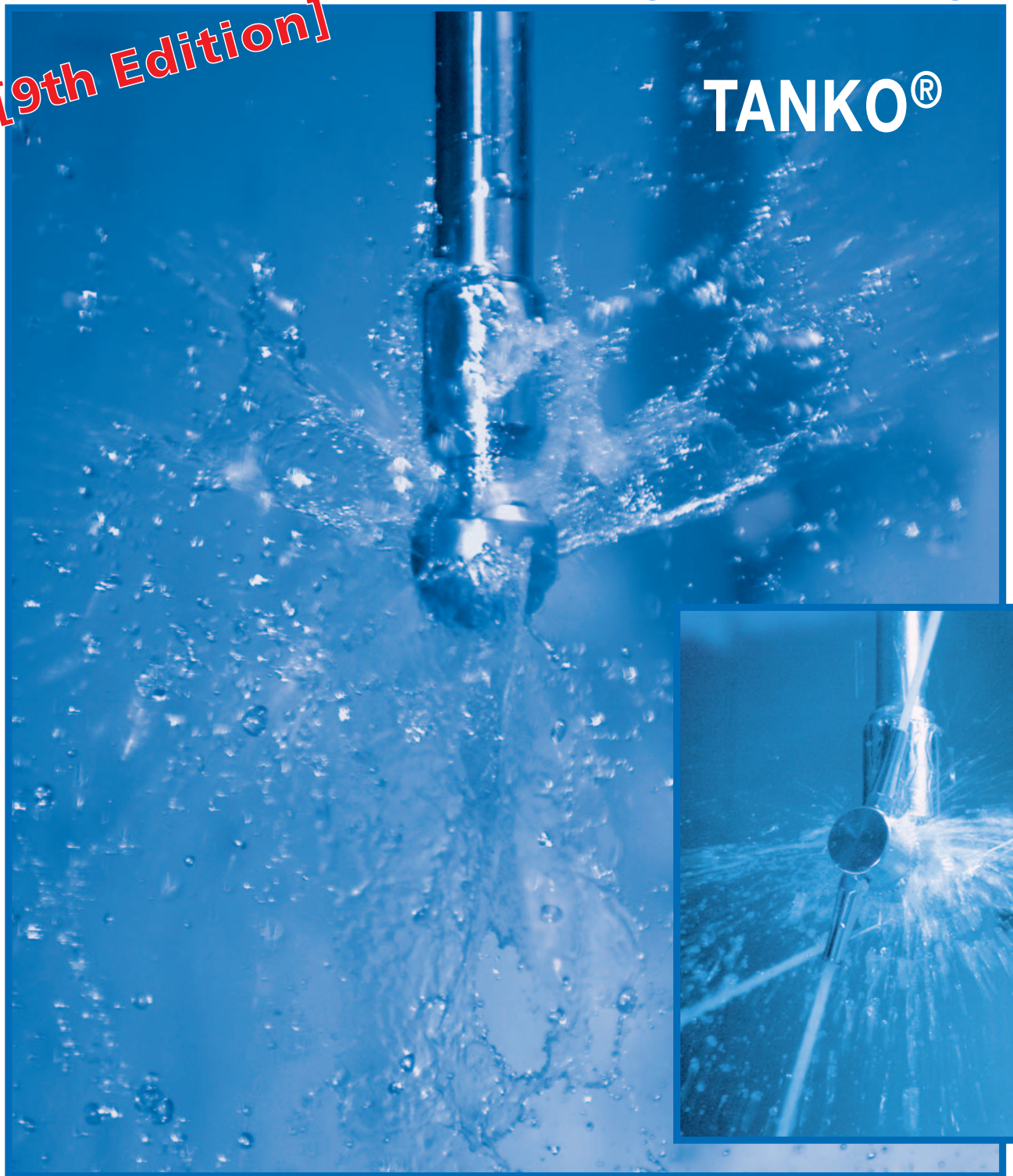


Stainless Steel Cleaning Technology

[9th Edition]

TANKO®



Spray heads for all purposes – economically efficient cleaning of vessels and tanks

Beside the high standards of cleanliness, the economically efficient cleaning of vessels is coming to the fore nowadays. Along with the investment cost issue, the operating expenses are increasingly being discussed.

The center stage is taken by:

- The reduction of cleaning agent consumption
- The reduction of cleaning duration
- The increase of the equipment availability
- The increase of the operational safety
- The validation of the cleaning processes via sensors

A cleaning machine is nowadays selected on the basis of the application or task and not according to the currently available technology. The best possible solution for the cleaning of vessels varies with the vessel geometry and its use. Potential spray shadows, due to various installations, connection pieces and manholes are to be observed likewise.

For this, AWH offers a product programmed with a comprehensive spectrum of devices and the required, appropriate application knowledge.

The cleaning technology of AWH has been revised, reconstructed and improved in many areas.

This is reflected by the new nomenclature:

TANKO [®] -RB	= rotating ball
TANKO [®] -S	= Spate cleaner
TANKO [®] -JX	= Jet cleaner with external motor
TANKO [®] -RPB	= rotating pipe ball
TANKO [®] -RT	= retractable system

Within the area of medium-driven jet cleaners you will find the well proven devices:

- ORBI-G4
- JUMBO-6-500
- TANKMAN

The static spray balls complete the product range of the cleaning devices.

The product range is completed

by the monitoring devices CIPMon:

- CIPMon SCII (sound analyzer) for the extended jet cleaning surveillance

Various fittings such as:

- Weld-on nipples with an "outlet lip" as rotating piece
- Downpipe concepts for the installation of the RT devices within the tank
- Mounting tools (pliers with plastic-coated jaws)

The product range is continuously being further developed. Please inquire for new variants or modifications. On request we can submit the various certificates (e.g. 3.1 certificate) for the cleaning devices.

The surface roughness of the applied materials is $\leq 0,8\mu\text{m}$, others upon request. Please quote this requirement in your inquiry additionally to the product request.

The choice of the appropriate cleaning device is facilitated by:

- | | | |
|-----------------------------|----|----------------|
| • The project data sheet | —> | see page 13 |
| • The project questionnaire | —> | see page 14-15 |
| • Down pipe system | —> | see page 18 |
| • Jet Cleaners | —> | see page 92 |

Please note that the presented cleaning devices should be supported by an appropriate filter system (corner pipe strainer or others) with mesh sizes of 50 μm according to the application) for best performance.

ATTENTION:

important information for our customers within the European Economic Area regarding the Directive on Machinery 98/37/EU and 2006/42/EU and 2006/42/EU Machinery Directive EN, respectively.

Unless agreed differently, AWH will consider the user language to be "German" or "English". The customer / ordering party will inform Messrs. AWH of any diverging user language. In such a case, AWH will immediately revise the quotation and complement same, if necessary.

Before commissioning of the AWH cleaning units and the products in this catalog at the latest, it has to be ensured that the proper use of these units is guaranteed. The respective instructions are contained in the operating instructions of the AWH products or will be put at your disposal upon request. Contact address CIP@AWH.de or by telephone.

**Make use of these options offered by AWH. Contact us.
And click on our special catalogue on the internet: www.awh.de**

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Ball bearings

The integrated ball bearings of the TANKO® series are subject to minor wear. The typical service life is as follows:
 Service life of 300 hours in vertical fitting position, spraying downwards, assuming a cleansing agent pressure (water) of 3 bar at a temperature of 25°C.
 Based on an average cleaning cycle time of 20 minutes per day and 200 days per year this corresponds to a service life of 4.5 years.
 To apply additionally: term of guarantee max. 24 months after delivery.

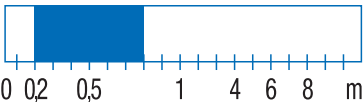
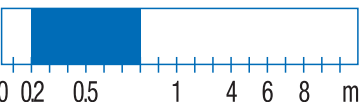
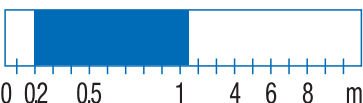
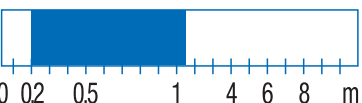
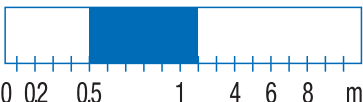
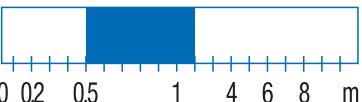
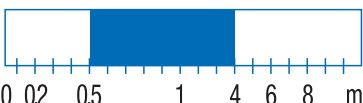
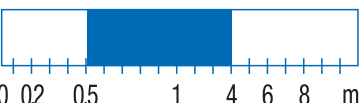
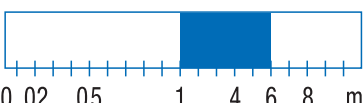
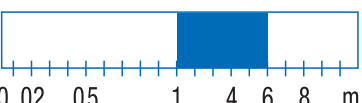
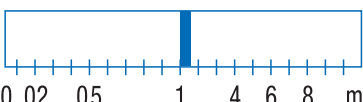
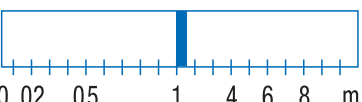
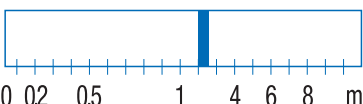
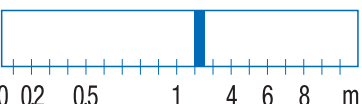
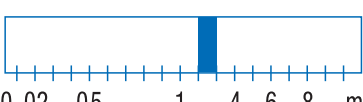
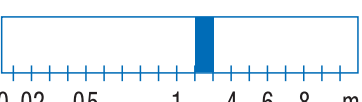
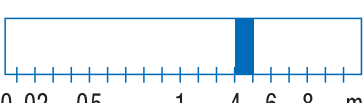
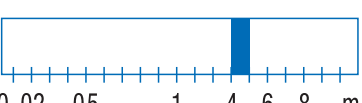
Information on consumptions:

All information on consumptions in this catalogue is a reference value. Please contact us for more detailed information.

Attention !!

For specific tasks AWH will gladly manufacture tailor-made solutions according to your requirements!

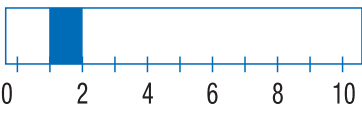
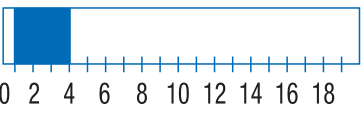
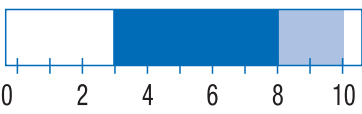
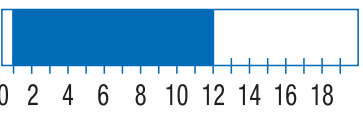
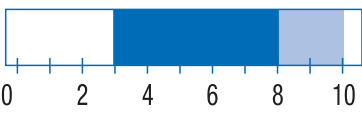
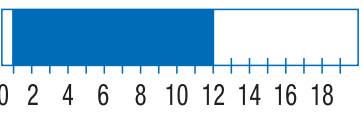
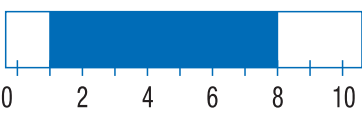
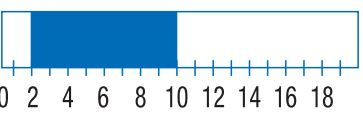
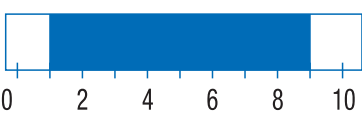
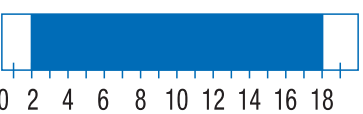
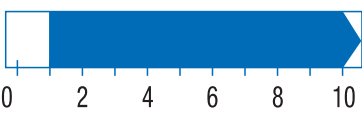
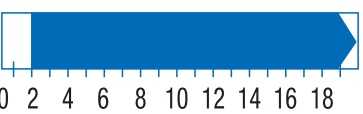
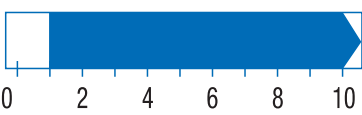
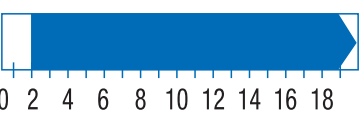
TANKO® - Serie

