Spraying Systems Co.®
Experts in Spray Technology

TANKJET® TANK CLEANING PRODUCTS

TANKJET® FROM SPRAYING SYSTEMS CO.: THE PRODUCTS, EXPERTISE & SERVICES TO OPTIMIZE TANK CLEANING

It takes more than equipment to ensure proper cleaning of your tanks, totes, vats, drums and more. It takes experience and expertise in addition to an extensive product line. The ultimate goal is to ensure tanks are cleaned thoroughly, in the least amount of time, using the least amount of water/chemicals possible. The right partner will guide you through the entire process, from equipment selection, to system evaluation and optimization, and ongoing support. We're that partner. We have dozens of TankJet products and decades of experience helping customers in hundreds of industries optimize tank cleaning.

- Use this catalog to research TankJet product options. It is organized by tank diameter. In each section, you'll find a wide range of products that provide gentle rinsing to high-impact cleaning. Many tank cleaners are available in a wide range of flow rates and materials. Some are available with different coverages, nozzle configurations, a choice of connection styles, extension lengths and more.
- Tap into local spray expertise: once you've evaluated the options, contact your local expert by phone or chat on tankjet.com. Your local expert can conduct an on-site evaluation of your tank cleaning operations, demonstrate products, conduct proof-of-concept tests, assist with payback calculations and arrange for no-obligation product trials.
- Consider how TankJet products can advance your sustainability goals. Your local expert can help you estimate your potential savings by reducing water, chemical and energy use with automated tank cleaners.
- Ongoing optimization assistance: In addition to the educational resources such as the optimization tips found on page A4, demonstration videos and tutorials on YouTube/sprayingsystems and informative case studies at spray.com/results, your local spray expert is always nearby and willing to help. Even when your TankJet tank cleaner is working properly, there may be ways to further improve cleaning efficiency. An on-site inspection is always just a call away.

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TANKJET QUICK REFERENCE GUIDE

Nozzle	Max. Tank Dia. (m)	Operating Principle	Flow Rate (l/min)	Operating Pressure (bar)	Spray Coverage	Min. Tank Opening	Max. Temp. (°C)	Recommended Strainer Mesh (micron)	Page No.
TankJet® 360 	**30.0**	Fluid-driven turbine	114 to 1,136	2.8 to 24.1	360°	159 mm (for 2 nozzles) 260 mm (for 3 nozzles)	121	840	B4
TankJet® AA290 	**24.0**	Motor-driven	91 to 1,075	3.4 to 17.2	360°	184 mm (for 2 nozzles) 210 mm (for 4 nozzles)	93	80	B6
TankJet® 180 	**24.0**	Fluid-driven turbine	114 to 1136	2.8 to 24	180°	311	121	840	B10
TankJet® 80 & 80H 	**15.0**	Fluid-driven turbine	200 to 538	4.1 to 13.8	360°	6.5 (165) for 2 nozzle; 12.5 (318) for 3 nozzle	121	840	B12
TankJet® 78 & 78D 	**14.0**	Fluid-driven turbine	246 to 625	1.7 to 6.9	360°	TJ78: 146 mm TJ78D: 194 mm	93	300	C4
TankJet® 65 & 65HT 	**12.0**	Fluid-driven turbine	114 to 568	3.4 to 10.3	360°	190 mm	TJ65: 121 TJ65HT: 260	840	C6
TankJet® AA190 	**10.0**	Motor-driven	11.8 to 167	6.9 to 69	180°, 360°	95 mm (360°) 114.3 mm (180°)	93	80	C8
TankJet® 75 & 75-H 	**9.0**	Fluid-driven turbine	57 to 125	5.2 to 21	360°	95 mm	121	80	C12
TankJet® 16 	**7.2**	Fluid-driven turbine	136 to 288	3.4 to 13.8	180° up/down, 270° down, 360°	76 mm	121	840	C14
TankJet® Rokon® D26984 & D40159 Stainless Steel 	**6.0**	Fluid-driven constant speed	12.0 to 75	2.1 to 6.2	65° down, 120° down, 180° up/down, 260° up/down, 360°	Thread: 56 mm CIP version: 102 mm	70	80	D4
TankJet® Rokon® D26984 & D40159 Plastic 	**6.0**	Fluid-driven constant speed	12.0 to 75	2.1 to 6.2	65° down, 120° down, 180° up/down, 260° up/down, 360°	Thread: 56 mm CIP version: 102 mm	70	80	D6

TANKJET QUICK REFERENCE GUIDE

Nozzle	Max. Tank Dia. (m)	Operating Principle	Flow Rate (l/min)	Operating Pressure (bar)	Spray Coverage	Min. Tank Opening	Max. Temp. (°C)	Recommended Strainer (micron)	Page No.
TankJet® 27500 & 27500-R 	**5.5**	Fluid-driven reactionary force	15.3 to 850	0.7 to 3.4	180° up/down, 270° up/down, 360°	51 to 178	93	80	D8
TankJet® 28500 & 28500-R 	**5.5**	Fluid-driven reactionary force	34 to 296	0.7 to 3.4	180° up/down, 270° up/down, 360°	64 to 102 mm	93	150	D10
TankJet® MiniRokon® D41800E 	**4.0**	Fluid-driven constant speed	11.0 to 86	2.1 to 6.2	360°	32 mm	130	80	D12
TankJet® MicroRokon D41990 	**5.0**	Fluid-driven reactionary force	9.0 to 141	1.0 to 4.1	180° up/down, 360°	Thread: 25 to 38 mm CIP version: 51 to 102 mm	130	80	D14
TankJet® MicroRokon D41990 	**2.5**	Fluid-driven reactionary force	9 to 40	1.0 to 4.1	180° up/down, 360°	Thread: 25 to 38 mm CIP version: 51 to 102 mm	130	80	D16
TankJet® CleanUp D55567 	**3.0**	Fluid-driven reactionary force	9 to 40	1.0 to 4.1	55°	-	130	80	D18
TankJet® AA090 	**2.4**	Motor-driven	5.7 to 28	7 to 35	360°	59 mm	93	80	D20
TankJet® Spray Balls 3996 	**2 - 6**	Fixed stationary	18.3 to 1311	1.0 to 2.5	180° up/down 270° up 360°	27 to 92 mm	204	1,190 to 300	D24
TankJet® UniRokon D41892 	**2.0**	Fluid-driven reactionary force	15.9 to 29	1.4 to 4.8	360°	37 mm	70	80	D26
TankJet® VSM 	**1.5**	Fixed stationary	10.4 to 269	0.7 to 10.3	240° down	51 mm	93	300	D28
TankJet® HS Rokon D26564 	**1.5**	Fluid-driven reactionary force	9.0 to 20.5	1.0 to 5.0	180° up/down	37 mm	90	80	D30

CLEANING POWER GUIDELINES

Choosing a tank cleaner is based primarily on tank size and level of cleaning required. Understanding the definitions that follow will help ensure you select the right tank cleaner for your application.

Impact cleaning is required to remove stubborn residues such as layers of a dried substance. Tank cleaners in this category generally use high flow in order to create a big "footprint" and flush the soil effectively away. Slow rotating solid stream devices provide the best cleaning efficiency.

Rinsing is used when distributing cleaning solution throughout the tank with less impact provides sufficient cleaning. Rinsing nozzles are typically free-spinning or stationary spray balls.

Spinning devices with rotation control - like our **Rokon® product line** - will optimize cleaning effectiveness.

If there is uncertainty as to how much flow is required, there is a rule of thumb (internal surface area of the tank):

--> Minimum 7 l/min per minute of circumference

--> Optimum 15 l/min per minute of circumference

For very intensive cleaning up to 30 l/min per meter of circumference may be required.

SPRAY DISTANCE

		Tank Diameter Range																							
Meters	Page	0.2	0.3	0.6	0.9	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.7	4.3	4.9	5.5	6.1	9.1	12	15	18	21	24	27	30
TankJet® 360	B4																								30
TankJet® AA290	B6																							24	
TankJet® 180	B10																							24	
TankJet® 80	B12																			15					
TankJet® 78 & 78D	C4																		14						
TankJet® 65 & 65HT	C6																		12						
TankJet® AA190	C8																	10							
TankJet® 75 & 75H	C12																9.0								
TankJet® 16	C14																7.2								
TankJet® Rokon® D26984 / D40159	D4															6.0									
TankJet® 27500	D8															5.5									
TankJet® 28500	D10															5.5									
TankJet® MiniRokon® D41800E	D12														4.0										
TankJet® MicroRokon D41990	D14														2.5 - 5.0										
TankJet® CleanUp D55567	D18											3.0													
TankJet® AA090	D20										2.4														
TankJet® Sprayballs 3996	D24															6.0									
TankJet® UniRokon D41892	D26								2.0																
TankJet® VSM	D28							1.5																	
TankJet® HS Rokon D26564	D30							1.5																	

TANKJET® TANK CLEANER OVERVIEW BY TANK DIAMETER

This chart shows our tank cleaning products and the range of tank diameters each unit can clean. The maximum tank diameter is defined as the total distance the spray can travel to tank walls assuming the unit is positioned in the center of the tank. The closer the nozzle is to the tank wall, the greater the impact.

OPTIMIZING YOUR TANK CLEANING OPERATIONS

Tank cleaning equipment is designed to yield specific performance under specific conditions. A variety of factors can affect results. Even when tank cleaning equipment appears to be working as expected, there may be room for improvement. Adjustments are often possible to achieve more consistent results, improve efficiency, reduce the length of time tanks are out of service and lower operating costs.

Here are seven optimization tips to consider as you evaluate the current performance of your tank cleaning equipment.

1. HEATED WATER VS. IMPACT

Hot water is costly but may be needed to remove some residues. However, in some cases, hot water may be eliminated by increasing cleaning impact. This can result in a dramatic reduction in energy costs and savings of thousands of dollars annually. Ask your local sales engineers for assistance in determining if increasing impact can eliminate hot water use in your application. This may involve a proof-of-concept test to compare the cleaning performance of high impact vs. hot water.

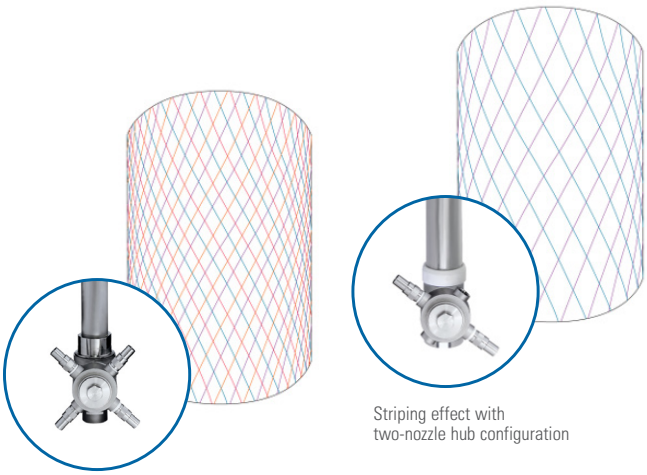
Don't try to evaluate impact without expert advice. Impact, or the amount of force the cleaning liquid applies to the tank surface, is difficult to measure. There is no industry standard for reporting impact data. Even though nozzles produce the same type of pattern, such as a solid stream, performance will vary based on how the nozzles were designed and machined.

2. OPERATIONAL CONSIDERATIONS

Two tanks that are the same size with the same residue may require completely different tank cleaners and cleaning times. For example, a 3.7 m diameter tank used for paint mixing may be cleaned using a medium-impact tank cleaner with cycle times averaging 10 minutes if the paint residue is still wet. The same size tank may require a high-impact tank cleaner and take longer to clean if the paint has dried in the tank.

3. LOOK FOR ISSUES ASSOCIATED WITH "STRIPING"

High-impact tank cleaners that provide 360° cleaning coverage use solid stream sprays. These sprays don't overlap as they rotate, so there's a small distance between each path and striping occurs. The greater the distance the nozzles are from the vessel walls, the greater the distance between paths. In some operations, striping can be a contamination risk. Switching to a three- or four-nozzle configuration, rather than the standard two-nozzle configuration, is one way to reduce striping and minimize risk.



Striping effect with four-nozzle hub configuration

Striping effect with two-nozzle hub configuration

4. SHORTEN CLEANING TIME BY INCREASING IMPACT

Simple adjustments to liquid pressure and flow may enable a reduction in the number of cycles needed for thorough cleaning. Faster cleaning saves time and reduces water and chemical use. To increase impact and cleaning efficiency, it's far more effective to increase flow than liquid pressure since increasing flow rate intensifies impact at a greater rate than increasing pressure. **In fact, doubling flow rate boosts impact as much as 100% while doubling liquid pressure provides only 40% more impact.** In addition, there are other drawbacks to increasing pressure. Higher liquid pressures can introduce turbulence to the jet stream, reducing throw and cleaning efficiency.

Relative Impact

Flow Rate	Liquid Inlet Pressure	Relative Impact
50 l/min	3 bar	1.0
50 l/min	6 bar	1.4
100 l/min	3 bar	2.0

5. CLEANING HARD-TO-REACH AREAS

Internal obstructions, like agitator shafts/blades, coils, etc., block the spray from hitting the tank wall. Certain areas, such as skim lines, require more cleaning than others. Having the flexibility to reposition tank cleaning equipment can help you achieve complete cleaning in less time and reduce operating costs. An adjustable ball fitting can be used to clean vessels in sections: Clean the top half of the vessel, then lower the device and clean the bottom half of the vessel, or change the angle to clean difficult locations.

Lances and adjustable flanges can also be used to help position nozzles properly. For example, if the tank only has a single entry opening, special lances and flanges can be used so the nozzle turret can be easily moved to multiple locations in the tank. Special lances and flanges can also be used to position nozzles so the spray impacts directly on heavily soiled areas or skim lines.

6. REVIEW SYSTEM COMPONENTS

In addition to the tank cleaner, other equipment can affect cleaning performance.

- ✓ **Pumps:** Check that you have the correct pump for your system. The efficiency of the pump will have a direct impact on flow and the performance of the tank cleaning equipment.
- ✓ **Piping and Valves:** Be sure pipes and valves are properly sized. Incorrect sizing can lead to inadequate flow, pressure and fluid velocity.
- ✓ **Filtration:** Confirm that required filtration products are installed. Filters or strainers should be properly sized and installed to prevent clogging.

- ✓ **Monitoring:** Ensure gauges or flow meters are placed in critical locations. System monitoring will enable quick detection and resolution of problems.

7. PERFORM REGULAR MAINTENANCE

After installing the tank cleaner, be sure to document performance to establish a baseline for later comparison. Also, be sure to inspect equipment on a regular basis. Verifying operation can be challenging since it is difficult to visually observe tank cleaning equipment while operating. Problems with tank cleaning equipment often become evident when trace amounts of residue are detected after cleaning.

Watch for debris build-up. Debris can clog nozzles, become embedded in bushings and gears and cause the unit to stop working or reduce service life. Even if you are just cleaning with water, rust or scale from piping may accumulate in the unit. Make sure to put your tank cleaners on a routine maintenance program to check bushings, seals, bearings and nozzles and make sure they are not worn or clogged.

Be sure to document when service is done and how frequently components are replaced.

7. DRAINING

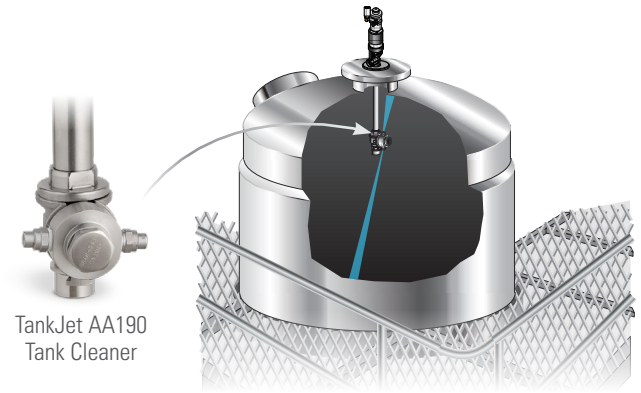
Make sure that the outlet has the capacity to evacuate the used cleaning liquid. Cleaning efficiency will be reduced as level of liquid is increasing inside the tank.

OPTIMIZING TANK CLEANING WILL PAY FOR ITSELF QUICKLY. HERE ARE A FEW EXAMPLES:

REDUCES CLEANING TIME BY 80%

Before: Spray balls were used to clean two 1.9 m diameter x 2.8 m tall processing tanks.

After: A TankJet® AA190, equipped with a 317 mm shaft, operates at pressures up to 34 bar to provide high-impact, 360° cleaning. Even with stubborn residue, cleaning time has been reduced from 1 hour to 12 minutes.

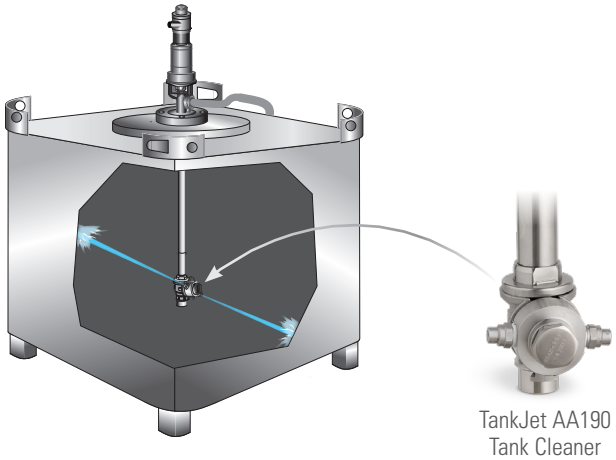


TankJet AA190
Tank Cleaner

TOTE CLEANING TIME REDUCED FROM 45 MINUTES TO 10 MINUTES

Before: Turbine-driven rotating nozzle spraying hot water at 37.8 l/min at 6.9 bar. Wash cycle was often repeated a second time for complete removal of residue.

After: A TankJet AA190 now cleans the totes at 34 bar and a flow rate of 75.7 l/min. Operating at greater flow rates and higher pressures increases cleaning impact and results in cycle times of just 10 minutes.

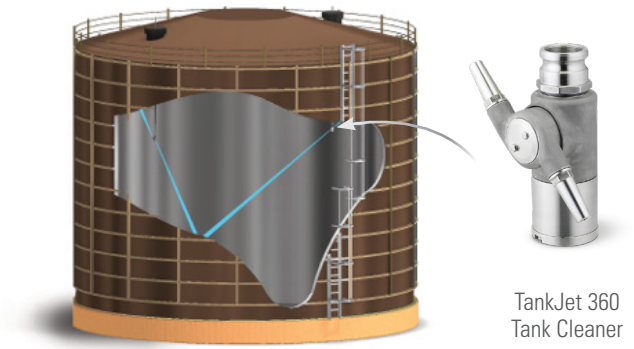


TankJet AA190
Tank Cleaner

FERMENTER CLEANING TIME REDUCED FROM 45 MINUTES TO 20 MINUTES

Before: Tank cleaning nozzle operating at 2.8 bar required two cleaning cycles, extending cleaning time and increasing use of water and chemicals.

After: Two fluid-driven TankJet 360 tank cleaners, each with a two-nozzle hub, operating at 6.2 bar provide thorough cleaning of the fermenter in less than half the time. High-impact, high-efficiency 9.5 mm nozzles rotate 360° in horizontal and vertical planes, creating a criss-crossing pattern that thoroughly removes residue.



TankJet 360
Tank Cleaner

CONSULT WITH EXPERTS

If you would like help optimizing your tank cleaning operations, our local sales engineers are always available for assistance and workshops at your facility. After evaluating your current operations and equipment, we'll offer optimization suggestions designed to achieve your specific cleaning objectives. More information on local sales services are available at **www.tankjet.com.**

SIMULATE YOUR TANK CLEANING OPERATION

Getting a grasp on what is happening inside your tank cleaning operation can be difficult. To help our customers understand the performance of our tank cleaning nozzles and the impact this has on their operation we offer simulations.

