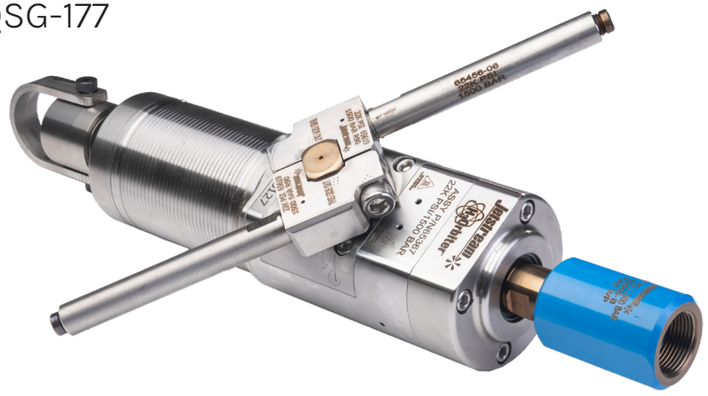
Jetstream
Subsidiary of Federal Signal Corporation

H_3ORBITER™

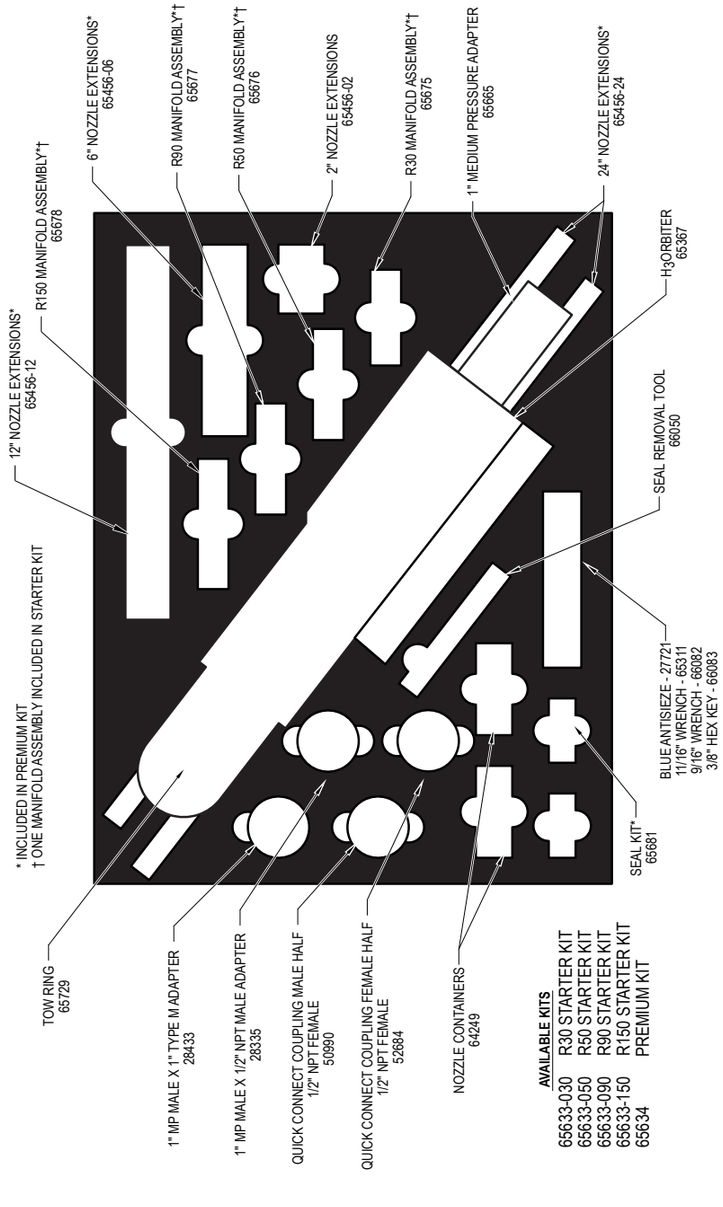
QUICK START GUIDE

QSG-177



Model Name	H_3Orbiter
Maximum Operating Pressure (psi)	22,000
Minimum Operating Pressure (psi)	2000
Maximum Flow (gpm)	80
Maximum Operating Pressure (bar)	1500
Minimum Operating Pressure (bar)	138
Maximum Flow (l/min)	307
Inlet Connection	1" NPT, ¾" NPT, 1" MP, ¾" MP
Power Range	30-1000 hp
Cycle Time	4-24 minutes
Rotation Speed	Adjustable
Nozzle Type Accepted	HHTC Carbide
Nozzle Port Size	¼" NPT(P4)
Diameter (in)	4
Length (in)	16.65
Weight (lbs)	35
Diameter (mm)	100
Length (mm)	423
Weight (kg)	16