Type	page	Installation position Spraying angle	Type of Cleaning	recommended maximum diameter for cleaning in [m]	maximum spraying distance as diameter in [m]
TANKO® S10	32-33	freely selectable 360°	surge cleaning		
TANKO® S20	34-37	freely selectable 90°/180°/270°/360°	surge cleaning		
TANKO® S30	38-43	freely selectable 90°/180°/270°/360°	surge cleaning		
TANKO® S40	44-55	freely selectable 90°/180°/270°/360° 360° HF	surge cleaning		
TANKO® S50	56-63	freely selectable 180°/270°/360°	surge cleaning		
TANKO® RB30	70-73	freely selectable 180°/360°	spray cleaning		
TANKO® RB40	74-77	freely selectable 180°/270°/360°	spray cleaning		
TANKO® RB64	78-81	freely selectable 180°/270°/360°	spray cleaning		
TANKO® RB90	82-85	freely selectable 180°/270°/360°	spray cleaning		

TANKO® - Serie

Operating pressure [bar]	Volume flow rate [l / min]	Volume flow rate [m³ / h]	Mode of drive	connections
			Continuous clean- ing agent flow, Supported in double ball bearings	thread M5 weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	1/8"-BSP, NPT, NPS Clip On weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	1/4"-BSP, NPT 3/8"-BSP, NPT, NPS Clip On weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	1/2"-BSP, NPT 3/4"-BSP, NPT, NPS Clip On weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	1 1/4"-BSP, NPT 1 1/2"-BSP, NPT, NPS Clip On weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	Clip On 1/4"-BSP, NPT 3/8"-BSP, NPT, NPS weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	Clip On 3/8"-BSP, NPT 1/2"-BSP, NPT, NPS weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	Clip On 3/4"-BSP, NPT, NPS weld-on nozzle
			Continuous clean- ing agent flow, Supported in double ball bearings	Clip On 1"-BSP, NPT, NPS weld-on nozzle

Overview Jet Cleaners

Type	page	Installation position	Number of nozzles Rotations	recommended maximum diameter for cleaning in [m]	spraying distance as diameter in [m]
TANKO® JX-70	94-97	freely selectable	2, 3 or 4 14 min ⁻¹		
TANKO® JX-75	94-97	freely selectable	2, 3 or 4 14 min ⁻¹		
TANKO® JX-80	94-97	freely selectable	2, 3 or 4 14 min ⁻¹		
Orbi G4	100-101	vertical	4 7-17 min ⁻¹		
Jumbo 6-500	102-105	vertical	4 5-40 min ⁻¹		
TANKMAN 2-düsüg	106-107	vertical	2 3-20 min ⁻¹		
TANKMAN 3-düsüg	106-107	vertical	3 3-20 min ⁻¹		

Overview Jet Cleaners

Operating pressure [bar]	Volume flow rate [l / min]	Volume flow rate [m³ / h]	Mode of drive	connections
			external with magnetic coupling	1/2"-BSP
			external with magnetic coupling	3/4"-BSP
			external with magnetic coupling	3/4"-BSP
			cleansing agent	3/4"-BSP, NPT
			cleansing agent	1 1/2"-BSP, NPT
			cleansing agent	1 1/2"-BSP, NPT
			cleansing agent	1 1/2"-BSP, NPT

Information acc. to ATEX (extract) on TANKO® - JX-Series



The cleaning device type **TANKO® - JX** is intended for industrial plants.
They meet the explosion protection requirements of directive 94/9 EC (ATEX 100a).



II 1/2 G c TX ☐*
II 1/3 G c TX ☐*

Explanation:
G = gas
c = constructional safety

Ex 5 06 05 55073 001

Speed range: 5-60 RPM
Operating pressure: 1-60 bar
Cleansing agent: < 60°C / 110°C

Information acc. to ATEX (extract) on TANKO® - RB + S-Series



The current information on component approval of cleaning devices



TANKO® - EX - S20
TANKO® - EX - S30
TANKO® - EX - S40
TANKO® - EX - S50
TANKO® - EX - RB - 30
TANKO® - EX - RB - 40
TANKO® - EX - RB - 64
TANKO® - EX - RB - 90

II 1 GD c T(X) ☐*

Explanation:
G = gas
D = dust
c = constructional safety

Ex 5 06 08 55073 002

Volume flow rate: < 680L/min *
Operating pressure: < 12 bar **
Cleansing agent: < 180° C

* dependent on model and cleansing agent
** dependent on model

Extra charge on standard products of Tanko® -S and -RB: 75,00 €
Item no.: apply the appropriate article no. and add „X“.
Example: 665_____X

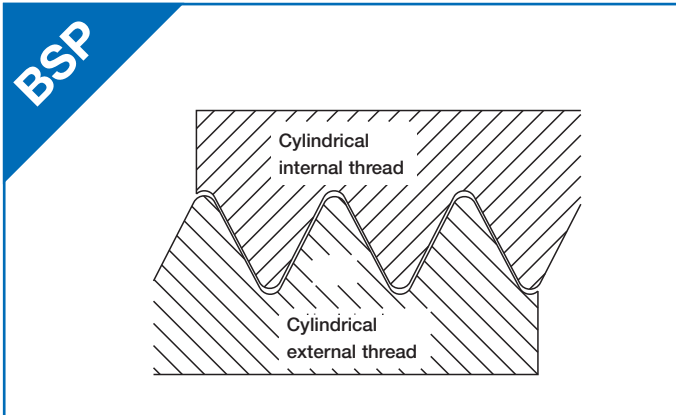
ATEX OPERATING INSTRUCTIONS

	Price/EUR	Item no.	
	40,00	664BA010 7 06DTX	Operating Instructions ATEX german Tanko® -S and -RB
	40,00	664BA020 6 07DTX	Operating Instructions ATEX german Tanko® -JX
	40,00	664BA010 7 06ENX	Operating Instructions ATEX english Tanko® -S and -RB
	40,00	664BA020 6 07ENX	Operating Instructions ATEX english Tanko® -JX

Pipe thread

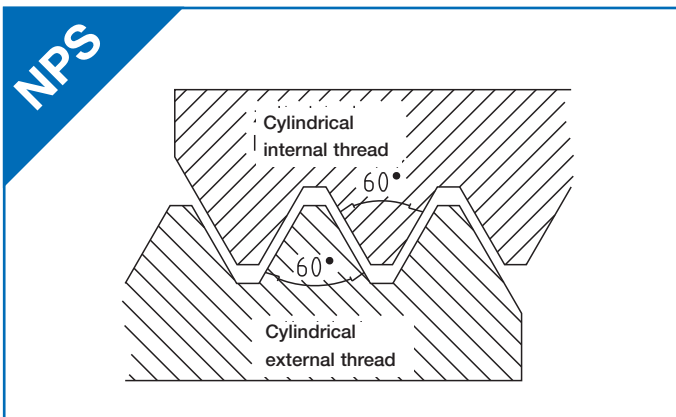
CYLINDRICAL THREAD

BSP British Standard Pipe Taper
British Standard (cylindrical gas thread)



corresponds to
INTERNATIONAL ORGANIZATION FOR STANDARDS ISO 228/1
Internal thread and cylindrical external thread
Crests and depths of thread are round

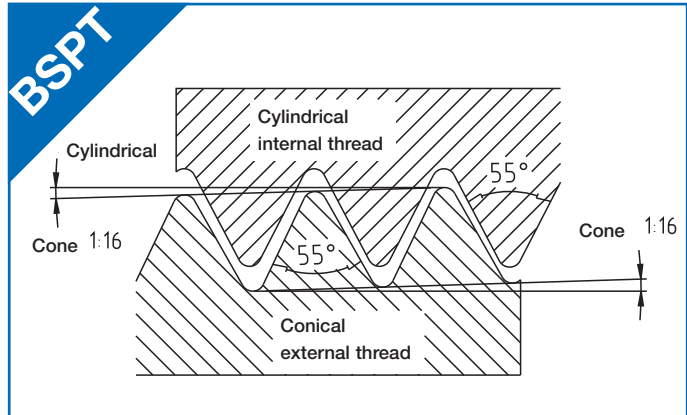
NPS – NATIONAL STRAIGHT PIPE
Not-sealing cylindrical pipe thread,
comparable with British Standard Pipe Thread BSP



Crests and depths of threads are flattened

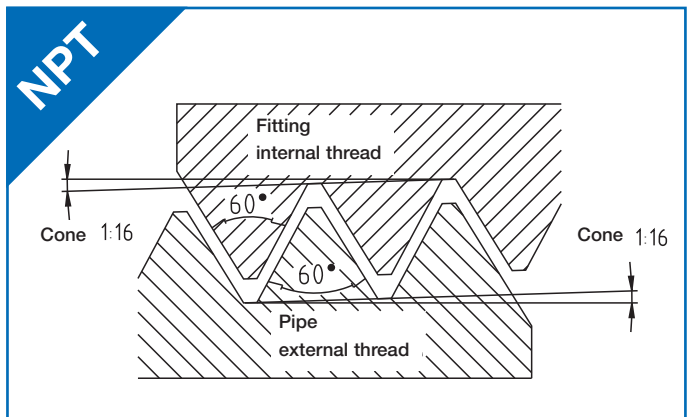
CONICAL THREAD

BSPT British Standard Pipe Taper
British Standard (conical gas thread)



similar to
Whitworth pipe thread for threaded pipes and fittings as per DIN 2999/1
Cylindrical internal thread and conical (cone 1 :16) external thread
Crests and depths of thread are round

NPT – AMERICAN STANDARD PIPE THREAD
(AMERIC. STANDARD PIPE THREAD) ANSI B 1.20.1
American pipe thread for self-sealing connection (conical) with sealant.



Crests and depths of threads are flattened

Further types of threads

ISO - INTERNATIONAL ORGANIZATION FOR STANDARDS
flank angle 60°
Diameter and flank lead measured in mm

NC – National Coarse Thread (USA)
flank angle 60°

NF – National Fine Thread (USA)
flank angle 60°

NPTF – National Pipe Thread (USA)
Dry Seal 1/16
flank angle 60°

BSW – British Standard Withworth Corase Thread (GB)
flank angle 55°

BSF – British Standard Fine Thread (GB)
flank angle 55°

measuring points

Stelle	Ra Sollwert µm	Ra Istwert µm
1a	+	
2a	+	
3a	+	
4a	+	
5a	+	
6a	+	

Stelle	Sollwert Ra	Istwert Ra
6a	+	
7a	+	

Type Ra-Messgerät	Ident.-Nr.	Datum	Name
Perthenster M1	23020		

Type Ra-Messgerät	Ident.-Nr.	Datum	Name
Ferritscope	2335		

Auftragsschreiber

am 10.05.2016
10:00 Uhr

Stück-Nr. _____

Stück-Nr. _____

Stück-Nr. _____

Stück-Nr. _____

Stück-Nr. _____

Stück-Nr. _____

☐ Maßstab
☐ Maßstab
☐ Maßstab
☐ Maßstab
☐ Maßstab
☐ Maßstab

TANKO-RB
 Messprotokoll Ra / Fe
 601 00 MP 000000

Blatt 1
 von 1

Messungen vor der Montage!	
Messpunkt	Raumhöhe (Ra)
1	Bohr innen
2	Mediumansatzschuß innen
3	Präzessionsansch. innen
4	Bohr außen
5	Kopf Gehäuse innen
6	Kopf Gehäuse außen
7	Düsenstrecke außen
8	Düse außen

Diese Messungen sind bei der Anfrage und Auftragserteilung zu vereinbaren und bedingen eine längere Lieferzeit!