1. TANK CLEANING SIMULATION

The simulation shows the behaviour of our nozzles during tank cleaning operations. The application contains all of the specific performance data for each nozzle so it can calculate and present the exact results they will have on your operation.

2. HOW DOES IT WORK?

Our simulation helps you to select the perfect tank cleaning nozzles for your operation.

First we enter exact dimensions of your tank and add any manholes and agitators. Then we enter the required amount of pressure for this specific operation. We suggest nozzles that would be a good match and will document the results.

3. WHAT'S THE BENEFIT FOR YOU?

Thanks to this unique application we finally have an efficient solution for testing different tank cleaning nozzles. In the past we had to test out a large selection of nozzles in real life to measure what the impact would be on your specific setup and how clean each area of the tank would be. This took a lot of time and testing and ended with varying results.

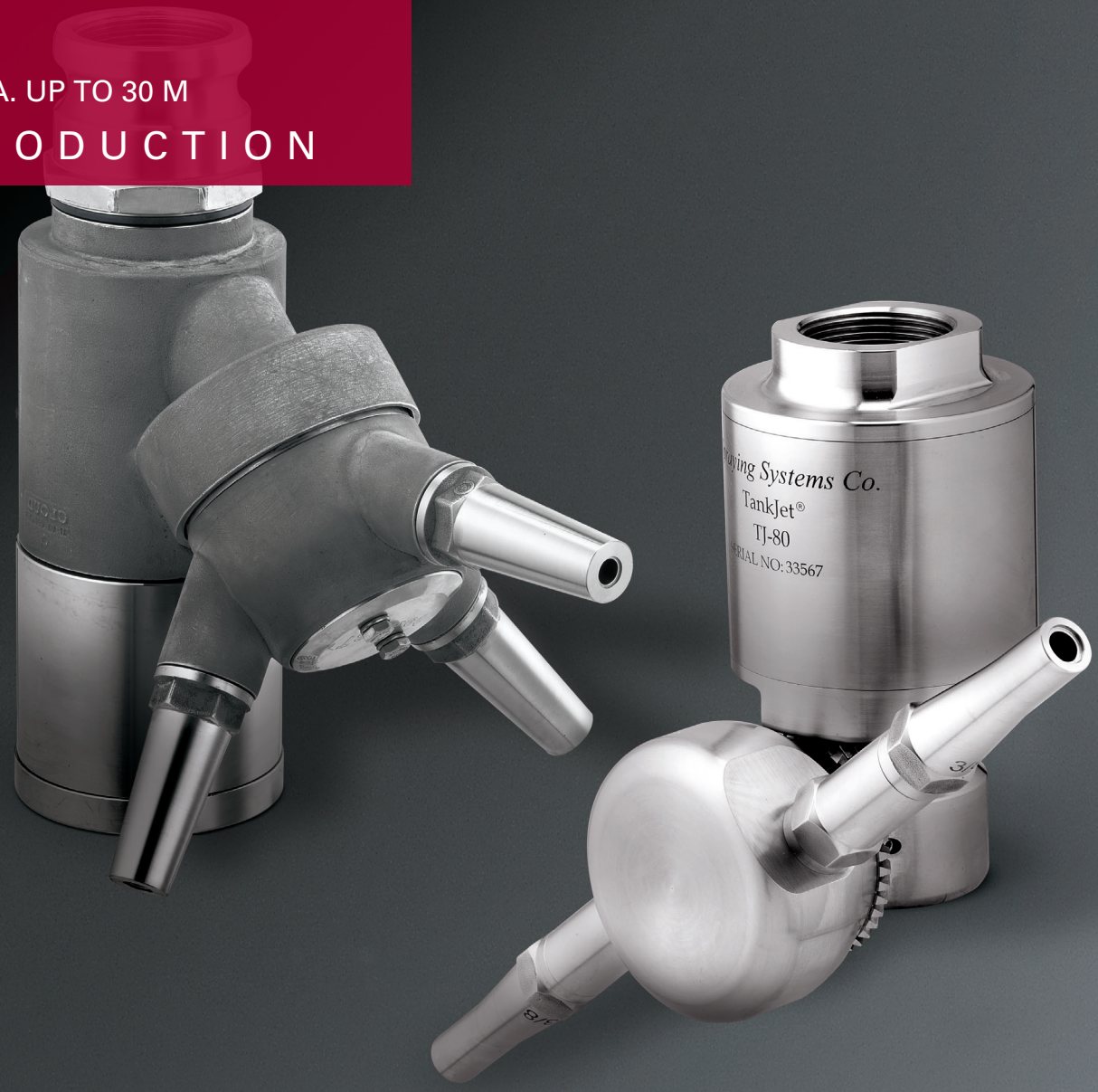
With our simulation we can enter the dimensions of your specific tank and how each nozzle would impact the cleaning process. Together we can then focus more on known problem areas of the tank to finally select the best tank cleaning nozzle for your operation.

CONSULT WITH EXPERTS

Contact your local sales engineers for assistance and workshops at your facility. More information on local sales services are available at **www.tankjet.com.**

FOR TANK DIA. UP TO **30 m**

PAINT TANKS • CHEMICAL TANKS
ADHESIVE TANKS • BLENDERS
TANKER TRUCKS • WINE VATS
BROKE CHESTS • PROCESS TANKS
FOOD AND BEVERAGE TANKS
BREWERY TANKS



CLEAN HARD-TO-REMOVE RESIDUES WITH HIGH-IMPACT, HIGH-EFFICIENCY SPRAYS

IDEAL FOR CLEANING LARGE TANKS

Designed to clean large vessels, these tank cleaners deliver high-impact, high-efficiency sprays for the complete removal of contaminants and residues. Designed to provide effective cleaning in the least amount of time possible, TankJet® 360, TankJet® AA290, TankJet® 180 and TankJet® 80 tank cleaners ensure tanks are returned to service quickly.

QUICK REFERENCE GUIDE

Model	Cleaning Power	Max. Tank Diameter m	Operating Principle	Flow Rate Range l/m	Operating Pressure bar	Spray Coverage	Max. Temperature °C	Materials	Page Number
TankJet® 360	High impact	30	Fluid-driven turbine	114 to 1136	2.8 to 24.1	360°	121	Gears – 17-4PH stainless steel Gear shaft bearing system – PTFE or oilite bearing O-rings – self-lubricating EPDM or Viton® Seals – high-performance spring-energized PTFE All other metallurgy – 1.4401 (316 stainless steel)	B4
TankJet® AA290 Ⓔx	High impact	24	Motor-driven	91 to 1075	3.4 to 17.2	360°	93	Seals – EPDM / FFKM All other metallurgy – 1.4401, 1.4404, 1.4571	B6
TankJet® 180	High impact	24	Fluid-driven turbine	114 to 1136	2.8 to 24	180°	121	Gears – 17-4PH stainless steel O-rings – self-lubricating EPDM or Viton Seals – high-performance spring-energized PTFE Gear shaft bearing system – PTFE or oilite bearing All other metallurgy – 1.4401 (316SS) or Viton	B10
TankJet® 80	High impact	15	Fluid-driven turbine	200 to 538	4.1 to 13.8	360°	121	1.4401 (316 stainless steel), PTFE and UHMW-PE	B12

TANKJET 360 TANK CLEANER FEATURES AND BENEFITS

- Provides consistent, high-impact, high-efficiency cleaning over the entire pressure range for short cycle times
- Can be used for high-concentration chemical recirculation cleaning or low-pressure, high-volume cleaning
- Choice of dual- or triple-nozzle fluid-driven hubs in food-grade, oil-lubricated or flow-through gearbox designs
- Nozzles rotate 360° in horizontal and vertical planes, creating a crisscrossing pattern to thoroughly clean tanks and remove the stickiest of residues
- All units are built-to-order, lightweight for easy portability and compact to fit in small tank openings
- Standard clutch version permits easy nozzle hub rotation by hand for insertion and removal from tank; optional pin version for permanent or CIP installations; optional external, self-rinsing nozzles are available for both pin and clutch versions
- Built-in strainer minimizes clogging and extends wear life; user-serviceable for easy maintenance

SPRAY COVERAGE

360°

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

TankJet 360 tank cleaner

SPECIFICATIONS

TankJet 360 Tank Cleaner	
Max. tank diameter:	30 m
Operating principle:	Fluid-driven turbine
Flow rate:	114 to 1136 l/min
Operating pressure:	2.8 to 24.1 bar
Wash cycle time:	10 to 30 min
Max. temperature:	121 °C
Materials:	Gears – 17-4PH stainless steel Gear shaft bearing system – PTFE or oilite bearing O-rings – self-lubricating EPDM or Viton® Seals – high-performance spring-energized PTFE All other metallurgy – 316 stainless steel
Inlet connection:	2" NPT (F) with 2-1/2" quick disconnect (M) 2" NPT (F) with 2-1/2" NST (NH) hose thread (M) 2" BSPT (F) with 2-1/2" quick disconnect (M)
Optional accessories:	Strainers, recommended mesh size: < 840 µm. See page E2

*For flow rates below 114 l/min, contact your local sales engineer for information about TankJet 363 tank cleaners with patented low-flow technology that reduces wastewater costs.

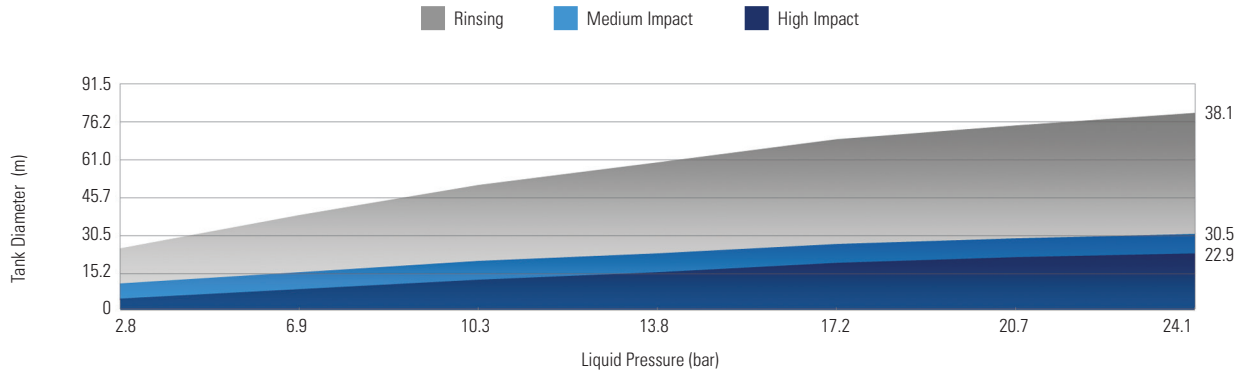
IDEAL FOR CLEANING:

- Blenders
- Brewery tanks
- Food processing vats and tanks
- Pulp storage chests
- Petrochemical/chemical processing reactors
- Processing tanks
- Tanker trucks
- Wine vats

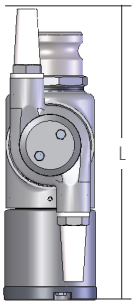
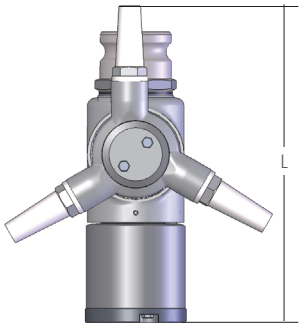
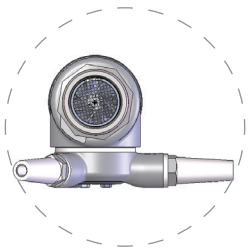
VIDEO

PERFORMANCE DATA

TankJet 360 Cleaning Effectiveness



DIMENSIONS AND WEIGHTS

TankJet 360 Tank Cleaner	No. of Nozzles	L mm	Min. Tank Opening mm
  MIN. TANK OPENING	2	338	158
  MIN. TANK OPENING	3	338	260

For lances, mounting kits, adapters and more, see page E6

ORDERING INFORMATION

Call your local spray expert for application assistance or to place an order.

TANKJET AA290 TANK CLEANER FEATURES AND BENEFITS

- Dependable, durable motor-driven units provide consistent, high-impact cleaning to remove the most stubborn residues
- Motor is positioned outside the tank to ensure long life and eliminate failures caused by exposure to harmful cleaning solutions; constructed of corrosion-resistant 316 stainless steel with EPDM / FFKM and PTFE fluoropolymer resin seals
- 55430 series solid stream nozzles provide optimum impact and have removable stabilizer vanes for easy maintenance
- Flow rates can be controlled through nozzle selection or adjustments to inlet pressure
- Customize by selecting:
  - CE-rated air or electric motors
  - Two- or four-nozzle configuration
  - Extension lengths from 0.9 m up to 3 m
  - Flange mounting options include: ASME® raised face, EN 1092-1
- PTFE free version for Food Contact available
- ATEX-certified versions available

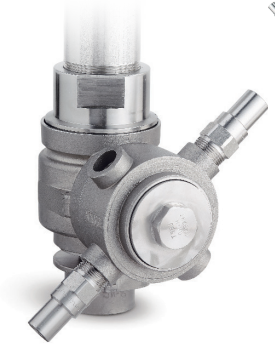
SPECIFICATIONS

TankJet AA290 Tank Cleaner	Standard version	PTFE free version & PTFE free version (FC)
Max. tank diameter:	24 m	
Operating principle:	Motor-driven	Motor-driven
Flow rate:	91 to 1075 l/min	
Operating pressure:	3.4 to 17.2 bar	
Max. temperature:	93 °C	60 °C
Materials:	Seals: EPDM / FFKM, PTFE (graphit filled), PA All other metallurgy: 316 stainless steel	Seals: EPDM, PE UHMW, PA All other metallurgy: 316 stainless steel
Inlet connection:	2" NPT or BSPT (F)	2" NPT or BSPT (F)
Motor options:	Air & electric	Air & electric
Electric motors:	230 V, 230/400 V, 50 or 60 Hz, up to IP 66	
ATEX:	available	not available
Optional accessories:	Strainers, recommended mesh size: < 80 µm See page E2	

TankJet AA290 tank cleaner with air motor

SPRAY COVERAGE
360°

MOUNTING OPTIONS
Vertical



TankJet AA290 spray head 2 nozzles

TankJet AA290 spray head 4 nozzles

FDA compliant materials

Lubricator assembly included with the air model

VIDEO

IDEAL FOR CLEANING:

- Fermentation and yeast tanks and vats
- Flour silos
- Mixing tanks
- Paint tanks

PERFORMANCE DATA

Model AA290		Total Flow of Equal Capacity (l/min*) Liquid Inlet Pressure									
Nozzle	Capacity Size	3.4 bar		6.9 bar		10.3 bar		13.8 bar		17.2 bar	
		Two Nozzles	Four Nozzles	Two Nozzles	Four Nozzles	Two Nozzles	Four Nozzles	Two Nozzles	Four Nozzles	Two Nozzles	Four Nozzles
55430-H3/4U	00100	91	179	128	247	154	297	190	360	200	379
	00200	170	336	241	475	293	564	360	653	380	667
	00250	212	410	296	577	356	685	434	796	458	816
	00350	293	546	415	725	496	841	584	958	602	978
	00400	335	613	470	820	559	948	648	1064	664	1075

*Note: Liquid inlet pressure measured near inlet connection of tank cleaner.

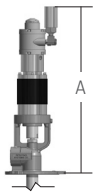
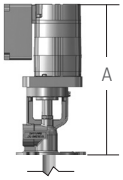
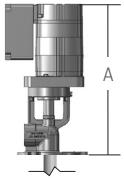
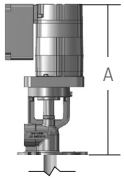
AIR MOTOR
CYCLE TIME DATA

Air Pressure psi (bar)	Approx. Speed (rpm)		Approx. Time for One Complete Cycle (min)	
	Liquid Pressure (bar)			
	3.45	17.2	3.45	17.2
0.83	3	2	20	30
0.97	4	3	15	20
1.10	5	4	12	15
1.24	6	5	10	12

ELECTRIC MOTOR
CYCLE TIME DATA

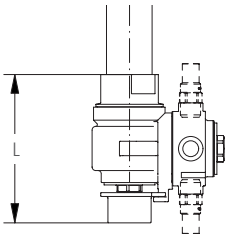
Type	Volt (V)	Frequency (Hz)	Power max. (W)	IP Rating	Speed (r/min)	Approx. Time for 1 Complete Cycle (min)
Standard	230	50	90	IP56	6.3	10
Standard	230/400	50	120	IP65	5.3	12
Standard	230/400	60	120	IP66	6.4	10
ATEX	230/400	50	120	IP66	5.3	12
ATEX	230/400	60	120	IP66	6.4	10

DIMENSIONS AND WEIGHTS

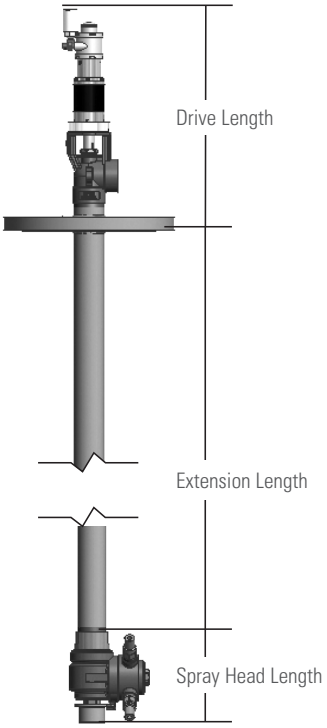
Air motor	Electric motor 230 V	Electric motor 230/400 V 50 and 60 Hz	Electric motor 230/400 V 50 and 60 Hz, ATEX
			
Length: 321 mm Weight: 6.4 kg	Length: 427 mm Weight: 7 kg	Length: 335 mm Weight: 10 kg	Length: 362 mm Weight: 10 kg

*Extension lengths available from 0.3 m to 3.0 m

Extension length	Weight
0.3 m	1.8 kg
0.6 m	3.6 kg
0.9 m	5.4 kg
1.2 m	7.2 kg
1.5 m	9.0 kg
1.8 m	10.8 kg
2.1 m	12.6 kg
2.4 m	14.4 kg
2.7 m	16.2 kg
3.0 m	18.0 kg

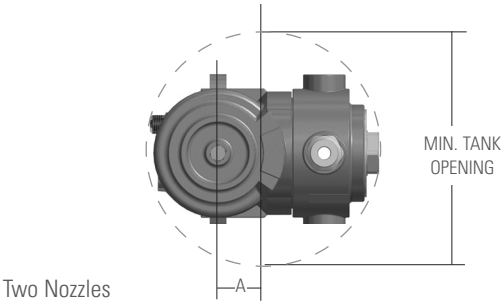
TankJet AA290 Spray Head	L	Weight
	196 mm	5 kg

TankJet AA290 Assembly

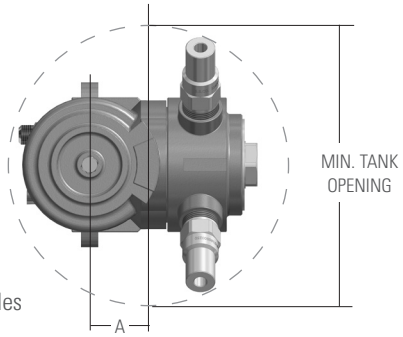


SPRAY HEAD TANK OPENING DIAMETER

Model	No. of Nozzles	Min. Tank Opening (mm)	A (mm)
AA290	2	184	41
	4	210	50

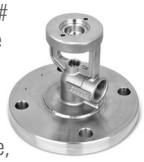


Two Nozzles



Four Nozzles

FLANGE OPTIONS

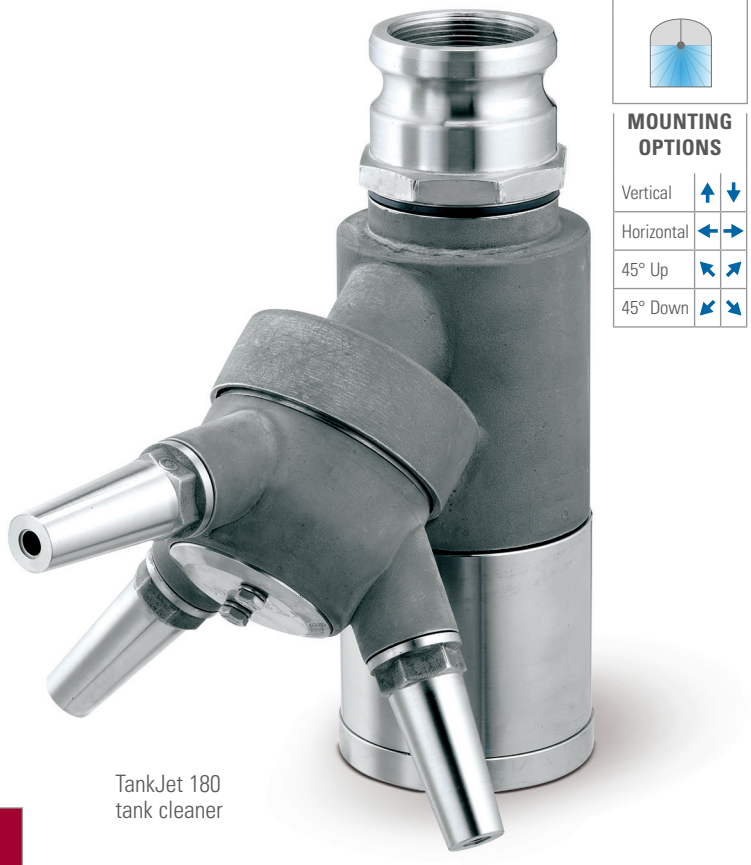
Flange Type	Size	Sales Code	Net Weight (kg)
EN 1092-1 flange 1.4571 	DN 200 / PN 6	S01	12.3
	DN 250 / PN 6	S02	18.5
	DN 200 / PN 16	S03	16.2
	DN 250 / PN 16	S04	25
ASME® 150# Raised Face Flange / ASME® Plate Flange, thin 	8"	8RF	16.5
	10"	10RF	16.5
	9" Plate Flange	9PF	6.8
	10" Plate Flange	10PF	7

ORDERING INFORMATION

Call your local spray expert for application assistance or to place an order.

