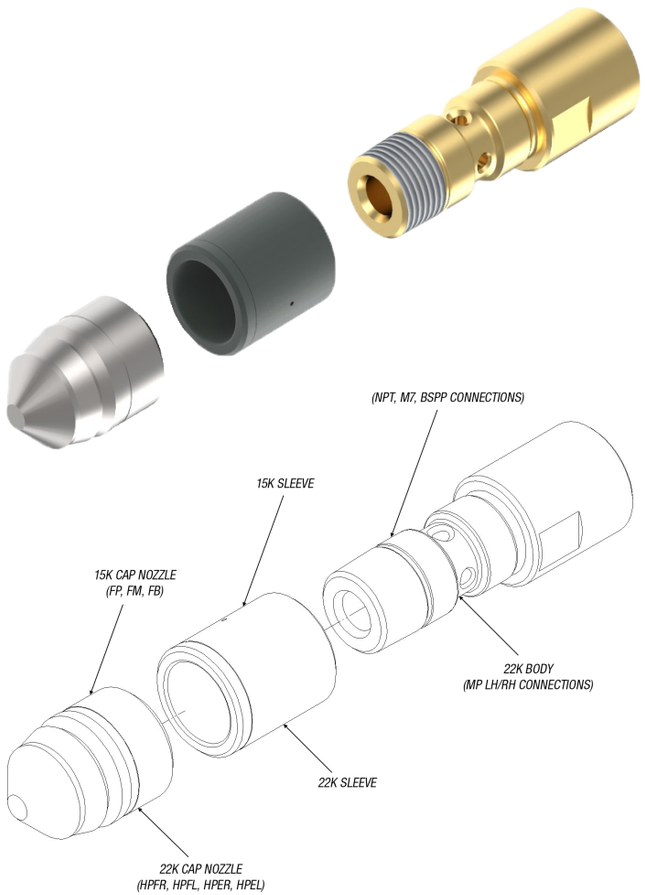
Jetstream
Subsidiary of Federal Signal Corporation

TUBE SPINNER™

QUICK START GUIDE

QSG-123



NOTE: Cap nozzles sold separately

TUBE SPINNER™ | NOZZLE OPTIONS

15K PSI

ASSEMBLY PART NO.	CONNECTION TYPE FEMALE INLET X MALE OUTLET	FLOW RATE	OUTSIDE DIAMETER		LENGTH W/ CAP NOZZLE*		SLEEVE PART NO.	BODY PART NO.
			in	mm	in	mm		
52146	1/16" NPT	1	0.375	9.5	2.72	69	52141	52143
52147		2	0.375	9.5	2.72	69	52142	52143
51997	1/8" NPT	1	0.500	12.7	2.66	68	51992	51996
51998		2	0.500	12.7	2.66	68	51993	51996
52002	1/4" NPT	1	0.665	16.9	3.14	80	51922	52001
52003		2	0.665	16.9	3.14	80	51923	52001
52007	3/8" NPT	1	0.875	22.2	3.30	84	51926	52006
52008		2	0.875	22.2	3.30	84	51927	52006
64104		3	0.875	22.2	3.30	84	64088	52006
64105		4	0.875	22.2	3.30	84	64089	52006
52012	1/2" NPT	1	1.040	26.4	3.92	100	51941	52011
52013		2	1.040	26.4	3.92	100	51942	52011
64106		3	1.040	26.4	3.92	100	64090	52011
64107		4	1.040	26.4	3.92	100	64091	52011
59900	M7 x 1	1	0.375	9.5	2.28	58	52141	59906
59901		2	0.375	9.5	2.28	58	52142	59906
59902	1/8" BSPP	1	0.500	12.7	2.38	61	51992	59907
59903		2	0.500	12.7	2.38	61	51993	59907
59904	1/4" BSPP	1	0.665	16.9	2.68	68	51922	59908
59905		2	0.665	16.9	2.68	68	51923	59908

* NPT connection uses FP cap nozzle, M7 connection uses PM cap nozzle, and BSPP connection uses FB cap nozzle. SOLD SEPARATELY.