nur bei
CSA-D-SSS

nur bei
ISO, S20, S30

[illegible]

measuring points TANKO® - RB

	measuring point	Item no.	Price/EUR
Roughness	1Ra, 2Ra, 3Ra	66100MP00R003	net 35,00
Δ- Ferrite content	6Fe, 7Fe	66100MP00F002	net 45,00

measuring points TANKO® - JX

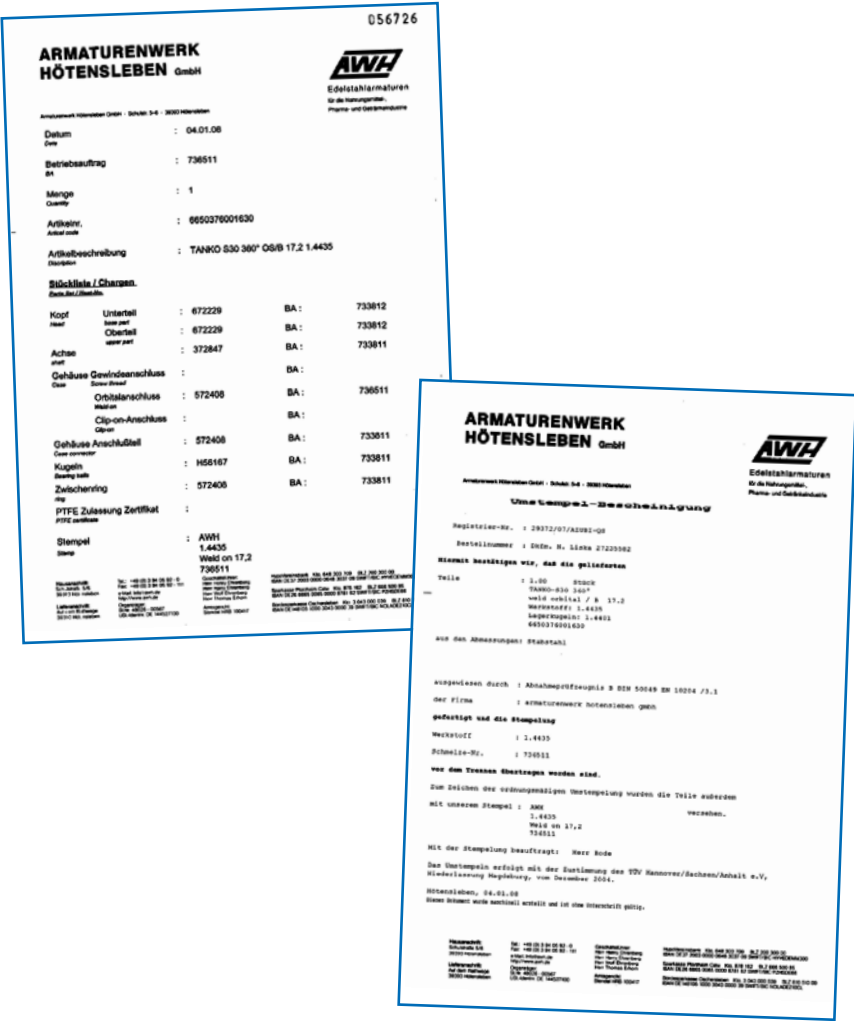
	measuring point	Item no.	Price/EUR
Roughness	1, 2, 3, 4,	66805MP00R008	net 140,00
	5, 6, 7, 8		

measuring points TANKO® - S

	measuring point	Item no.	Price/EUR
Roughness	1, 2, 3	66500MP00R003	net 35,00
Roughness	1, 2, 3, 4, 5	66500MP00R005	net 55,00
Δ- Ferrite content	6, 7	66500MP00F002	net 45,00

measuring points TANKO® - RT

	measuring point	Item no.	Price/EUR
Roughness: basic body	A1, A2, A3, A4, A5, A6	66R00MP01R006	net 65,00
Roughness: spray head	B1, B2,	66R00MP02R004	net 45,00
TANKO®-RPB-E	B3, B4		



certificate

Additional option	Item no.	Price/EUR
material certificate 2.1 for TANKO®-JX70, -75, -80	66001Z21	net 15,00
material certificate 2.2 for TANKO®-JX70, -75, -80	66001Z22	net 105,00
material certificate 3.1 for TANKO®-JX70, -75, -80	66001Z31	net 125,00
material certificate 3.1 for TANKO®-S/-RB	66000Z31	net 15,00
material certificate 3.1 for TANKO®-RT100-500	66002Z31	net 95,00
material certificate 3.1 for wire locking pins	66004Z31	net 15,00

for TANKO® - S

316L acc. to ASME BPE 2005

TANKO® - S und TANKO® - RB with balls made of Hastelloy at extra charge

TANKO®-S with balls made of Hastelloy at extra charge

TANKO®-S	material grade of balls	add. charge per TANKO®-S /EUR
10	2.4610 / HC4	141,00
20	2.4610 / HC4	56,00
20	2.4602 / HC22	62,00
30	2.4610 / HC4	72,00
30	2.4602 / HC22	80,00
40	2.4610 / HC4	120,00
40	2.4602 / HC22	133,00
50	2.4610 / HC4	272,00
50	2.4602 / HC22	302,00

Extra charge to standard products of Tanko® -S

Item no.:

Please apply the appropriate article no. and replace **00** by **0A** for 2.4602 or **0B** for 2.4610

Example: 6650376 **00** 1350 Tanko® -S 30, 360° Standard

Example: 6650376 **0A** 1350 Tanko® -S 30, 360° with balls made of 2.4602 / HC22

Example: 6650376 **0B** 1350 Tanko® -S 30, 360° with balls made of 2.4610 / HC4

TANKO®-RB with balls made of Hastelloy at extra charge

TANKO®-RB	material grade of balls	add. charge per TANKO®-RB /EUR
30	2.4610 / HC4	64,00
30	2.4602 / HC22	71,00
40	2.4610 / HC4	81,00
40	2.4602 / HC22	90,00
64	2.4610 / HC4	124,00
64	2.4602 / HC22	137,00
90	2.4610 / HC4	224,00
90	2.4602 / HC22	248,00

Extra charge to standard products of Tanko® -RB

Item no.:

Please apply the appropriate article no. and replace **00** by **0A** for 2.4602 or **0B** for 2.4610

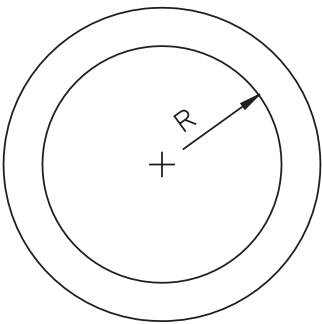
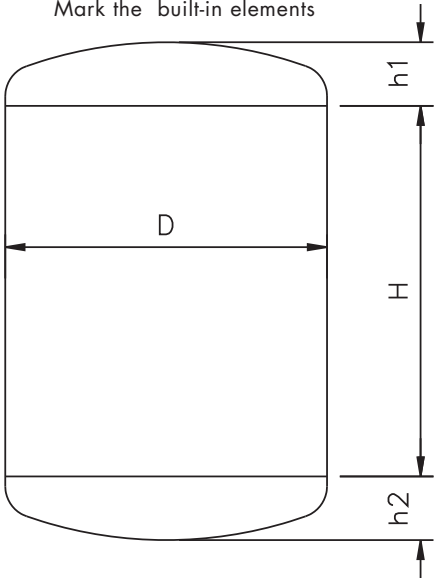
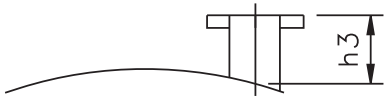
Example: 6610376 **00** 1350 Tanko® -RB 30, 360° Standard

Example: 6610376 **0A** 1350 Tanko® -RB 30, 360° with balls made of 2.4602 / HC22

Example: 6610376 **0B** 1350 Tanko® -RB 30, 360° with balls made of 2.4610 / HC4

Wire locking pins - material certificate see page 11

Item no.	set wire locking pins	to use for	dimensions	price /EUR
6640000A20044	(4 pcs.) for TANKO-S20, -RB30 Clip-On	materials: 1.4435 (316L), 1.4404 (316L)	Ø 2,0mm - length: 40mm	29,60
6640000A20064	(4 pcs.) for TANKO-S20, -RB30 Clip-On	materials: 1.4576	Ø 2,0mm - length: 40mm	29,60
6640000A20094	(4 pcs.) for TANKO-S20, -RB30 Clip-On	materials: 2.4602 (HC22), 2.4610 (HC4)	Ø 2,0mm - length: 40mm	32,40
6640000A30044	(4 pcs.) for TANKO-S30 Clip-On	materials: 1.4435 (316L), 1.4404 (316L)	Ø 2,0mm - length: 49mm	29,60
6640000A30064	(4 pcs.) for TANKO-S30 Clip-On	materials: 1.4576	Ø 2,0mm - length: 49mm	29,60
6640000A30094	(4 pcs.) for TANKO-S30 Clip-On	materials: 2.4602 (HC22), 2.4610 (HC4)	Ø 2,0mm - length: 49mm	32,40
6640000A50044	(4 pcs.) for TANKO-RB40 Clip-On	materials: 1.4435 (316L), 1.4404 (316L)	Ø 2,4mm - length: 49mm	29,60
6640000A50064	(4 pcs.) for TANKO-RB40 Clip-On	materials: 1.4571 (316Ti) (316Ti), 1.4576	Ø 2,4mm - length: 49mm	29,60
6640000A51064	(4 pcs.) for TANKO-RB40 Clip-On	materials: 1.4571 (316Ti) (316Ti), 1.4576	Ø 2,4mm - length: 59mm	29,60
6640000A50094	(4 pcs.) for TANKO-RB40 Clip-On	materials: 2.4602 (HC22), 2.4610 (HC4)	Ø 2,4mm - length: 49mm	32,40
6640000A60054	(4 pcs.) for TANKO-S40, -RB64 Clip-On	materials: 1.4571 (316Ti) (316Ti)	Ø 3,6mm - length: 78mm	34,40
6640000A60074	(4 pcs.) for TANKO-S40, -RB64 Clip-On	materials: 2.4602 (HC22), 2.4610 (HC4)	Ø 3,6mm - length: 78mm	63,20
6640000A70054	(4 pcs.) for TANKO-S50, -RB90 Clip-On	materials: 1.4571 (316Ti) (316Ti)	Ø 4,5mm - length: 115mm	38,80

Project Information Sheet		Project Nr.:	
Customer:		Handled by:	
Description:		Date:	
Vessel description:	Volume:		
	Dimensions:		
	Fitting position: vertical ☐ horizontal ☐ others.....		
Type of impurity:	Cleansing agent:	ATEX zone	
	Max. temperature of the cleansing agent: °C		
Consumption: m3/h	Max. ambient temperature: °C		
Estimated cleaning duration:	Working pressure: bar/ Cleansing agent		
Type of weld-on socket: 1) 2)	Dimensions:	Material:	
	Dimensions:	Material:	
Cleaning device: 1) 2)	Spray pattern:	Material:	
	Spray pattern:	Material:	
Current cleaning:			
Top view Mark the socket  Side view Mark the built-in elements  			
Remarks:			
This data sheet is intended for rating of AWH cleaning technology equipment. Each copy, transmission or any other utilization by third parties requires the written approval by AWH.			

