

TANK WASHING NOZZLE



Group enterprise:
DongGuan Changyuan Spraying Technology Co.,Ltd.
Hunan Changyuan Technology Co.,Ltd.

Company profile



Dongguan Changyuan Spraying Technology Limited Company, branding as CYCO, founded in 1999, is a professional manufacturer of spray nozzles and aftermarket sales. We are committed on research and design of industrial spray nozzles which includes full cone nozzles, hollow cone nozzles, spiral nozzles, air atomizing nozzles, tank washing nozzles and millions of different nozzles for over 22 years.

We are supplying many types of spray nozzles which are applied to marine scrubber for Exhaust Gas Cleaning System, such as spiral nozzle, short type full cone nozzle and large flowrate full cone nozzle which are made of plastic, silicone carbide, and stainless steel with various parameters.

Let us walk you through.

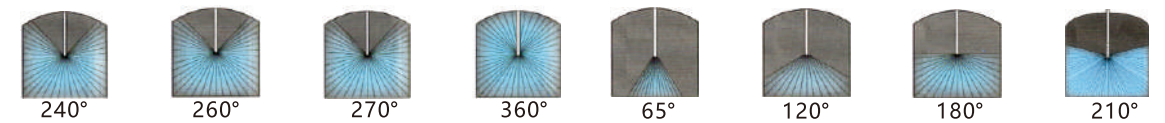


Tank washing optimizing

It is a challenging subject that washing your tanks thoroughly by your best way and reduce the expensive chemicals, water and labor at the meantime. You can maximize the cleaning equipment performance through many respects. We have selected several excellent cleaning solutions for you here which will help to optimize cleaning efficiency.



Covering area of spray



Are you still cleaning tanks manually?

You get the following benefits by applying the automation technology:

The cleaning effect will be more consistent and thoroughly; Avoid direct contact with dangerous chemicals, and workers are safer;

Faster cleaning, downtime minimization, tanks can be quickly restored to working state;

Usage of water and chemicals will be reduced drastically and lower the cost of wastewater disposal.

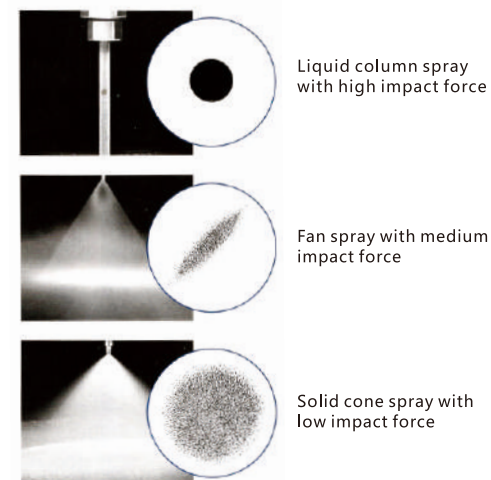
Extra labor freed from cleaning operations can create other benefits for the company.

If you are currently using cleaning nozzles or tank washing machines, you can improve your cleaning efficiency greatly through a few simple changes or try to change the cleaning device.






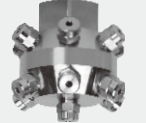




If you want to optimize tank washing, you need to evaluate the proposed operation firstly.

- How many tanks need to be cleaned? Diameter, length and height of each tank.
- Are there any obstacles such as stirrer or mixer inside the tanks that your company using now?
- Compared with other areas, is there any specific area needs to be more careful cleaning, such as degreased line?
- What residues need to be removed? Are these residues sticky? Can residues be washed out easily?
- Whether need detergent, is the water sufficient? Whether need to heat the cleaning liquid?
- Is there any problem with the cleaning method you are currently applying?
- With the clear answer to these questions, what you need to do next is to evaluate which cleaning product you are going to use.





Spraying pattern:



Quick reference guide

Nozzle series		Cleaning diameter (m)	Pressure (bar)	Flow range (L/min)	Working principle drives form	General application
Fixed Spray Ball S360/Y360 serie		0.35-3.9	1.5-10	6-165	Solid static type	Light cleaning
Rotary cleaning ball ROT serie		0.8-3	2-7	6-165	Liquid driven turbine	Light cleaning
Telescopic cleaning nozzle CY-SS		0.6-1.5	2-7	30-50	Liquid driven telescopic	Light cleaning
Three dimensional rotary can washer CYCO-05		2-6.5	5-20	26-135	Liquid actuation Rotation of gear	high pressure cleaning
Large three-dimensional can washer 360A/B		13-45	5-20	105-260	Liquid actuation Rotation of gear	high pressure cleaning
Stationary type K4-6160\10250		1.5-3.0	1.5-3.5	35-230	Solid static type	high pressure cleaning
Stationary type K4-9800		0.6-2.5	4-10	20-43	Solid static type	Light cleaning
Rotary tank washer K4-28250		0.5-2.0	3-10	31-150	Liquid driven turbine	Light cleaning
Rotary tank washer K4-19250		0.4-2.5	1.5-12	31-150	Liquid driven turbine	Light cleaning
Large three-dimensional can washer Cs090		5-20	10-40	40-200	Liquid actuation Rotation of gear	high pressure cleaning

Quick reference guide

Nozzle series		Cleaning diameter (m)	Pressure (bar)	Flow range (L/min)	Working principle drives form	General application
Rotate the ceramic cleaning nozzle M-50		0.35-3.9	1.5-3	20-132	Liquid driven turbine	Light cleaning
Teflon can washer 36300 36300R		0.6-1.2	0.7-3.5	31-295	Liquid actuation Sliding bearing	Light cleaning
Teflon can washer 36300 36300R		0.6-1.2	0.7-3.5	31-295	Liquid actuation Sliding bearing	Light cleaning
Teflon can washer 36500		0.5-1.8	0.7-3.5	16-49	Liquid actuation Sliding bearing	Light cleaning
Spiral can washing nozzle SPJT series		1.2-1.5	0.7-5	11-260	Solid static type	Light cleaning
Rotary bottle cleaner CYCO-08		Less than 8	4-14	35-65	The liquid drives the gear to rotate	high pressure cleaning
Rotary can washer CYCO-100		Less than 6	4-10	80-145	The liquid drives the gear to rotate.	high pressure cleaning
Universal bottle and can cleaner CYCO-10		Less than 8	3-10	400-750	Liquid drives the reaction force	high pressure cleaning
Bottle cleaner CYCO-15		Less than 12	5-22	CY15-4-6: 90-190 CY15-2-6: 50-140	The liquid drives the gear to rotate.	high pressure cleaning
High pressure tank cleaning system CY-08H		Within 10 meters	80-200	1.2:11.6-18.4 1.5:17.6-28.3 1.6:21.5-34.0 1.8:26.8-42.4	Rotation driven by stepper motor	high pressure cleaning

Six key specification guidelines

Spray distance

Spray distance is usually expressed as tank diameter. If you are using a tank with a diameter of 20 feet (6m) and a height of 40 feet (12m), you will need two spray tank washers with diameter of 20 feet (6m) or a tank washer with diameter of 40 feet (12m).

Impact force

You can increase the impact by increasing the flow or pressure. Relatively speaking, the way to increase the flow is particularly effective. If the flow rate is doubled, the impact force can also be increased by 100%, while if the pressure is doubled, the impact force can only be increased by 40%. In a word, to ensure the optimal cleaning efficiency, the best solution is still to choose tank cleaning products with sufficient impact force.

Flow rate

Operating at the lowest possible flow can significantly reduce operating costs. In this way, cleaning fluid, sewage treatment and energy consumption can be greatly reduced. In view of this, our basic guideline is to use flows between 0.2 gal/min/ft²(7 l/min/m²) 2.0.4 gal/min/ft²(1.5 l/min/m²). This guideline usually applies to stationary nozzles where all surfaces of tanks can be flushed simultaneously. Rotating nozzles are usually in contact with tank parts at a certain time, allowing for lower flow rates.

Spray pattern

Solid stream sprays provide the greatest impact force, followed by fan and full cone sprays

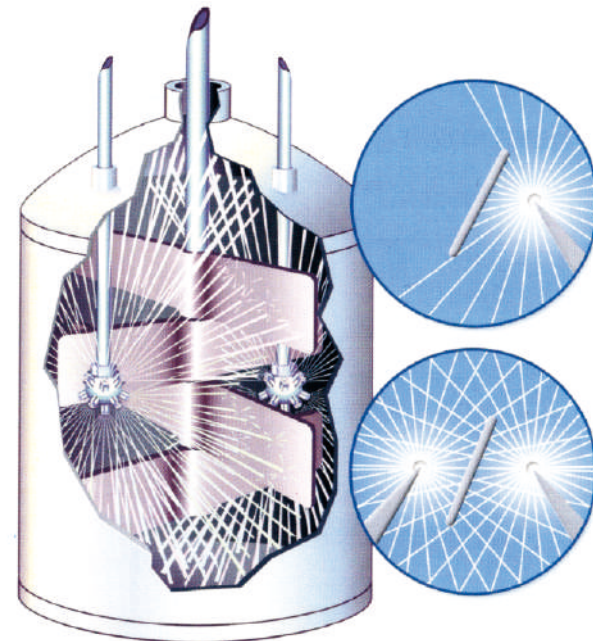
Spray coverage

Spray coverage of tank washing nozzle varies from 65° to 360°. To reach all areas of the tank, you may need to use multiple nozzles, especially if there is a mixer in the tank.

