *" means the jet orifice number. The second" *" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.

Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 42 l/min
Rotation speed: 500~1500rpm	Max. Outer diameter: 29 mm
Length: 156mm	
Connection thread: M20*1.5 female Or custom-made as per client requirement	

Nozzle Heads:

Three standard head designs are available with M4 hardened steel nozzles (Max.2000bar) or M4 sapphire nozzles (Max.2800bar) . The universal head has total seven nozzles, three forward jet, two jets at 90 degrees and another two back jets; the polisher head has four nozzles, two at 90 degrees and another two back jet; the unplugging head has five nozzles, three forward jet and two back jet.

②-1 RWT-S29-20MN4* (POLISHER) Max.2000bar

②-2 RWT-S29-28MN4* (POLISHER) Max.2800bar

②-3 RWT-S29-20MN5* (UNPLUGGER) Max.2000bar

②-4RWT-S29-28MN5* (UNPLUGGER) Max.2800bar

②-5 RWT-S29-20MN7* (UNIVERSAL) Max.2000bar

②-6 RWT-S29-28MN7* (UNIVERSAL) Max.2800bar

③ RWT-S35-16MN/D**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.



Technical Specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 42 l/min
Rotation speed: 500~1500rpm	Max. Outer diameter: 35 mm
Length: 150mm	
Connection thread: M24*1.5 female Or custom-made as per client requirement	

Magnetic speed control, easy maintenance;

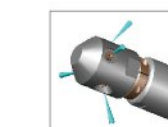
Nozzle Heads:

Three standard head designs are available with M4 hardened steel nozzles or drilled orifices. The universal head has total seven nozzles, three forward jet, two jets at 90 degrees and another two back jets; the polisher head has four nozzles, two at 90 degrees and another two back jet; the unplugging head has five nozzles, three forward jet and two back jet.

- ③-1 RWT-S35-16MN4* (POLISHER) (M4 nozzles)
- ③-2 RWT-S35-16MD4* (POLISHER) (Drilled orifices)
-
- ③-3 RWT-S35-16MN5* (UNPLUGGER) (M4 nozzles)
- ③-4 RWT-S35-16MD5* (UNPLUGGER) (Drilled orifices)
-
- ③-5 RWT-S35-16MN7* (UNIVERSAL) (M4 nozzles)
- ③-6 RWT-S35-16MD7* (UNIVERSAL) (Drilled orifices)
-

④ RWT-S44-28MS**

Note: The first" **" means the jet orifice number. The second" **" means the types of nozzle heads, which has different jet angles and different nozzle threads etc.



4 jet (Polishing)



5 jet (Unplugging)



7 jet (Universal)

Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 42 l/min
Rotation speed: 500~1500rpm	Max. Outer diameter: 44 mm
Length: 183mm	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

Magnetic speed control, easy for maintenance;

Nozzle Heads:

Three standard head designs are available with 1/4-28 sapphire nozzles. The universal head has total seven sapphire nozzles, three forward jet, two jets at 90 degrees and another two back jets; the polisher head has four sapphire nozzles, two at 90 degrees and another two back jet; the unplugging head has five sapphire nozzles, three forward jets and two back jets.

- ④-1 RWT-S44-28MS4*
With four 1/4-28 sapphire nozzles screwed in nozzle head, two at 90 degree, two back jets
- ④-2 RWT-S44-28MS5*
With five 1/4-28 sapphire nozzles screwed in nozzle head, three forward jet, two back jet.
- ④-3 RWT-S44-28MS7*
With seven 1/4-28 sapphire nozzles screwed in nozzle head, three forward jet, two jets at 90 degrees and another two back jets

3.4 DARK STORM SERIES

① RWT-S15M-45T**



Technical Specifications:

Max. Operating pressure: 1500bar	Max. Flow rate: 75 l/min
Rotation speed: 500~1500rpm	Max. Outer diameter: 45mm
Length: 88mm (Not incl. adapter)	
Connection thread: M16*1.5 female Or custom-made as per client requirement	
Number of nozzle: 4; 1/4-28 sapphire nozzles, two at 90 degrees, two back jets.	