Vessel geometry and environment:

- 1.01 Size: _____ (in m)
- 1.02 Dimensions: _____ (width x height x depth)
- 1.03 Utilized height: (fill up quantity...) _____ (in m)
- 1.04 Installations: (agitators, funnels...) _____
- 1.05 Nozzles for measurement techniques or others: _____
- 1.06 Please attach drawings or drafts to your questionnaire or use the AWH project information sheet
- 1.07 ATEX approval required? ☐ Yes ☐ No
- 1.08 Which zones? _____
- 1.09 Utilization of the vessel: (tank, bottler...) _____
- 1.10 Storage of: (foods, adhesives, solvents...) _____
- 1.11 Process vessel: (mixing vessels, tank cleaning, reactor...) _____
- 1.12 Temperature of the process: _____ (°C)
- 1.13 Others: _____

Cleaning of the vessel

- 2.01 Point in time of cleaning: _____
- 2.02 Directly after process? ☐ Yes ☐ No
- 2.03 How often? _____
- 2.04 What is your current cleansing agent? (lye, acid, water, alcohol...) _____
- 2.05 How are you currently cleaning? _____
- 2.06 ☐ brush Type of: _____
- 2.07 ☐ high-pressure cleaner Type of: _____
- 2.08 ☐ competitive device Type of: _____
- 2.09 What does not work?: _____
- 2.10 Available amount of cleansing agent: _____ (m3/h)
- 2.11 Available pressure for cleansing agent: _____ (bar)
- 2.12 Where is the pressure for the cleansing agent being measured? _____
- 2.13 Are several cleaning devices concurrently in use? _____
- 2.14 Does the pressure drop during operation of the cleaning device? ☐ Yes ☐ No

2.15 Duration of the cleaning process: (cyclic...)

2.16 Is a surge or jet cleaner required?

2.17 Washing/rinsing or blasting?

2.18 Are any modifications planned for the cleaning process?

2.19 Is the cleansing agent applied in circles?

(or lost cleaning)

2.20 Has the filter been installed in front of the cleaning device?

☐ Yes

☐ No

2.21 Does the cleansing agent require subsequent disposal? (hazardous waste ...)

Materials:

3.01 Material of the tank:

3.02 Material of the cleaning device:

☐ 1.4404 (316L)

☐ 1.4571 (316Ti)

☐ 1.4435 (316L)

☐ Hasteloy (HC4 or HC 22)

3.03 3.1 Certificates required?

☐ Yes

☐ No

3.04 Surface quality:

3.05 Connection of the cleaning device:

☐ clip-on

dimensions:

☐ Thread

dimensions:

☐ Orbital weld version

dimensions:

AWH is offering complete downpipe solutions, please attend to the downpipe questionnaire

on page 18 for further enquiries!

ATTENTION: Nominal width of the connection depends on the type of device!

Cleansing agent flow off:

4.01 Diameter and execution of the connection:

4.02 Extraction by suction with a pump

☐ Yes

☐ No

4.03 Free flow off

☐ Yes

☐ No

4.04 Settling residues in the vessel can be expected

☐ Yes

☐ No

Cleaning devices are to be hygienically installed into the tank. This task starts with the outside wall of the tank. Here, various solutions are available:

- Threaded connection acc. to DIN 11851 with weld-on nozzle
- TriClamp with weld-on nozzle
- Welding neck flange of various types with weld-on nozzle
- DIN 11864- connection (clamp, threaded connection or flange) with weld-on nozzle
- Block flange following the DIN 11864
- Block flange of the BioConnect – series

This listing is definitely not complete, yet it describes some technically reasonable possibilities.

Important advices on the design of the connecting pieces arise directly from the examination of the spray angle, spray

shadow pattern and the available cleaning devices. The weld-on nozzles should be adjusted to these determining factors. The most reasonable solution is a block flange application. The short construction of the block flanges reduces the rebound into the connecting flange, thus most suitable for avoiding the areas, which are difficult to clean.

For economical reasons most applications will be equipped with clamp, flange or threaded connections. Yet, an optimization can also be achieved here. For this, reductions with a central or an excentrical design are applied.

Generally, sufficient rinsing or blasting conditions for the final cleaning process are achieved with an optimal design of the weld-on nozzles, i.e. nozzle depth = nozzle diameter or Downpipe diameter.

One of the most important issues regarding the connection of the cleaning device is the connection of the cleaning device to the down pipe (piece of pipe within the vessel).

Implementations are:

- Welding points at the down pipe with manual or orbital welding seam
- Clip-on connection
- Threaded connection

From the hygienic point of view the orbital welding seam is definitely the best solution. Problems with cleaning the downpipe are to be observed and require for a particularly long downpipe special solutions.

The threaded connector enables a flexible connection of the cleaning device, though it bears particular cleanliness risks especially at the thread. A pipe with a male thread is bound to result in a "cup formation" at the transition of the thread to the cleaning device.

The weld-on adapter depicted in the figure is a good solution to this problem in combination

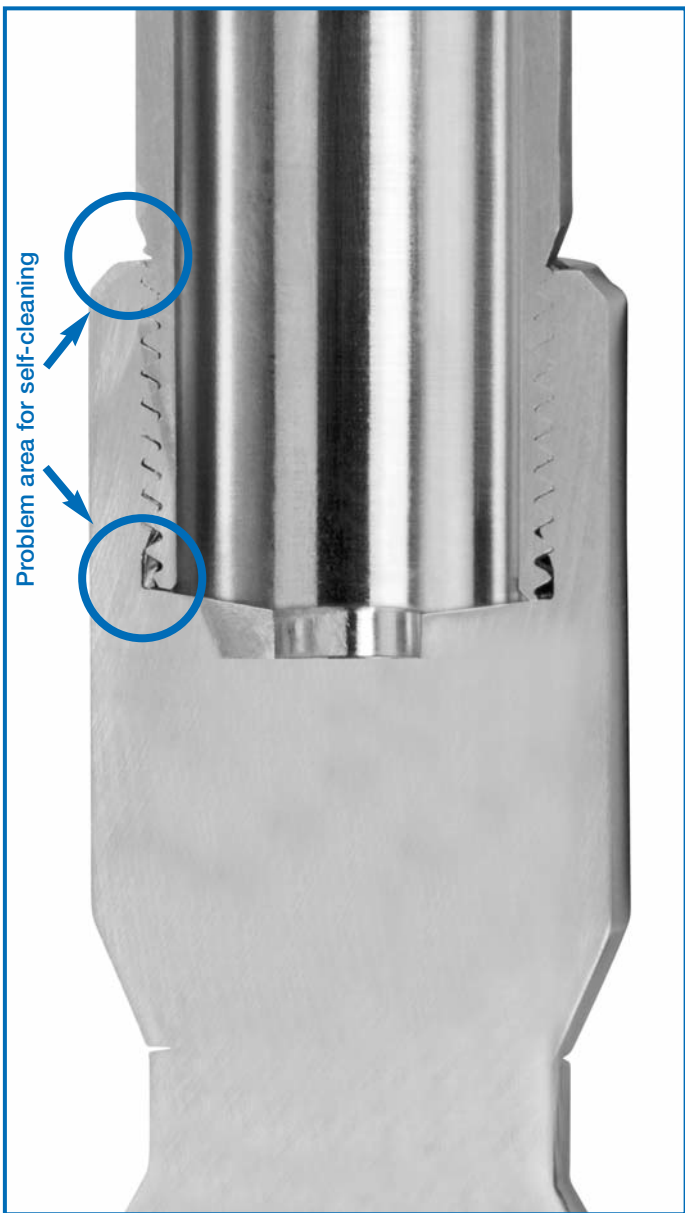


Hygienic Installation of cleaning devices!

with a clean weld seam. The horizontal orientation of the gap between the thread and the cleaning device prevents a deposit of effluent cleansing agent. Hence it can flow off entirely over this edge. Various designs for the available combinations of pipe diameters and cleaning devices are possible. The material grades 1.4404, 1.4571, 1.4435 and, if necessary, also various Hastelloy variants can be selected.

In combination with the given vessel connection variants, a clean general solution has been developed for the broad range of cleaning devices. Hence, contaminations at the connecting points of the cleaning devices can easily be reduced. Even in case of modification of the downpipe geometry (immersion depths ...), the optimization of the cleaning processes is trouble-free.

Standard – Male Thread - Installation



AWH – Hygienic – Solution



Down pipe systems for tank cleaning CIP

1 cleaning device:

TANKO®-S	10	20	30	40	50
TANKO®-RB	30	40	64	90	
ORBI G4					
Jumbo 6-500					
TANKMAN					
static sprayball	24	30	40	64	90

2 weld on nipple:

1/8"	3/4"	
1/4"	1"	BSP
3/8"	1 1/2"	NPSM
1/2"		
metric thread M5		

3 pipe:

DN	length A	length B
DIN 11866 series A (DIN)	H3	X
DIN 11866 series B (ISO)	H3	X
DIN 11866 series C (ASME)	H3	X
DIN 11850 series 1		
DIN 11850 series 2		

4 process connection:

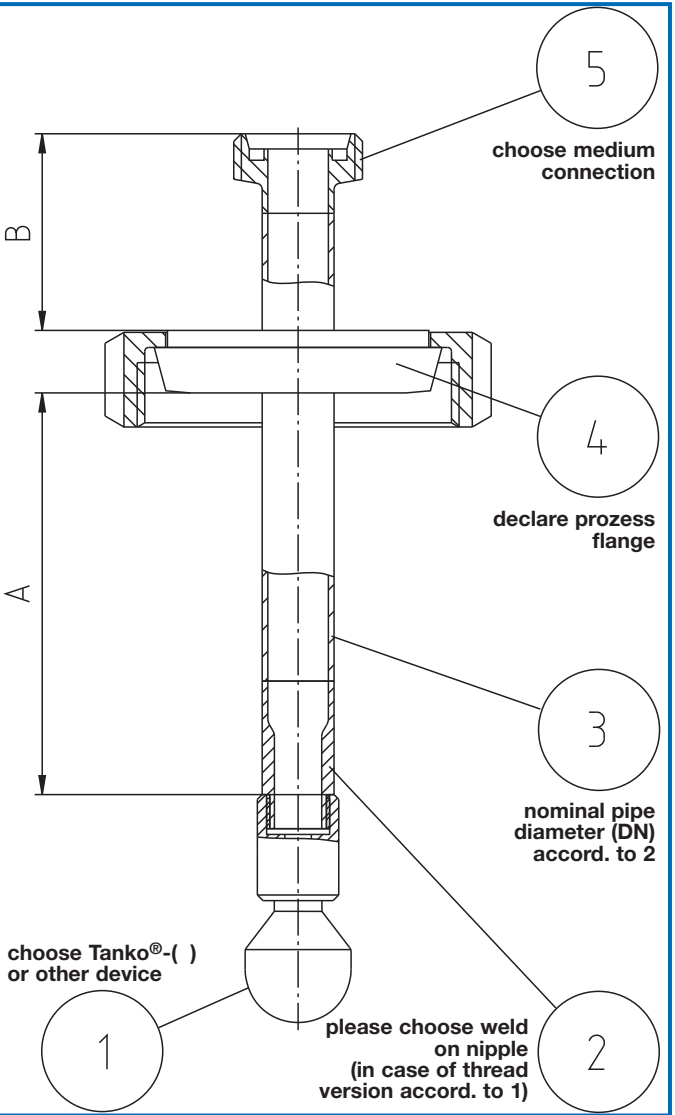
nominal pipe diameter	
ISO flange	nominal pressure (e.g. 10 bar)
DIN 11851 liner	
DIN 11864 part 1 liner	
DIN 11864 part 2 Form A	slot flange
DIN 11864 part 3 Form A	slot clamp nozzle

5 medium connection:

nominal pipe diameter	
ISO flange	nominal pressure (e.g. 10 bar)
DIN 11851 threaded neck (male)	liner
DIN 11864 part1 Form A threaded neck (male)	collar nozzle
DIN 11864 part 2 Form A slot flange	collar flange
DIN 11864 part 3 Form A slot clamp nozzle	collar clamp nozzle