Material

In view of the durability and high temperature resistance of stainless steel, most tank washing nozzles are made of stainless steel. Nozzles made of PTFE(teflon) or PVDF(polyvinylidene fluoride) are used for operations involving corrosion protection requirements. Make sure the material with the seal or o-ring device is compatible with the cleaning fluid.

Flow rate	Pressure	Relative impact
13gpm(50 l/min)	45 psi(3 bar)	1.0
13gpm(50 l/min)	90 psi(6 bar)	1.4
26gpm(100 l/min)	45 psi(3 bar)	2.4



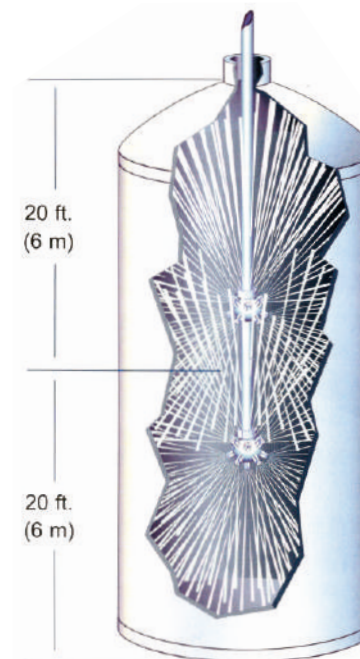
Free evaluation of tank washing:

After you have read this unit, you may consider taking advantage of our free on-site tank cleaning evaluation. Our company will send a tank cleaning expert to the site to conduct field inspection of related operations.

If you are using tank cleaning nozzle, our company's experts will check the nozzle and evaluate its model, layout and position. Our company's experts will record the flow rate, operating pressure, cleaning fluid and residue to be removed. After the evaluation, our company will submit a written summary report on your previous operation and improvement of cleaning efficiency.

Contents

- Fixed Spray Ball S360/Y360
- Rotary Cleaning Ball ROT Serie
- CY-SS Telescopic Nozzle
- CYCO-05 Rotary Tank Cleaning
- 360-Tank Cleaning Nozzle
- K4 Tank Washing Nozzle(6160-10250)
- K4 Tank Washing Nozzle(9800)
- K4 Tank Washing Nozzle (36250-28250)
- SPJT Bottle Cleaning Nozzle
- M-50 Rotating Tank Washing Nozzle
- 36300-36500 Tank Washing Nozzle
- 36300/R Tank Washing Nozzle
- K4 Tank Washing Nozzle(19250)
- CYCO-08 Rotary bottle and jar cleaner
- CYCO-100 rotary can washer
- CYCO-10 universal bottle and jar cleaner
- CYCO-15 bottle and jar cleaner
- CY-08H high pressure tank cleaning system
- Company strength
- Certificate
- Quality assurance



Cleaning of Pharmaceuticals Processing



TankCleaning of Chemical Processing

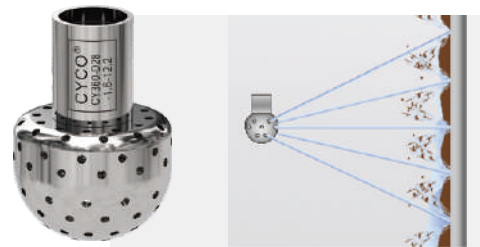


TankCleaning of Food Processing Tank

Fixed Spray Ball S360/Y360

Product Description

Sanitary fixed spray ball ball is a kind of cleaning equipment of can washer, its function is mainly used to clean the residual material inside the tank. It is a liquid or steam in the ball body pressurization, through the multi-point small hole spraying and achieve the cleaning effect, the spray hole can be customized according to the needs of different angles or range. Fixed spray ball links are mainly: clamp type, internal thread, welding, pin type.

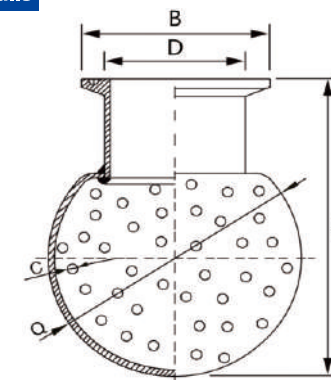


Product Description

- 1、Material of main body: SS304/316L
- 2、Nominal diameter: DN25-50
- 3、Driving pressure: $\geq 0.4\text{Mpa}$
- 4、Application scope: beverage, dairy products, beer, food, cosmetics, medicine, chemical industry, water treatment and so on.

Fixed Spray Ball S360/Y360

Quick Release Spray Balls

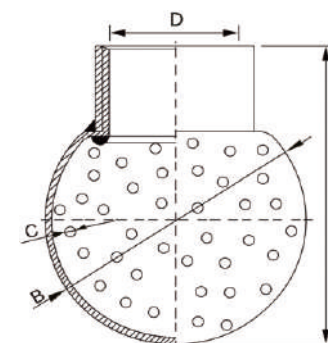


Linking method: clamp type

Dimensional data

D	B	Q	C
19.1	25.2	38	2
25.4	50.5	45	2.5
38.1	50.5	53	3
50.8	64	76	3
63.5	77.5	91	3

Inner filament spray ball

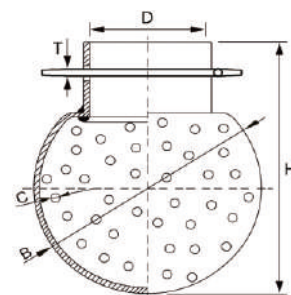


Linking method: female thread

Dimensional data

IN	D	B	C
1/4"	12.1	28	1.5
3/8"	15.1	32	2
1/2"	19.2	38/45/53	2/2.5/3
3/4"	24.4	45/53	2.5/3
1"	30.8	56/63	3
1-1/4"	39.2	63	3
1-1/2"	45.6	63/76	3

Pin Spray Balls

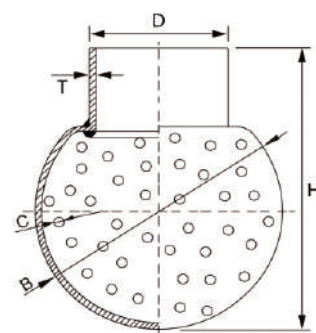


Linking method: pin

Dimensional data

D	B	C	T
12.9	28	1.5	2
19.3	38/45	2/2.5	2
25.6	45/53	2.5/3	2
32	53	3	2
38.3	53/63	3	2
51	76	3	2

Welding Spray Balls

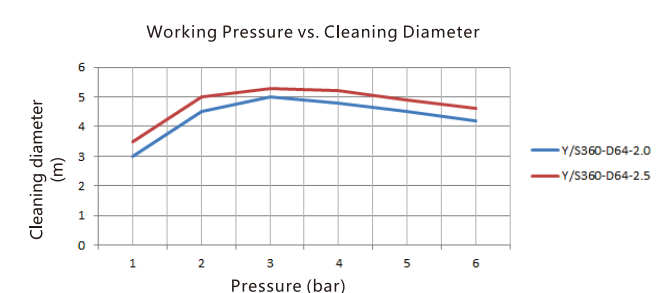
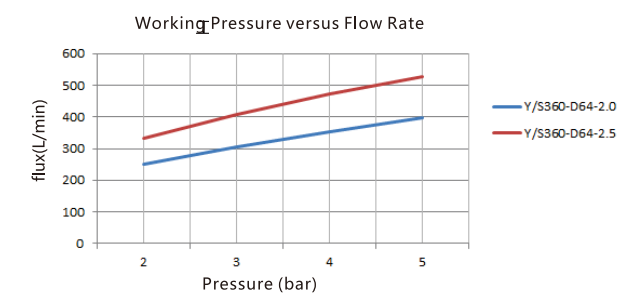
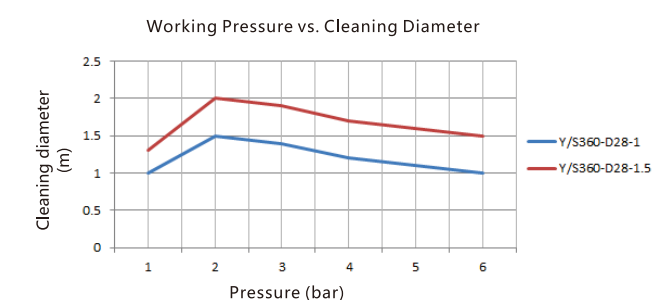
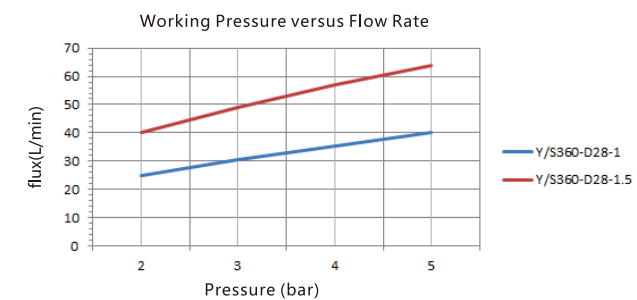