22K PSI

ASSEMBLY PART NO.	CONNECTION TYPE FEMALE INLET X MALE OUTLET	FLOW RATE	OUTSIDE DIAMETER		LENGTH W/ CAP NOZZLE*		SLEEVE PART NO.	BODY PART NO.
			in	mm	in	mm		
64199	1/4" MP LH	1	0.375	9.5	2.22/2.57	55/65	51956	64193
64200	1/4" MP RH	1	0.375	9.5	2.22/2.57	55/65	51956	64194
64201	3/8" MP LH	1	0.500	12.7	2.57/2.99	65/76	51958	64195
64202	3/8" MP RH	1	0.500	12.7	2.57/2.99	65/76	51958	64196
64203	9/16" MP LH	1	0.750	19.1	3.55/4.02	90/102	52551	64197
64204	9/16" MP RH	1	0.750	19.1	3.55/4.02	90/102	52551	64198
64205	9/16" MP LH	2	0.750	19.1	3.55/4.02	90/102	54256	64197
64206	9/16" MP RH	2	0.750	19.1	3.55/4.02	90/102	54256	64198

* MP connection uses HPFR/HPFL/HPER/HPEL cap nozzle. Lengths are HPFR and HPFL/HPER and HPEL respectively. SOLD SEPARATELY.

TUBE SPINNER™ | NOZZLE FLOW CHART

ASSEMBLY PART NO.	CONNECTION TYPE FEMALE INLET X MALE OUTLET	FLOW RATE	SLEEVE PART NO.	BODY PART NO.	OUTSIDE DIAMETER		LENGTH W/ CAP NOZZLE		FLOW (GPM) AT SPECIFIED PRESSURE (PSI)*											
					in	mm	in	mm	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	12,500	15,000	17,500	20,000
52146	1/16" NPT	1	52141	52143	0.375				1.9	2.3	2.6	2.9	3.2	3.5	3.7	4.0	4.6	5.1	-	-
52147		2	52142	52143	0.375				3.0	3.5	4.0	4.4	4.8	5.2	5.6	5.9	6.8	7.5	-	-
51997	1/8" NPT	1	51992	51996	0.500				2.6	3.1	3.5	3.9	4.3	4.7	5.0	5.4	6.2	7.0	-	-
51998		2	51993	51996	0.500				5.0	5.9	6.7	7.4	8.0	8.7	9.3	9.9	11.3	12.5	-	-
52002	1/4" NPT	1	51922	52001	0.665				2.4	2.9	3.4	3.8	4.2	4.6	5.0	5.4	6.3	7.2	-	-
52003		2	51923	52001	0.665				5.2	6.2	7.0	7.8	8.5	9.2	9.9	10.6	12.1	13.5	-	-
52007	3/8" NPT	1	51926	52006	0.875				3.6	4.3	4.9	5.5	6.1	6.6	7.2	7.7	9.0	10.1	-	-
52008		2	51927	52006	0.875				7.0	8.2	9.3	10.4	11.3	12.2	13.1	14.0	15.9	17.8	-	-
64104		3	64088	52006	0.875				10.0	11.7	13.3	14.7	16.0	17.2	18.4	19.6	22.1	24.6	-	-
64105		4	64089	52006	0.875				13.7	15.9	18.0	19.9	21.5	23.1	24.7	26.2	29.5	32.7	-	-
52012	1/2" NPT	1	51941	52011	1.040				3.0	3.7	4.3	4.9	5.5	6.1	6.6	7.1	8.5	9.7	-	-
52013		2	51942	52011	1.040				6.7	7.9	9.0	10.0	11.0	12.0	12.9	13.7	15.8	17.8	-	-
64106		3	64090	52011	1.040				10.3	12.2	13.8	15.2	16.7	18.1	19.3	20.5	23.4	26.1	-	-
64107		4	64091	52011	1.040				14.0	16.4	18.5	20.4	22.2	24.0	25.6	27.1	30.8	34.2	-	-
59900	M7 x 1	1	52141	59906	0.375				1.9	2.3	2.6	2.9	3.2	3.5	3.7	4.0	4.6	5.1	-	-
59901		2	52142	59906	0.375				3.0	3.5	4.0	4.4	4.8	5.2	5.6	5.9	6.8	7.5	-	-
59902	1/8" BSPP	1	51992	59907	0.500				2.6	3.1	3.5	3.9	4.3	4.7	5.0	5.4	6.2	7.0	-	-
59903		2	51993	59907	0.500				5.0	5.9	6.7	7.4	8.0	8.7	9.3	9.9	11.3	12.5	-	-
59904	1/4" BSPP	1	51922	59908	0.665				2.4	2.9	3.4	3.8	4.2	4.6	5.0	5.4	6.3	7.2	-	-
59905		2	51923	59908	0.665				5.2	6.2	7.0	7.8	8.5	9.2	9.9	10.6	12.1	13.5	-	-
64199	1/4" MP LH	1	51956	64193					-	-	-	-	-	-	-	2.3	2.7	3.0	3.4	3.8
64200	1/4" MP RH	1	51956	64194					-	-	-	-	-	-	-	2.3	2.7	3.0	3.4	3.8
64201	3/8" MP LH	1	51958	64195					-	-	-	-	-	-	-	3.3	3.9	4.5	5.1	5.7
64202	3/8" MP RH	1	51958	64196					-	-	-	-	-	-	-	3.3	3.9	4.5	5.1	5.7
64203	9/16" MP LH	1	52551	64197					-	-	-	-	-	-	-	4.5	5.5	6.4	7.4	8.5
64204	9/16" MP RH	1	52551	64198					-	-	-	-	-	-	-	4.5	5.5	6.4	7.4	8.5
64205	9/16" MP LH	2	54256	64197					-	-	-	-	-	-	-	8.8	10.3	11.7	13.1	14.6
64206	9/16" MP RH	2	54256	64198					-	-	-	-	-	-	-	8.8	10.3	11.7	13.1	14.6