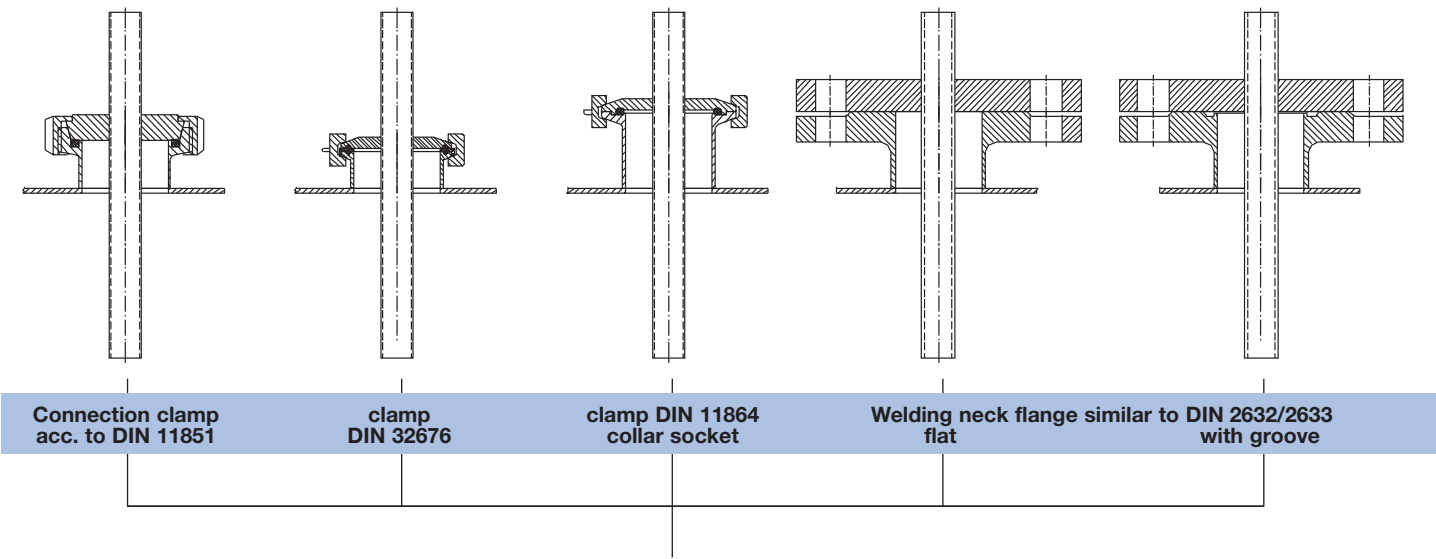
6 special features:

Down pipe

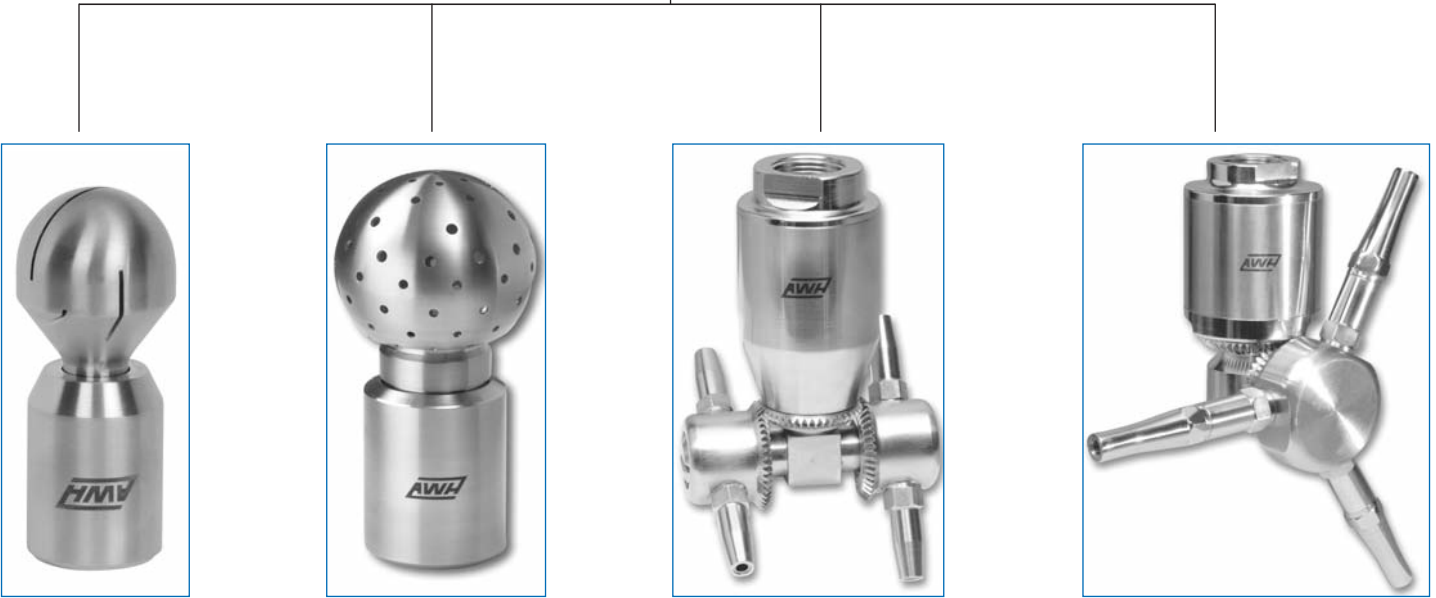


Choose yourself!

Available in various designs at short notice



Weld-on nipple see page 20-25



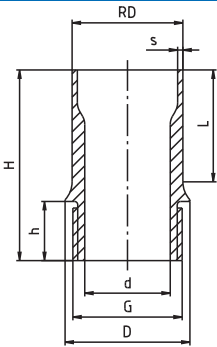
TANKO® S see page 32 TANKO® RB see page 70 Orbi see page 100 Jumbo see page 102 Tankmann see page 106

Weld-on nipple (orbital)



DN	DIN 11866	RD mm	s mm	G BSP	D mm	d mm	H mm	h mm	L min mm	
6	series A (DIN)	8,0	1	M5	8,5	3	33,5	3,5	27	8,9
10	series A (DIN)	13,0	1,5	G 1/8"	14	6	36	6	27	22,1
8	series B (ISO)	13,5	1,6	G 1/8"	14	6	36	6	27	23,9
8	series C (ASME)	1/2"-12,7	1,65	G 1/8"	14	6	36	6	27	21,7
10	series A (DIN)	13,0	1,5	G 1/4"	15	9	36	6	27	18,7
8	series B (ISO)	13,5	1,6	G 1/4"	15	9	36	6	27	20,7
8	series C (ASME)	1/2"-12,7	1,65	G 1/4"	15	9	36	6	27	18,1
15	acc. to DIN11850	18,0	1,5	G 3/8"	19	12,5	39	9	27	33,4
15	series A (DIN)	19,0	1,5	G 3/8"	19	12,5	39	9	27	37,0
10	series B (ISO)	17,2	1,6	G 3/8"	19	12,5	39	9	27	30,1
15	series B (ISO)	21,3	1,6	G 3/8"	19	12,5	39	9	27	46,5
15	series C (ASME)	3/4"-19,05	1,65	G 3/8"	19	12,5	39	9	27	37,7

Weld-on nipple (orbital)



DN	DIN 11866	RD mm	s mm	G BSP	D mm	d mm	H mm	h mm	L min mm	
15	series A (DIN)	19,0	1,5	G 1/2"	23	15	44	12	27	41,4
15	series B (ISO)	21,3	1,6	G 1/2"	23	15	44	12	27	53,2
15	series C (ASME)	3/4"-19,05	1,65	G 1/2"	23	15	44	12	27	42,0
20	series B (ISO)	26,9	1,6	G 3/4"	30	21	55	15	35	85,3
20	series C (ASME)	1" - 25,4	1,65	G 3/4"	30	21	55	15	35	72,6
25	series A (DIN)	29,0	1,5	G 3/4"	30	21	55	15	35	102,9
25	series B (ISO)	33,7	2,0	G 3/4"	30	21	55	15	34	151,6
25	acc. to DIN11850	28,0	1,5	G 3/4"	30	21	55	15	35	103,0
25	series B (ISO)	33,7	2,0	G 1"	38	26	58	18	34	147,5
32	series A (DIN)	35,0	1,5	G 1"	38	26	58	18	34	154,9
32	series C (ASME)	1 1/2"-38,1	1,65	G 1"	38	26	58	18	34	188,7
40	series A (DIN)	41,0	1,5	G 1 1/2"	52	38	60	20	28	183,0
40	series B (ISO)	48,3	2,0	G 1 1/2"	52	41	60	20	35	214,5
40	series C (ASME)	2" - 50,8	1,65	G 1 1/2"	52	41	60	20	35	249,2
50	series A (DIN)	53,0	1,5	G 1 1/2"	52	41	60	20	35	277,4

Weld-on nipple (orbital) BSP thread								
1.4404 (316L)			1.4571 (316Ti)		1.4435 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
6			39,40	66401 38 010650	40,60	66401 38 010630		
10			24,80	66401 40 010650	25,60	66401 40 010630		
8			24,80	66401 75 010650	25,60	66401 75 010630		
8			24,80	66401 89 010650	25,60	66401 89 010630		
10			24,80	66401 75 400650	25,60	66401 75 400630		
8			24,80	66401 75 750650	25,60	66401 75 750630		
8			24,80	66401 75 890650	25,60	66401 75 890630		
15			22,10	66401 03 760650	23,80	66401 03 760630		
15	22,10	66401 41 010620	22,10	66401 41 010650	23,80	66401 41 010630		
10	22,10	66401 76 010620	22,10	66401 76 010650	23,80	66401 76 010630		
15	22,10	66401 77 010620	22,10	66401 77 010650	23,80	66401 77 010630		
15	22,10	66401 90 010620	22,10	66401 90 010650	23,80	66401 90 010630		

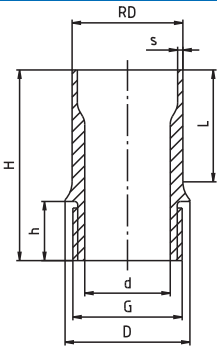
Weld-on nipple (orbital) BSP thread								
1.4404 (316L)			1.4571 (316Ti)		1.4435 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
15	22,10	66401 41 020620	22,10	66401 41 020650	22,90	66401 41 020630		
15	22,10	66401 77 020620	22,10	66401 77 020650	22,90	66401 77 020630		
15	22,10	66401 90 020620	22,10	66401 90 020650	22,90	66401 90 020630		
20	25,20	66401 78 010620	22,10	66401 78 010650				
20	25,20	66401 91 010620	22,10	66401 91 010650				
25	25,20	66401 43 010620	22,10	66401 43 010650				
25	25,20	66401 79 020620	22,10	66401 79 020650				
25	27,90	66401 05 780620	23,50	66401 05 780650				
25	36,10	66401 79 010620	32,30	66401 79 010650				
32	36,10	66401 44 010620	32,30	66401 44 010650				
32	36,10	66401 92 010620	32,30	66401 92 010650				
40	27,80	66401 40 810620	24,10	66401 40 810650				
40	27,80	66401 81 010620	24,10	66401 81 010650				
40	27,80	66401 93 010620	24,10	66401 93 010650				
50	27,80	66401 46 010620	24,10	66401 46 010650				

Weld-On Nipple (orbital) with BSP Thread

Weld-on nipple (orbital)



Weld-on nipple (orbital)



DN	DIN 11866	RD mm	s mm	G BSP	D mm	d mm	H mm	h mm	L min mm	
6	series A (DIN)	8,0	1	M5	8,5	3	33,5	3,5	27	8,9
10	series A (DIN)	13,0	1,5	G 1/8"	14	6	36	6	27	22,1
8	series B (ISO)	13,5	1,6	G 1/8"	14	6	36	6	27	23,9
8	series C (ASME)	1/2"-12,7	1,65	G 1/8"	14	6	36	6	27	21,7
10	series A (DIN)	13,0	1,5	G 1/4"	15	9	36	6	27	18,7
8	series B (ISO)	13,5	1,6	G 1/4"	15	9	36	6	27	20,7
8	series C (ASME)	1/2"-12,7	1,65	G 1/4"	15	9	36	6	27	18,1
15	acc. to DIN11850	18,0	1,5	G 3/8"	19	12,5	39	9	27	33,4
15	series A (DIN)	19,0	1,5	G 3/8"	19	12,5	39	9	27	37,0
10	series B (ISO)	17,2	1,6	G 3/8"	19	12,5	39	9	27	30,1
15	series B (ISO)	21,3	1,6	G 3/8"	19	12,5	39	9	27	46,5
15	series C (ASME)	3/4"-19,05	1,65	G 3/8"	19	12,5	39	9	27	37,7