Linking method: Welding type

Dimensional data

D	T	B	C
12.7	1.5	28	1.5
19.1	1.5	38	2
25.4	1.5	45/53	2.5/3
31.8	1.5	53	3
38.1	1.5	53/63	3
50.8	1.5	63/76	3

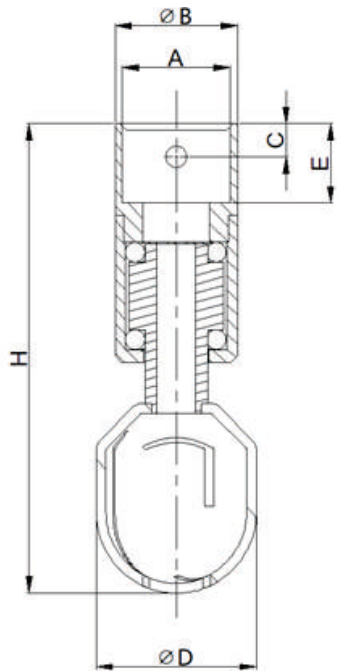
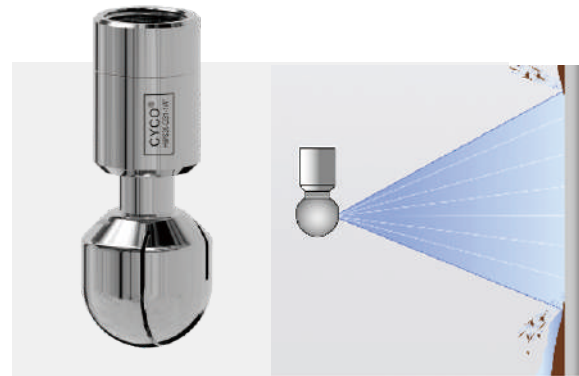
Performance data



Rotary cleaning ball ROT series

Design Features

- High Standard Surface Treatment
- Suitable For High Temperature Environment
- High Corrosion Resistance (All 316L Stainless Steel)
- Comply With FDA&EG 1935/2004 Standard
- Available to provide AETX Certified Explosion-proof Version



1. Main Specification: Big improvement on Weld treatment, internal structure and surface polishing.
2. Machine casting 0.5um is the best proof of the polishing effect.
3. Solved the biggest problem in industry to through improvement on nozzle caliber and increased the upward water distribution, Riboflavin cleaning validation is the best proof.
4. ROT series products have a cleaning efficiency rating of 2 and is excellent for rinsing and removing light stains. It is mainly used for food and beverage industry, chemical and pharmaceutical industry and other similar cleaning situation.
5. ROT series products are made from AISI 316L stainless steel and can be used at temperatures up to 250°C, ensure to use different cleansers widely.

Notices

Recommend to operate with compressed air within short period. If working pressures is higher than recommended, it will caused higher abrasion rates and smaller droplets. This may affect the final cleaning effect.



Rotary cleaning ball ROT series

more models

Type	Model	Spray Angle	Connection way	connection size	connection Standard	Ball Outer Diameter	Connection Inner Diameter (mm)	Standard Flow (cubic/bar)
ROT	ROT-D24-0.8	360	threaded connection	3/8"	DIN11850	Φ24	3/8"	1.40m³/h,@2bar (23L/min)
	ROT-D24-0.8	360	Pin Connection	Inner DiameterΦ15.4	DIN11850		15.4	
	ROT-D31-1	360	threaded connection	1/2"	DIN11850	Φ31	1/2"	2.30m³/h,@2bar (38L/min)
	ROT-D31-1-	360	Slip-on connection	Inner DiameterΦ21.8	DIN11850		21.8	
	ROT-D38-1	360	threaded connection	1/2"	DIN11850	Φ38	1/2"	4.20m³/h,@2bar (69L/min)
	ROT-D38-1	360	Slip-on connection	Inner DiameterΦ25.4	DIN11850		25.4	
	ROT-D46-1.2	360	threaded connection	3/4"	DIN11850	Φ46	3/4"	5.60m³/h,@2bar (92L/min)
	ROT-D46-1.2	360	Slip-on connection	Inner DiameterΦ33	DIN11850		33	

Application of automatic rotating cleaning ball

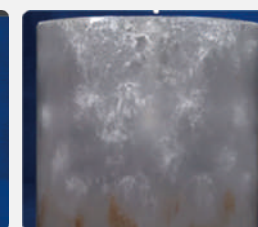
Automatic rotating cleaning ball is for full cleaning and jetting with cleaning fluid. It is specially designed for the inner five-gallon tank cleaning. After long time repeating test and researching, it prove that its unique design has a small flow rate, high efficiency and saves cleaning liquid. It is Suitable for lifting equipment. Specifically used for water barrel cleaning, mineral water barrel cleaning equipment, 3-gallon barrel cleaning and 5-gallon barrel cleaning.



Spray effect



At beginning



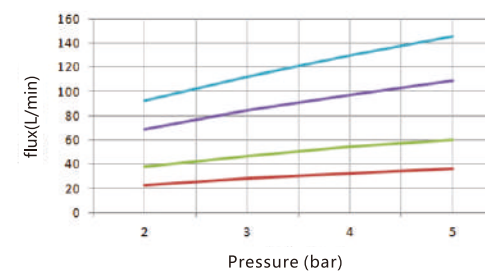
After 10 mins



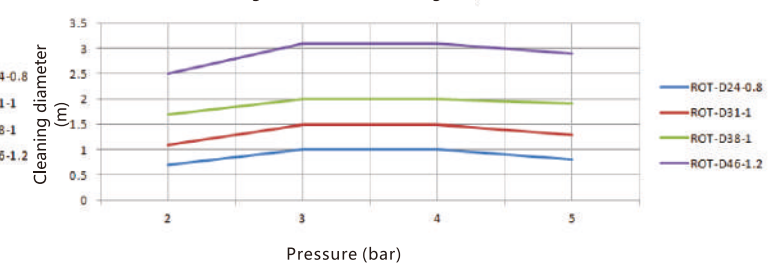
After cleaing

Performance data

Working Pressure versus Flow Rate



Working Pressure vs. Cleaning Diameter



CY-SS telescopic nozzle

DESIGN FEATURES:

- High-Impact Cleaning, Hygienic design
- Minimum cleaning fluid consumption
- Direct fluid drive
- Automatic lubrication
- 1.8m impact radius

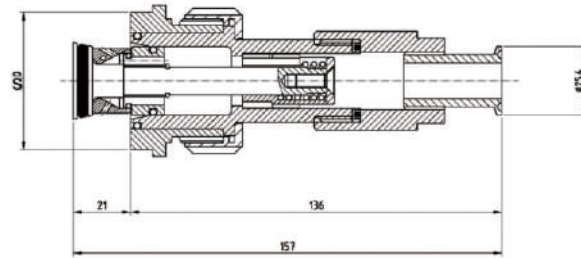


type	model	Spray angle	Connection Method	Thread size	Connection standard	Ball Outer Diameter	Connection inner diameter (mm)	Standard Flow (cubic/bar)
telescopic	RT-D54-1/2	180	thread	1/2"	DIN11850	/	18.2	1.80m ³ /h, @2bar (30L/min)



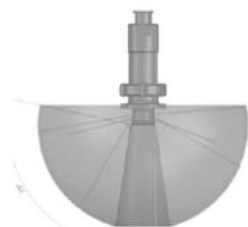
Telescopic CIP nozzle

The nozzle head is flush with the equipment mouth when not in use (The equipments are spray drying chamber, cyclone, fluidized bed, storage tank, pipeline, etc.). During nozzle operation, water is pumped to the nozzle under pressure, which put the nozzle head into the correct position in the tank to clean the equipment. Once the water stops, the nozzle head automatically retracts to its original position and stops liquid residue in time.

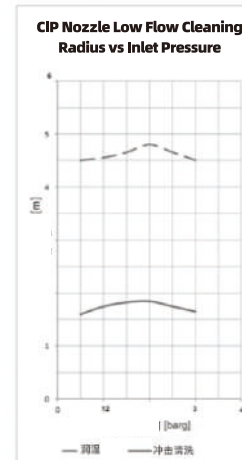
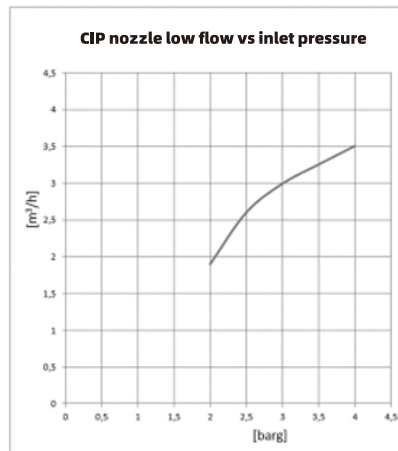


Specification

Wetting Radius: Up to 4.5m
 Impact Cleaning Radius: Up to 1.8m
 Spray Angle: 70-150°
 Maximum Operating Temperature: 120°C
 Maximum Ambient Temperature: 150°C
 Supply Pressure: 1.8-4 bar
 Recommended Pressure: 2 bar
 Liquid Flow: 1.8 m³/h @ 2 bar



cleaning impact radius blind spot less than 30°



CYCO-05 Rotary tank cleaning nozzle



Actual data form	
Pressure (bar)	Flow (L/m)
3	24
4	28
5	32
7	37
10	45
12	52
15	56

CYCO-5 Data Sheet

Model: CYCO-05	Type: Impeller Reducer Drive
Weight: 2.6kg	Working Pressure: 4-20bar
Recommended Pressure: 5-15bar	Cleaning Cycle: 4-8mins
Material: 316L	Cleaning Angle: 360°
Cleaning Diameter: 5meter	Minimum Mounting Diameter: 105mm

Connection: 3/4 BSPP Female Thread (Customized connection optional)

Theory: The Rotary tank washer nozzle drives the turbine to drive the internal deceleration mechanism through the cleaning fluid. The gear mechanism runs according to the set trajectory to achieve rotation, and realizes 360-degree cleaning thoroughly.