①-1 RWT-S15M-45T0* (without thrust jets)

①-2 RWT-S15M-45T3* (with three 1/4-28 thrust jets sapphire nozzles)

② RWT-S20M-40*



Technical Specifications:

Max. Operating pressure: 2000bar	Max. Flow rate: 90 l/min
Rotation speed: 500~1500rpm	Max. Outer diameter: 40mm
Length: 120mm (Not incl. adapter)	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzle: 4; M4 hardened steel nozzles, back jets	

③ RWT-S20M-55*



Technical Specifications:

Max. Operating pressure: 2000bar	Max. Flow rate: 90 l/min
Rotation speed: 500~1500rpm	Max. Outer diameter: 55mm
Length: 120mm (Not incl. adapter)	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	
Number of nozzle: 1/4-28 sapphire nozzles, at 90 degrees, two back jets	

4. HIGH PRESSURE SPRAY GUN

4.1 SG1500BC (Dump Style)



The hand-operated dump style control guns allow the operator to have complete control of the pressure at all times. This dump gun is designed and constructed for high pressure water jet cleaning in marine applications, surface preparation, heat exchanger cleaning, tube bundle cleaning and general water jetting. When the dump gun is deactivated the water is dumped by the dump valve.

Technical Specifications:

Max. Operating pressure: 1500bar	Max. Flow rate: 80 l/min
Lance type: 9/16"	Lance length: 750 mm
Weight: approx.6.0kg	
Connection thread: M24*1.5 Or custom-made as per client requirement	

■ FEATURES:

- The shoulder stock and handgrip are both adjustable.
- With split cartridge valve structural design, wear parts easy to replace only control pin & seat need replacement, not required to replace the whole cartridge assembly.
- Can be ordered lance sizes in different lengths (minimum length 750 mm).
- Less maintenance cost.

4.2 SG2800B (Dump Style)



Technical Specifications:

Max. Operating pressure: 2800bar	Max. Flow rate: 50 l/min
Lance type: 9/16"	Lance length: 750 mm
Weight: approx.6.6kg	
Connection thread: 1-1/8UNF female Or custom-made as per client requirement	

4.3 SG1600B (Dump Style)



Technical Specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 80 l/min
Lance type: 9/16"	Lance length: 750 mm
Weight: approx.6.0kg	
Connection thread: M24*1.5 Or custom-made as per client requirement	

4.4 SG1600CA (Shut in Style)



The hand-operated shut in style gun is used when remote dumping is required, to keep discharge water in the blasting area to a minimum. The high pressure system requires the use of an unloader valve. The Shut in Style gun is designed and constructed for high pressure water jet cleaning in surface preparation, heat exchanger cleaning, tube bundle cleaning and general water jetting.

Technical Specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 80 l/min
Lance type: 9/16"	Lance length: 750 mm
Weight: approx.5.8kg	
Connection thread: M24*1.5 Or custom-made as per client requirement	

■ FEATURES:

- The shoulder stock and handgrip are both adjustable.
- With cartridge valve structural design and easy for maintenance.
- Can be ordered lance sizes in different lengths (minimum length 750 mm).
- Reduced water consumption compare with dump guns.
- Maintenance cost is less.

5. ULTRA HIGH PRESSURE SPRAY GUN (air-operated)

5.1 RSG3000/42T (Designed for tube cleaning)



Specially designed for heat exchanger tube cleaning.

Technical Specifications:

Max. Operating pressure: 3000bar	Max. Flow rate: 42 l/min
Weight: approx. 7.8kg	Rotation speed: 10~500 rpm
Air pressure: 4~6bar	Air input: Max.7m ³ /h
Lance length: custom-made as per client requirement	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

FEATURES:

- Lightweight aluminum & stainless steel construction.
- The barrel supported on a ball bearing for smooth operation.
- Highest quality air motor.
- Quick change swivel seal assembly.
- Can be ordered lance sizes in different lengths.

5.2 RSG3000/42S (Designed for surface cleaning)



Specially designed for surface cleaning; wide selection of multi-orifice heads.

Technical Specifications:

Max. Operating pressure: 3000bar	Max. Flow rate: 42 l/min
Weight: approx. 8.2kg	Rotation speed: 0~2000 rpm
Air pressure: 4~6bar	Air input: Max.7m ³ /h
Lance length: custom-made as per client requirement	
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement	

FEATURES:

- Lightweight aluminum & stainless steel construction.
- The barrel supported on a ball bearing for smooth operation.
- Highest quality air motor.
- Quick change swivel seal assembly.
- Can be ordered lance sizes in different lengths.
- The ability to accept a wide range of nozzles for almost any application.