DN	DIN 11866	RD mm	s mm	G BSP	D mm	d mm	H mm	h mm	L min mm	
15	series A (DIN)	19,0	1,5	G 1/2"	23	15	44	12	27	41,4
15	series B (ISO)	21,3	1,6	G 1/2"	23	15	44	12	27	53,2
15	series C (ASME)	3/4"-19,05	1,65	G 1/2"	23	15	44	12	27	42,0
20	series B (ISO)	26,9	1,6	G 3/4"	30	21	55	15	35	85,3
20	series C (ASME)	1" - 25,4	1,65	G 3/4"	30	21	55	15	35	72,6
25	series A (DIN)	29,0	1,5	G 3/4"	30	21	55	15	35	102,9
25	series B (ISO)	33,7	2,0	G 3/4"	30	21	55	15	34	151,6
25	series B (ISO)	33,7	2,0	G 1"	38	26	58	18	34	147,5
32	series A (DIN)	35,0	1,5	G 1"	38	26	58	18	34	154,9
32	series C (ASME)	1 1/2"-38,1	1,65	G 1"	38	26	58	18	34	188,7
50	series A (DIN)	53,0	1,5	G 1 1/2"	52	41	60	20	35	277,4
40	series B (ISO)	48,3	2,0	G 1 1/2"	52	41	60	20	35	214,5
40	series C (ASME)	2" - 50,8	1,65	G 1 1/2"	52	41	60	20	35	249,2

Weld-on nipple (orbital) BSP thread								
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
6	on request	66401 38 010680	on request	66401 38 010670				
10	92,10	66401 40 010680	92,10	66401 40 010670				
8	92,10	66401 75 010680	92,10	66401 75 010670				
8	92,10	66401 89 010680	92,10	66401 89 010670				
10	on request	66401 75 400680	on request	66401 75 400670				
8	on request	66401 75 750680	on request	66401 75 750670				
8	on request	66401 75 890680	on request	66401 75 890670				
15	on request	66401 03 760680	on request	66401 03 760670				
15	on request	66401 41 010680	on request	66401 41 010670				
10	on request	66401 76 010680	on request	66401 76 010670				
15	on request	66401 77 010680	on request	66401 77 010670				
15	on request	66401 90 010680	on request	66401 90 010670				

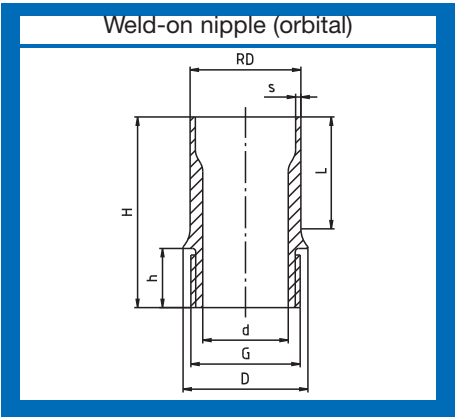
Weld-on nipple (orbital) BSP thread								
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
15	on request	66401 41 020680	on request	66401 41 020670				
15	on request	66401 77 020680	on request	66401 77 020670				
15	on request	66401 90 020680	on request	66401 90 020670				
20	209,60	66401 78 010680	209,60	66401 78 010670				
20	209,60	66401 91 010680	209,60	66401 91 010670				
25	209,60	66401 43 010680	209,60	66401 43 010670				
25	287,00	66401 79 020680	287,00	66401 79 020670				
25	on request	66401 79 010680	on request	66401 79 010670				
32	on request	66401 44 010680	on request	66401 44 010670				
32	on request	66401 92 010680	on request	66401 92 010670				
50	on request	66401 46 010680	on request	66401 46 010670				
40	on request	66401 81 010680	on request	66401 81 010670				
40	on request	66401 93 010680	on request	66401 93 010670				

NPSM

Weld-On Nipple (orbital) with NPSM Thread



DN	DIN 11866	RD mm	s mm	G NPSM	D mm	d mm	H mm	h mm	L min mm	
6	series B (ISO)	13,5	1,6	1/8"	14	6	36	6	27	23,9
6	series C (ASME)	1/2" - 12,7	1,65	1/8"	14	6	36	6	27	21,7
10	series B (ISO)	13,5	1,6	1/4"	15	9	36	6	27	20,7
10	series C (ASME)	1/2" - 12,7	1,65	1/4"	15	9	36	6	27	18,1
10	series B (ISO)	17,2	1,6	3/8"	19	12,5	39	9	27	30,1
10	series C (ASME)	3/4" - 19,05	1,65	3/8"	19	12,5	39	9	27	37,7
15	series B (ISO)	21,3	1,6	1/2"	23	15	44	12	27	53,2
15	series C (ASME)	3/4" - 19,05	1,65	1/2"	23	15	44	12	27	42,0
20	series B (ISO)	26,9	1,6	3/4"	30	21	55	15	35	85,3
20	series C (ASME)	1" - 25,4	1,65	3/4"	30	21	55	15	35	72,6
25	series B (ISO)	33,7	2,0	1"	38	26	58	18	34	147,5
32	series C (ASME)	1 1/2" - 38,1	1,65	1"	38	26	58	18	34	188,7
40	series B (ISO)	48,3	2,0	1 1/2"	52	41	60	20	35	214,5
40	series C (ASME)	2" - 50,8	1,65	1 1/2"	52	41	60	20	35	249,2



DN	DIN 11866	RD mm	s mm	G NPSM	D mm	d mm	H mm	h mm	L min mm	
6	series B (ISO)	13,5	1,6	1/8"	14	6	36	6	27	23,9
6	series C (ASME)	1/2" - 12,7	1,65	1/8"	14	6	36	6	27	21,7
10	series B (ISO)	13,5	1,6	1/4"	15	9	36	6	27	20,7
10	series C (ASME)	1/2" - 12,7	1,65	1/4"	15	9	36	6	27	18,1
10	series B (ISO)	17,2	1,6	3/8"	19	12,5	39	9	27	30,1
10	series C (ASME)	3/4" - 19,05	1,65	3/8"	19	12,5	39	9	27	37,7
15	series B (ISO)	21,3	1,6	1/2"	23	15	44	12	27	53,2
15	series C (ASME)	3/4" - 19,05	1,65	1/2"	23	15	44	12	27	42,0
20	series B (ISO)	26,9	1,6	3/4"	30	21	55	15	35	85,3
20	series C (ASME)	1" - 25,4	1,65	3/4"	30	21	55	15	35	72,6
25	series B (ISO)	33,7	2,0	1"	38	26	58	18	34	147,5
32	series C (ASME)	1 1/2" - 38,1	1,65	1"	38	26	58	18	34	188,7
40	series B (ISO)	48,3	2,0	1 1/2"	52	41	60	20	35	214,5
40	series C (ASME)	2" - 50,8	1,65	1 1/2"	52	41	60	20	35	249,2

! Combinable with TANKO®-S / -RB connection: NPS-thread !

Weld-on nipple (orbital) NPSM thread							
1.4404 (316L)			1.4571 (316Ti)		1.4435 (316L)		
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	
6			24,80	6640 17 5740 M50	25,60	6640 17 5740 M30	
6			24,80	6640 18 9740 M50	25,60	6640 18 9740 M30	
10			24,80	6640 17 5750 M50	25,60	6640 17 5750 M30	
10			24,80	6640 18 9750 M50	25,60	6640 18 9750 M30	
10			22,10	6640 17 6760 M50	23,80	6640 17 6760 M30	
10			22,10	6640 19 0760 M50	23,80	6640 19 0760 M30	
15			22,10	6640 17 7770 M50	22,90	6640 17 7770 M30	
15			22,10	6640 19 0770 M50	22,90	6640 19 0770 M30	
20			22,10	6640 17 8780 M50	on request	6640 17 8780 M30	
20			22,10	6640 19 1780 M50	on request	6640 19 1780 M30	
25			32,30	6640 17 9790 M50	on request	6640 17 9790 M30	
32			32,30	6640 19 2790 M50	on request	6640 19 2790 M30	
40			24,10	6640 18 1810 M50	on request	6640 18 1810 M30	
40			24,10	6640 19 3810 M50	on request	6640 19 3810 M30	

Weld-on nipple (orbital) NPSM thread							
2.4602 (HC22)			2.4610 (HC4)				
DN	Price/EUR	Item no.	Price/EUR	Item no.			
6	92,10	6640 17 5740 M80	92,10	6640 17 5740 M70			
6	92,10	6640 18 9740 M80	92,10	6640 18 9740 M70			
10	on request	6640 17 5750 M80	on request	6640 17 5750 M70			
10	on request	6640 18 9750 M80	on request	6640 18 9750 M70			
10	on request	6640 17 6760 M80	on request	6640 17 6760 M70			
10	on request	6640 19 0760 M80	on request	6640 19 0760 M70			
15	on request	6640 17 7770 M80	on request	6640 17 7770 M70			
15	on request	6640 19 0770 M80	on request	6640 19 0770 M70			
20	209,60	6640 17 8780 M80	209,60	6640 17 8780 M70			
20	209,60	6640 19 1780 M80	209,60	6640 19 1780 M70			
25	on request	6640 17 9790 M80	on request	6640 17 9790 M70			
32	on request	6640 19 2790 M80	on request	6640 19 2790 M70			
40	on request	6640 18 1810 M80	on request	6640 18 1810 M70			
40	on request	6640 19 3810 M80	on request	6640 19 3810 M70			

Pipe tongs with plastic jaws

For installation of thread versions of
- TANKO®-S30, -S40
- TANKO®-RB30, - RB40

pipe tongs with plastic jaws
item no. 07509



Item No.:	Price/EUR
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07509	39,10
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07510	substitute plastic jaws	on request
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Particular for installation of thread versions of
TANKO®-S10, -S20

pipe tongs with plastic jaws
item no. 07506



Item No.:	Price/EUR
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07506	28,50
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Cleaning devices for tanks or vessels are being applied since several decades. The achievable cleaning results could be considerably improved by developing new devices. Thanks to this development work, significant potential savings, best cleaning results and product safety emerge from today's economical surge cleaners (TANKO-S).

Reliable cleaning results thanks to enhanced clearing power

For economical reasons, surge cleaners often replace expensive jet cleaners. Meanwhile, this step is feasible for many applications. The reason for this is the improved cleaning power, i.e. the higher impact on the vessel's wall of modern surge cleaners. The current manufacturing technologies, such as orbital welding and high-precision CNC metal working centers offer various possibilities for optimizations. Here, the spray nozzle width and the quality of manufacture of the "spray nozzles slits" play a particular role. To put it in a nutshell: the broader and more accurate the construction of the slit, the higher the cleaning power. Attention should be paid to the achievable large droplet diameter on the vessel's wall. This is larger for large slit widths than for smaller slit widths, thus producing a higher impact. The drop has virtually a round shape, when impinging on the vessel's wall. The impingement angle of the drop onto the vessel's wall (which depends on the rotation speed of the TANKO-S head) plays a minor role. Basically, only the droplet size and its impact speed are the relevant parameters for the cleaning power. In order to perform an appropriate radius of action, apart from the droplet size, various constructive aspects are to be considered. Thanks to modern constructions of spray heads (design of the spray slits) and CNC-controlled processing centers, the spray heads have become 100% fabricable with repetitious accuracy. So-called "hand slit procedures" belong to the past. Cleaning processes that have been optimized once after exchanging the spray heads do not require any readjustment.

Hygienic and safe construction

Older constructions apply threaded constructions between spray head and the base (area of ball bearing). According to the construction several weak points can be found. On the one hand the spray head can turn off

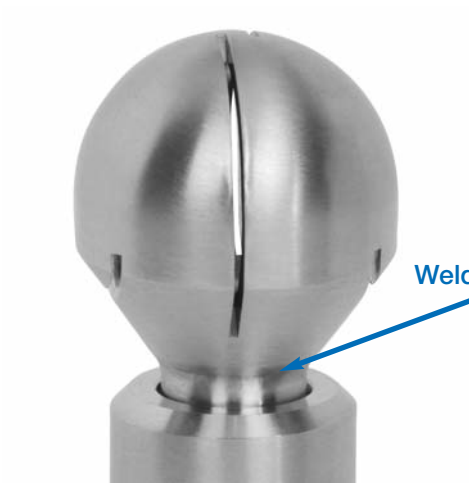


of the base plate. This happens only rarely, but the rotation of the spray head creates loosening effects at the thread in connection with the vibrations of the vessel (due to the built-in agitator). The thread can be secured by means of a locking pin. However, the quality of the locking pin (material and construction) and the installation of the pin bear significant responsibility for the hygienic properties of the entire surge cleaner. Therefore, the locking pin is not a really good solution.