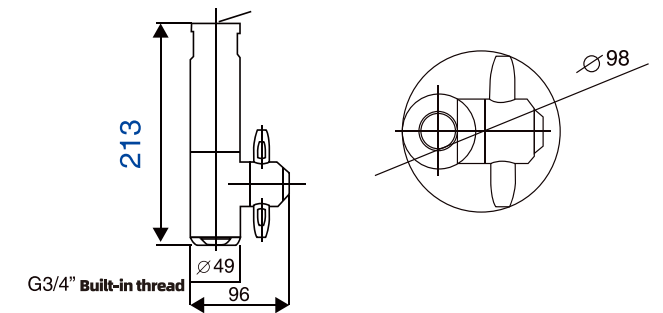
Application: It is suitable for three-dimensional cleaning of medium&small storage tanks, tanker truck and underground storage tanks, such as cleaning, beer, pharmaceutical, chemical, industrial fermentation tanks or other occasions which require high impact cleaning.

Features: Independent reduction gearbox mechanism, good sealing, strong impact water flow.
 Order Information

OrderInfo

Model: CYCO-05	Orifice: 4	Nozzle quantity : 4
Angle: 360°	Material: 316L SS	Connection: BSPP 3/4

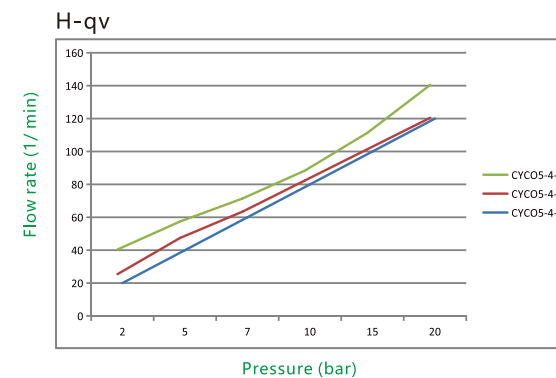
Pictures



Property

1. Perfect structure design, and been able to generate larger impact water flow.
2. Excellent sealing design, water leakage rate is only 3%, more economical cleaning solution
3. Independent gearbox design to prevent internal gear damage, and been able to work under conditions of poor water quality.

Technical Data

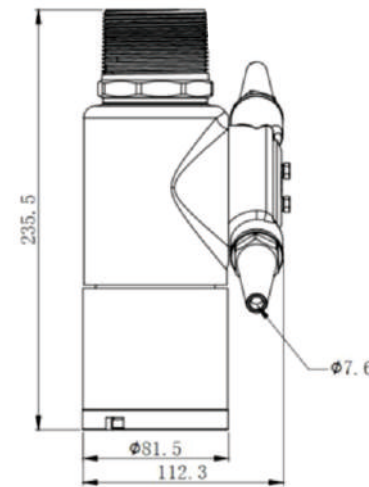


Technical highlights

Working temperature	30	60	90	120	150	180
Maximum tank value	5	10	15	20	25	30
Manufacturing	1	2	3	4	5	6
Materia	316L	PEEK	EPDM			
Technical highlights	Self-lubricating, self-cleaning, independent gearbox design					
Other parameters	2-6 minutes cleaning cycle, minimum opening 100mm, weight 2.6KG, connection 3/4BSPT.					

360-Tank cleaning nozzle

K4 Tank Washing Nozzle (6160-10250)



Product Description

Model 360 is a very durable and reliable tank cleaning machine, covering all the functions required to deal with the most serious tank cleaning problems.

- Model 360 with unique design, long service life and short cleaning time, its suitable for all kind of storage tank cleaning.
- Model 360 with 2 nozzles, it provides a powerful and thorough 360° cleaning mode every 60 revolutions.
- Optional thread size and thread connection way, predictable cleaning affects and short cleaning time.
- The structure of gear reducer and the combination of rotor and stator can meet most application requirement.
- Built-in filter can help to decrease the blockage and prolongs the using life, meanwhile, users can repair it by themselves and easy to maintain.



360-A

Clean Angle: 360°	Recommend Pressure: 3.4-20bar
Material: 316L、PTFE	Medium: Liquid
Male thread connection	Weight: 5.1KG
Max working temperature: 95°	Clean diameter: 15.3m
Working pressure: 3-15bar	Min cut size: φ290mm

360-B

Clean Angle: 360°	Recommend Pressure: 3.4-20bar
Material: 316L、PTFE	Medium: Liquid
Female connection	Weight: 11.6KG
Max working temperature: 93°	Clean diameter: 30.5m
Working pressure: 3-22bar	Min cut size: φ320mm

Advantages and features

- Clean large tank from 8m to 25m
- With unique and precise rotating mechanism.
- The nozzle rotates 360° around the horizontal and vertical axes at the same time, and a dense mesh is made in the container to ensure that every corner of the container is thoroughly cleaned by the high-impact water flow.
- Pressure range: 3-15bar, suggest to run it under 4-13bar.
- Flow rate range: 6-15ton/h
- Cleaning time is from 5min to 35min.
- Connection size: 2" Male thread (BSPT, NPT)

Design Features

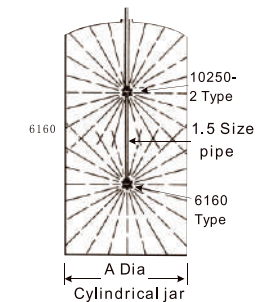
The 6160 fixed tank washing nozzle assembly features a large flow capacity for cleaning tanks up to 3.1 meters in diameter .

The flow rates can be changed by using the size of 1/4" or 1/8" full cone spray nozzle .The 6160 nozzle can pass through tank mouth of 130mm of large in diameter .

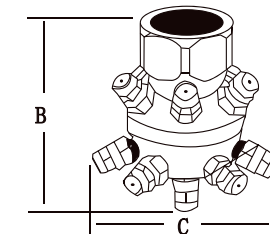
For cleaning large tanks where extra-large flow capacity is use to clean the tank which diameter reaches 6.7 meter. It uses size of 1/2", 3/4 "or 1" full cone to change the flow rates

The 10250-1 nozzle assembly can pass through tank mouth of 230mm in diameter .For deep tanks the 10250-1 version is available with a 1.5 inch bottom outlet connection for use with a pipe extension and a 6160 nozzle assembly.

6160 Type



10250 Type



On Application

- Washbox defoaming
- Stock tank cleaning

Perfomancedata

Pipe Size NPT or BSPT (Female)	Nozzle in the first order number	Flow rate (l/min.) at diferent pressures & Aprox. Max. Tank Dia								Tank dia A (m)	Size	
		1.5 Bar		2 Bar		3 Bar		3.5 Bar			Height B (mm)	Dia C (mm)
		l/min	diameter jar A (m)	l/min	diameter jar A (m)	l/min	diameter jar A (m)	l/min	diameter jar A (m)			
3 Inch	10250-1-1/2	280	3.0	320	3.5	390	3.5	415	4.5		166	191
	10250-1-3/4	580	3.5	660	4.0	800	4.5	860	5.0		174	210
	10250-1-1	1000	4.0	1130	5.0	1370	6.0	1470	6.5		183	229
1 1/2 Inch	6160-1/4GG5	35		40		48		52		1.2	114	114
	6160-1/4GG10	70		80		97		104		2.1	114	114
	6160-1/4GG22	155		177		215		230		3.0	121	127

K4 Tank Washing Nozzle(9800)

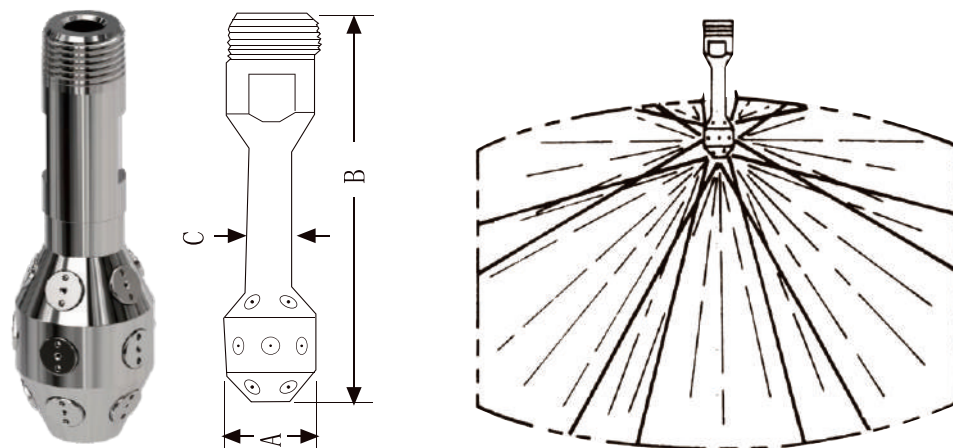
K4 Tank Washing Nozzle(36250-28250)

Design features

The 9800 washing nozzle is designed for effective cleaning of small containers .

The nozzles is available in a choice of 15 or 21 full cone spray tips that can provide complete coverage of the interior surface of the small containers at pressure up to 10 bar.

The 9800 nozzle fit through a standard drum mouth .It can be installed on a self driven drum washer .The biggest diameter of the spray tip is 35mm with a 16mm reduced neck design .Constructed of SS,this nozzle is an ideal application when max. corrosion resistance is required.