TANKJET 180 TANK CLEANER FEATURES AND BENEFITS

- Customizable to your operation, the TankJet 180 can be used for high-concentration chemical recirculation cleaning or low-pressure, high-volume cleaning
- Food-grade, oil-lubricated or flow-through gearbox designs are fluid-driven and ideal for open top tanks; a built-in strainer minimizes clogging
- Nozzles rotate on multiple axes creating a crisscross pattern to thoroughly clean tanks and remove the stickiest of residues
- Concentrated cleaning stream effectively cleans bottom and shadow areas of tanks, outperforming other fluid-driven tank cleaners
- All units are built-to-order and lightweight for easy portability



TankJet 180 tank cleaner

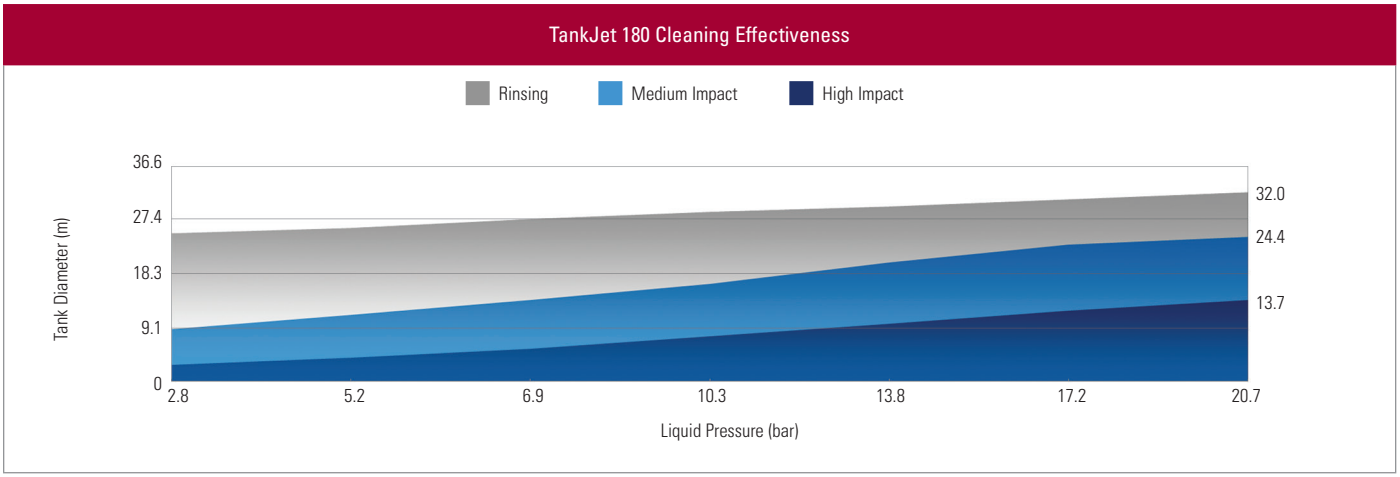
SPECIFICATIONS

TankJet 180 Tank Cleaner	
Max. tank diameter:	24 m
Operating principle:	Fluid-driven turbine
Flow rate:	114 to 1,136 l/min
Operating pressure:	2.8 to 24 bar
Wash cycle time:	10 to 30 min
Max. temperature:	121 °C
Materials:	Gears – 17-4PH stainless steel O-rings – self-lubricating EPDM or Viton Seals – high-performance spring-energized PTFE Gear shaft bearing system – PTFE or oilite bearing All other metallurgy – 316 stainless steel or Viton
Inlet connection:	2" NPT (F) with 2-1/2" quick-disconnect (M) 2" NPT (F) with 2-1/2" NST hose thread (M) 2" BSPT (F) with 2-1/2" quick-disconnect (M)
Optional accessories:	Strainers, recommended mesh size: < 840 µm See page E2

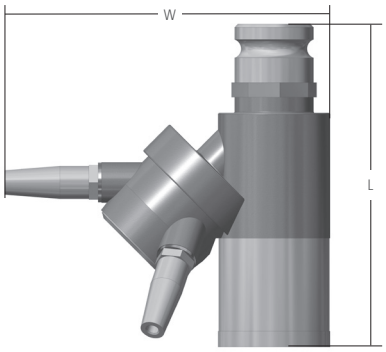
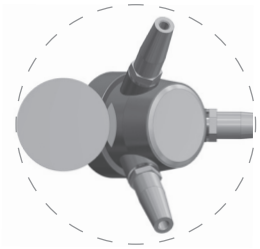
IDEAL FOR CLEANING:

- Adhesive tanks
- Food processing vats and tanks
- Paint tanks
- Petrochemical/chemical processing reactors
- Processing tanks
- Sludge/wastewater tanks

PERFORMANCE DATA



DIMENSIONS AND WEIGHTS

TankJet 180 Tank Cleaner	Model	L (mm)	W (mm)	Min. Tank Opening (mm)	Net Weight (kg)
  MIN. TANK OPENING	TJ180	310	308	311	13.2

For lances, mounting kits, adapters and more, see page E6

ORDERING INFORMATION

Call your local spray expert for application assistance or to place an order.

TANKJET 80 TANK CLEANER FEATURES AND BENEFITS

- Slow rotation provides excellent dwell time on tank surface and offers powerful, reliable cleaning
- Hygienic (H) models feature polished surfaces and enclosed gears, ideal for fermenters, food and brewery applications
- Simple, self-cleaning, flow-through design requires minimal maintenance
- Choice of dual- or triple-nozzle fluid-driven turbine hubs
- Multi-axis rotation provides complete 360° coverage every 45 revolutions
- Lightweight construction for easy portability and installation
- Optional external clean-in-place nozzles help keep unitand drop pipe clean
- Slow Rotation (SR) models available for applications needing longer dwell time

SPRAY COVERAGE
360°

MOUNTING OPTIONS
Vertical

TankJet 80 tank cleaner

Typically used in the brewery industry, external clean-in-place (CIP) nozzles clean unit and down pipe.

IDEAL FOR CLEANING:

- Brewery tanks
- Chemical vessels
- Fermenters
- Food and dairy tanks
- Tanker trucks
- Pulp chests

SPECIFICATIONS

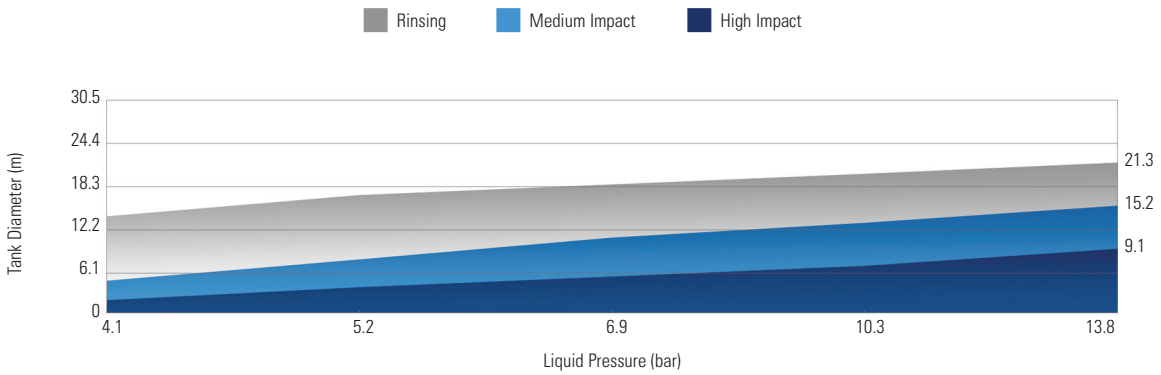
TankJet 80 Tank Cleaner	
Max. tank diameter:	15 m
Operating principle:	Fluid-driven turbine
Flow rate:	200 to 538 l/min
Operating pressure:	4.1 to 13.8 bar
Max. temperature:	121°C
Material:	316 stainless steel, PTFE and UHMW-PE
Rotation speed:	SR: 3 to 8 rpm Std: 8 to 20 rpm
Inlet connection:	1-1/2" NPT or BSPT (F)
Optional accessories:	Strainers, recommended mesh size: < 840 µm See page E2

TankJet 80H tank cleaner

VIDEO

PERFORMANCE DATA

TankJet 80 & 80H Cleaning Effectiveness

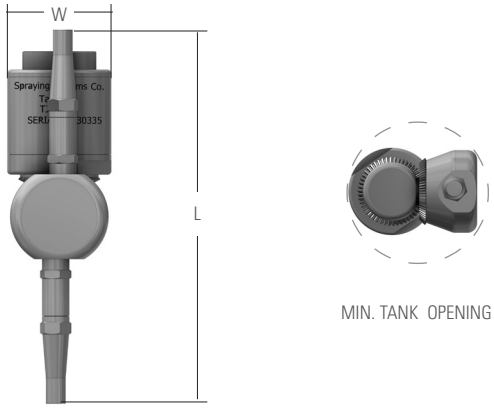
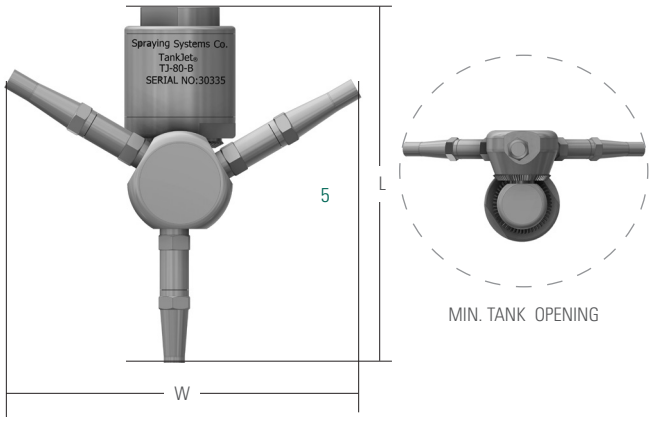


Model TJ80				Liquid Flow Capacity (l/min)						
No. of Nozzles	Capacity Size	Slow Rotation Option*	CIP Option*	4.1 bar	5.2 bar	6.9 bar	8.6 bar	10.3 bar	12.1 bar	13.8 bar
2	250		•	102	113	130	144	157	168	179
2	313	•	•	163	180	203	224	242	258	274
2	375		•	204	226	259	288	314	337	359
2	438	•	•	239	264	299	330	358	383	406
3	250			121	135	156	175	191	206	221
3	313			210	234	270	301	329	355	379
3	375			258	287	330	368	402	433	462
3	438			327	356	397	431	462	489	514

*Available with the TankJet 80 only

For lances, mounting kits, adapters and more, see page E6

DIMENSIONS AND WEIGHTS

TankJet 80 Tank Cleaner	Model	No. of Nozzles	L (mm)	W (mm)	Min. Tank Opening (mm)	Net Weight (kg)
	80	2	324	94	165*	6.8
	80H	2	333	86	140	5.5
	80	3	324	299	138	6.8
	80H	3	324	304	304	5.5

* Slow rotation version 178 mm

ORDERING INFORMATION

TANKJET 80

Model	Inlet Conn.*	–	No. of Nozzles	–	Capacity Size	Slow Rotation**	Clean In Place**

EXAMPLE

TJ80	____	–	3	–	375	SR	CIP

* Leave blank for NPT connection or insert B for BSPT connection

**Leave blank for standard version

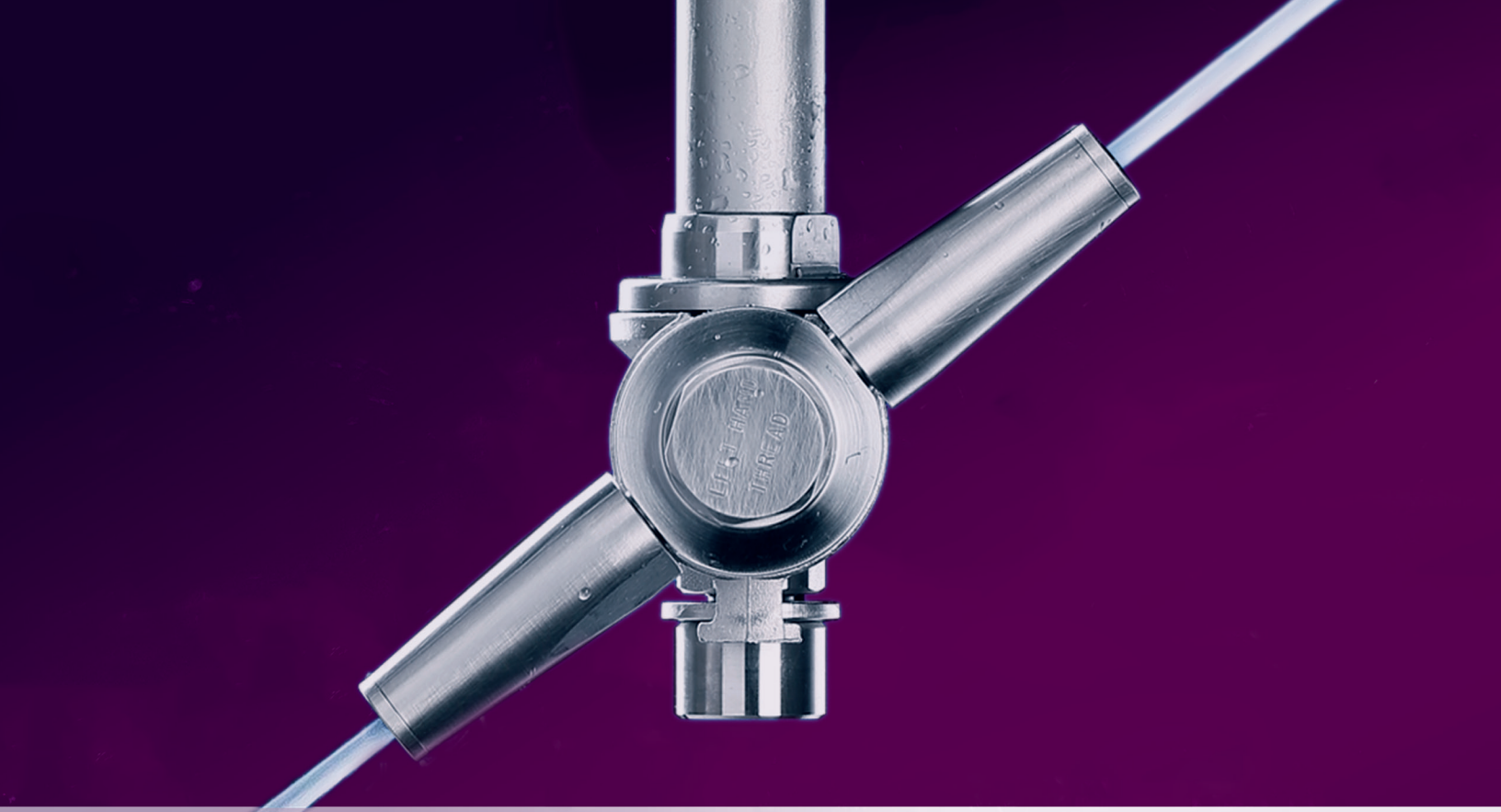
TANKJET 80H

Model	Inlet Conn.*	–	No. of Nozzles	–	Capacity Size

EXAMPLE

TJ80H	____	–	3	–	375

* Leave blank for NPT connection or insert B for BSPT connection



FOR TANK DIA. UP TO **14 m**

BREW KETTLES • CHEMICAL TANKS
DAIRY TANKS & TOTES • TANKER
TRUCKS • FOOD & BEVERAGE TANKS
PROCESS TANKS • BROKE CHESTS
PHARMACEUTICAL TANKS

MINIMIZE THE USE OF CHEMICALS WITH EFFICIENT, DEPENDABLE CLEANING

RELIABLE AND CHEMICAL-RESISTANT TANK CLEANING SOLUTIONS

Available in a variety of spray coverage options and impact ratings, these TankJet® nozzles effectively clean tanks in shorter cleaning cycles to provide savings on water and chemicals. A range of chemical-resistant materials and differing operating principles make this collection ideal for harsh environments.

QUICK REFERENCE GUIDE

Model	Cleaning Power	Max. Tank Diameter (m)	Operating Principle	Flow Rate (l/min)	Operating Pressure (bar)	Spray Coverage	Max. Temperature (°C)	Materials	Page Number
TankJet® 78 & 78D	High impact	14	Fluid-driven turbine	246 to 625	1.7 to 6.9	360°	93	1.4404 (316L stainless steel), PTFE and EPDM All materials meet FDA Title 21 CFR	C4
TankJet® 65	Medium impact	12	Fluid-driven turbine	114 to 568	3.4 to 10.3	360°	93	Standard version: Stainless steel, PTFE, UHMW-PE, nylon High-temperature version: Stainless steel	C6
TankJet® AA190	High impact	10	Motor-driven	11.8 to 167	6.9 to 69	180°, 360°	93	Seals: EPDM or FFKM, PTFE (graphit filled), PA All other metallurgy: 1.4401 (316 stainless steel), 1.4571	C8
TankJet® 75	Medium impact	9.1	Fluid-driven turbine	57 to 125	5.2 to 21	360°	121	1.4401 (316 stainless steel), PTFE and UHMWE-PE	C12
TankJet® 16	Medium impact	7.2	Fluid-driven turbine	136 to 288	3.4 to 13.8	180° up/down, 270° down, 360°	121	1.4401(316 stainless steel) and PTFE	C14

TANKJET 78 & 78D SANITARY TANK CLEANER FEATURES AND BENEFITS

- High-impact 360° coverage ensures tank cleanliness and results in shorter cleaning cycles and reduced use of water and chemicals
- Patent-pending sanitary design meets 3-A Sanitary Standard 78
- Fast and easy maintenance without tools
- Easy retrofit for spray balls
- Choice of two- or four-nozzle configurations and inlet connection size
- Ideal for cleaning food, dairy and beverage tanks, blenders, spray dry towers and pulp chests
- Can be steam sanitized

3-A® 78-01 Auth. No. 1040

This unit meets the requirements of 3-A Sanitary Standard 78. Spray cleaning devices intended to remain in place.