6. HIGH PRESSURE FOOT VALVE

6.1 FV1600BB (Dump Style)

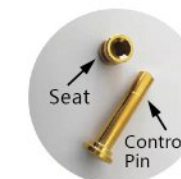
Made with stainless steel and fully protective guard. Dump-style valves allow instantaneous dump to low pressure when the foot pedal is released.

Technical Specifications:

Max. Operating pressure: 1600bar
Max. Flow rate: 80 l/min
Weight: approx. 14kg
Connection thread: M24*1.5 Or custom-made as per client requirement

FEATURES:

- With split cartridge valve structural design, wearparts easy to replace only Control pin & seat need replacement, no need to replace the whole cartridge assembly.
- Cover and footrest are made of stainless steel.



6.2 FV2800B (Dump Style)

Technical Specifications:

Max. Operating pressure: 2800bar
Max. Flow rate: 50 l/min
Weight: approx. 14kg
Connection thread: 1-1/8 UNF female Or custom-made as per client requirement



6.3 FV1500C (Shut in Style)

Foot-operated shut-in style allows the operator to have complete control of the pressure at all times, Shut-in style control foot valve do not dump water when the pedal is released. Shut-off valves minimize water in the work area by dumping it elsewhere via an unloader valve.

Technical Specifications:

Max. Operating pressure: 1500bar
Max. Flow rate: 80 l/min
Weight: approx. 14kg
Connection thread: M24*1.5 Or custom-made as per client requirement

FEATURES:

- With cartridge valve structural design and easy for maintenance.
- Cover and footrest are made of stainless steel.



7. HIGH PRESSURE SWIVEL CONNECTION (connected gun with hose)

7.1 SC3000/42



Technical specifications:

Max. Operating pressure: 3000bar

Max. Flow rate: 42 l/min

Connection thread: 1-1/8 UNF female Or custom-made as per client requirement

7.2 SC1600/117



Technical specifications:

Max. Operating pressure: 1600bar

Max. Flow rate: 117 l/min

Connection thread: M24*1.5 Or custom-made as per client requirement

8. HIGH PRESSURE ROTARY SWIVELS

8.1 RC1800/300



Technical specifications:

Max. Operating pressure: 1800bar

Max. Flow rate: 300 l/min

Connection thread: M24*1.5 Or custom-made as per client requirement

8.2 RC1800/117

Technical specifications:

Max. Operating pressure: 1800bar

Max. Flow rate: 117 l/min

Connection thread:
M24*1.5 Or custom-made as per client requirement

8.3 RC3000/58



Technical specifications:

Max. Operating pressure: 3000bar

Max. Flow rate: 58 l/min

Connection thread: 1-1/8 UNF female Or custom-made as per client requirement

9. SURFACE/FLOOR CLEANER

9.1 FS1800/117



The Tianjin Fluid surface cleaning system is the most efficient way to remove coatings (paint, epoxies, etc.), scale, and other tough adherents. For cleaning of horizontal surfaces with high pressures. Use in conjunction with a vacuuming system to clean in a non-polluting way. UHP water jetting works faster and more thoroughly without metal and concrete undamaged and ready for recoating. The system is self-rotating does not require hydraulic, electrical, or pneumatic power to operate. The speed of the self-rotating spray bar can be controlled via a knob with a maximum speed of 1500 RPM.

Technical specifications:

Max. Operating pressure: 1800bar

Max. Flow rate: 117 l/min

Max.speed (adjustable) : 1500 rpm

Number of sapphire nozzle: custom-made

Blasting width: 268 mm;Custom-made (the Max. Width won't exceed 500mm)

Connection thread: M24*1.5 Or custom-made as per client requirement

■ FEATURES:

- Very high performance; Uniform contact pressure.
- Aluminum and stainless steel design with hard rubber wheels allows for ease of maneuverability.
- Completely removes markings, coatings
- No damage to surrounding areas.
- Saves time and labor

9.2 FS3000/58

Technical specifications:

Max. operating pressure: 3000bar

Max. flow rate: 58 l/min

Max.speed (adjustable) : 1500 rpm

Number of sapphire nozzle: custom-made

Blasting width: 268 mm;Custom-made (the Max. Width won't exceed 500mm)

Connection thread: 1-1/8 UNF Or custom-made as per client requirement

9.3 FSV1800/117 (vacuumed)



Technical specifications:

Max. Operating pressure: 1800bar	Max. Flow rate: 117 l/min
Max.speed (adjustable) : 1500 rpm	
Number of sapphire nozzle: custom-made	
Blasting width: 268 mm; Custom-made (the Max. Width won't exceed 500mm)	
Connection thread: M24*1.5 Or custom-made as per client requirement	

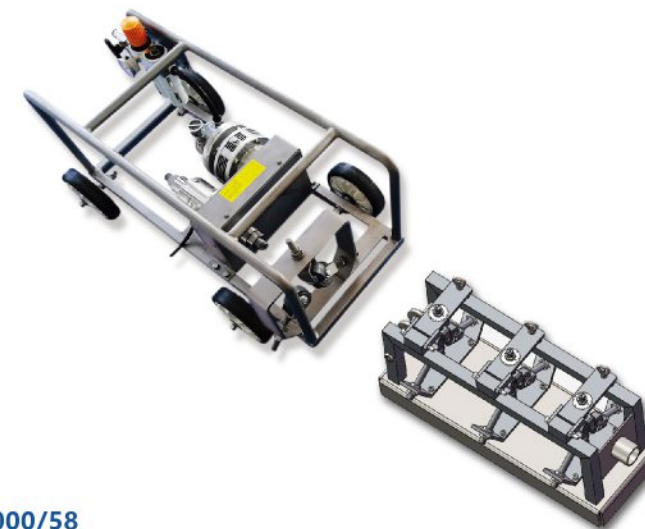
9.4 FSV3000/58 (vacuumed)

Technical specifications:

Max. Operating pressure: 3000bar	Max. Flow rate: 58 l/min
Max.speed (adjustable) : 1500 rpm	
Number of sapphire nozzle: custom-made	
Blasting width: 268 mm; Custom-made (the Max. Width won't exceed 500mm)	
Connection thread: 1-1/8 UNF Or custom-made as per client requirement	

10.CLEANING EQUIPMENTS

① ROTARY UNIT FOR HIGH PRESSURE HOSE (Air-operated)



①-1 HSR-R3000/58

Technical Specifications:

Max. Operating pressure: 3000bar	Max. Flow rate: 58 l/min
Rotation speed: 0~40rpm	Hose OD: Φ 16~33mm
Air compressed: 5~8bar	Air supply: 120 m³/h

①-2 HSR-R1800/117

Technical Specifications:

Max. Operating pressure: 1800bar	Max. Flow rate: 117 l/min
Rotation speed: 0~40rpm	Hose OD: Φ 16~33mm
Air compressed: 5~8bar	Air supply: 120 m³/h

② HOSE STORAGE REEL



②-1 HSR-W2000/250 (Hydraulically operated)

Technical Specifications:

Max. Operating pressure: 2000bar	Max. Flow rate: 250 l/min
Length: 1500mm	Width: 1010mm
Height: 1231mm	Weight: 350 kg
Feeding speed: 1~20m/min	Hydraulic power unit: 2.2KW, 380V
Capacity: i/d13- o/d27 Max.120m; i/d20- o/d34 Max.100m	



②-2 MSR-W1600/200 (Manually operated)

Technical Specifications:

Max. Operating pressure: 1600bar	Max. Flow rate: 200 l/min
Length: 1400mm	Width: 1000mm
Height: 1400mm	Weight: 520 kg
Capacity: i/d13- o/d27 Max.120m; i/d20- o/d34 Max.100m	

②-3 MSR-W3000/117 (Manually operated)

Technical Specifications:

Max. Operating pressure: 3000bar	Max. Flow rate: 117 l/min
Length: 1400mm	Width: 1000mm
Height: 1400mm	Weight: 520 kg
Capacity: i/d13- o/d27 Max.120m; i/d20- o/d34 Max.100m	

③ SWIVELING/ROTATING HOSE REEL (Hydraulically operated)

TYPE: HRS-2000/250 (Max.2000bar/250l/min)



HSR-2000/250

Technical Specifications:

Max. Operating pressure: 2000bar	Max. Flow rate: 250 l/min
Length: 2650mm	Width: 1350mm
Height: 1400mm	Weight: 1800 kg
Rotation speed: 0~30 rpm	Feeding speed: 1~20m/min
Power unit: 4.0 KW 380 V AC	
Hydraulic oil: 120 L 46#	
Capacity: i/d13- o/d27 Max.120m; i/d20- o/d34 Max.100m	

11.ADAPTERS / NOZZLES / NOZZLE EXTENTIONS ETC.