**Flow rates do not include additional flow if a drilled cap nozzle is used.

Jetstream of Houston LLP • 5905 Thomas Road Houston, TX 77041
www.waterblast.com • 832-590-1300

TUBE SPINNER™ | QUICK START GUIDE

⚠ DANGER

THIS PRODUCT CAN BE DANGEROUS IF NOT USED PROPERLY! *Always wear appropriate Personal Protective Equipment (PPE). Detailed PPE information can be found at: www.fsesgsafety.com and clicking on the JETSTREAM name or by referring to the yellow JETSTREAM SAFETY WARNING pamphlet (PI-082).*

The following Quick-Start Guide is intended to provide the customer with an expedient reference for Tube Spinner installation and operation. It does not replace the complete product instructions (PI-123).

This product is sold with the understanding that the purchaser agrees to thoroughly train all operators and maintenance personnel in the correct and safe installation, operation, and maintenance of the product and to provide adequate supervision of personnel at all times. JETSTREAM urges customers to make complete instructions available to all personnel and ensure they are read thoroughly before installing, connecting or using the Tube Spinner. Retain these instructions for future reference. If this product is resold or otherwise conveyed, the purchaser must pass on these instructions to the new user. If any questions remain, or to request additional copies, call JETSTREAM at (800) 231-8192 or (832) 590-1300.

Read the yellow JETSTREAM SAFETY WARNING pamphlet (PI-082) included with the shipment of the product.

CONNECTING TUBE SPINNER

Prior to the start of any job, make sure only high pressure rated fittings and hoses are used in the waterblasting system.

Connect the body to the system according the appropriate connection rating below. **DO NOT ASSEMBLE SLEEVE OR FRONT NOZZLE AT THIS STAGE.**-Once body is connected, engage the pump and purge the lines for a minute to clear any possible debris. Disengage pump once lines are purged.

15K PSI RATED TUBE SPINNING NOZZLES

NOTE: When using a thruster, follow the steps below, repeating twice, to assemble body to thruster then thruster to lance or stinger.

FOR NPT CONNECTIONS:

1. Apply 3-4 wraps of Teflon thread sealant tape to the male threads on the mating lance or stinger.
2. Apply anti-seize compound over the sealant tape for additional protection against galling in connection threads.
3. Install the nozzle bodies by using appropriate open-end wrench on flats found on body and tighten 1-2 turns past hand-tight. All NPT pipe connections should have a minimum thread engagement of (4) threads.

FOR BSPP AND M7 FLAT SEAL CONNECTIONS:

1. BSPP and M7 flat seal connections required a copper crush washer between the male and female connections.
2. Seat copper crush washer in female BSPP or M7 connection on tube spinning nozzle body.
3. Apply anti-seize compound to male threads of mating lance or stinger.
4. Install the nozzle bodies by using appropriate open-end wrench on flats found on body and tighten to 20lb-ft.