H_3ORBITER™ | PARTS PLACEMENT



H_3ORBITER™ | NOZZLE FLOW RATES

Pressure (psi)		Nozzle Diameter (inches)													
		0.035	0.038	0.042	0.047	0.052	0.057	0.063	0.067	0.069	0.073	0.075	0.078		
2000	Flow, GPM														
	Manifold														
5000	Flow, GPM								17	18	20	21	23		
	Manifold								R150	R150	R150	R150	R150		
10000	Flow, GPM				12	15	18	21	24	26	29	31	33		
	Manifold				R150	R150	R150	R150	R90	R90	R90	R90	R90		
15000	Flow, GPM		10	12	15	18	21	26	30	32	35	37	40		
	Manifold		R150	R150	R150	R90	R90	R90	R50	R50	R50	R50	R50		
20000	Flow, GPM	10	11	14	17	21	25	30	34	36	41	43	46		
	Manifold	R150	R150	R150	R90	R90	R90	R50	R50	R50	R50	R50	R30		

Pressure (psi)		Nozzle Diameter (inches)													
		0.082	0.090	0.093	0.098	0.106	0.110	0.115	0.125	0.135	0.145	0.155	0.165		
2000	Flow, GPM					27	29	32	38	44	51	58	66		
	Manifold					R150	R150	R150	R150	R150	R90	R90	R90		
5000	Flow, GPM	26	31	33	37	43	46	50	60	70	80				
	Manifold	R150	R90	R90	R90	R90	R90	R50	R50	R50	R50				
10000	Flow, GPM	36	44	47	52	61	65	71							
	Manifold	R50	R50	R50	R50	R50	R30	R30							
15000	Flow, GPM	44	53	57	64	74									
	Manifold	R50	R30	R30	R30	R30									
20000	Flow, GPM	51	62	66	73										
	Manifold	R30	R30	R30	R30										

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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 H_3Orbiter installation and operation. It does not replace the complete product instructions (PI-177).

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 H_3Orbiter. 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 THE H_3ORBITER

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

Prior to installing the H_3Orbiter onto the hose, flush the system to clear any debris.

- Install required inlet adapter on shaft with anti-seize.
- Flush and install Nozzle extensions onto associated Manifold Assy.
- Install Manifold assembly onto tool output shaft.
- Inlet shaft connections:

15K PSI RATED CONNECTION (3/4" & 1" NPT FEMALE INLET)

1. Apply 3-4 wraps of Teflon thread sealant tape to the available male threads of the connection.
2. Apply anti-seize compound over the sealant tape for additional protection against galling.
3. Install by using an appropriate open-ended wrench on flats found on the inlet shaft and adapter and tighten 1-2 turns past hand-tight. All NPT pipe connections should have a minimum thread engagement of (4) threads.

22K PSI RATED CONNECTION (3/4" & 1" MP Female Inlet)

1. Apply anti-seize compound to the threads of the inlet connection.

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

2. Install by using an appropriate open-ended wrench on flats found on the body and tighten to 90 ft-lbs.

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

OPERATION

As per the WJTA-IMCA Recommended Practices, all operators shall follow the OSHA regulations for personal protective equipment. (OSHA guidelines for Personal Protective Equipment are available in document number 3151-12R 2004, which can be obtained from www.osha.gov.) All operators shall be issued suitable head protection, eye protection, hearing protection, body protection, hand and foot protection and respiratory protection (if needed). For detailed specifications on all protections required, refer to the WJTA-IMCA 'Recommended Practices for the Use of High Pressure Waterjetting Equipment' Section 6, Protective Equipment For Personnel.

CAUTION

The H_3Orbiter™ can be used at a minimum service temperature of -20°C (-4°F) and a maximum service temperature of 115°C (240°F). Use at temperatures lower or higher than these recommended temperatures may result in premature tool failure.

1. Start by slowly increasing pressure to 500 psi and check the entire system, including all connections, for leaks. Increase pressure in increments, pausing at each to inspect the system for leaks, proper rotation of tool, temperature, and other operational anomalies. If any problems are discovered, lower pressure back to zero and turn off source of power before making any adjustments.
2. Adjust the speed as needed for operation.

WARNING

Remove the tool from service if:

a. *Water is found to be exiting any of the weep holes found on the tool.*

b. *The rotation of the inlet shaft or outlet nozzles is binding in any way.*

c. *The nozzles can no longer hold pressure at water flow rate for which it was sized.*

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).

H_3Orbiter™ surface may exceed 200:F.

H_3Orbiter™ utilizes magnets which produce strong magnetic fields. Keep the tool at least 6 inches away from any medical device.

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DANGER

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

- *DO NOT operate the H_3Orbiter™ above its specified pressure.*
- *Operator must wear ear protection due to the noise generated by the spinning nozzle.*
- *NEVER stand in the plane of blasting.*
- *At high-pressure, the water can be hot. Wear gloves and use caution 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 H_3Orbiter™ 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