HARDENED STEEL NOZZLES



NOZZLE HOLDERS



SAPPHIRE NOZZLES



THREE-WAY CONNECTION



FOUR-WAY CONNECTION

12.TAILOR-MADE CLEANING TOOLS AND ACCESSORIES



- ① Road cleaning
- ③ 3-D pipe cleaning
- ⑤ Cleaning tools for robot

- ② Runway cleaning
- ④ Hydraulic motor driven rotary nozzle
- ⑥ Rotary cleaning for paint and rust removal

PERFORMANCE (M10*1.5、1/4-28UNF、M4 SAPPHIRE NOZZLES)

Nozzles φ d mm	200 bar L/min	500 bar L/min	750 bar L/min	1000 bar L/min	1500 bar L/min	2000 bar L/min	2500 bar L/min	3000 bar L/min
0.10	0.064	0.1	0.122	0.141	0.171	0.196	0.217	0.237
0.125	0.1	0.157	0.191	0.22	0.267	0.306	0.34	0.37
0.15	0.143	0.226	0.275	0.316	0.385	0.441	0.489	0.532
0.175	0.197	0.309	0.377	0.434	0.527	0.604	0.671	0.73
0.20	0.255	0.401	0.489	0.563	0.684	0.784	0.87	0.946
0.25	0.402	0.632	0.771	0.887	1.078	1.235	1.371	1.492
0.30	0.574	0.903	1.101	1.266	1.538	1.763	1.957	2.13
0.35	0.808	1.27	1.549	1.781	2.165	2.481	2.754	2.997
0.40	1.026	1.614	1.969	2.264	2.751	3.153	3.5	3.808
0.45	1.301	2.046	2.495	2.869	3.486	3.996	4.436	4.827
0.50	1.638	2.577	3.143	3.614	4.391	5.032	5.587	6.079
0.55	1.982	3.118	3.802	4.373	5.313	6.089	6.76	7.356
0.60	2.343	3.685	4.494	5.168	6.28	7.197	7.99	8.694
0.65	2.769	4.355	5.311	6.107	7.421	8.505	9.442	10.274
0.70	3.2	5.034	6.139	7.06	8.578	9.831	10.914	11.876
0.75	3.7	5.82	7.098	8.162	9.918	11.367	12.619	13.731
0.80	4.261	6.702	8.174	9.399	11.421	13.09	14.531	15.812
0.85	4.81	7.566	9.228	10.611	12.893	14.777	16.404	17.85
0.90	5.401	8.495	10.36	11.913	14.475	16.59	18.417	20.04
0.95	6.094	9.584	11.689	13.441	16.332	18.718	20.78	22.611
1.00	6.93	10.9	13.293	15.287	18.574	21.288	23.632	25.751
1.10	8.39	13.19	16.08	18.5	22.48	25.76	28.6	31.12
1.20	9.99	15.72	19.17	22.04	26.78	30.7	34.08	37.08
1.30	11.73	18.45	22.5	25.87	31.43	36.02	39.99	43.52
1.40	13.6	21.39	26.09	30	36.46	41.78	46.38	50.47
1.50	15.61	24.56	29.95	34.44	41.85	47.96	53.24	57.94
1.60	17.16	27.94	34.08	39.19	47.61	54.57	60.58	65.92
1.70	20.05	31.54	38.47	44.24	53.75	61.6	68.39	74.42
1.80	22.24	34.98	42.66	49.06	59.61	68.32	75.84	82.53
1.90	25.05	39.4	48.05	55.26	67.14	76.95	85.43	92.96
2.00	27.76	43.66	53.25	61.23	74.4	85.27	94.66	103
2.10	30.6	48.13	58.7	67.5	82.02	94.01	104.36	113.56
2.20	35.95	56.54	68.95	79.29	96.35	110.42	122.58	133.39
2.30	39.19	61.64	75.17	86.45	105.04	120.38	133.64	145.42
2.40	42.67	67.12	81.85	94.13	114.37	131.08	145.52	158.34
2.50	46.3	72.83	88.82	102.13	124.1	142.23	157.9	171.81
2.60	50.08	78.77	96.06	110.47	134.23	153.84	170.78	185.83
2.70	54.1	84.95	103.6	119.13	144.75	165.9	184.17	200.4
2.80	58.08	91.35	111.41	128.12	155.67	178.41	198.06	215.52
2.90	62.3	98	119.51	137.43	166.99	191.39	212.46	231.59
3.00	66.67	104.87	127.9	147.07	178.71	204.81	227.37	247.41

Note: ① <150N; <250N; >250N.