TankJet 78D four-nozzle configuration sanitary tank cleaner

SPRAY COVERAGE

360°

TJ78 MOUNTING OPTIONS

Vertical

TJ78D MOUNTING OPTIONS

Vertical
Horizontal
45° Up
45° Down

SPECIFICATIONS

TankJet 78 & 78D Sanitary Tank Cleaners	
Max. tank diameter:	14 m
Operating principle:	Fluid-driven turbine
Flow rate:	246 to 625 l/min
Operating pressure:	1.7 to 6.9 bar
Wash cycle time:	3 to 6 min
Max. temperature:	93 °C
Materials:	1.4404 (316L stainless steel), PTFE and EPDM All materials meet FDA Title 21 CFR
Inlet connection:	1-1/2" or 2" slip-fit
Optional accessories:	Strainers, recommended mesh size: < 300 µm See chapter E

IDEAL FOR CLEANING:

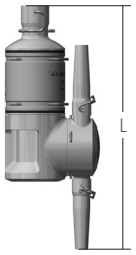
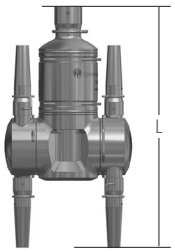
- Milk, cheese, yogurt tanks
- Spray drying towers
- Blenders
- Brewery tanks
- Food processing vats and tanks
- Wine vats

VIDEO

PERFORMANCE DATA

Model	Capacity Size	Rating	Liquid Flow Capacity (l/min)				
			1.7 bar	2.8 bar	4.1 bar	5.5 bar	6.9 bar
TJ78	375	3A	246	303	379	447	507
TJ78D	300	3A	303	379	473	553	625

DIMENSIONS AND WEIGHTS

TankJet 78 & 78D Sanitary Tank Cleaners	Model	Inlet Conn.	L (mm)	Min. Tank Opening (mm)	Net Weight (kg)
  MIN. TANK OPENING	TJ78 Single-hub	1-1/2	362	146	6.8
		2	372		
  MIN. TANK OPENING	TJ78D Dual-hub	1-1/2	362	194	8.6
		2	372		

ORDERING INFORMATION

TANKJET 78 & 78D

Model	–	Inlet Conn.	–	Capacity Size	–	Rating

EXAMPLE

TJ78	–	2	–	375	–	3A

TANKJET 65 TANK CLEANER FEATURES AND BENEFITS

- Four solid stream nozzles, a slow and steady multi-axis rotation, and a tight 360° indexing pattern provide excellent dwell time on the tank's surface while covering the entire tank every 45 revolutions
- External gears and self-cleaning, flow-through design for easy maintenance
- All stainless steel version offers high-temperature operability
- Lightweight for easy portability

SPRAY COVERAGE

360°

TJ65 MOUNTING OPTIONS

Vertical	↑ ↓
45° Up	↖ ↗
45° Down	↙ ↘

TankJet 65 tank cleaner

SPECIFICATIONS

TankJet 65 Tank Cleaner	Standard version	High-temperature version
Max. tank diameter:	12 m	12 m
Operating principle:	Fluid-driven turbine	Fluid-driven turbine
Flow rate:	114 to 379 l/min	246 to 568 l/min
Operating pressure:	3.4 to 10.3 bar	3.4 to 10.3 bar
Max. temperature:	121 °C	260 °C
Materials:	Stainless steel, PTFE, UHMW-PE and nylon	Stainless steel
Rotation speed:	5 to 40 rpm	5 to 40 rpm
Inlet connection:	1-1/2" NPT, BSPT (F) or 1" sanitary flange	1-1/2" NPT, BSPT (F) or 1" sanitary flange
Optional accessories:	Strainers, recommended mesh size: < 800 µm See page E2	

For lances, mounting kits, adapters and more, see page E6

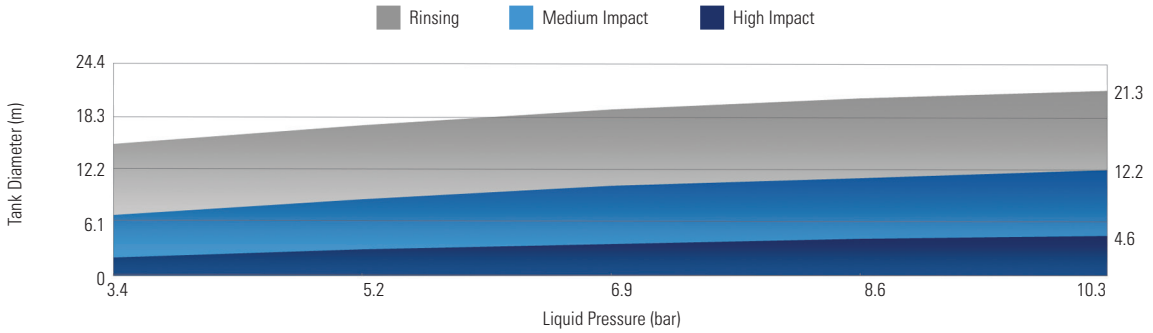
IDEAL FOR CLEANING:

- Brew kettles
- Chemical processing tanks
- Dairy vessels
- Food processing vats
- Spray dryers
- Tanker trucks

VIDEO

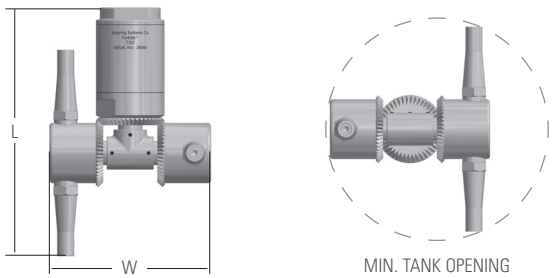
PERFORMANCE DATA

TankJet 65 Cleaning Effectiveness



Model TJ65		Liquid Flow Capacity (l/min)						
Orifice Size	High Temperature	3.4 bar	4.8 bar	6.2 bar	6.9 bar	7.6 bar	9.0 bar	10.3 bar
250		114	148	170	185	201	220	238
313		193	227	265	280	299	322	348
375		220	261	295	314	333	356	379
250	•	246	295	341	363	379	413	439
313	•	254	314	367	390	405	443	477
375	•	326	397	450	473	492	541	568

DIMENSIONS AND WEIGHTS

TankJet 65 Tank Cleaner	Inlet Conn.	L mm	W mm	Min. Tank Opening mm	Weight kg
	Threaded	260.4	168.4	222.3	5.3
	Sanitary Flange	300			5.6

ORDERING INFORMATION

TANKJET 65

Model	Inlet Conn.*	–	Orifice Size	–	High Temperature**

EXAMPLE

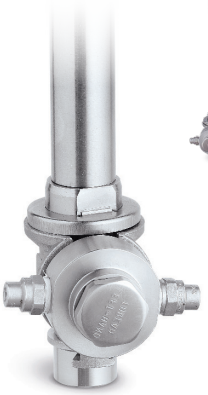
TJ65	—	–	375	–	HT

*Leave blank for NPT connection. Insert B for BSPT connection or SF for sanitary flange.
**Leave blank for standard version.

TANKJET AA190 TANK CLEANER FEATURES AND BENEFITS

- Versatile, high-impact tank cleaner provides efficient, consistent, reliable cleaning with virtually no maintenance
- Lightweight units can be installed permanently or easily moved from tank to tank
- Unit is constructed using corrosion-resistant materials with the motor positioned outside the tank, away from harmful caustics, for trouble-free operation and long service life
- Component and configuration options allow easy customization to meet the needs of a variety of cleaning operations. Choices include:
  - Variable speed CE-approved air or electric motors
  - High-pressure versions, for applications requiring higher impact force, that operate at pressures up to 70 bar
  - 360° or 180° coverage
  - Extension lengths from 0.3 m to 3.0 m
  - Flange mounting options include: three-prong (standard), ASME® raised face, EN 1092-1 and sanitary tri-clamp
- Long wear-life materials of construction with corrosion-resistant stainless steel and PTFE fluoropolymer-resin seals
- PTFE free version for Food Contact available
- ATEX-certified versions available

TankJet AA190 tank cleaner with air motor



TankJet AA190 spray head for 360° coverage

TankJet AA190 spray head for 180° coverage

SPRAY COVERAGE

360°

180° Down

MOUNTING OPTIONS

Vertical	↑	↓
Horizontal	←	→
45° Up	↖	↗
45° Down	↙	↘

FDA compliant materials

VIDEO

SPECIFICATIONS

TankJet AA190 Tank Cleaner	Standard version	PTFE free version & PTFE free version (FC)
Max. tank diameter:	10 m	7.6 m
Operating principle:	Motor-driven	Motor-driven
Flow rate:	11.8 to 167 l/min	11.8 to 167 l/min
Operating pressure:	7 to 70 bar	7 to 35 bar
Max. temperature:	93 °C	60 °C
Materials:	Seals: EPDM / FFKM, PTFE (graphit filled), PA All other metallurgy: 1.4401 (316 stainless steel)	Seals: EPDM, PE UHMW, PA All other metallurgy: 1.4401 (316 stainless steel)
Inlet connection:	1" NPT or BSPT (F)	1" NPT or BSPT (F)
Motor options:	Air & electric	Air & electric
Electric motors:	230 V, 230/400 V, 50 or 60 Hz, up to IP 66	
ATEX:	available	not available
Optional accessories:	Strainers, recommended mesh size: < 80 µm See chapter E	

IDEAL FOR CLEANING:

- Chemical reactors
- Food processing tanks and vats
- Paint tanks
- Pharmaceutical processing vessels
- Process tanks
- Tanker trucks

PERFORMANCE DATA

Model AA190		Liquid Flow Capacity (l/min)* Liquid Inlet Pressure						
Nozzle	Capacity Size	7 bar	13.8 bar	20.7 bar	27.6 bar	34.5 bar	48.3 bar **	70 bar **
1/4MEG	0010	11.8	17.3	20	24	27	31	37
	0015	17.9	25	31	36	40	47	56
	0020	23	33	41	47	53	62	74
	0025	29	41	50	58	65	76	–
	0030	34	49	60	69	76	–	–
	0035	39	56	69	80	87	–	–
	0040	44	63	76	91	98	–	–
	0050	53	76	95	106	121	–	–
	0060	62	87	106	125	140	–	–
	0070	69	98	121	140	155	–	–
	0080	75	106	129	151	167	–	–

*Note: Flow rates tabulated above include pressure drop through unit.
**High-pressure versions only. For additional performance data on high-pressure units, contact your local spray expert.

PERFORMANCE DATA ONLY FOR SOLID STREAM NOZZLE

Model AA190		Liquid Flow Capacity (l/min)* Liquid Inlet Pressure						
Nozzle	Capacity Size	7 bar	13.8 bar	20.7 bar	27.6 bar	34.5 bar	48.3 bar	70 bar
D55606	0019	11.1	15.8	19.3	22.3	24.9	29.5	35.2
	0027	15.9	22.4	27.5	31.7	35.5	42.0	50.2
	0036	21.1	29.9	36.6	42.3	47.3	55.9	66.9
	0046	27.1	38.3	46.9	54.1	60.5	71.6	85.6

*Note: Flow rates tabulated above include pressure drop through unit.

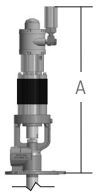
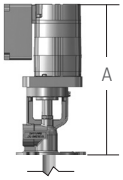
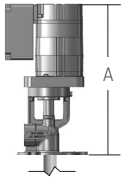
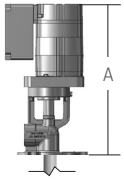
AIR MOTOR
CYCLE TIME DATA

Air Pressure	Approx. Speed (r/min)			Approx. Time for One Complete Cycle (min)		
	Liquid Pressure (bar)					
bar	6.9	34.5	69.0	6.9	34.5	69.0
0.55	4.0	3.3	2.1	8.8	10.5	16.3
0.69	5.5	5.0	4.1	6.4	7.0	8.5
0.83	6.9	6.7	6.1	5.1	5.3	5.7
0.97	8.0	7.9	7.1	4.4	4.4	4.9
1.10	9.1	9.1	8.5	3.9	3.9	4.1

ELECTRIC MOTOR
CYCLE TIME DATA

Type	Volt (V)	Frequency (Hz)	Power max. (W)	IP Rating	Speed (r/min)	Approx. Time for 1 Complete Cycle (min)
Standard	230	50	90	IP56	6.3	5.5
Standard	230/400	50	120	IP65	5.3	6.6
Standard	230/400	60	120	IP66	6.4	5.5
ATEX	230/400	50	120	IP66	5.3	6.6
ATEX	230/400	60	120	IP66	6.4	5.5

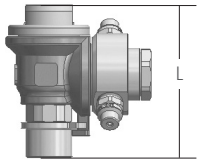
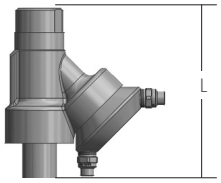
DIMENSIONS AND WEIGHTS

Air motor	Electric motor 230 V	Electric motor 230/400 V 50 and 60 Hz	Electric motor 230/400 V 50 and 60 Hz, ATEX
			
Length: 321 mm	Length: 427 mm	Length: 335 mm	Length: 362 mm
Weight: 6.4 kg	Weight: 8.4 kg	Weight: 13.4 kg	Weight: 13.4 kg

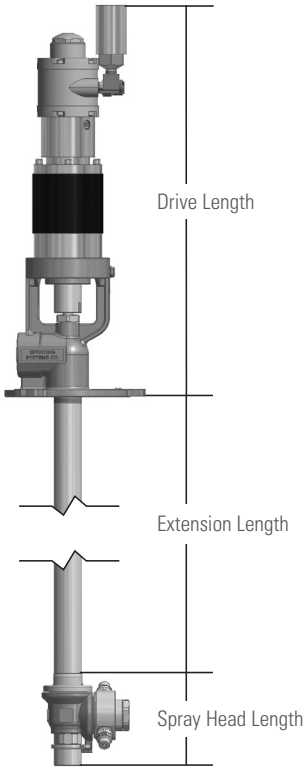
*Extension lengths available from 0.3 m to 3.0 m

**Add additional weight from the flange options' chart if not using the standard flange.

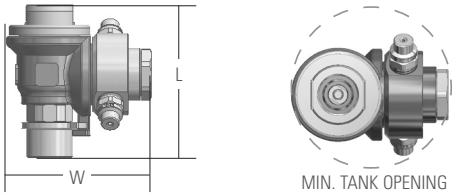
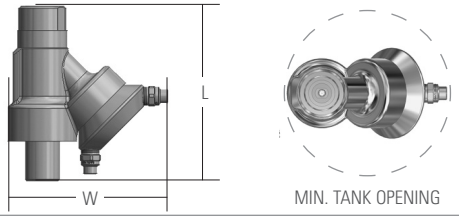
Extension length	Weight
0.3 m	0.6 kg
0.6 m	1.2 kg
0.9 m	1.8 kg
1.2 m	2.4 kg
1.5 m	3.0 kg
1.8 m	3.6 kg
2.1 m	4.2 kg
2.4 m	4.8 kg
2.7 m	5.4 kg
3.0 m	6.0 kg

TankJet AA190 Spray Head	Spray Coverage	L (mm)	Weight (kg)
	360°	82.6	1.5
	180°	127	1.5

TankJet AA190 Assembly



DIMENSIONS AND WEIGHTS

TankJet AA190 Spray Head	Model	Spray Coverage	Min. Tank Opening (mm)	L (mm)	W (Dia.) (mm)
	Standard	360°	85	82.6	81.3
	Small Dia.*	360°	71.5	82.6	71.4
	Directional	180°	115	127	110.5

*The 3 in. sanitary flange (3SF) has a modified hub assembly that can fit through a 71.5 mm opening with nozzles oriented in vertical position.

FLANGE OPTIONS

Flange Type	Size	Sales Code	Net Weight (kg)**
Three-Prong (std.) 	—	3P	—
Sanitary Tri-Clamp Flange 	3	3SF*	—
	4	4SF	0.1
	6	6SF	1.4

Flange Type	Size	Sales Code	Net Weight (kg)**
EN 1092-1 flange 1.4571 	DN 100	S05	5.7
	DN 65	S06*	3.6
	DN 125	S07	8.4
ASME® 150# Raised Face Flange 	3	3RF	4.8
	4	4RF	7.0
	6	6RF	11.1

* Use with modified hub assembly for small diameter

**Add additional weight to tank cleaner if not using the standard flange.

ORDERING INFORMATION

TANKJET AA190

Contact your local sales engineer for information about TankJet AA190 tank cleaners

TANKJET 75 & 75H TANK CLEANER FEATURES AND BENEFITS

- Ideal for medium-impact cleaning applications, providing thorough, cost-effective cleaning of tanks, totes and IBCs without the expense of high-impact tank cleaners
- Hygienic (H) models feature polished surfaces and enclosed gears, ideal for food, pharmaceutical, and dairy applications
- Fluid-driven with enclosed gears that reduce nozzle rotation speed for optimal impact and cleaning efficiency
- Solid stream nozzles rotate in multiple axes on a 360° indexing pattern to provide complete coverage of the entire tank every 45 revolutions
- Self-cleaning, flow-through design is easy to maintain and can be rebuilt quickly and easily in about 5 minutes
- Two-nozzle or four-nozzle designs provide excellent coverage and fast cleaning
- Tank cleaner is constructed of long-wearing materials and can be mounted permanently or moved from tank to tank
- Choice of low pressure or standard operation

For lances, mounting kits, adapters and more, see chapter E

TankJet 75H-4 four-nozzle tank cleaner

SPRAY COVERAGE

360°

MOUNTING OPTIONS

Vertical	↑ ↓
45° Up	↖ ↗
45° Down	↙ ↘

TankJet 75H-2 two-nozzle tank cleaner

SPECIFICATIONS

TankJet 75 Tank Cleaner	
Max. tank diameter:	9 m
Operating principle:	Fluid-driven turbine
Flow rate:	45 to 125 l/min
Operating pressure:	5.2 to 21 bar
Max. temperature:	121 °C
Materials:	1.4401 (316 stainless steel), PTFE and UHMWE-PE
Rotation speed:	7 to 17 r/min
Inlet connection:	3/4" NPT or BSPT (F), 1" sanitary flange
Accessories:	3/4" TWD strainer, recommended mesh size: < 80 µm See chapter E

STRAINER OPTION

3/4" TWD
Mesh size: 200

See page E2 for specifications

VIDEO

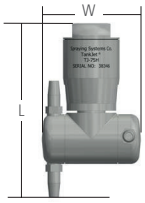
IDEAL FOR CLEANING:

- Chemical containers
- Dairy tanks and totes
- Food and beverage tanks
- Pharmaceutical tanks
- Process tanks

PERFORMANCE DATA

Model TJ75 & TJ75H		Liquid Flow Capacity (l/min)					
Type	Capacity	5.2 bar	6.9 bar	10.3 bar	13.8 bar	17.2 bar	21 bar
2	234	–	–	64	76	83	91
	234LP	45	53	64	–	–	–
4	172	–	–	87	106	117	125
	172LP	57	68	87	–	–	–
	125	–	–	57	68	76	79

DIMENSIONS AND WEIGHTS

TankJet 75 & 75H Tank Cleaner	Model	No. of Nozzles	Inlet Conn.	L (mm)	W (mm)	Min. Tank Opening (mm)	Net Weight (kg)
  MIN. TANK OPENING	75	2	Threaded	156	50	76	1.2
			Sanitary Flange	181			1.3
	75H	2	Threaded	159			1.2
			Sanitary Flange	184			1.3
  MIN. TANK OPENING	75	4	Threaded	156	50	107	1.4
			Sanitary Flange	181			1.5
	75H	4	Threaded	159			1.4
			Sanitary Flange	184			1.5

ORDERING INFORMATION

TANKJET 75&75H

Model	Inlet Conn.*	–	No. of Nozzles	–	Capacity Size**

EXAMPLE

TJ75H	___	–	4	–	172

*Leave blank for NPT connection. Insert B for BSPT connection or SF for sanitary connection.