Design Features

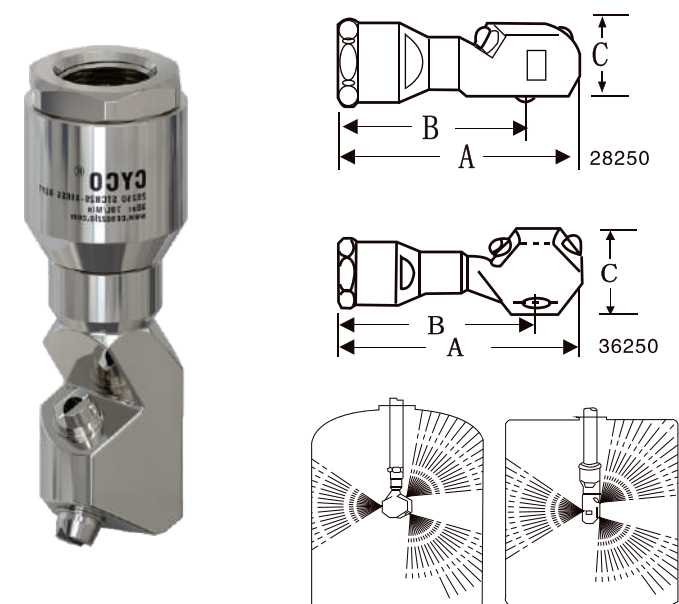
Feature of 36250/28250 Compact Nozzle:

There are three high-pressure flat fan spray nozzles at the rotary spray head. The spray tip should be precisely oriented, in order to well wash all inner surface.

Therefore, there two models of nozzle can be used to effectively wash inner of small bottle, jar and barrel.

36250 Nozzle body is made of anticorrosive plastic, and bearing spring is made of hard stainless steel for max. wearable life and high pressure washing with max. Pressure of 5 bar.

28250 Impact Nozzle can pass inlet with diameter of 42 mm. The sector spray head with low flux has good effect to wash small container. The spray body is made of 316 stainless steel for max. wearable life and high pressure washing with max. pressure of 7 bar.



Performance data

Nozzle order number	Capacity (l /min.)								
	1Bar	2Bar	3Bar	4Bar	5Bar	6Bar	7Bar	10Bar	10Bar
9800-15-SS	-	-	-	20	23	25	26	31	31
9800-21-SS	-	-	-	28	31	34	36	43	43

Performance data

Nozzle Order Number	Capacity (l/min.)					
	1Bar	1.5Bar	2Bar	2.5Bar	3Bar	4Bar
36250-STCN16-PP	49	59	68	76	84	94
36250-STCN18-PP	101	121	140	159	179	201
36250-STCN27-316SS	22	27	32	38	43	49
36250-STCN29-316SS	40	48	55	62	70	79

Dimensions and weight

Based on largest /heaviest version of each type

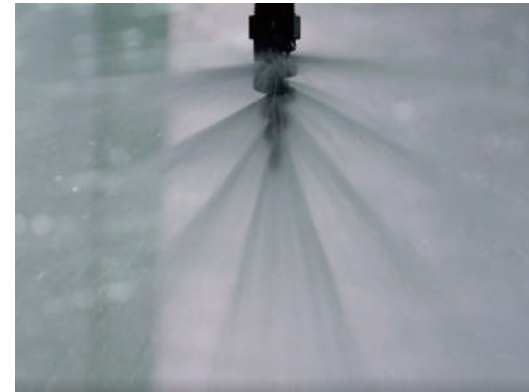
Nozzle serial number	9800-	Pipe joints NPT or BSPT (male)		1 Inch	Net Weight(Kg)
A(mm)	35	C (mm)	16		0.51
B(mm)	156				0.51

Size and weight

Nozzle Model	Joint NPT or BSPT (Female)	A (mm)	B (mm)	C (mm)	C (mm)	Hexagon (mm)	Net Weight (KG)
36250-	3/4 inch	145	115	85	85	75	0.55
28250-	3/4 inch	122	100	56	56	44.5	0.68

SPJT bottle cleaning nozzle

M-50 Rotating Tank Washing Nozzle



Tank Washing

DESIGN FEATURES

- Clog-resistant spiral design
- Energy efficient
- Compact design; fits small openings

SPRAY CHARACTERISTICS

- Easy to maintain
- Unique patterns that spray in opposing directions

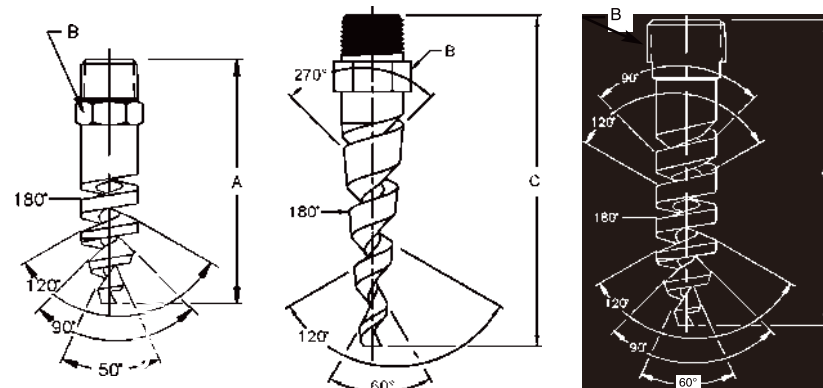
Flow rates: 11.4 to 260 l/min

Tank Washing SPJT Flow Rates and Dimensions SPJT 180° and 270°, 3/8", 1/2", and 1" Pipe Sizes

Male Pipe Size	Number	Available Angles	K Factor	LITERS PER MINUTE					Approx. (mm)		Metal Only Dim.(mm)			Weight (g) Metal	
				0.7 bar	1 bar	2 bar	3 bar	4 bar	5 bar	Orifice Dia	Free Pass. Dia.	A	B		C
3/8	38SPJT-20-180	180°, 270°	13.7	11.4	13.7	19.3	23.7	27.3	30.6	4.83	3.30	73.0	17.5	92.1	49.6
	38SPJT-21-180	180°, 270°	18.5	15.4	18.5	26.1	32.0	36.9	41.3	5.59	3.30				
	38SPJT-22-180	180°, 270°	24.2	20.2	24.2	34.2	41.8	48.3	54.0	6.35	3.30				
	38SPJT-23-180	180°, 270°	37.6	31.5	37.6	53.2	65.1	75.2	84.1	7.87	3.30				
1/2	38SPJT-20-270	270°	54.9	46.0	54.9	77.7	95.1	110	123	10.4	4.32	22.2	108.0	181	
1	1SPJT-1-270	270°	116	97.2	116	164	201	232	260	14.2	5.08	28.7	146.1	298	

Flow Rate (l/min) = K√bar

標準材料: 黃銅、316 不銹鋼



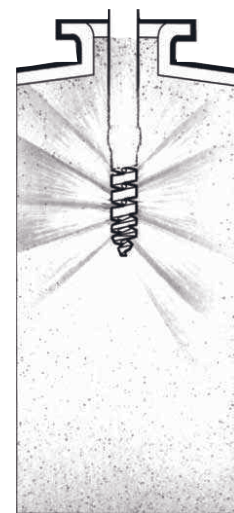
38SPJT-20-180

38SPJT-20-270

1SPJT-1-270

Tank Washing SPJT Coverage Chart When spraying at 2-3 bar

Pipe Size	Nozzle Number	Scrubbing Diameter (mm)	Rinsing Diameter (mm)
3/8	38SPJT-20-180	380	760
	38SPJT-21-180	460	1200
	38SPJT-22-180	610	1500
	38SPJT-23-180	910	2100
1/2	38SPJT-20-270	1200	2700
1	1SPJT-1-270	2400	6100



Design features

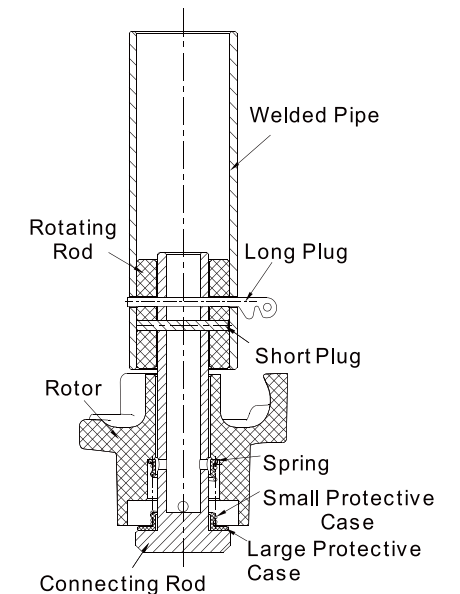
- Compact design fits through small openings. O.D.: M50-49mm
- Superior cleaning at low pressures and low flow rates for greater economy
- Self cleaning
- No ball bearing to corrode

Spray Characteristics

- High impact scrubbing action
- Slow rotation speed provides better cleaning
- Wide coverage
- Flow rate: 76 to 132 l/min.