22K PSI RATED TUBE SPINNING NOZZLES

1. Apply anti-seize compound to the male threads and cone of the mating lance or stinger.

NOTE: DO NOT use Teflon tape on 22K PSI connections.

2. Install the nozzle bodies by using appropriate open-end wrench on flats found on body and tighten until firmly snug.

NOTE: DO NOT OVERTIGHTEN; damage to coned sealing surface could result.

SLEEVE AND FRONT NOZZLE

Assemble the sleeve and the appropriate front nozzle or cap (See Appendix B of the Tube Spinner PI (PI-123) for applicable accessories) to the previously connected body. Assemble front nozzle or cap according to appropriate connection rating below.

15K PSI MODELS

1. Slide sleeve over male end of body.

FOR NPT CONNECTIONS:

2. Apply 3-4 wraps of Teflon thread sealant tape to the available male threads found on the body.
3. Apply anti-seize compound over the sealant tape for additional protection against galling.
4. Install appropriate FP front nozzle using smooth jaw plier wrench (PN 64119).
5. Tighten 1-2 turns past hand-tight. All NPT pipe connections should have a minimum thread engagement of (4) threads.

FOR BSPP AND M7 FLAT SEAL CONNECTIONS

6. Seat copper crush washer in female BSPP or M7 connection on appropriate FB or FM cap nozzle.
7. Apply anti-seize compound to male threads of tube spinning nozzle body.
8. Install the cap nozzle by using appropriate open-end wrench on flats found on cap nozzle and tighten to 20lb-ft.

22K PSI MODELS

1. Slide sleeve over male end of body.
2. Apply anti-seize compound to the available male threads found on the body.

NOTE: DO NOT use Teflon tape on 22K PSI connections.

3. Install appropriate HPFR/HPFL/HPER/HPEL front nozzle by using appropriate open-end wrench on flats found on cap nozzle and tighten until firmly snug.

NOTE: DO NOT OVERTIGHTEN; damage to coned sealing surface could result.

NOTE: There should be approximately 1/16" to 1/8" clearance between the sleeve and the front nozzle. With a knife or other sharp object, clear any Teflon tape or exposed compound between the nozzle and sleeve. Confirm sleeve spins freely.

OPERATION

⚠ DANGER

Operators and crew need to be clear of spray area as high water pressure is dangerous. The person controlling the cleaning nozzle must be the operator and must have control of the pressure. Do not allow a secondary or remote operator have control of pressure. Use only thoroughly trained operators.

QSG-123

⚠ WARNING

Remove the nozzle from service if:

a. *The body, sleeve, or front nozzle shows signs of cracking or other damage.*
b. *The wall thickness of these parts is reduced by 25% at any point.*
c. *The nozzles can no longer hold pressure at water flow rate for which it was sized.*

The Tube Spinner can now be used like any standard tube cleaning nozzle. Periodically inspect the nozzle for damage or excessive wear.

NOTE: For improved reliability and longer life, it is recommended that a filter of at least 10 microns be used on the water supply inlet. A strainer (100 mesh minimum) must also be used in the water tank (if equipped with tank).

⚠ DANGER

Failure to follow the following instructions will cause unsafe conditions, severe injury can result.

- *DO NOT operate the Tube Spinner above its specified pressure.*
- *When used on a flex lance and in a tube much larger than the nozzle diameter, the Tube Spinner must be used with a stinger to prevent the nozzle from "doubling back" for operator safety.*
- *Operator must wear ear protection due to the noise generated by the spinning nozzle.*
- *Never stand in the plane of blasting.*
- *A Lance Safety Grip is recommended to minimize the risk of a live nozzle exiting the tube unexpectedly back at the lance operator.*
- *At high-pressure, the water can be hot. Wear gloves and use precaution to prevent scalding.*
- *Place barricades with warning signs or barricade tape around work area. This includes the waterblast unit and all high-pressure hoses.*
- *Operator must be outfitted with proper safety apparel (refer to yellow JETSTREAM SAFETY WARNING pamphlet). Body armor is strongly recommended.*

⚠ CAUTION

DO NOT use the Tube Spinner if it has not been cleaned and inspected prior to starting the working shift.

FOR FURTHER INFORMATION SEE:

YouTube https://www.youtube.com/user/JetstreamWaterblast

and the

Jetstream Safety Manual