**Add LP to 172 orifice size for low pressure version.

TANKJET 16 TANK CLEANING NOZZLE FEATURES AND BENEFITS

- Fluid-driven turbine rotates spray head at slow speeds to provide increased dwell time on tank surface compared to free spinning units
- Similar in design and appearance to static spray balls, these rotating units ensure full coverage and effective impingement of cleaning solution on tank walls
- The TankJet 16 produces solid stream sprays and easily passes through a 3 inch Schedule 40 pipe
- Suitable for clean-in-place (CIP) or portable installation
- Spray head is easily removed for inspection and maintenance

For lances, mounting kits, adapters and more, see chapter E

TankJet 16
tank cleaning nozzle

SPRAY COVERAGE

C	360° Up
D	270° Down
G	180° Down
H	180° Up

MOUNTING OPTIONS

Vertical	↑	↓
45° Up	↖	↗
45° Down	↙	↘

SPECIFICATIONS

TankJet 16 Tank Cleaning Nozzle	
Max. tank diameter:	7.2 m
Operating principle:	Fluid-driven turbine
Flow rate:	136 to 288 l/min
Operating pressure:	3.4 to 13.8 bar
Rotation speed:	3 to 15 r/min
Max. temperature:	121 °C
Materials:	1.4401 (316 stainless steel) and PTFE
Inlet connection:	1-1/2" NPT or BSPT (F)
Optional accessories:	Strainers. recommended mesh size: < 840 µm See chapter E

VIDEO

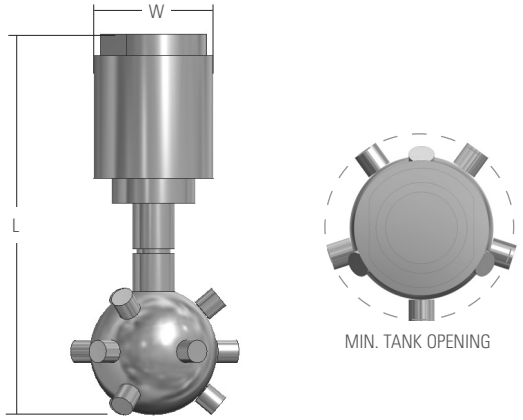
IDEAL FOR CLEANING:

- Brewery tanks
- Pharmaceutical tanks
- Chemical mixers/ blenders
- Totes/IBCs
- Food processing tanks
- Wine tanks

PERFORMANCE DATA

Model	Spray Coverage	Liquid Flow Capacity (l/min)								
		3.4 bar	4.8 bar	6.2 bar	6.9 bar	8.3 bar	9.7 bar	11.0 bar	12.4 bar	13.8 bar
TJ16	H	136	163	185	197	216	231	246	261	276
	C, D, G	151	178	201	208	227	246	261	280	288

DIMENSIONS AND WEIGHTS

TankJet 16 Tank Cleaning Nozzle	Model	L (mm)	W (mm)	Min. Tank Opening (mm)	Net Weight (kg)
	TJ16, threaded	228	77	76	2.1
	TJ16, sanitary	268	77	76	2.4

ORDERING INFORMATION

TANKJET 16

Model	Inlet Conn.*	–	Spray Coverage

EXAMPLE

TJ16	___	–	C

*Leave blank for NPT connection. Insert B for BSPT connection or SF for sanitary connection.

Food Ingredient Manufacturer Cuts Tank Cleaning Time by 75% and Offsets Equipment Cost in Less Than a Week

PROBLEM:

A leading producer of spices and seasonings needed to thoroughly clean the interior surfaces of its mixing tanks between batches. Manually cleaning the powder residue from the blenders with high pressure hoses and brushes took workers an hour or more and produced inconsistent results. The cleaning process was a significant labor expense since three batches per shift were being produced during three shifts per day. The production downtime also resulted in significant lost revenue.

Call your local spray expert
to explore your tank cleaning options.

TankJet 75 tank cleaner, see page C12

SOLUTION:

Spraying Systems Co.'s TankJet® 75 tank cleaner solved the customer's problem. Two TankJet 75 units, positioned in opposite corners of the blender, provide effective cleaning. Shadowing, caused by the ribbon blade and other internal obstructions, is overcome by the use of two tank cleaners to ensure all surfaces are thoroughly cleaned. Hot water is pumped to the tank cleaners at 5.2 bar with a flow rate of 57 l/min. The powerful impact of the water jets ensures repeatable results with every cleaning cycle.

RESULTS:

The automated-tank cleaning process has saved in labor expense. In addition, TankJet units have reduced the time required for cleaning the mixers from one hour to 20 minutes. This reduction in downtime allows for the production of one additional batch of spices per shift. Together, these factors paid for the investment in tank cleaning equipment in less than one week. The customer reports a payback period of just over three months per tank cleaner.

Ribbon blender being cleaned

Results

TankJet 75 tank cleaners are installed in opposite corners of the blender to ensure thorough cleaning of all interior surfaces

FOR TANK DIA. UP TO **6.0 m**

CHEMICAL PROCESSING TANKS
MIXING TANKS • PHARMACEUTICAL VESSELS • DRUMS AND KEGS
FOOD PROCESSING TANKS
BREWERY TANKS

SUPERIOR TANK CLEANING IN SANITARY AND CHEMICAL ENVIRONMENTS

EFFECTIVE SPRAY IN A VARIETY OF MATERIALS AND SPRAY COVERAGES

Offered in a variety of sanitary and chemical-resistant configurations, these nozzles are built to efficiently clean and rinse. With numerous spray coverage options and varying impact ratings, these compact TankJet nozzles are powerful and effective solutions for medium-sized tanks and vessels.

QUICK REFERENCE GUIDE

Model	Cleaning Power	Max. Tank Diameter (m)	Operating Principle	Flow Rate Range (l/min)	Operating Pressure (bar)	Spray Coverage	Max. Temperature (°C)	Materials	Page Number
TankJet® Rokon® D26984 & D40159	Medium impact	6.0	Fluid-driven constant speed	12 to 75	2.1 to 6.2	65° down, 120° down, 180° up/down, 260° up/down, 360°	70	1.4305 or 1.4571 stainless steel body, PTFE sleeve and washer	D4
TankJet® Rokon® D26984 & D40159	Medium impact	6.0	Fluid-driven constant speed	12 to 75	2.1 to 6.2	65° down, 120° down, 180° up/down, 260° up/down, 360°	70	PVDF body with PTFE washer and PE sleeve	D6
TankJet® 27500 & 27500-R	Medium impact	5.5	Fluid-driven reactionary force	34 to 850	0.7 to 3.4	180° up/down, 270° up/down, 360°	93	PTFE fluoropolymer resin, CTTEF and PTFE, graphit filled, electric conductive	D8
TankJet® 28500 & 28500-R	Medium impact	5.5	Fluid-driven reactionary force	34 to 295	0.7 to 3.4	180° up/down, 270° up/down, 360°	93	Body, saucer & spacer – PTFE fluoropolymer resin Locking pin – stainless steel	D10
TankJet® MiniRokon® D41800E	Medium impact	4.0	Fluid-driven constant speed	11 to 86	2.1 to 6.2	360°	130	1.4305 or 1.4404 stainless steel, 2.4819 (Alloy C-276)	D12
TankJet® MicroRokon D41990	Rinsing	5.0	Fluid-driven reactionary force	9 to 141	1.0 to 4.1	180° up/down, 360°	130	1.4404 (316L stainless steel) or 1.4404 with PEEK bearing	D14
TankJet® MicroRokon D41990	Rinsing	2.5	Fluid-driven reactionary force	9 to 40	1.0 to 4.1	180° up/down, 360°	130	1.4404 (316L stainless steel)	D16
TankJet® CleanUp D55567	Rinsing	3.0	Fluid-driven reactionary force	9 to 40	1.0 to 4.1	180° up/down, 360°	130	1.4404 (316L stainless steel)	D18
TankJet® AA090	High impact	2.4	Motor-driven	5.7 to 28	7 to 35	360°	93	Seals: EPDM or FFKM, PTFE (graphit filled), PA All other metallurgy: 1.4401 (316 stainless steel)	D20
TankJet® Spray Balls	Rinsing	2.0 - 6.0	Fixed stationary	83 to 192	1.0 to 2.8	360°	204	1.4571, 1.4435, Alloy C-276, PTFE	D24
TankJet® UniRokon D41892	Rinsing	2.0	Fluid-driven reactionary force	15.9 to 29	1.4 to 4.8	360°	70	POM or PVDF	D26
TankJet® VSM	Rinsing	1.5	Stationary	10.4 to 269	0.7 to 10.3	240° down	93	Brass, Stainless Steel, Polyamid, PTFE	D28
TankJet® HS Rokon D26564	Rinsing	1.5	Fluid-driven reactionary force	9.0 to 20.5	1.0 to 5.0	180° up/down	90	PVDF	D30

TANKJET® ROKON® D26984E & D40159 (STEEL) TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Driven by the flow of the cleaning liquid, three flat sprays mounted in a rotating spray head rotate at a near-constant speed of 2 to 30 r/min over a wide range of fluid pressures and deliver as much as four times the impact of conventional rotating nozzles
- Slow, controlled rotation provides extended dwell time on tank surface making these nozzles ideal for cleaning, sanitizing and foaming applications
- Sanitary tubing and wall mounting options available upon request
- ATEX-certified versions available

IDEAL FOR CLEANING:

- Chemical processing tanks
- Dry powder tanks
- Food processing tanks
- Mixing tanks
- Pharmaceutical

For lances, mounting kits, adapters and more, see page E6

Stainless Steel version

FDA compliant materials

SPRAY COVERAGE

A	180° Up
B	180° Down
C	260° Up
D	260° Down
E	360°
G	120° Down
K	65° Down

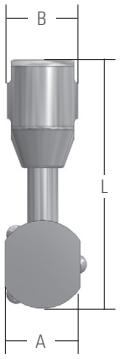
MOUNTING OPTIONS

Vertical		↓
Horizontal	←	→
45° Down	↙	↘

SPECIFICATIONS

TankJet® Rokon® Tank Cleaning Nozzles	Stainless Steel
Max. tank diameter:	6.0 m
Operating principle:	Fluid-driven constant speed
Flow rate:	12.0 to 74 l/min
Recommended pressure:	2.0 to 6.0 bar
Max. temperature:	70 °C
Materials:	1.4305 or 1.4571 stainless steel body, PTFE sleeve and washer
Inlet connection:	1/2" NPT or BSPT + CIP
Optional accessories:	Strainers. recommended mesh size: < 80 µm See chapter E

DIMENSIONS AND WEIGHTS



TankJet® Rokon® Tank Cleaning Nozzles	L (mm)	A (mm)	B (mm)	Min. Tank Opening (mm)	Net Weight (kg)
	146	50	41	56	0.73

VIDEO

SPRAY COVERAGE

Material	Inlet. Conn. Size	Capacity Size	E 360°	A 180° up	B 180° down	C 260° up	D 260° down	G 120° down	K² 65° down
	1/2" & all CIP								
Stainless Steel	•	3.2	•						
	•	4.5	•						
	•	9.9	•	•	•	•	•	•	•
	•	13.6	•	•	•	•	•	•	•

PERFORMANCE DATA

Capacity Size	Liquid Flow Capacity (l/min)			
	2.0 bar	3.4 bar	4.8 bar	6.0 bar
3.2	12	14.5	16.9	19
4.5	15	17.9	21	24
9.9	32	40	48	55
13.6	43	55	66	75

ORDERING INFORMATION

TANKJET ROKON D26984E & D40159 (STEEL)

D40159 | A | - | 182 | A4 | - | 13.6 | - | EX

Modifications:
Blank = Standard version
EX = Meets the European ATEX standard for use in explosive environments

Capacity size:
3.2[1] | 4.5[1] | 9.9 | 13.6

Material code:
A2 = 1.4305 / PTFE
A4 = 1.4571 / PTFE

Inlet connection:
1/2 = 1/2" NPT
B1/2 = 1/2" BSPT
213 = CIP Ø 21.3 mm
222 = CIP Ø 22.2 mm
235 = CIP Ø 23.5 mm
252 = CIP Ø 25.2 mm

Spray coverage:
Use letter E, A, B, C, D, G or K²

Nozzle type:
D26984 = Spray coverage E (360°)
D40159 = Spray coverage A, B, C, D, G or K²

[1] = Only available for D26984 (spray coverage 360°)
[2] = Only available for capacity size 9.9

TANKJET® ROKON® D26984E & D40159 (PLASTIC) TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Driven by the flow of the cleaning liquid, three flat sprays mounted in a rotating spray head rotate at a near-constant speed of 2 to 30 r/min over a wide range of fluid pressures and deliver as much as four times the impact of conventional rotating nozzles
- Slow, controlled rotation provides extended dwell time on tank surface making these nozzles ideal for cleaning, sanitizing and foaming applications
- Sanitary tubing and wall mounting options available upon request
- Made of corrosion- and chemical-resistant PVDF

IDEAL FOR CLEANING:

- Chemical processing tanks
- Dry powder tanks
- Food processing tanks
- Mixing tanks
- Pharmaceutical

For lances, mounting kits, adapters and more, see page F6

FDA compliant materials

SPRAY COVERAGE

A	180° Up
B	180° Down
C	260° Up
D	260° Down
E	360°
G	120° Down
K	65° Down

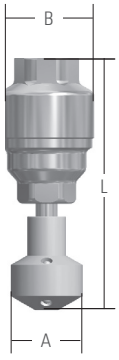
MOUNTING OPTIONS

Vertical		↓
Horizontal	←	→
45° Down	↙	↘

SPECIFICATIONS

TankJet® Rokon® Tank Cleaning Nozzles	Stainless Steel
Max. tank diameter:	6,0 m
Operating principle:	Fluid-driven constant speed
Flow rate:	12.0 to 74 l/min
Recommended pressure:	2.0 to 6.0 bar
Max. temperature:	70 °C
Materials:	PVDF body with PTFE washer and PE sleeve (stainless steel inserts for some variants)
Inlet connection:	1/2" NPT or BSPT + CIP
Optional accessories:	Strainers. recommended mesh size: 80 µm See chapter E

DIMENSIONS AND WEIGHTS

TankJet® Rokon® Tank Cleaning Nozzles	L (mm)	A (mm)	B (mm)	Min. Tank Opening (mm)	Net Weight (kg)
	146	49	49	56	0.19

VIDEO

SPRAY COVERAGE

Material	Inlet. Conn. Size		Capacity Size	E 360°	A 180° up	B 180° down	C 260° up	D 260° down	G 120° down	K² 65° down
	3/8"	1/2" and all CIP								
PVDF	•	•	3.2	•		•				
	•	•	4.5	•		•				
		•	9.9	•						
		•	13.6	•						
PVDF with SS insert		•	3.2		•	•	•	•	•	
		•	4.5		•	•	•	•	•	
		•	9.9		•	•	•	•	•	•
		•	13.6		•	•	•	•	•	

PERFORMANCE DATA

Capacity Size	Liquid Flow Capacity (l/min)			
	2.0 bar	3.4 bar	4.8 bar	6.0 bar
3.2	12	14.5	16.9	19
4.5	15	17.9	21	24
9.9	32	40	48	55
13.6	43	55	66	75

ORDERING INFORMATION

TANKJET ROKON D26984E & D40159 (PLASTIC)

D40159 | A | - | 182 | A4 | - | 13.6

Capacity size:
3.2 | 4.5 | 9.9 | 13.6

Material code:
KY = PVDF / PTFE
KYA2 = PVDF / 1.4305 / PTFE

Inlet connection:
3/8[4] = 3/8" NPT
B3/8[4] = 3/8" BSPT
1/2 = 1/2" NPT
B1/2 = 1/2" BSPT
213 = CIP Ø 21.3 mm
222 = CIP Ø 22.2 mm
235 = CIP Ø 23.5 mm
252 = CIP Ø 25.2 mm

Spray coverage:
Use letter E[1], A[2], B[1;4], C[2], D[2], G[2] or K[2;3]

Nozzle type:
D26984 = Spray coverage E (360°)
D40159 = Spray coverage A, B, C, D, G or K

[1] = Only available in KY
[2] = Only available in KYA2
[3] = Only available for capacity size 9.9
[4] = Only available for capacity size 3.2 and 4.5
[5] = Capacity size 3.2 and 4.5 in KY, other only in KYA2

TANKJET® 27500 AND 27500-R TANK CLEANING NOZZLE FEATURES AND BENEFITS

- With rotation driven by the reactionary force of the cleaning liquid, these rotating nozzles provide excellent cleaning and rinsing and are especially well-suited to clean-in-place (CIP) systems
- Spray angles range from 180° to 360° and can be used to clean specific areas or the entire tank interior
- Made of corrosion- and chemical-resistant PTFE fluoropolymer resin, both models offer peak performance when used with debris-free liquid and deliver greater impact than static spray balls
- The rotating spray heads on 27500-R nozzles can be easily removed from the body for inspection and maintenance
- 27500-R nozzles with 1/2 in. and 3/4 in. inlet connections are also available in carbon-filled PTFE for improved thermal characteristics and higher mechanical strength
- ATEX available for D27500

TankJet 27500

TankJet 27500-R

TankJet D27500

SPRAY COVERAGE

A	180° Up
B	180° Down
C	270° Up
D	270° Down
E	360°

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

FDA compliant materials

Ex

IDEAL FOR CLEANING:

- Broke chests
- Chemical tanks
- PCB washers
- Process tanks
- Pharmaceutical tanks

VIDEO

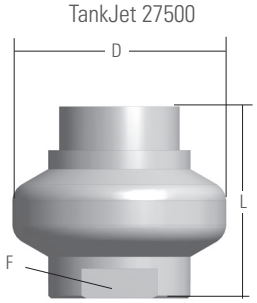
SPECIFICATIONS

TankJet® Cleaning Nozzle	27500	27500-R	D27500
Max. tank diameter:	4.3 to 5.5 m		
Operating principle:	Fluid-driven reactionary force		
Flow rate:	34 to 850 l/min		
Recommended pressure: (operating pressure)	1.5 to 2.8 bar (0.7 to 3.5 bar)		
Max. temperature:	93 °C		70 °C
Materials:	PTFE fluoropolymer resin or CTEF		PTFE, graphit filled, electric conductive
Inlet connection:	1/2", 3/4" and 1" NPT or BSPT (F)		
Optional accessories:	Strainers, recommended mesh size: 150 µm See chapter E		
ATEX:	No		Yes

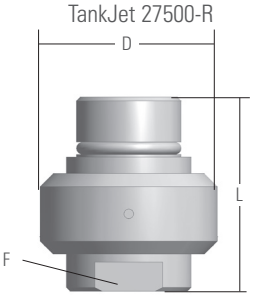
DIMENSIONS AND WEIGHTS

Model	Inlet Conn. in.	D (Dia.) (mm)	L (mm)	F (Flats) (mm)
(D)27500	1/2	49.2	60.3	28.6
(D)27500 27500-R	3/4	57.2	66.6	33.3
(D)27500 27500-R	1	69.8	76.2	45.3

TankJet 27500



TankJet 27500-R



PERFORMANCE DATA

Model		Inlet Conn.	Capacity Size	Orifice Dia. (mm)	Liquid Flow Capacity (l/min)					Max. Tank Dia. (m)
(D)27500	27500-R				0.7 bar	1.4 bar	2.1 bar	2.8 bar	3.4 bar	
•	•	1/2	8	2.4	15	22	27	31	34	4.3
•	•	3/4	18	3.2	34	48	59	68	76	4.3
•	•		32	4.7	61	89	103	126	136	4.3
•	•		46	6.0	87	130	148	182	196	4.3
•	•	1	50	6.0	95	140	161	197	215	5.5
•	•		70	7.1	133	195	225	275	300	5.5
•	•		90	9.0	172	250	290	355	385	5.5

ORDERING INFORMATION

TANKJET (D)27500 AND 27500-R

D* | B | 27500 | E | - | R | - | 3/4 | - | 46 | - | TEF01 | - | EX

Modifications:
- EX[2] = Meets the European ATEX standard for use in explosive environments

Material code:
- TEF01[2] = Electric conductive PTFE / FDA
- CTEF[1] = PTFE carbon fibre reinforced
- TEF[1] = PTFE / FDA / FC

Capacity size:
8 | 18 | 32 | 46 | 50 | 70 | 90

Inlet connection:
- 1/2 = 1/2" (available size 8)
- 3/4 = 3/4" (available sizes: 18, 32, 46)
- 1 = 1" (available sizes: 50, 70, 90)
- -20[1] = CIP Ø 22.2 mm
- -25[1] = CIP Ø 28.2 mm

Model:
- Blank = Not removable
- R[1] = Removable (with EPDM o-ring)

Connection type:
- Blank = NPT
- B = BSPT

Spray coverage:
- A = 180° up
- B = 180° down
- C = 270° up
- D = 270° down
- E = 360°

[1] = Only available for 27500

[2] = Only available for D27500

* = D required for ATEX version

TANKJET® 28500 & 28500-R TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Rotating nozzles for use with sanitary tubing resist harsh chemicals and provide excellent cleaning and more impact than static spray balls
- 28500-R nozzles conform to 3-A Sanitary Standard 78 for spray cleaning devices to remain in place (does not apply to horizontal mounting)
- Well-suited for clean-in-place systems; no motor source is needed as the reactionary force of the cleaning liquid rotates the spray head
- Threadless, tapered design promotes self-draining to prevent build-up on nozzle
- 28500-R rotating spray head is easily removable from the body for inspection and maintenance

IDEAL FOR CLEANING:

- Chemical tanks
- Dairy vats
- Food processing tanks
- Pharmaceutical vessels

TankJet 28500-R

SPRAY COVERAGE

A	180° Up
B	180° Down
C	270° Up
D	270° Down
E	360°

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

78-01
Auth. No. 1040

This unit meets the requirements of 3-A Sanitary Standard 78. Spray cleaning devices intended to remain in place.