M-50 Nozzle Components

M-50 consists of the welded pipe of 304SS, long plug, short plug, spring, small protective case of Teflon, big protective case of Teflon, rotating rod of POM, rotor and connecting rod of 316SS



Schematic

Technical Datas

Technical Datas	Flow Rates (l/m.)		Spray Radius (m/ft)
	US	GPM	
1.4/20	76	20	1.8/6
2.1/30	95	25	2.1/7
2.8/40	110	29	2.1/7
3.4/50	125	33	1.8/6
4.1/60	132	35	1.5/5

36300-36500 Tank Washing Nozzle

36300/R Tank Washing Nozzle

Design Features

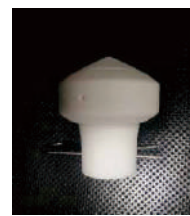
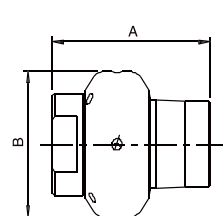
- The maximum diameter is about 7.6meter
- It is suitable for CIP(cleaning in place) system
- The reaction force of the cleaning liquid turns the nozzle, no need power to drive it
- It can be cleaned and rinsed under low pressure
- Teflon material has a long service life
- Jet Angle range between 180 ° to 360 °

Main Feature

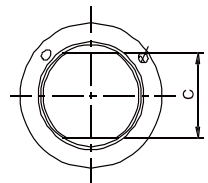
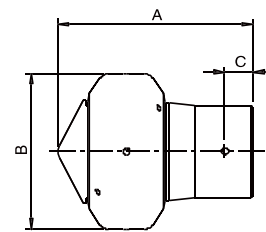
- Flow Rate Range: 15-1490l/min.
- Highest Temperature: 95 C
- Spraying Angle: 180°, 270°, 360°
- Pressure Range: 0.7-3.5bar
- Tank Opening Size: 50-180mm



36300



36500



Spraying Angle

	180° Spraying Up	180° Spraying Down	270° Spraying Up	270° Spraying Down	360°
A					
	6 Holes	6 Holes	7 Holes	7 Holes	8 Holes

Size(mm)

Model No.	A	B	C
1/2	60.3	49.2	28.6
3/4	66.6	57.2	33.3
1	76.2	69.8	45.3
2	111	123.8	69.8
3	149.2	174.6	98.4

Performance Data

Model No	Orifice diameter (mm)	Capacity (l/min.)					Max. Cleaning Diameter
		0.7bar	1.5bar	2bar	3bar	3.5bar	
1/2-8	2.4	15.3	22	26	32	34	3.0
3/4-18	2.4	34	50	58	71	77	4.3
3/4-32	4.0	61	89	103	126	136	4.3
3/4-46	6.0	88	130	148	182	196	4.3
1"-50	4.0	95	140	161	197	215	5.5
1"-70	5.6	133	195	225	275	300	5.5
1"-90	7.5	172	250	290	355	385	5.5
2"-100	6.0	191	280	320	395	425	6.0
2"-125	6.7	240	350	400	495	530	6.0
2"-150	7.9	285	420	480	590	640	6.0
2"-175	9.5	335	490	560	690	745	6.0
2"-200	10.7	380	560	645	790	850	6.0
3"-250	9.9	475	700	805	985	1056	7.6
3"-300	10.7	570	840	965	1180	1280	7.6
3"-350	12.3	665	975	1130	1380	1490	7.6

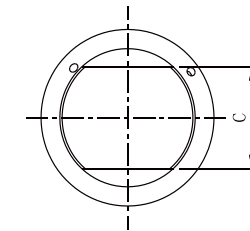
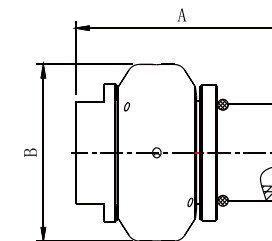
Design Features

- The maximum diameter is about 5.5 meter
- No thread, the tapered design facilitates drainage, prevent the formation of nozzle hydrops, better advantage in sanitation application
- 316SS bolt design, safer and more reliable
- Teflon material is suitable for corrosive chemical cleaning agent
- Removable design, it can be easily removed during inspection and maintenance
- Jet Angle range between 180 ° to 360 °

Main Feature

- Flow Rate Range: 34-295l/min.
- Highest Temperature: 95 C
- Spraying Angle: 180°, 270°, 360°

- Pressure Range: 0.7-3.5bar
- Tank Opening Size: 64-102mm
- 36300R Bolt Type



Spraying Angle

	180° Spraying Up	180° Spraying Down	270° Spraying Up	270° Spraying Down	360°
A					
	6 Holes	6 Holes	7 Holes	7 Holes	8 Holes

Size(mm)

Model No.	A	B	C
1/2	60.3	49.2	28.6
3/4	66.6	57.2	33.3
1	76.2	69.8	45.3
2	111	123.8	69.8

Performance Data

Model No	Orifice diameter (mm)	Capacity (l/min.)					Max. Cleaning Diameter
		0.7bar	1.5bar	2bar	3bar	3.5bar	
3/4-18	2.4	34	50	58	71	77	4.3
3/4-32	4.0	61	89	103	126	136	4.3
3/4-46	6.0	88	130	148	182	196	4.3
1"-50	4.0	95	140	161	197	215	5.5
1"-70	5.6	133	195	225	275	300	5.5
1"-1/2"-53	5.1	101	148	171	209	226	5.5
1"-1/2"-70	6.8	132	185	231	265	295	5.5

K4 Tank Washing Nozzle(19250)

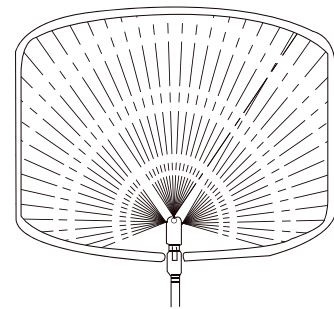
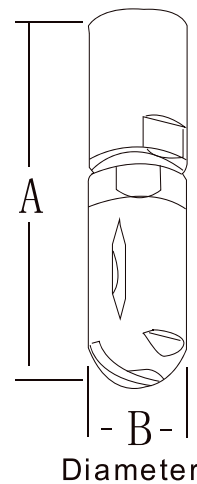
CYCO-08 Rotary bottle and jar cleaner

Design features

19250 Compact Nozzle can generate self-rotary drive for side spraying by two flat fan spray tip with 25 mm hole. The top hatch makes a whole global spraying available.

The main material is 316 stainless steel, while axletree and axletree circle are made of rigid stainless steel for longest wearability life.

The max. pressure is 13 bar and max temperature is 180 centigrade.



Performance data

Nozzle Order Number	Capacity (l/min.)							
	1.5Bar	3Bar	4Bar	5Bar	6Bar	8Bar	10Bar	12Bar
19250-STCN5-316SS	49	19.7	23	25	28	32	36	39
19250-STCN6-316SS	15.9	22	26	29	32	37	41	45
19250-STCN7-316SS	19.5	28	32	36	39	45	50	55
19250-STCN8-316SS	22	32	36	41	45	52	58	63
19250-STCN9-316SS	28	39	46	51	56	64	72	79

Size and weight

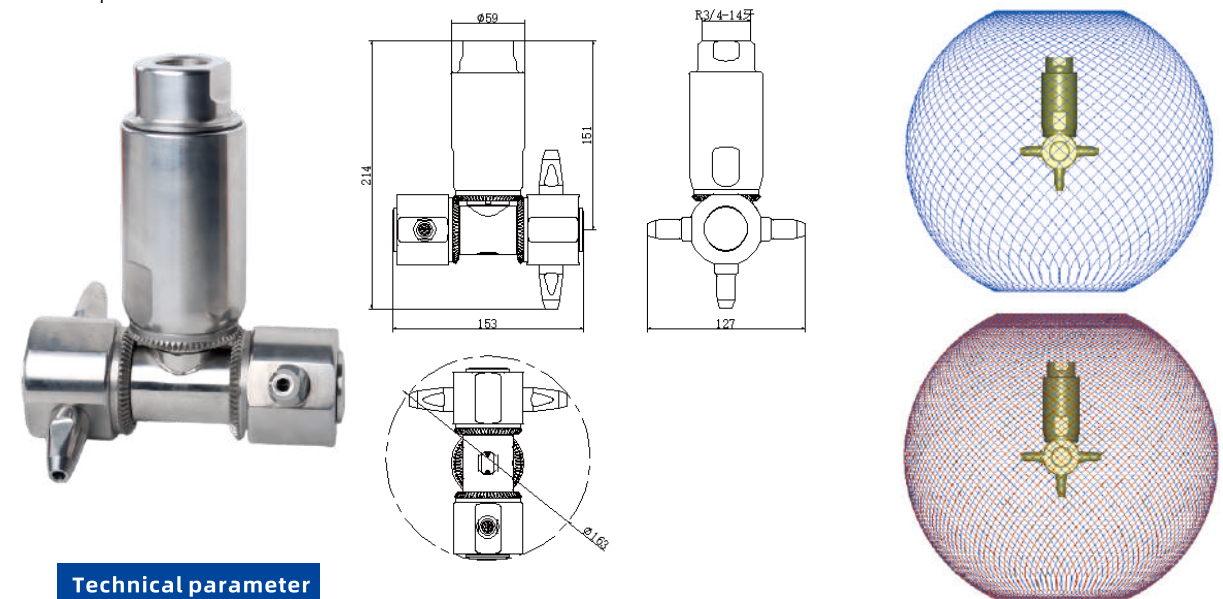
Nozzle Number	19250	A(mm)	89	B(mm)	25.4	Net Weight(KG)	0.23
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Product characteristics

360° cleaning without dead angle: when the cleaner is working, first confirm that the four nozzles are in the direction of 90 degrees, and rotate axially and radially at the same time according to the set track. When the two nozzles on one side clean one cycle, the two nozzles on the other side encrypt and supplement the cleaning cycle to realize 360° cleaning without dead angle.

Tightness: The leakage point adopts dynamic seal to reduce the leakage and save the cleaning liquid. At the same time, it produces greater impact force of water flow.