With the new construction AWH waives a thread .

For the "weld-on version" the customer receives a thread-free device. The spray head is firmly attached to the base plate, which is welded to the downpipe as a whole. This construction has increased the hygienic optimization of the TANKO-S to a maximum degree. For best assembly into the vessel, the TANKO-S is optimally supplemented by the AWH downpipe concept.

The TANKO[®] S - Family



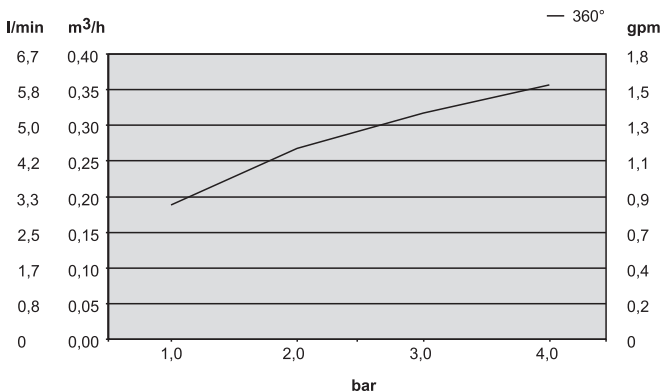
Connection types:

2 Locking pin	3	1
2 Spring cotter	3	1 Thread 2 Clip-on 3 Weld-on

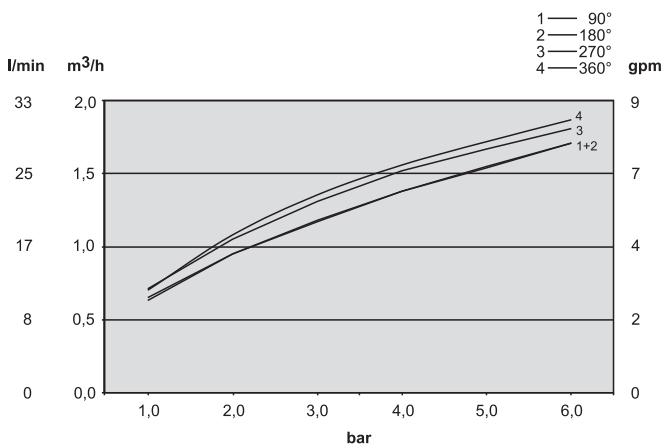
Consumption tables TANKO® S

Measuring temperature: ca. 25-30°C • Measuring medium: water

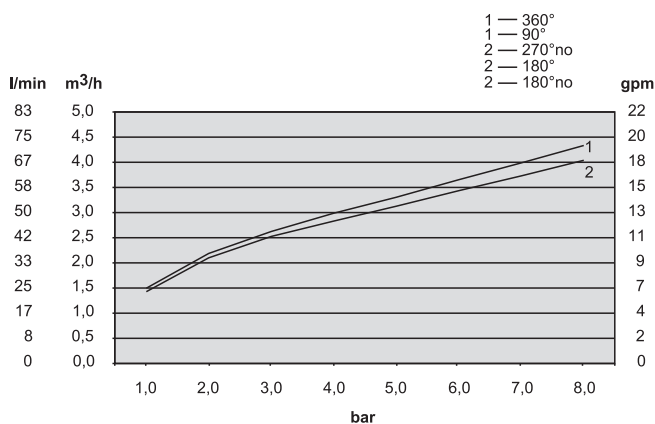
TANKO®-S10



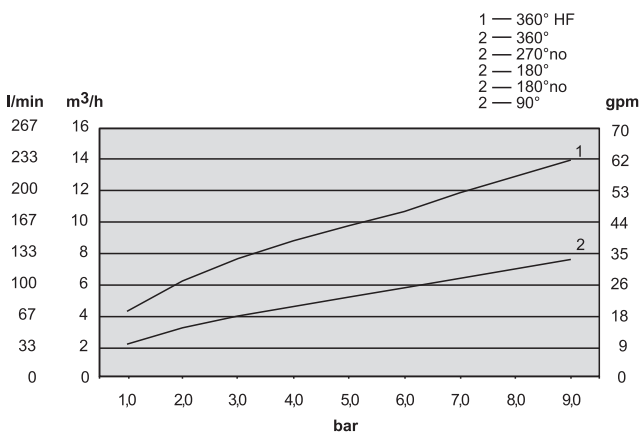
TANKO®-S20



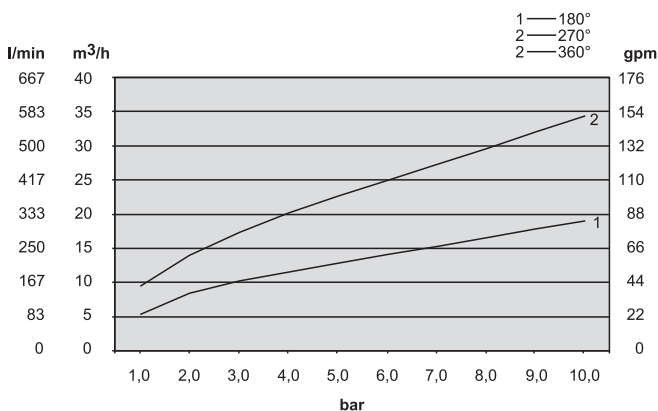
TANKO®-S30



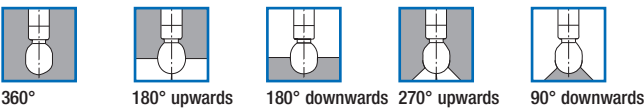
TANKO®-S40



TANKO®-S50



TANKO®-S Technical details



MATERIALS:

1.4404 (316L), 1.4435 (316L), 1.4571 (316Ti), 2.4602 (HC22), 2.4610 (HC4)

BALL BEARING:

1.4401 (316), optional 2.4602 (HC22), 2.4610 (HC4)

CONNECTIONS:

Clip-On, thread, weld-on

WORKING PRESSURE:

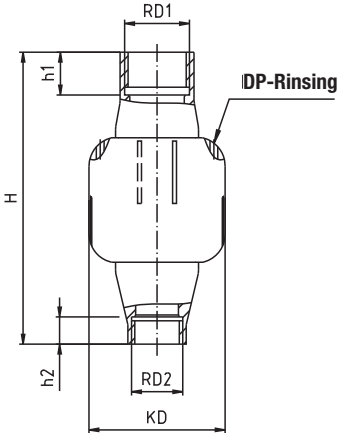
depends on the spray head size, see consumption tables

max. working temperature: 230°C

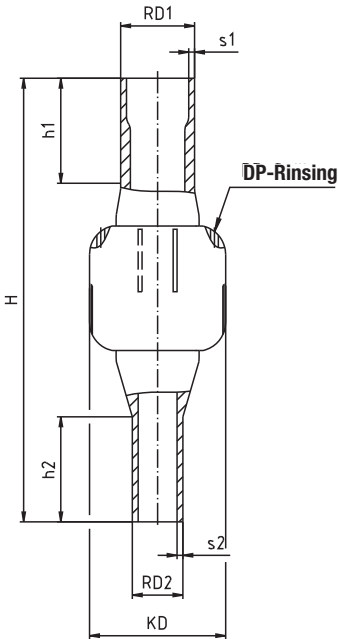
max. ambient temperature: 250°C

TANKO®-RPB-35 (rotating pipe ball)

TANKO® -RPB-35 360°
thread



weld on



Conne- ction	type of bearing	Standard DIN 11866	KD	RD1	s1	h1	RD2	s2	h2	DP- Rinsing	H	
thread	BB	BSP	35	3/8"	--	11	1/4"	--	7	without	75	140
thread	BB	BSP	35	3/8"	--	11	1/4"	--	7	with	75	140
thread	PB	BSP	35	3/8"	--	11	1/4"	--	7	without	75	140
thread	PB	BSP	35	3/8"	--	11	1/4"	--	7	with	75	140
thread	BB	NPT	35	3/8"	--	11	1/4"	--	7	without	75	140
thread	BB	NPT	35	3/8"	--	11	1/4"	--	7	with	75	140
thread	PB	NPT	35	3/8"	--	11	1/4"	--	7	without	75	140
thread	PB	NPT	35	3/8"	--	11	1/4"	--	7	with	75	140
weld on	BB	series A (DIN)	35	19	1,5	27	13	1,5	27	without	114	151
weld on	BB	series A (DIN)	35	19	1,5	27	13	1,5	27	with	114	151
weld on	PB	series A (DIN)	35	19	1,5	27	13	1,5	27	without	114	151
weld on	PB	series A (DIN)	35	19	1,5	27	13	1,5	27	with	114	151
weld on	BB	series B (ISO)	35	21,3	1,6	27	13,5	1,6	27	without	114	151
weld on	BB	series B (ISO)	35	21,3	1,6	27	13,5	1,6	27	with	114	151
weld on	PB	series B (ISO)	35	21,3	1,6	27	13,5	1,6	27	without	114	151
weld on	PB	series B (ISO)	35	21,3	1,6	27	13,5	1,6	27	with	114	151
weld on	BB	series C (ASME)	35	19,05	1,65	27	12,7	1,65	27	without	114	151
weld on	BB	series C (ASME)	35	19,05	1,65	27	12,7	1,65	27	with	114	151
weld on	PB	series C (ASME)	35	19,05	1,65	27	12,7	1,65	27	without	114	151
weld on	PB	series C (ASME)	35	19,05	1,65	27	12,7	1,65	27	with	114	151

- RPB 35

BB =

ball bearing

Maximum working temperature: 140 °C
- RPB 35

PB =

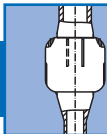
plain bearing

Maximum working temperature: 60° C, higher upon request
- DP-Rinsing =

down pipe rinsing upwards
- Operating pressure:

typically 1 – 3 bar

	DP-Rinsing Slide bearing	DP-Rinsing Ball bearing	Slide bearing	Ball bearing
Pressure/bar	Volume m ³ /h	Volume m ³ /h	Volume m ³ /h	Volume m ³ /h
1,0	1,30	1,35	1,20	1,25
1,5	1,60	1,7	1,50	1,6
2,0	1,90	2	1,80	1,9



TANKO® -RPB-35 (rotating pipe ball) 360°

1.4404 (316L)		1.4435 (316L)		1.4571 (316 Ti)		2.4610 (HC4)		2.4602 (HC22)	
Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
on request	667 11101 3230 020	225,00	667 11101 3230 030	on request	667 11101 3230 050	on request	667 11101 3230 070	on request	667 11101 3230 080
on request	667 11111 3230 020	225,00	667 11111 3230 030	on request	667 11111 3230 050	on request	667 11111 3230 070	on request	667 11111 3230 080
on request	667 11102 3230 020	255,00	667 11102 3230 030	on request	667 11102 3230 050	on request	667 11102 3230 070	on request	667 11102 3230 080
on request	667 11112 3230 020	255,00	667 11112 3230 030	on request	667 11112 3230 050	on request	667 11112 3230 070	on request	667 11112 3230 080
on request	667 11101 3240 020	225,00	667 11101 3240 030	on request	667 11101 3240 050	on request	667 11101 3240 070	on request	667 11101 3240 080
on request	667 11111 3240 020	225,00	667 11111 3240 030	on request	667 11111 3240 050	on request	667 11111 3240 070	on request	667 11111 3240 080
on request	667 11102 3240 020	255,00	667 11102 3240 030	on request	667 11102 3240 050	on request	667 11102 3240 070	on request	667 11102 3240 080
on request	667 11112 3240 020	255,00	667 11112 3240 030	on request	667 11112 3240 050	on request	667 11112 3240 070	on request	667 11112 3240 080
on request	667 11101 6660 020	275,00	667 11101 6660 030	on request	667 11101 6660 050	on request	667 11101 6660 070	on request	667 11101 6660 080
on request	667 11111 6660 020	275,00	667 11111 6660 030	on request	667 11111 6660 050	on request	667 11111 6660 070	on request	667 11111 6660 080
on request	667 11102 6660 020	305,00	667 11102 6660 030	on request	667 11102 6660 050	on request	667 11102 6660 070	on request	667 11102 6660 080
on request	667 11112 6660 020	305,00	667 11112 6660 030	on request	667 11112 6660 050	on request	667 11112 6660 070	on request	667 11112 6660 080
on request	667 11101 7760 020	275,00	667 11101 7760 030	on request	667 11101 7760 050	on request	667 11101 7760 070	on request	667 11101 7760 080
on request	667 11111 7760 020	275,00	667 11111 7760 030	on request	667 11111 7760 050	on request	667 11111 7760 070	on request	667 11111 7760 080
on request	667 11102 7760 020	305,00	667 11102 7760 030	on request	667 11102 7760 050	on request	667 11102 7760 070	on request	667 11102 7760 080
on request	667 11112 7760 020	305,00	667 11112 7760 030	on request	667 11112 7760 050	on request	667 11112 7760 070	on request	667 11112 7760 080
on request	667 11101 8860 020	275,00	667 11101 8860 030	on request	667 11101 8860 050	on request	667 11101 8860 070	on request	667 11101 8860 080
on request	667 11111 8860 020	275,00	667 11111 8860 030	on request	667 11111 8860 050	on request	667 11111 8860 070	on request	667 11111 8860 080
on request	667 11102 8860 020	305,00	667 11102 8860 030	on request	667 11102 8860 050	on request	667 11102 8860 070	on request	667 11102 8860 080
on request	667 11112 8860 020	305,00	667 11112 8860 030	on request	667 11112 8860 050	on request	667 11112 8860 070	on request	667 11112 8860 080

That's how to reduce spray shadows!