For lances, mounting kits, adapters and more, see chaper E

SPECIFICATIONS

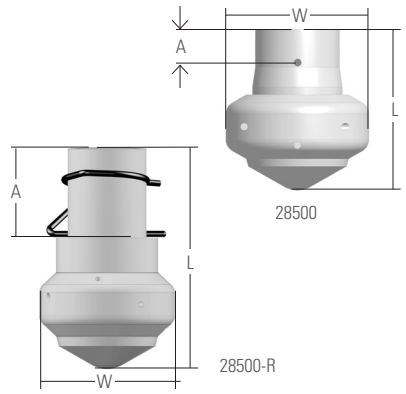
TankJet® 28500 & 28500-R Tank Cleaning Nozzles	
Max. tank diameter:	5.5 m
Operating principle:	Fluid-driven reactionary force
Flow rate:	34 to 296 l/min
Operating pressure:	0.7 to 3.4 bar
Max. temperature:	93 °C
Materials:	Body, saucer & spacer – PTFE fluoropolymer resin Locking pin – 316 stainless steel
Inlet connection:	3/4", 1" and 1-1/2" DN20, DN25 and DN40 sanitary tubing
Optional accessories:	Strainers, recommended mesh size: < 150 µm See chaper E

VIDEO

PERFORMANCE DATA

Nozzle 28500		Orifice Dia. (mm)	Liquid Flow Capacity (l/min)				
Nozzle Inlet	Capacity Size		0.7 bar	1.4 bar	2.1 bar	2.7 bar	3.4 bar
3/4 or DN20	18	2.3	34	48	59	68	76
	23	2.8	44	62	75	87	98
	32	3.9	61	86	105	121	136
	46	6.5	87	123	151	174	195
1 or DN25	33	3.9	62	87	110	125	140
	50	5.3	95	134	164	189	212
	70	6.8	132	187	229	265	296
1-1/2 or DN40	52	5.1	102	140	174	201	223
	70	6.8	132	187	229	265	296

DIMENSIONS AND WEIGHTS

TankJet® 28500 & 28500-R Tank Cleaning Nozzles	Model	Inlet Conn. Size/Type in.	Inlet Dia.	W (mm)	L (mm)	A (mm)
	28500	3/4	0.76 in.	84.1	66.8	9.5
		DN20	22.2 mm			
		1	1.02 in.	97.0	73.2	12.7
		DN25	28.2 mm			
		1-1/2	1.52 in.	109.7	111.3	19.1
		DN40	40.2 mm			
	28500-R	3/4	0.76 in.	57.2	93.7	36.3
		DN20	22.2 mm			
		1	1.02 in.	69.9	104.9	38.1
		DN25	28.2 mm			
		1-1/2	1.52 in.	92.2	136.7	44.5
		DN40	40.2 mm			

Min. tank opening size is 64 to 114 mm depending on capacity size.

ORDERING INFORMATION

TANKJET 28500 AND 28500-R

Model	Spray Coverage	Removable Spray Head*	–	Inlet Conn. Size/Type	–	Capacity Size	–	Material Code
EXAMPLE								
28500	E	-R*	–	3/4	–	23	–	TEF

* -R for removable spray head. Leave blank for standard version.

TANKJET® MINIROKON® D41800E TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Cost effective and environmentally friendly cleaning of small tanks and containers
- Compact, constant-speed nozzles provide up to four times the impact of conventional rotating nozzles
- Rotating head with three flat sprays is driven by the flow of the cleaning liquid
- Rotates at nearly constant speed over a wide range of fluid pressures
- Slow, controlled rotation provides more dwell time on tank surface, making it perfect for cleaning, sanitizing and foaming applications
- Patented self-flushing water bearing design eliminates internal bearings and races
- ATEX-certified versions available
- 3-A version available

SPRAY COVERAGE

E 360°

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

FDA compliant materials

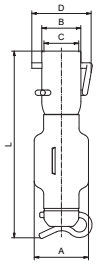
IDEAL FOR CLEANING:

- Chemical processing tanks
- Pharmaceutical tanks
- Canisters
- Food processing tanks
- Mixing tanks
- Dry powder tanks

SPECIFICATIONS

TankJet® MiniRokon® D41800E Tank Cleaning Nozzle	
Max. tank diameter:	4.0 m
Operating principle:	Fluid-driven constant speed
Flow rate:	11.0 to 128 l/min
Recommended pressure:	2.0 to 6.0 bar
Max. temperature:	150 °C (depends on boiling pressure of cleaning agent)
Materials:	- 1.4305 (303 stainless steel) - 1.4404 (316L stainless steel) - 2.4819 (Alloy C-276)
Surface quality:	Standard; outer surface polished or outer and inner surface electropolished
Inlet connection:	3/8" NPT or BSPT (F), CIP 182 or 192
Optional accessories:	Strainers: recommended mesh size: < 80 µm See chapter E

DIMENSIONS AND WEIGHTS

D41800E	Inlet Conn.	L (mm)	A (mm)	B (mm)	C (mm)	Pin Length (mm)	Min. Tank Opening (mm)	Weight (kg)
	3/8"	78	Ø 30	Ø 21.2	Thread	–	35	0.14
	CIP182 CIP192	97	Ø 30	Ø 21.6	18.2 19.2	39	50	0.17
	CIP182 3A CIP192 3A	104	Ø 30	Ø 21.6	18.2 19.2	39	50	0.17

VIDEO

PERFORMANCE DATA

Model	Inlet Conn. Size/Type	Capacity Size	Liquid Flow Capacity (l/min)			
			2.1 bar	3.4 bar	4.8 bar	6.2 bar
D41800E	3/8"	3.2	11	14	17	19
		4.5	15	20	23	27
		9.9	33	41	49	56
		13.6	47	59	70	80
	CIP182 & CIP182 3A CIP192 & CIP192 3A	3.2	15	19	23	26
		4.5	17	22	26	30
		9.9	35	44	52	60
		13.6	51	64	76	86

ORDERING INFORMATION

TANKJET MINIROKON D41800E

D41800 | E | - | 182 | A4 | - | 13.6 | X | - | 3A | - | EX

Inlet connection:

3/8[1]	=	3/8" NPT
B3/8[1]	=	3/8" BSPT
182	=	CIP Ø 18.2 mm
192	=	CIP Ø 19.2 mm

Modifications:

Blank	=	Standard version
EX	=	Meets the European ATEX standard for use in explosive environments

Type:

None	=	Standard version
3A[2;3]	=	3A-version

Surface quality:

Blank	=	Standard version
P	=	Outer surface polished (Ra ≤ 0.8 µm)
X[1;4]	=	Outer + inner surface electropolished (Ra ≤ 0.5 µm)

Capacity size:

3.2 | 4.5 | 9.9 | 13.6

Material code:

A2	=	1.4305 (303 stainless steel)
A4	=	1.4404 (316L stainless steel)
HC	=	276HC (Alloy C-276)

[1] = Not available in A2

[2] = Not available in size 3.2

[3] = Only available in A4

[4] = Threaded tip is glued with Loctite EA 9480

TANKJET® MICROROKON D41990 TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Cost effective and environmentally friendly low-pressure, low-volume rinsing of small tanks and containers
- Less maintenance due to fluid-driven reactionary force nozzle no motor sourceneeded to drive spray head
- Micro-size nozzle fits into very small tank openings – as small as 35 mm
- All stainless steel construction for long wear life and corrosion resistance
- Suitable for high-temperature applications up to 130 °C
- ATEX-certified versions available
- Steam-proof versions with PEEK bearing available

FDA compliant materials

SPRAY COVERAGE

A	180° Up
B	180° Down
E	360°

MOUNTING OPTIONS

Vertical	↑	↓
Horizontal	←	→
45° Up	↖	↗
45° Down	↙	↘

IDEAL FOR CLEANING:

- Chemical tanks
- Beverage tanks
- Canisters
- Food tanks
- Keg/drum
- Tote/container

SPECIFICATIONS

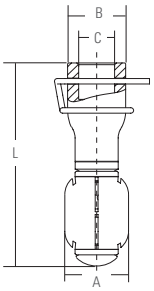
TankJet® MicroRokon D41990 Tank Cleaning Nozzle	
Max. tank diameter:	5.0 m
Operating principle:	Fluid-driven reactionary force
Flow rate:	29 to 141 l/min
Operating pressure:	1 to 4 bar
Max. temperature:	130 °C
Materials:	1.4404 (316L stainless steel) or 1.4404 with PEEK bearing
Inlet connection:	3/8", 1/2", 3/4" NPT or BSPT (F), CIP 182, 192 or 252
Optional accessories:	Strainers, recommended mesh size: < 80 µm See chapter E

PERFORMANCE DATA

Inlet Conn.	Capacity Size	Capacity (l/min)					
		1.0 bar	1.4 bar	2.1 bar	2.8 bar	3.4 bar	4.1 bar
3/8" 1/2" 3/4" CIP182 CIP192 CIP252	13.6	28.5	33	40	45	49	53
	15	34	40	48	55	60	65
	21	48.5	57	68	78	95	92
	24	51.5	61	74	85	93	100.5
	32	76	88	105	120	130	141

VIDEO

DIMENSIONS AND WEIGHTS

MicroRokon D41990 Tank Cleaning Nozzle	Capacity	Inlet Conn. Size*	L (mm)	A (mm)	B (mm)	C (mm)	Pin Length (mm)	Min. Tank Opening (mm)	Weight (kg)
	13.6 15 21 24 32	3/8" 1/2" 3/4"	111	Ø34	Ø31	Thread	--	35	0.36
		CIP182				18.2	47.5	50	0.4
		CIP192				19.2			
		CIP252				25.2			

ORDERING INFORMATION

TANKJET MICROROKON D41990

D41990 | E | - | 182 | A4 | - | 16 | P | - | EX

Modifications:
- Blank = Standard version
- EX = Meets the European ATEX standard for use in explosive environments

Surface quality:
- Blank = Standard version
- P = Outer surface polished (Ra ≤ 0.8 µm)
- X = Partially electropolished (Ra ≤ 0.5 µm; bearings polished Ra ≤ 0.8 µm)

Capacity size:
13.6 | 15 | 21 | 24 | 32

Material code:
- A4 = 1.4404
- A4/P[1] = 1.4404 / PEEK bearings (glued)

Inlet connection:
- 3/8 = 3/8" NPT
- B3/8 = 3/8" BSPT
- 3/4 = 3/4" NPT
- B3/4 = 3/4" BSPT
- 1/2 = 1/2" NPT
- B1/2 = 1/2" BSPT
- 182 = CIP Ø 18.2 mm
- 192 = CIP Ø 19.2 mm
- 252 = CIP Ø 25.2 mm
- 257 = CIP Ø 25.7 mm

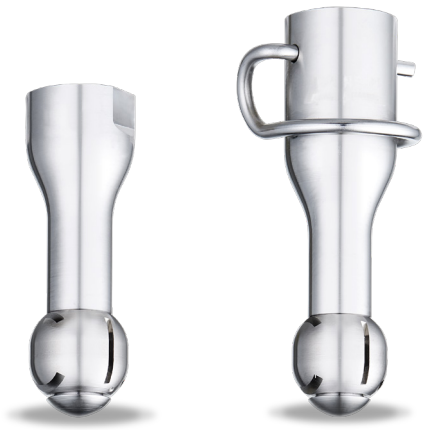
Spray coverage:
- A = 180° up
- B = 180° down
- E = 360°

[1] = Not available in ATEX

TANKJET® MICROROKON D41990 TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Cost effective and environmentally friendly low-pressure, low-volume rinsing of small tanks and containers
- Less maintenance due to fluid-driven reactionary force nozzle no motor sourceneeded to drive spray head
- Micro-size nozzle fits into very small tank openings – as small as 21 mm
- All stainless steel construction for long wear life and corrosion resistance
- Suitable for high-temperature applications up to 130 °C
- ATEX-certified versions available



SPRAY COVERAGE

A	180° Up
B	180° Down
E	360°

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

FDA compliant materials

IDEAL FOR CLEANING:

- Chemical tanks
- Beverage tanks
- Canisters
- Food tanks
- Keg/drum
- Tote/container

SPECIFICATIONS

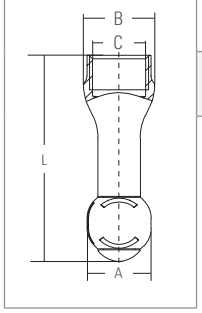
TankJet® MicroRokon D41990A Tank Cleaning Nozzle	
Max. tank diameter:	2.5 m
Operating principle:	Fluid-driven reactionary force
Flow rate:	9 to 39.5 l/min
Operating pressure:	1 to 4 bar
Max. temperature:	130 °C
Materials:	1.4404 (316L stainless steel)
Inlet connection:	3/8", NPT or BSPT (F), CIP 182
Optional accessories:	Strainers, recommended mesh size: < 80 µm See chapter E

PERFORMANCE DATA

Inlet Conn.	Capacity Size	Capacity (l/min)					
		1.0 bar	1.4 bar	2.1 bar	2.8 bar	3.4 bar	4.1 bar
3/8" CIP182	3.2	9	10	12	13	13.5	14.5
	4.5	12.5	14	16	18	19	20.5
	6	16.5	19	20	23	23	27.5
	9	19.5	23	27	31	34	39.5

VIDEO

DIMENSIONS AND WEIGHTS

MicroRokon D41990 3.2 - 9	Inlet Conn.	L (mm)	A (mm)	B (mm)	C (mm)	Pin Length (mm)	Min. Tank Opening (mm)	Weight (kg)
	3/8"	60	Ø18	Ø20	Thread	--	21	0.1
	CIP182	77	Ø18	Ø21.5	18.2	39	50	

ORDERING INFORMATION

TANKJET MICROROKON D41990

D41990 | E | - | 182 | A4 | - | 3.2 | P | - | EX

Modifications:

None	=	Standard version
EX	=	Meets the European ATEX standard for use in explosive environments

Surface quality:

Blank	=	Standard version
P	=	Outer surface polished (Ra ≤ 0.8 µm)

Capacity size:

3.2 | 4.5 | 6 | 9

Material code:

A4	=	1.4404

Inlet connection:

3/8	=	3/8" NPT
B3/8	=	3/8" BSPT
182	=	CIP Ø 18.2 mm

Spray coverage:

A	=	180° up
B	=	180° down
E	=	360°

TANKJET® CLEAN UP D55567 TANK CLEANING NOZZLE

FEATURES AND BENEFITS

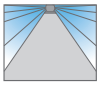
- Nozzle retracts below 0.3 bar and is flush to the tank wall and won't affect the production process
- Cost-effective and environmentally friendly cleaning of small tanks and pipes
- Less maintenance due to fluid-driven reactionary force nozzle, no motor source needed to drive spray head
- Suitable for high-temperature applications up to 130 °C
- ATEX-certified versions available

Closed position

Open position

SPRAY COVERAGE

55°



MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

IDEAL FOR CLEANING:

- Chemical tanks
- Beverage tanks
- Pipes
- Food tanks
- Pharmaceutical tanks

FDA compliant materials

SPECIFICATIONS

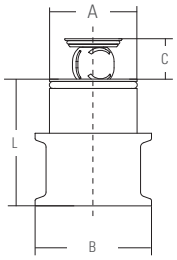
TankJet® CleanUp D55567 Tank Cleaning Nozzle	
Max. tank diameter:	3.0 m
Operating principle:	Fluid-driven reactionary force
Flow rate:	9 to 40 l/min
Operating pressure:	1 to 6 bar
Max. temperature:	130 °C
Materials:	1.4404 (316L) and 1.4571 (316Ti) stainless steel, O-ring: EPDM
Surface quality:	Standard or outer surface polished
Inlet connection:	Flange DN 40 KK AISI 316L (1.4404)
Optional accessories:	Strainers, recommended mesh size: < 80 µm Weld-in flange: CP-D55567-4-1.4404 Gasket EPDM: CP-D26536-0028 Tri-Clamp (A2): CP-D41919-3001

PERFORMANCE DATA

Inlet Conn.	Capacity Size	Capacity (l/min)	
		1.0 bar	4.0 bar
505	3.2	6	14.5
	4.5	12.5	20.5
	6	16.5	27.5
	9	19.5	39.5

VIDEO

DIMENSIONS AND WEIGHTS

CleanUp D55567	Capacity	Inlet Conn. Size*	L (mm)	A (mm)	B (mm)	C (mm)	Min. Tank Opening (mm)	Weight (kg)
	3.2 4.5 6 9	505	55	Ø 38	Ø 50.5	17.5	55	0.38

ORDERING INFORMATION

TANKJET CLEANUP D55567

D55567 | 505 | A4 | - | 3.2 | P | - | EX

Modifications:
None = Standard version
EX = Meets the European ATEX standard for use in explosive environments

Surface quality:
None = Standard version
P = Outer surface polished (Ra ≤ 0.8 µm)

Capacity size:
3.2 | 4.5 | 6 | 9

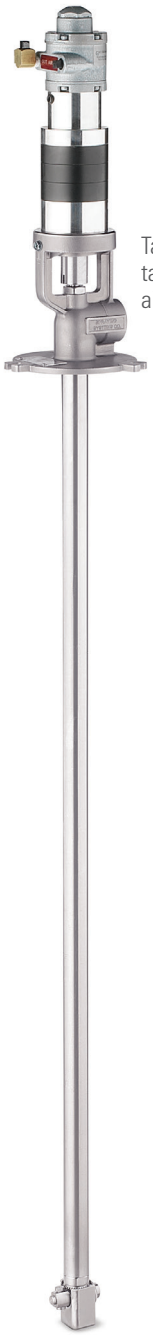
Material code:
A4 = 1.4404 / EPDM

Inlet connection:
505 = Ø 50.5 mm

TANKJET® AA090 TANK CLEANER

FEATURES AND BENEFITS

- Versatile, high-impact tank cleaner provides efficient, consistent, reliable cleaning with virtually no maintenance
- Lightweight units can be installed permanently or easily moved from tank to tank
- Unit is constructed using corrosion-resistant materials with the motor positioned outside the tank away from harmful caustics for trouble-free operation and long service life
- Component and configuration options allow easy customization to meet the needs of a variety of cleaning operations. Choices include:
  - CE-rated air or electric motors
  - Extension lengths from 0.9 m up to 3 m
  - Three nozzle capacity sizes
- Flange mounting options include: three-prong (standard), ASME® raised face, and sanitary tri-clamp
- PTFE free version for Food Contact available
- ATEX-certified versions available



TankJet AA090 tank cleaner with air motor

SPRAY COVERAGE

360°

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

TankJet AA090 tank cleaner

Ex FDA compliant materials

SPECIFICATIONS

TankJet® AA090 Tank Cleaner	Standard version	PTFE free version & PTFE free version (FC)
Max. tank diameter:	2.4 m	2.4 m
Operating principle:	Motor-driven	Motor-driven
Flow rate:	5.7 to 28 l/min	5.7 to 28 l/min
Operating pressure:	7 to 35 bar	7 to 35 bar
Max. temperature:	93 °C	60 °C
Materials:	Seals: EPDM / FFKM, PTFE (graphit filled), PA All other metallurgy: 1.4401, 1.4571	Seals: EPDM, PE UHMW, PA All other metallurgy: 1.4401, 1.4571
Inlet connection:	1" NPT or BSPT (F)	1" NPT or BSPT (F)
Motor options:	Air & electric	Air & electric
Electric motors:	230 V, 230/400 V, 50 or 60 Hz, up to IP 66	
ATEX:	available	not available
Optional accessories:	Strainers, recommended mesh size: < 150 µm See chapter E	

IDEAL FOR CLEANING:

- Drums
- Totes
- Process tanks

PERFORMANCE DATA

Model	Nozzle Size	Total Flow of Equal Capacity, (l/min*) Liquid Inlet Pressure				
		7 bar	15 bar	20 bar	30 bar	35 bar
AA090	W0005	5.7	7.6	9.1	10.6	12.1
	W0010	10.2	14.0	17.0	19.3	22.0
	W0014	13.2	17.8	22.0	25.0	28.0

*Note: Flow rates tabulated above include pressure drop through unit.