High impact force: The nozzle adopts a unique steady flow design, which can make the jet flow more concentrated, the impact force

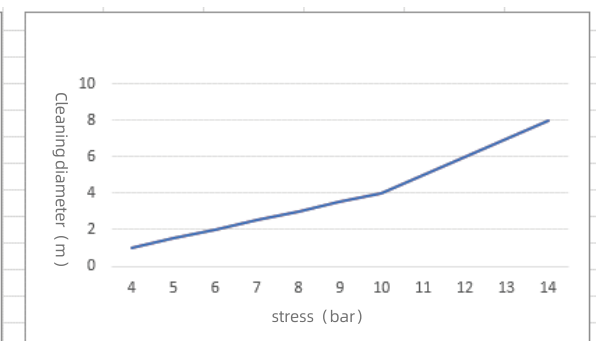
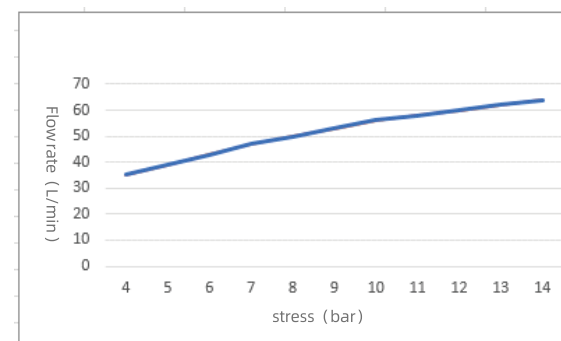


Technical parameter

1. Manufacturing material: 316 L stainless steel, PPS, Rulon Special Engineering Materials
2. Working pressure: 3-15bar
3. Recommended pressure: 4-14bar
4. Maximum working temperature: 95°C
5. Maximum ambient temperature: 140 °C
6. Cleaning angle: 360°

7. Cleaning diameter: Less than 8m
8. Opening of storage tank: ≥Φ170mm
9. Interface specification: G3/4 internal thread
10. cleaning cycle: 5-35 minutes
11. Weight: 3.8 kg
12. Cleaning medium: water, weak acid solution, weak alkali solution

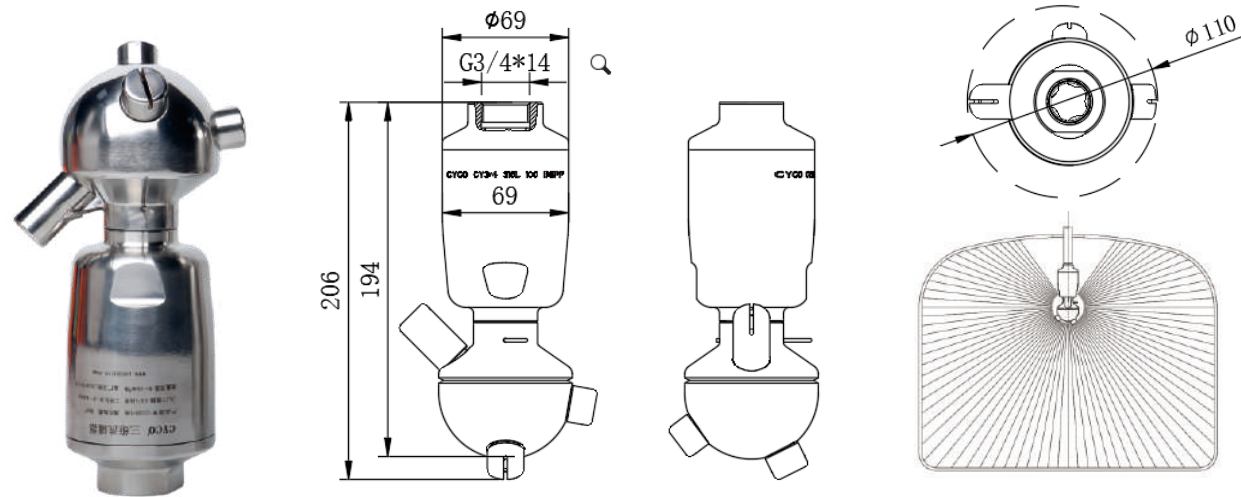
Performance data



CYCO-100 rotary can washer

Product characteristics

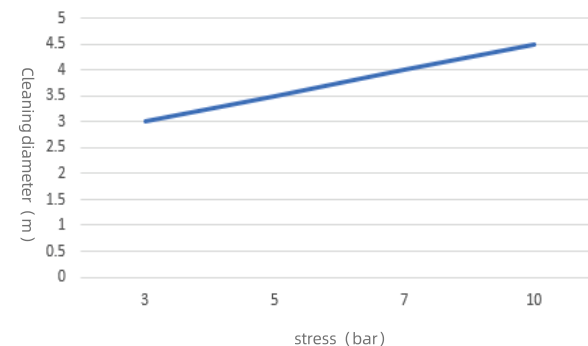
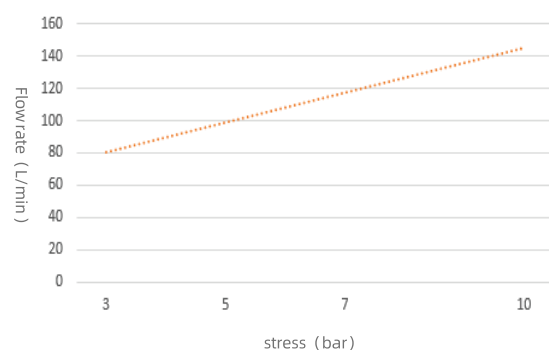
The CYCO-100 rotary cleaner uses the cleaning fluid to drive the impeller to rotate for 360-degree cleaning. It has a built-in sealed deceleration mechanism with a constant speed and a higher impact force. Compared with the traditional rotary cleaning ball, the CYCO-100 rotary cleaner has a greater impact force and consumes less cleaning fluid, which greatly shortens the cleaning cycle and improves the cleaning efficiency.



Technical parameter

1. Manufacturing materials: 316L stainless steel, PPS, PEEK special engineering materials
2. Working pressure: 3-15bar
3. Recommended pressure: 4-14bar
4. Maximum working temperature: 95°C
5. Maximum ambient temperature: 140 °C
6. Opening of storage tank: $\geq \Phi 110\text{mm}$
7. Cleaning angle: 360 °
8. Cleaning diameter: Less than 6m
9. cleaning cycle: 5-35 minutes
10. Interface specification: G3/4 internal thread
11. Weight: 2.5 kg
12. Cleaning medium: water, weak acid solution, weak alkali solution

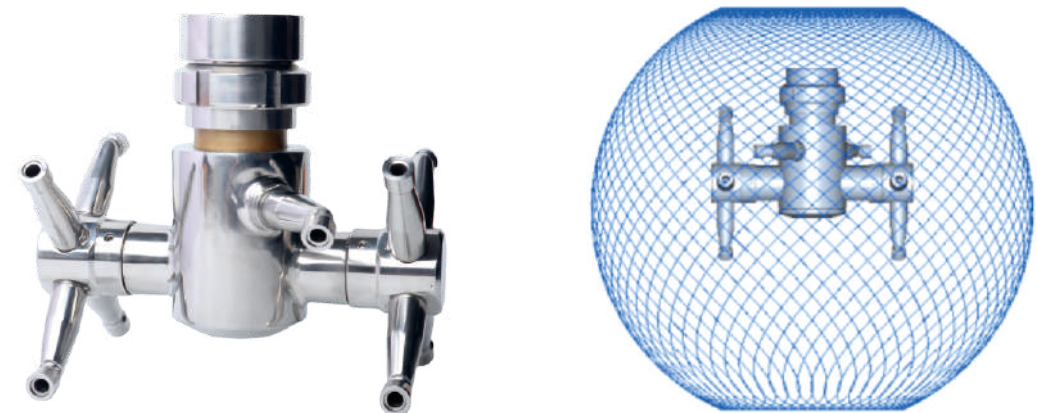
Performance data



CYCO-10 Universal bottle and jar cleaner

Product characteristics

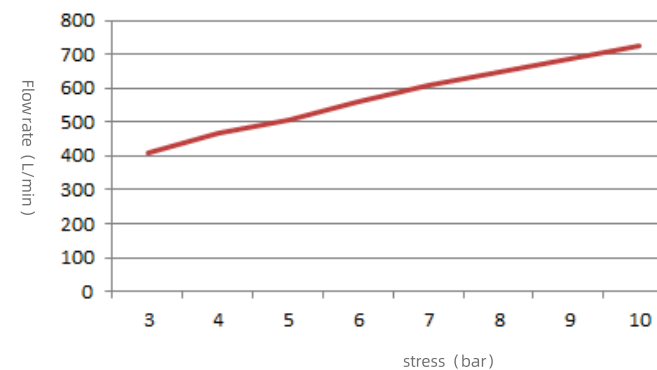
360 ° cleaning without dead angle: when the cleaner is working, first confirm the direction and position of the four corner driving nozzles as shown in the figure, and rotate axially and radially at the same time according to the set track. While one side of the nozzle cleans one cycle, the other side of the nozzle encrypts and supplements the cleaning cycle to realize 360 ° cleaning without dead angle in all directions.



Technical parameter

1. Manufacturing materials: SU5304, PTFE and other special engineering materials
2. Working pressure: 3-10bar
3. Maximum working temperature: 100 °C
4. Cleaning angle: 360 °
5. Cleaning diameter: Less than 8m
6. Opening of storage tank: $\geq \Phi 280\text{mm}$
7. Interface specification: G2 external thread
8. cleaning cycle: 5-35 minutes
9. Weight: 3.5 kg
10. Pump: 35-50T/H
11. Water volume: 12T/H
12. Cleaning medium: water, weak acid solution, weak alkali solution

Performance data



Installation method

This product is externally threaded (G2 screw as standard) and is usually connected to a flanged spray rod. During installation, the external thread of the washer is connected with the internal thread on the spray rod, the washer is placed in the best cleaning position, and the flange of the spray rod is installed.