② Above M4、1/4-28UNF sapphire nozzles Max. size is φ 1.0mm

③ Above M10X1.5 sapphire nozzles Max. size is φ 3.0mm

PERFORMANCE (M3、M4、1/8NPT、1/4NPT HARDENED STEEL NOZZLES)

Nozzles φ d mm	150 bar L/min	250 bar L/min	350 bar L/min	450 bar L/min	550 bar L/min	750 bar L/min	850 bar L/min	1000 bar L/min	1200 bar L/min	1400 bar L/min	1500 bar L/min
0.4	1.2	1.5	1.8	2.1	2.3	2.7	2.8	3.1	3.4	3.6	3.8
0.5	1.9	2.4	2.8	3.2	3.6	4.2	4.4	4.8	5.3	5.7	5.9
0.6	2.7	3.5	4.1	4.6	5.1	6.0	6.4	6.9	7.6	8.2	8.5
0.7	3.6	4.7	5.6	6.3	7.0	8.1	8.7	9.4	10.3	11.1	11.5
0.8	4.8	6.1	7.3	8.2	9.1	10.6	11.3	12.3	13.4	14.5	15.0
0.9	6.0	7.8	9.2	10.4	11.5	13.4	14.3	15.5	17.0	18.4	19.0
1.0	7.4	9.6	11.3	12.9	14.2	16.6	17.7	19.2	21.0	22.7	23.5
1.1	9.0	11.6	13.7	15.6	17.2	20.1	21.4	23.2	25.4	27.4	28.4
1.2	10.7	13.8	16.3	18.5	20.5	23.9	25.5	27.6	30.2	32.7	33.8
1.3	12.5	16.2	19.2	21.7	24.0	28.1	29.9	32.4	35.5	38.3	39.7
1.4	14.6	18.8	22.2	25.2	27.9	32.5	34.6	37.6	41.2	44.5	46.0
1.5	16.7	21.6	25.5	28.9	32.0	37.4	39.8	43.1	47.3	51.0	52.8
1.6	19.0	24.5	29.0	32.9	36.4	42.5	45.3	49.1	53.8	58.1	60.1
1.7	21.5	27.7	32.8	37.2	41.1	48.0	51.1	55.4	60.7	65.6	67.9
1.8	24.1	31.1	36.7	41.7	46.1	53.8	57.3	62.1	68.0	73.5	76.1
1.9	26.8	34.6	40.9	46.4	51.3	59.9	63.8	69.2	75.8	81.9	84.8
2.0	29.7	38.3	45.4	51.4	56.9	66.4	70.7	76.7	84.0	90.7	93.9
2.2	35.9	46.4	54.9	62.2	68.8	80.4	85.6	92.8	101.7	109.8	113.6
2.4	42.8	55.2	65.3	74.1	81.9	95.6	101.8	110.4	121.0	130.7	135.3
2.6	50.2	64.8	76.7	86.9	96.1	112.2	119.5	129.6	142.0	153.4	158.7
2.8	58.2	75.2	88.9	100.8	111.5	130.2	138.6	150.3	164.7	177.8	184.1
3.0	66.8	86.3	102.1	115.8	128.0	149.4	159.1	172.6	189.0	204.2	211.3
3.2	76.0	98.2	116.1	131.7	145.6	170.0	181.0	196.3	215.1	232.3	240.4
3.4	85.8	110.8	131.1	148.7	164.4	191.9	204.3	221.6	242.8	262.2	271.4
3.6	96.2	124.2	147.0	166.7	184.3	215.2	229.1	248.5	272.2	294.0	304.3
3.8	107.2	138.4	163.8	185.7	205.3	239.8	255.2	276.8	303.3	327.6	339.1
4.0	118.8	153.4	181.5	205.8	227.5	265.7	282.8	306.8	336.0	363.0	375.7

Note: ① Above M3-Max. Nozzles size is φ 0.8mm M4-Max. Nozzles size is φ 1.0mm

② 1/8NPT、1/4NPT-Max. Nozzles size is φ 4.0mm