AIR MOTOR
CYCLE TIME DATA

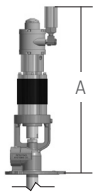
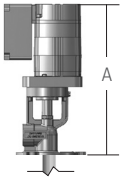
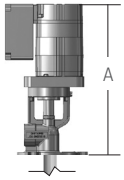
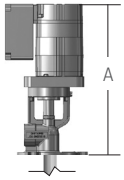
Air Pressure (bar)	Approx. Speed (rpm)		Approx. Time for One Complete Cycle (min.)	
	Liquid Pressure (bar)			
	7	35	7	35
0.41	1	1.2	31	25.8
0.55	3	3.3	10.3	9.4
0.69	5.3	5.6	5.8	5.5

ELECTRIC MOTOR
CYCLE TIME DATA

Type	Volt (V)	Frequency (Hz)	Power max. (W)	IP Rating	Speed (r/min)	Approx. Time for 1 Complete Cycle (min)
Standard	230	50	90	IP56	6.3	4.9
Standard	230/400	50	120	IP65	5.3	5.8
Standard	230/400	60	120	IP66	6.4	4.9
ATEX	230/400	50	120	IP66	5.3	5.8
ATEX	230/400	60	120	IP66	6.4	4.9

For lances, mounting kits, adapters and more, see page E6

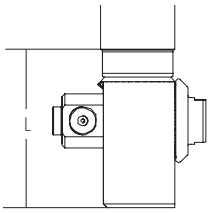
DIMENSIONS AND WEIGHTS

Air motor	Electric motor 230 V	Electric motor 230/400 V 50 and 60 Hz	Electric motor 230/400 V 50 and 60 Hz, ATEX
			
Length: 321 mm Weight: 6.4 kg	Length: 427 mm Weight: 7 kg	Length: 335 mm Weight: 10 kg	Length: 362 mm Weight: 10 kg

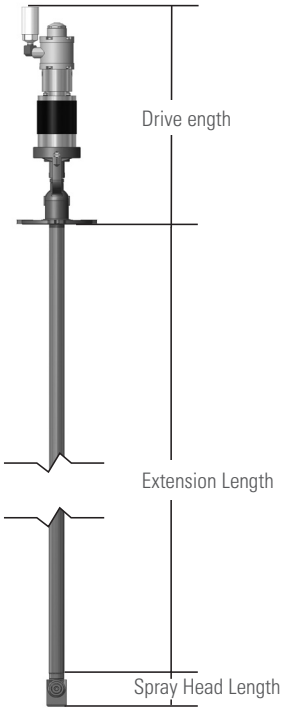
*Extension lengths available from 0.3 m to 3.0 m

**Add additional weight from the flange options' chart if not using the standard flange.

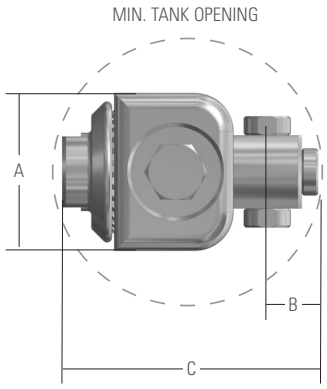
Extension Length	Weight
0.3 m	0.6 kg
0.6 m	1.2 kg
0.9 m	1.8 kg
1.2 m	2.4 kg
1.5 m	3.0 kg
1.8 m	3.6 kg
2.1 m	4.2 kg
2.4 m	4.8 kg
2.7 m	5.4 kg
3.0 m	6.0 kg

TankJet AA090 Spray Head	L (mm)	Weight (kg)
	54	0.8

TankJet AA090 Assembly



DIMENSIONS AND WEIGHTS

TankJet AA090 Spray Head	Min. Tank Opening (mm)	A (mm)	B (mm)	C (mm)
	59	29	18	51

FLANGE OPTIONS

Flange Type	Size	Sales Code	Net Weight (kg*)
Three-Prong (standard) 	—	3P	—
Sanitary Tri-Clamp Flange 	2.5	2.5SF*	—
	3	3SF	0.1
	4	4SF	1.4

*Add additional weight to tank cleaner if not using the standard flange.

Flange Type	Size	Sales Code	Net Weight (kg*)
EN 1092-1 Flange 1.4571 	DN 100	S05	5.7
	DN 65	S06	3.6
	DN 125	S07	8.4
ASME® 150# Raised Face Flange 	3	3RF	4.8
	4	4RF	7.0
	6	6RF	11.1

ORDERING INFORMATION

TANKJET AA090

Contact your local sales engineer for information about TankJet AA190 tank cleaners

TANKJET® 3996 SPRAY BALLS

FEATURES AND BENEFITS

- Stationary spray balls are ideal for sanitary rinsing and low-pressure washing, offering a low-cost way to handle easy-to-remove residues
- CIP or thread connection
- No moving parts spray balls, well-suited to clean-in-place (CIP) installations
- Self-draining design that prevents buildup
- Can be installed in any position
- Materials: Stainless steel, Alloy C-276 and PTFE

TankJet Spray ball

SPRAY COVERAGE

360°

180° Up

180° Down

260° Up

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

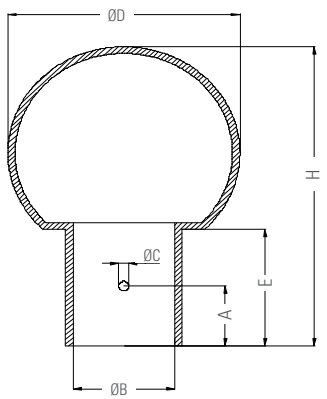
SPECIFICATIONS

TankJet® 3996 Spray Balls	
Max. tank diameter:	0.5 to 6.0 m
Operating principle:	Stationary
Flow rate:	8 to 1,300 l/min
Operating pressure:	1.0 to 2.8 bar
Max. temperature:	up to 204 °C
Materials:	1.4571, 1.4435, Alloy C-276, PTFE
Inlet tube size:	1/8", 1/4", 1/2", 1", 2", DN 8 - DN 50

IDEAL FOR CLEANING:

- Chemical processing tanks
- Pharmaceutical vessels
- Food processing vats and tanks

DIMENSIONS



TankJet 3996 Spray Balls	DN	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	H (mm)	Thread
	8	7.5	8.2	2.2	20	15	32.5	G 1/8" (male)
	10	9	12.2	2.2	24	17	37.5	G 1/8"
	15	9	18.2	2.2	30	18	42	G 1/4" ; 3/8"
	20	9	22.2	2.5	40	21	53	G 1/2"
	25	18	28.2	2.8	64	35	90	G 1"
	32	18	34.2	2.8	64	35	90	G 1"
	40	18	40.3	2.8	64	35	90	G 1"
	50	25	52.3	3.3	90	47.5	121.5	G 2"

PERFORMANCE DATA

Spray Coverage	Type	Cov.	DN	CIP size (mm)	Coverage Diameter (m)	Flow Rate l/min	
						1.0 bar	2.5 bar
360°	M1	1	8	-	max. 0.5	8.3	-
	X1	1	10	12.2	0.5 - 1.0	35.0	-
	Y1	1	15	18.2	1.0 - 1.5	70.0	-
	A2	1	20	22.2	2.0 - 2.5	128	203
	B3	1	25	28.2	2.0 - 3.0	183	288
	B5	1	25	28.2	3.0 - 4.0	292	468
	F4	1	32	34.2	2.5 - 3.5	225	367
	F5	1	32	34.2	3.0 - 4.0	362	592
	C4	1	40	40.3	2.5 - 3.5	197	320
	C5	1	40	40.3	3.0 - 4.0	380	613
	D4	1	50	52.3	4.0 - 5.0	477	785
	D5	1	50	52.3	6.0	818	1312
180° Up	X1	2	10	12.2	0.5 - 1.0	25	-
	Y1	2	15	18.2	1.0 - 1.5	50	-
	A2	2	20	22.2	2.0 - 2.5	93	143
	B3	2	25	28.2	2.5 - 3.0	145	213
	B5	2	25	28.2	3.0 - 4.0	237	383
	F4	2	32	34.2	2.5 - 3.5	163	260
	F5	2	32	34.2	3.0 - 4.0	267	445
	C4	2	40	40.3	2.5 - 3.5	160	247
	C5	2	40	40.3	3.0 - 4.0	248	413
	D4	2	50	52.3	4.0 - 4.5	325	510
	D5	2	50	52.3	6.0	517	850
	D6	2	50	52.3	10.0	602	1000

Spray Coverage	Type	Cov.	DN	CIP size (mm)	Coverage Diameter (m)	Flow Rate l/min	
						1.0 bar	2.5 bar
180° Down	X1	3	10	12.2	0.5 - 1.0	25	-
	Y1	3	15	18.2	1.0 - 1.5	47	-
	A2	3	20	22.2	2.0 - 2.5	105	163
	B3	3	25	28.2	2.0 - 3.0	117	182
	B5	3	25	28.2	3.0 - 4.0	207	333
	F4	3	32	34.2	2.5 - 3.5	130	208
	F5	3	32	34.2	3.0 - 4.0	228	367
	C4	3	40	40.3	2.5 - 3.5	173	270
	C5	3	40	40.3	3.0 - 4.0	233	370
	D4	3	50	52.3	4.0 - 4.5	283	467
	D5	3	50	52.3	6.0	512	828
270° Up	A2	4	20	22.2	2.0 - 2.5	125	197
	B3	4	25	28.2	2.0 - 3.0	167	263
	B5	4	25	28.2	3.0 - 4.0	267	437
	F4	4	32	34.2	2.5 - 3.5	190	310
	F5	4	32	34.2	3.0 - 4.0	333	543
	C4	4	40	40.3	2.5 - 3.5	182	277
	C5	4	40	40.3	3.0 - 4.0	300	500
	D4	4	50	52.3	4.0 - 4.5	462	750
	D5	4	50	52.3	6.0	750	1238

ORDERING INFORMATION

TANKJET SPRAY BALLS 3996

3996 - X1[1] - 1[2] - G1/2 - 1.4435 - P

Connection (Female thread):

None	=	CIP connection
G1/8	=	G 1/8" (only DN10)
G1/4	=	G 1/4" (only DN15)
G3/8	=	G 3/8" (only DN15)
G1/2	=	G 1/2" (only DN20)
G1	=	G 1" (only DN25, DN32 and DN40)

Material:

None	=	1.4571 (Standard)
1.4435	=	1.4435
HC22	=	Alloy C-276
PTFE	=	PTFE

Surface quality:

None	=	Standard (Ra 0.8 µm - 1 µm)
P	=	Outer surface polished (Ra ≤ 0.4 µm)

[1] = Type (chart above)

[2] = Spray coverage code (chart above)

TANKJET® UNIROKON D41892 TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Three flat sprays provide 360° coverage to rinse the entire tank
- The flow of the cleaning liquid drives spray head rotation
- Lightweight, durable and corrosion resistant
- CIP connection and ATEX-certified versions available

SPRAY COVERAGE

360°

MOUNTING OPTIONS

Vertical	↑ ↓
Horizontal	← →
45° Up	↖ ↗
45° Down	↙ ↘

IDEAL FOR CLEANING:

- Chemical containers
- Mixing tanks
- Food containers

FDA compliant materials

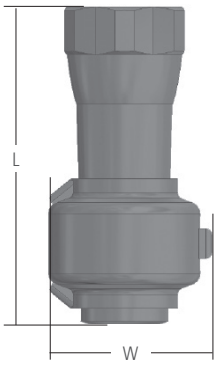
VIDEO

SPECIFICATIONS

TankJet® UniRokon D41892 Tank Cleaning Nozzle	
Max. tank diameter:	2.0 m
Operating principle:	Fluid-driven reactionary force
Flow rate:	10.6 to 25 l/min
Recommended pressure: (operating pressure)	2.0 to 4.0 bar (1.4 to 8.0 bar)
Max. temperature:	70 °C
Materials:	Polyacetal (POM) or PVDF
Inlet connection:	CIP Ø 18.2 mm, 3/8", 1/2" NPT or BSPT (F)
Optional accessories:	Strainers, recommended mesh size: 80 µm See chapter E.

DIMENSIONS AND WEIGHTS

Model	L (mm)	W (mm)	Min. Tank Opening (mm)	Weight (kg)
D41892	68	37	37	0.04



PERFORMANCE DATA

Capacity Size	Liquid Flow Capacity (l/min)				
	2.0 bar	2.5 bar	3.0 bar	3.5 bar	4 bar
3.2	10.6	11.9	13	14	15
4.5	14.7	16.4	18	19.4	20.8
6	18.4	20.3	22	23.5	25

PERFORMANCE DATA

Capacity Size	Liquid Flow Capacity (l/min)				
	2.0 bar	2.5 bar	3.0 bar	3.5 bar	4 bar
3.2	10.6	11.9	13	14	15
4.5	14.7	16.4	18	19.4	20.8
6	18.4	20.3	22	23.5	25

ORDERING INFORMATION

TANKJET UNIROKON D41892

D41892 | E | - | 1/2 | KY | - | 4.5 | - | EX

Modifications:

None	=	Standard version
EX[1]	=	Meets the European ATEX standard for use in explosive environments

Capacity size:

3.2 | 4.5 | 6

Material code: Color:

KY	=	PVDF	White (FC & FDA)
KY	=	PVDF	Black (ATEX, not FC)
POM	=	POM	Black
FC*	=	PVDF	Blue

Inlet connection:

3/8	=	3/8" NPT
B3/8	=	3/8" BSPT
1/2	=	1/2" NPT
B1/2	=	1/2" BSPT
182	=	CIP Ø 18.2 mm

Spray coverage:

E = 360°

[1] = Only available in KY and black color

* = Only upon request

For lances, mounting kits, adapters and more, see chapter E

TANKJET® VSM TANK CLEANING NOZZLE

FEATURES AND BENEFITS

- Lightweight stationary nozzles are ideal for low pressure rinsing of small vessels
- 240° spray coverage via 40 spray orifices or 120° spray coverage via 22 spray orifices
- Nozzles offer excellent chemical resistance and, with no moving parts, are suitable for clean-in-place (CIP) applications

R
RINSING

SPRAY COVERAGE

120° Down

240° Down

MOUNTING OPTIONS

Vertical	↑	↓
Horizontal	←	→
45° Up	↖	↗
45° Down	↙	↘

IDEAL FOR CLEANING:

- Chemical containers
- Pharmaceutical vats

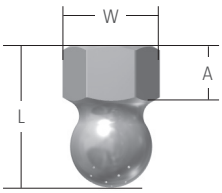
FDA compliant materials

For lances, mounting kits, adapters and more, see chapter E

SPECIFICATIONS

TankJet® VSM Tank Cleaning Nozzle	
Max. tank diameter:	1.5 m
Operating principle:	Fixed stationary
Flow rate:	10.4 to 269 l/min
Operating pressure:	0.5 to 10.0 bar
Max. temperature:	93 °C
Materials:	PVDF, PTFE, PA, Brass, 1.4305, 1.4571, Hastelloy®
Inlet connection:	1/2" or 3/4" NPT or BSPT (F)
Optional accessories:	Strainers, recommended mesh size: 300 µm See chapter E

DIMENSIONS AND WEIGHTS



Model	Inlet Conn. Size in.	L (mm)	W (mm)	A (mm)	Min. Tank Opening (mm)	Weight (kg)
VSM	1/2	45	31	16	33	0.08
	3/4	62	47	21	50	0.23

PERFORMANCE DATA

Model	Inlet Conn. in.	Capacity Size (at 5 bar)	Max. Free Passage (mm)	Liquid Flow Capacity (l/min)					
				0.5 bar	1.0 bar	2.0 bar	3.0 bar	5.0 bar	10.0 bar
VSM 120°	1/2	6	0.55	1.9	2.7	3.8	4.7	6.0	8.5
	1/2	16	0.90	5.1	7.2	10.1	12.4	16.0	22.6
	1/2	27	1.10	8.5	12.1	17.1	20.9	27.0	38.2
	3/4								
	1/2	53	1.60	16.8	23.7	33.5	41.1	53.0	74.9
	3/4		1.50						
	1/2	100	2.00	31.6	44.7	63.1	77.4	100.0	141.4
	3/4								
VSM 240°	1/2	28	0.90	8.8	12.5	17.7	21.7	28.0	39.5
	1/2	44	1.10	13.9	19.7	27.9	34.1	44.0	62.3
	1/2	90	1.50	28.5	40.3	56.9	69.7	90.0	127.3
	3/4								
	1/2	140	1.95	44.3	62.6	88.5	108.4	140.0	198.0
	3/4								
	1/2	190	2.20	60.1	85.0	120.2	147.2	190.0	268.7
	3/4								

ORDERING INFORMATION

TANKJET VSM

VSM 100 - 120 PD 4P

Material:

2A	=	Brass
4E	=	1.4305
4P	=	1.4571
8A	=	Polyamid
8G	=	PTFE

Thread:

ID	=	1/2“ BSPP
IE	=	3/4“ BSPP
PD	=	1/2" NPT (Female thread)
ND	=	1/2“ NPT (Male thread)

Spray angle:

120	=	120° down
240	=	240° down

Capacity size:

Pls. insert number from column ‘Capacity Size at 5 bar’ from chart 'Performance Data'

TANKJET® HS ROKON D26564 TANK CLEANING NOZZLE

SPRAY COVERAGE

A	180° Up
B	180° Down

MOUNTING OPTIONS

Vertical	↑	↓
Horizontal	←	→
45° Up	↖	↗
45° Down	↙	↘

FEATURES AND BENEFITS

- Compact design ideal for tanks or containers with small openings
- Ideal for rinsing small tanks and containers, the fast rotating nozzle provides thorough coverage over the vessel surface
- No motor source is required as the force of the liquid provides the spray head rotation
- Corrosion and chemical resistant materials of construction

IDEAL FOR CLEANING:

- Small containers

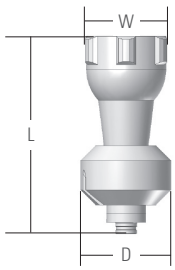
FDA compliant materials

SPECIFICATIONS

TankJet® HS Rokon D26564 Tank Cleaning Nozzle	
Max. tank diameter:	1.5 m
Operating principle:	Fluid-driven reactionary force
Flow rate:	9.0 to 13.0 l/min
Recommended pressure: (operating pressure)	1.0 to 2.0 bar (1.0 to 5.0 bar)
Max. temperature:	90 °C
Materials:	PVDF
Inlet connection:	1/2" and 3/8" NPT or BSPT
Optional accessories:	Strainers, recommended mesh size: 80 µm See chapter E.