CYCO-15 bottle and jar cleaner

Product characteristics

360° no dead Angle cleaning: When the cleaner works, the axial and radial rotation according to the set trajectory at the same time, to achieve an all-round 360° no dead Angle cleaning

Sealing: The leakage point adopts dynamic sealing to reduce leakage and save cleaning fluid. At the same time, more water impact

Higher impact force: The nozzle adopts a unique steady flow design, which can make the jet water more concentrated, greater impact force, and more thorough cleaning



First cycle



All tracks

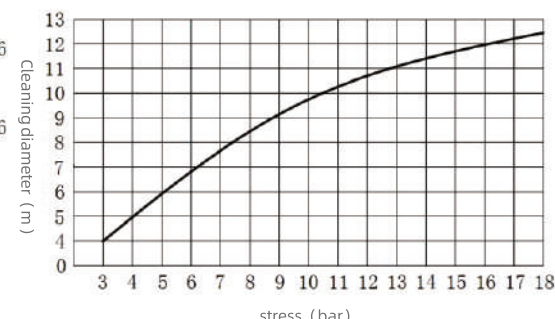
Technical parameter

1. manufacturing materials: 316 L stainless steel, PEEK special engineering materials
2. Working pressure: 4-25bar
3. Recommended pressure: 5-22bar
4. Maximum working temperature: 95°C
5. Maximum ambient temperature: 120 °C
6. Cleaning angle: 360 °
7. Cleaning diameter: Less than 12m
8. Tank opening: ≥φ110mm
9. Interface specification: 1-1/2 "BSPP internal thread
10. Cleaning cycle: 4-10 minutes
11. Weight: 4.1 kg
12. Cleaning medium: water, weak acid solution, weak alkali solution

Performance data



Pressure and flow relationship



Relationship between pressure and cleaning diameter

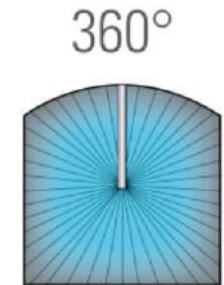
CY-08H high pressure tank cleaning system

Product overview

CY-08H electric high pressure tank cleaning system is mainly used for light cleaning inside the main machine of 5-7m tank, medium cleaning inside the main machine of 3-5m tank, and heavy cleaning inside the main machine of 1.5-3m tank; Can flexibly use a manual or automatic control operation system to realize the cleaning of chemical reaction sticks, food and drug processing tanks and other types of tanks with strong impact force, and is an ideal equipment for automatically cleaning stubborn stains.

Product characteristics

- Reliable and durable, the waterproof and explosion-proof motor drive provides stable, high-impact output and effectively removes stubborn stains;
- Pneumatic or electric motor drive can be provided according to customer needs, to adapt to various use environments, cleaning power, cleaning speed is flexible and adjustable;
- The equipment is lightweight and can be installed permanently with the equipment or easily moved between storage tanks for cleaning;
- The equipment components are made of durable corrosion-resistant materials, and the drive device is located outside the tank, away from corrosion sources, and has a long service life;
- Equipment components and configurations allow for easy customization to meet a wide range of customer operational needs;
- The high pressure version is suitable for high impact cleaning with working pressure up to 200bar and full coverage of 360 degrees;
- The installation method can be selected according to the size of the opening of the tank flange, ASME convex surface or sanitary loose joint;
- The washer is connected with a flexible structure, and the expansion range can be customized according to customer needs (100mm-3m).



Technical parameter

1. Rotary cleaning nozzle: 200bar, (adjustable)
2. Cleaning tank diameter: within 10m
3. Nozzle: 2
4. Cleaning cycle: 5-7 min
5. Nozzle speed 1-60 rpm (adjustable)
6. Cleaning mode: 360 degree automatic cleaning
7. Interface mode: G3/4 internal thread (pipe length ≤10m) Or G1/2 internal thread (pipe length ≤10m)
8. Installation method: the opening size of the host cover is φ120, and the flange and the opening of the tank are fixed by clamping or flange

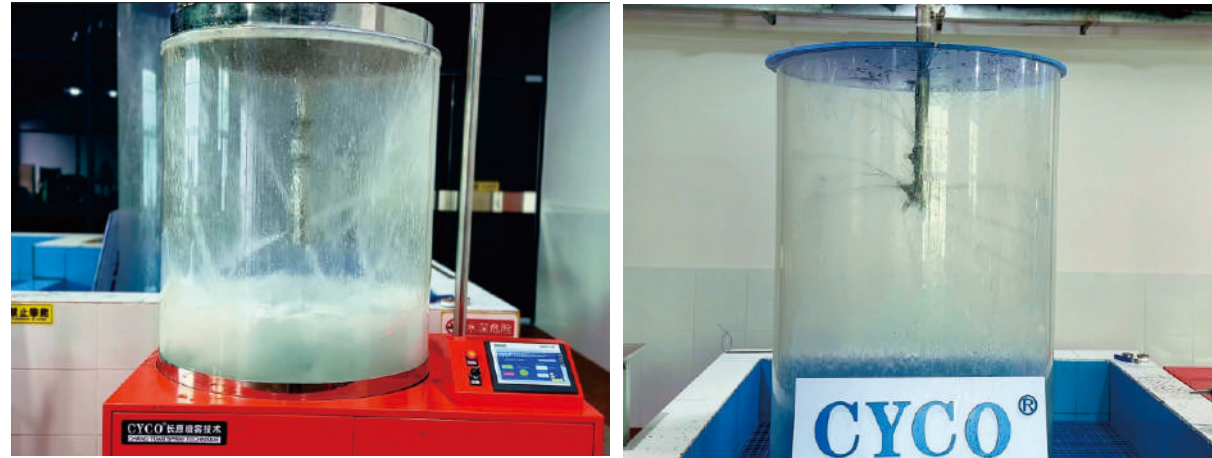
Flow rate

Model	80Bar (L/min)	100Bar (L/min)	120Bar (L/min)	150Bar (L/min)	200Bar (L/min)
CY-08H-300-1.2	11.6	13	14.2	15.9	18.4
CY-08H-300-1.5	17.6	20	21.9	24.5	28.3
CY-08H-300-1.6	21.5	24	26.3	29.4	34.0
CY-08H-300-1.8	26.8	30	32.9	36.7	42.4

Adjust length and weight

Washer illustration	Cleaner name	Adjust the lever length L	Overall length A	Cleaner weight KG
	CY-08H-300-1.2	300	645	7
	CY-08H-600-1.2	600	945	8
	CY-08H-900-1.2	900	1245	8.8
	CY-08H-1200-1.2	1200	1545	9.7
	CY-08H-1500-1.2	1500	1845	10.6
	CY-08H-1800-1.2	1800	2145	11.5
	CY-08H-2100-1.2	2100	2445	12.4
	CY-08H-2400-1.2	2400	2745	13.3
	CY-08H-2700-1.2	2700	3045	14.2
	CY-08H-3000-1.2	3000	3345	15

Company strength



Spray production two



Development Division 1



American particle size detector



Material testing laboratory

Company strength



→ Technical team

Enterprise strength



Precision machining equipment

Patent wall

Wall of Fame

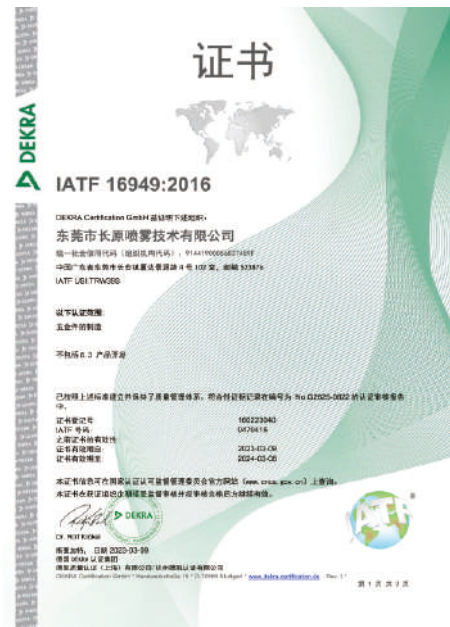
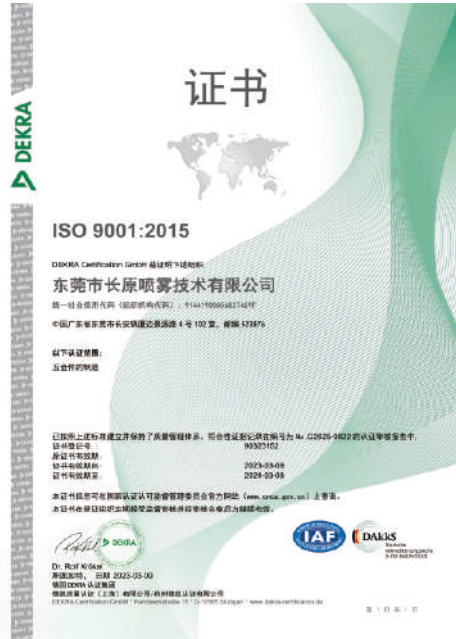
Large nozzle flow test bench

Partial partners



Certificate

Quality certification



Salt spray tester

For testing the corrosion performance of raw materials



Material analysis

For each batch of raw materials, we perform material spectral analysis



Two-dimensional measuring instrument

It is used for precision dimensional inspection such as small holes



Three-dimensional image measuring instrument

Ensure the dimensional accuracy, positioning accuracy, geometric accuracy and contour accuracy of the product