DIMENSIONS AND WEIGHTS

Model	Inlet Conn. Size in.	L (mm)	W (mm)	D (mm)	Min. Tank Opening (mm)	Weight (kg)
D26564	1/2	70	27	35	37	0,04
	3/8		24			



VIDEO

PERFORMANCE DATA

Capacity Size	Capacity (l/min)		
	1.0 bar	3.5 bar	5.0 bar
4	9.0	17	20.5

ORDERING INFORMATION

TANKJET HS ROKON D26564

D26564	Spray Coverage	-	*Inlet Size	Material Code	Capacity Size

EXAMPLE

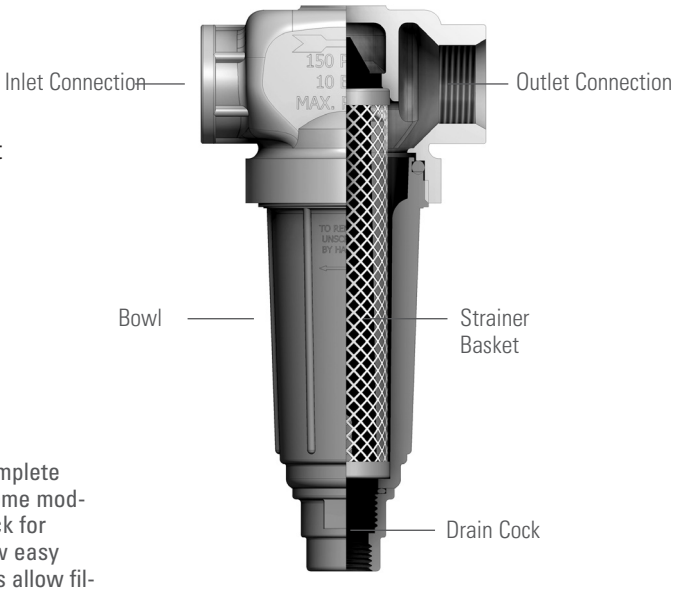
D26564	A	-	1/2	KY	4

*Add B prior to the inlet connection for BSPT connections.

ACCESSORIES

STRAINER FEATURES AND BENEFITS

- Reduce clogging in tank cleaners and tank cleaning nozzles
- Remove contaminants from liquid to ensure continuous movement of rotating spray heads
- Extend wear life of nozzles, valves and pumps
- Wide range of options: heavy duty, heavy duty high pressure, self cleaning and a wide range of mesh sizes



T-Style Strainer

T-strainers feature a removable bottom cap or plug for complete withdrawal of the screen assembly during cleaning. On some models, the bottom pipe plug can be replaced with a drain cock for quick-flush cleaning. Models with a clear nylon bowl allow easy visual inspection of the internal screen. Self-clean designs allow filtered liquid to pass through, while liquid particles are returned back to the liquid supply through a return outlet.

STRAINER OPTIONS

TWD

- 1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" female conn.
- Removable bottom plug for easy screen cleaning
- Bottom plug can be replaced with drain cock for flush cleaning
- Max. pressure: 20 bar
- Materials: Aluminum, brass, stainless steel
- Mesh: 16, 30, 50, 80, 100, 40 x 200 Dutch weave
- Use TWC for connections of 3" and up.
- TWC handles large flow rates with minimal pressure drops. Call your local specialist for application assistance.

Model B8310A:

- Designed for high pressure operation
- Removable bottom plug for easy flush cleaning of screen
- 1/4", 3/8", 1/2" female conn.
- Max. pressure: 345 bar at 66 °C
- Material: Stainless steel
- Mesh: 16, 30, 50, 100

AAB124-AL

- 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" female conn. (Inlet connections vary depending on strainer type)
- Larger size screen area requires less frequent cleaning
- Self-cleaning styles and versions with mounting lugs available
- AA124 strainers material: aluminium (head) and nylon (bowl)

Strainer Type	Strainer Part No.	Material*	Max. Pressure	Mesh Sizes
124	AAB124-AL	Aluminum head/ nylon bowl	10 bar	16, 30, 50, 80, 100
124ML with mounting holes**	AAB124ML-AL	Aluminum head/ nylon bowl	10 bar	16, 30, 50, 80, 100
124A self-cleaning version	AAB124ASC-NYB	Aluminum head/ nylon bowl	8 bar	16, 30, 50, 80, 100
430ML with mounting holes**	AAB430ML	Polypropylene head/ nylon bowl	8 bar	16, 30, 50, 80, 100, 120, 200†
430 self-cleaning version	AAB430SC	Polypropylene head/ nylon bowl	5 bar	16, 30, 50, 80, 100, 120, 200†

*Max. temperature for plastic 38 °C; max. temperature for metal 82 °C.
**For mounting on machinery or angle iron.
†120 only for 1-1/4" and 1-1/2" sizes; 200 only for 3/4" and 1" sizes.

AAB430

- 3/4", 1", 1-1/4", 1-1/2"
- Larger size screen area requires less frequent cleaning
- Self-cleaning styles and versions with mounting lugs available
- AA430 material is PP

Strainer Type	Strainer Part No.	Material*	Max. Pressure	Mesh Sizes
430ML with mounting holes**	AAB430ML	Polypropylene head/ nylon bowl	8 bar	16, 30, 50, 80, 100, 120, 200†
430 self-cleaning version	AAB430SC	Polypropylene head/ nylon bowl	5 bar	16, 30, 50, 80, 100, 120, 200†

AAB122-PP

- 1/2", 3/4"
- Max. pressure: 10 bar at 38 °C
- Materials: PP
- Version ML with M6 mounting connections
- Mesh: 16, 30, 50, 80, 100, 200

AAB122-NYC:

- 1/2", 3/4"
- Max. pressure: 10 bar at 38 °C
- Materials: PP (head), NYC (clear nylon for bowl)
- Mesh: 16, 30, 50, 80, 100, 200

MESH RECOMMENDATIONS

Nozzle Type	Mesh Recommendation
Motor Driven Tank Cleaner	100 min
Fluid Driven (Turbine)	30 to 50
Fluid Driven (Reactionary Force and Constant Speed)	200 min
Fixed Stationary	Refer to Mesh to Micron Conversion Chart

MESH TO MICRON CONVERSION CHART

Mesh	Micron	mm	ISO-Colour
16	1191	1.2	Brown Red
20	840	0.84	Beige
30	590	0.58	Red
50	297	0.29	Blue
60	250	0.24	Blue
80	177	0.17	Yellow
100	149	0.14	Green
200	74	0.08	Pink

Mesh size are marked on the screen using this colour scheme where possible.

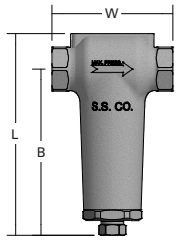
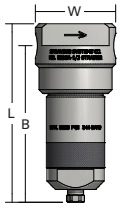
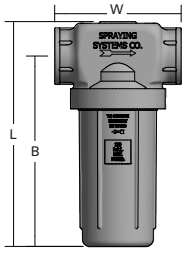
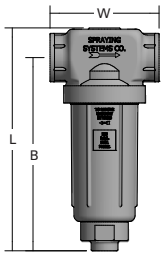
PRESSURE DROP CALCULATION

Pressure drop formula using K-Factor (see table below)

Pressure drop dp (bar) is calculated using the flow (V) in m^3/h and the flow coefficient K, that is indicated for each strainer. Sample for a AAB124AL-1-1/2-NYB-50 (K-Factor: 28.3) and a flow of 250 l/min (15 m^3/h):

$$\Delta p = \left(\frac{V}{K}\right)^2 \qquad \Delta p = \left(\frac{15}{28{,}3}\right)^2 = 0.28 \text{ bar}$$

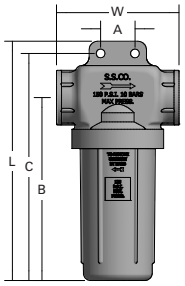
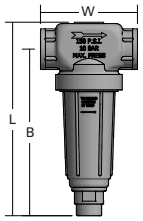
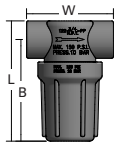
DIMENSIONS AND WEIGHTS

Strainer	Model	Inlet Conn. in.	L (mm)	W (mm)	B (mm)	Net Weight (kg)	K-Factor
	TWD	1/4	99.6	63.5	82.2	0.71	1.6
		3/8	124.6	82.6	100.7	0.80	3.5
		1/2	124.6	82.6	100.7	0.80	4.3
		3/4	191.4	114.3	158.1	2.28	8.7
		1	191.4	114.3	158.1	2.17	12.4
		1-1/4	262.1	152.4	212.9	5.39	22
		1-1/2	262.1	152.4	212.9	5.20	27.3
		2	314.1	203.2	249	10.14	49.5
		2-1/2	314.1	203.2	249	9.47	60.6
	8310A	1/4	154.7	69.9	135.6	2.18	1.6
		3/8	154.7	69.9	135.6	2.15	3.5
		1/2	154.7	69.9	135.6	2.12	4.3
	AA124	1-1/4	238.8	135.7	203.7	2.19	23.7
		1-1/2	238.8	135.7	203.7	2.18	28.3
		2	304.8	188.9	254	6.10	63.1
		2-1/2	304.8	188.9	254	5.81	69.2
	AA124SC	1-1/4	222.3	135.7	186.8	1.51	22.9
		1-1/2	222.3	135.7	186.8	1.48	29.5

Based on the largest/heaviest version of each type.

MATERIAL	CODE
Aluminum	AL
Brass	B
Ductile Iron	No code
Nylon	NYB
Polypropylene	PP
Polypropylene head/clear nylon bowl	NYC
303 stainless steel	SS
316 stainless steel	316SS

DIMENSIONS AND WEIGHTS

Strainer	Model	Inlet Conn. (in.)	L (mm)	W (mm)	A (mm)	B (mm)	C (mm)	Net Weight (kg)	K-Factor
	AAB124ML	3/4	202	106.4	25.4	149.6	189.3	0.88	8.7
		1	202	106.4	25.4	149.6	189.3	0.86	13
		1-1/4	246.1	135.7	38.1	183.7	232.6	1.18	23.7
		1-1/2	246.1	135.7	38.1	183.7	232.6	1.11	28.3
		2	367.8	188.9	60.3	285.3	351.9	3.06	63.1
		2-1/2	367.8	188.9	60.3	285.3	351.9	3.06	69.2
	AAB124ASC	3/4	211.5	106.4	–	182.1	–	1.49	8.8
		1	211.5	106.4	–	182.1	–	1.43	13.4
	AAB122	1/2	102	77.8	-	92.1	-	0.11	4.3
		3/4	102	77.8	-	92.1	-	0.10	8.7

Based on the largest/heaviest version of each type.

ORDERING INFORMATION

TWD AND TWC STRAINERS

Inlet Conn.*		Model	—	Material Code		Mesh Size
EXAMPLE						
B1/4		TWD	—	SS		100

AA124/AA430 SELF-CLEANING STRAINER

Model*	—	Inlet Conn.	Self Cleaning**	—	Material Code	—	Mesh Size
EXAMPLE							
AAB124	–	1-1/4	SC	–	NYB	–	50

8310A STRAINER

Model*	—	Inlet Conn.	—	Mesh Size
EXAMPLE				
B8310A	–	3/8	–	100

*BSPT connections require the addition of a "B" prior to the inlet connection or model.
**Leave blank for NPT version

TANK CLEANING LANCES FEATURES AND BENEFITS

METALLIC/ WELDED SOLUTIONS

- Custom CIP lances/wands, dip tubes, tube manifolds, spray rings and more designed and fabricated to your exact requirements
- Materials of construction: 316L stainless steel, Hastelloy®, AL6XN® and other exotics
- Welders and weld/fabrication procedures BPVC Sect. IX compliant as required by the ASME® BPE

NON-METALLIC SOLUTIONS

- Non-metallic materials available upon request, including: Polypropylene, PVDF, PTFE and more
- Plastics and elastomers available with FDA or USP Class VI certificates
- GMP manufacturing procedures and fabrication

Tank cleaning lance with TankJet 63225 spray ball

SPECIFICATIONS

Model	Tank Cleaning Lances
Nozzles:	All TankJet® nozzles and spray balls
Connection:	Select NPT or BSPT connections, cam lock connections, raised face flanges or tri-clamp fittings
Pipe/tube size and length:	Custom
Materials:	Specify material for each component – stainless steel, PTFE, PVDF, brass, polypropylene

ORDERING INFORMATION

Call your local spray expert for application assistance or to place an order.

ADAPTERS AND MOUNTING KITS
FEATURES AND BENEFITS

- Adapters and kits come in many sizes and configurations to ensure the proper fit for various tanks and vessels
- A wide array of materials are available that can handle applications ranging from chemical to sanitary

ADAPTERS AND MOUNTING KIT OPTIONS

Manway Adapter

- Includes vent for vapor release, shield to prevent liquid from spraying into vent and removable plug that allows cone to be filled with liquid if additional weight is desired
- Tapered manway adapter enables drop-in-place installation of the TankJet 360 with tanker truck openings between 17" and 21" (432 and 533 mm); 304 stainless steel construction

Adapter for TankJet AA090 and AA190 Tank Cleaners

- Has a 6.25" OD, Celcon® construction with 304 stainless steel screws
- Chemically-resistant adapter enables any air or electric TankJet AA090 or AA190 tank cleaner to be used in tanks with inlet sizes ranging from 2" to 4"

Mounting Kit

- Includes everything you need – flange, lock washers, bolts and gasket
- Simplify mounting the standard TankJet AA090 or AA190 three-prong flange to a 4" 150# flange. Kit includes a 4" 316 stainless steel raised face flange, stainless steel lock washers, bolts and PTFE gasket

DIMENSIONS AND WEIGHTS

Item	Model	Length (mm)	Outside Diameter (mm)	Weight (kg)
Tapered Manway with 1-1/2" NPT (M) Both Ends	46573	1,168	559	34
Adapter	45260	3.19	159	0.45
Mounting Kit	39204	24	229	6.8

ORDERING INFORMATION

ADAPTERS

Model – Material Code

EXAMPLE: **45260** – **CE**

MOUNTING KITS

Model – Flange Size – Material Code

EXAMPLE: **39204** – **4** – **316SS**

SPRAYING SYSTEMS CO.'S TRADEMARK USAGE

The following is a current list of Spraying Systems Co.'s trademarks registered in the United States. Some marks are registered in other countries as well.

FullJet®

TankJet®

REGISTRERED TRADEMARK CREDITS

The following trademarks are registered to other entities in the US and may be registered in other countries as well.

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ANSI®
ASME®
Celcon®
Hastelloy®
Ryton®
Viton®

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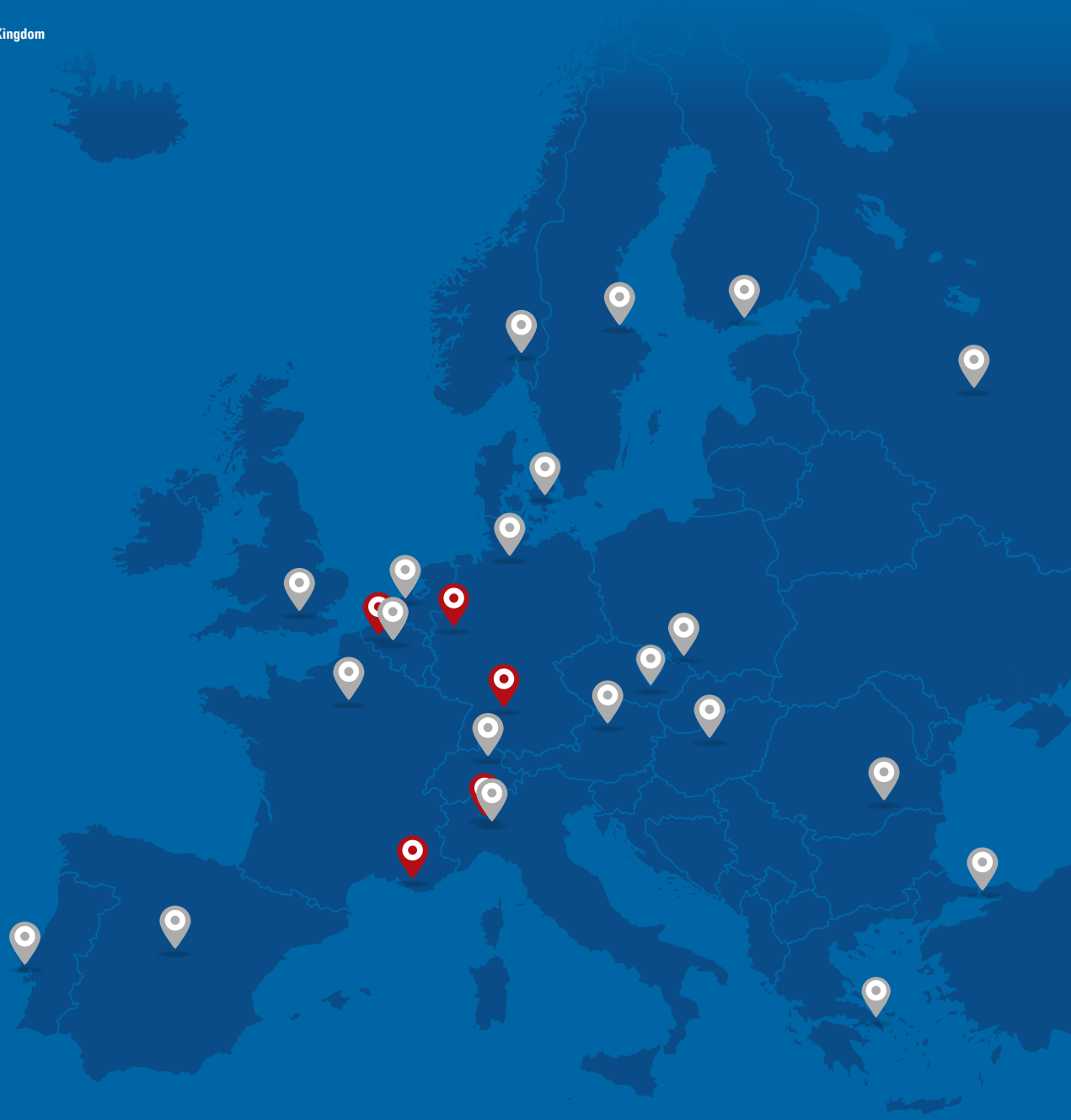

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