TANKO® -RPB-35 / 360° combined with TANKO® -S-20 in a down pipe.

One connection nozzle and two surge sources (TANKO® S) that are installed within one down pipe in different heights reduce the spray shadows to a minimum.

The TANKO® RPB 35 is available as PEEK-slide bearing and stainless steel ball bearing (1.4401) version with a spray angle of 360°.

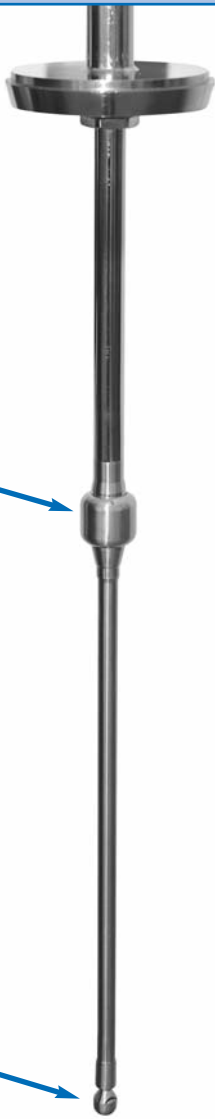
The base plate and the spray ball are made of the indicated material such as 1.4435 for instance. Supplementing the standard 360° spray angle model, a RPB version with down pipe rinsing for nozzle and down pipe cleaning is also available.

Further spray angles and product models are being developed or involved in long-term tests and available in short time.

TANKO® -RPB-35 360°

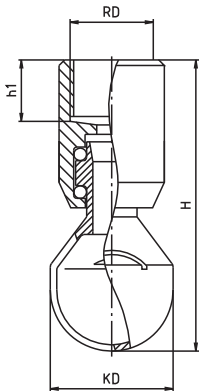


TANKO® -S20 360° (Example)

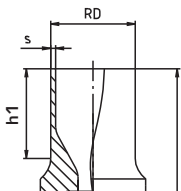




TANKO® S10 360°
thread



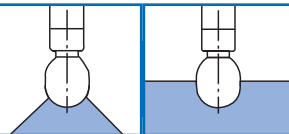
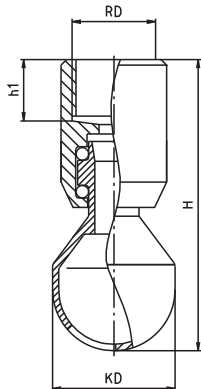
weld on



Conne- tion	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	
weld on	series A (DIN)	6	8,0	1	10	53	27	---	---	13,6
thread	DIN 13 T.1	6	M5	---	10	25	4	---	---	7,0

[illegible]

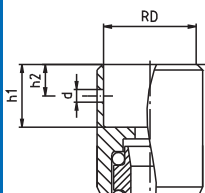
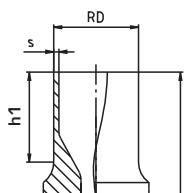
Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


TANKO® S20 90° downwards
 thread


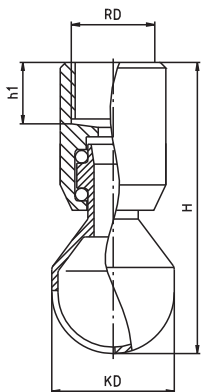
Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	8	10,2	---	17	43	7	3	2,2	25
Clip on	series B (ISO)	6	10,4	---	17	43	7	3	2,2	25
weld on	series A (DIN)	8	10,0	1	17	69	27	---	---	47
weld on	series A (DIN)	10	13,0	1,5	17	69	27	---	---	47
weld on	series B (ISO)	8	13,5	1,6	17	69	27	---	---	47
weld on	series C (ASME)	8	1/2"(12,7)	1,65	17	69	27	---	---	47
thread	BSP	6	G 1/8"	---	17	43	7	---	---	25
thread	NPT	6	1/8"	---	17	43	7	---	---	25
thread	NPS	6	1/8"	---	17	43	7	---	---	25

weld on

clip on



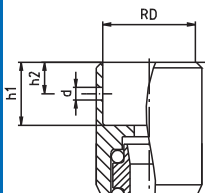
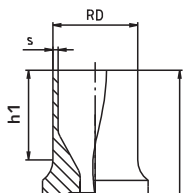
Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

TANKO® S20 180° downwards
 thread


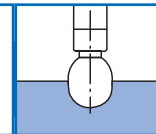
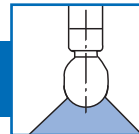
Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	8	10,2	---	17	43	7	3	2,2	25
Clip on	series B (ISO)	6	10,4	---	17	43	7	3	2,2	25
weld on	series A (DIN)	8	10,0	1	17	69	27	---	---	47
weld on	series A (DIN)	10	13,0	1,5	17	69	27	---	---	47
weld on	series B (ISO)	8	13,5	1,6	17	69	27	---	---	47
weld on	series C (ASME)	8	1/2"(12,7)	1,65	17	69	27	---	---	47
thread	BSP	6	G 1/8"	---	17	43	7	---	---	25
thread	NPT	6	1/8"	---	17	43	7	---	---	25
thread	NPS	6	1/8"	---	17	43	7	---	---	25

weld on

clip on



Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



TANKO® S20 90° downwards

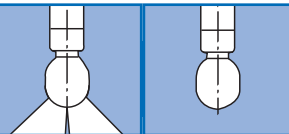
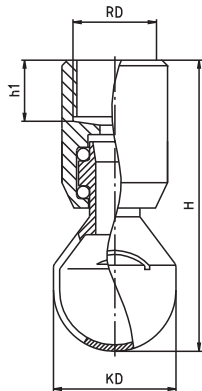
1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
8	215,00	665 02 39 00 3 2 5 1	185,00	665 02 39 00 3 2 3 1	890,00	665 02 39 00 3 2 8 1	890,00	665 02 39 00 3 2 7 1
6	215,00	665 02 74 00 3 2 5 1	185,00	665 02 74 00 3 2 3 1	890,00	665 02 74 00 3 2 8 1	890,00	665 02 74 00 3 2 7 1
8	215,00	665 02 39 00 3 6 5 1	185,00	665 02 39 00 3 6 3 1	890,00	665 02 39 00 3 6 8 1	890,00	665 02 39 00 3 6 7 1
10	215,00	665 02 40 00 3 6 5 1	185,00	665 02 40 00 3 6 3 1	890,00	665 02 40 00 3 6 8 1	890,00	665 02 40 00 3 6 7 1
8	215,00	665 02 75 00 3 6 5 1	185,00	665 02 75 00 3 6 3 1	890,00	665 02 75 00 3 6 8 1	890,00	665 02 75 00 3 6 7 1
8	215,00	665 02 89 00 3 6 5 1	185,00	665 02 89 00 3 6 3 1	890,00	665 02 89 00 3 6 8 1	890,00	665 02 89 00 3 6 7 1
6	215,00	665 02 74 00 3 3 5 1	185,00	665 02 74 00 3 3 3 1	890,00	665 02 74 00 3 3 8 1	890,00	665 02 74 00 3 3 7 1
6	215,00	665 02 74 00 3 4 5 1	185,00	665 02 74 00 3 4 3 1	890,00	665 02 74 00 3 4 8 1	890,00	665 02 74 00 3 4 7 1
6	215,00	665 02 74 00 3 A 5 1	185,00	665 02 74 00 3 A 3 1	890,00	665 02 74 00 3 A 8 1	890,00	665 02 74 00 3 A 7 1

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).

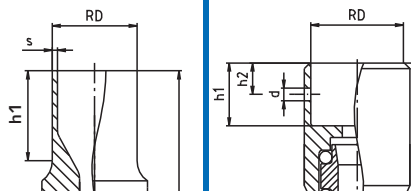
TANKO® S20 180° downwards

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
8	215,00	665 02 39 00 2 2 5 1	185,00	665 02 39 00 2 2 3 1	890,00	665 02 39 00 2 2 8 1	890,00	665 02 39 00 2 2 7 1
6	215,00	665 02 74 00 2 2 5 1	185,00	665 02 74 00 2 2 3 1	890,00	665 02 74 00 2 2 8 1	890,00	665 02 74 00 2 2 7 1
8	215,00	665 02 39 00 2 6 5 1	185,00	665 02 39 00 2 6 3 1	890,00	665 02 39 00 2 6 8 1	890,00	665 02 39 00 2 6 7 1
10	215,00	665 02 40 00 2 6 5 1	185,00	665 02 40 00 2 6 3 1	890,00	665 02 40 00 2 6 8 1	890,00	665 02 40 00 2 6 7 1
8	215,00	665 02 75 00 2 6 5 1	185,00	665 02 75 00 2 6 3 1	890,00	665 02 75 00 2 6 8 1	890,00	665 02 75 00 2 6 7 1
8	215,00	665 02 89 00 2 6 5 1	185,00	665 02 89 00 2 6 3 1	890,00	665 02 89 00 2 6 8 1	890,00	665 02 89 00 2 6 7 1
6	215,00	665 02 74 00 2 3 5 1	185,00	665 02 74 00 2 3 3 1	890,00	665 02 74 00 2 3 8 1	890,00	665 02 74 00 2 3 7 1
6	215,00	665 02 74 00 2 4 5 1	185,00	665 02 74 00 2 4 3 1	890,00	665 02 74 00 2 4 8 1	890,00	665 02 74 00 2 4 7 1
6	215,00	665 02 74 00 2 A 5 1	185,00	665 02 74 00 2 A 3 1	890,00	665 02 74 00 2 A 8 1	890,00	665 02 74 00 2 A 7 1

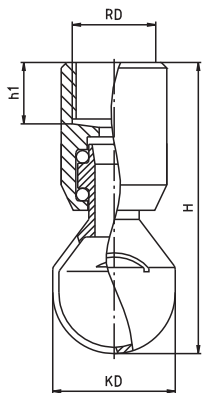
Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


TANKO® S20 270° upwards
 thread


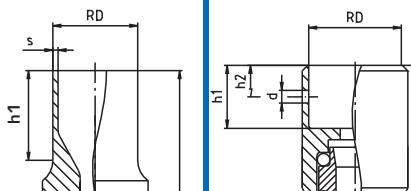
Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	 g
Clip on	series A (DIN)	8	10,2	---	17	43	7	3	2,2	25
Clip on	series B (ISO)	6	10,4	---	17	43	7	3	2,2	25
weld on	series A (DIN)	8	10,0	1	17	69	27	---	---	47
weld on	series A (DIN)	10	13,0	1,5	17	69	27	---	---	47
weld on	series B (ISO)	8	13,5	1,6	17	69	27	---	---	47
weld on	series C (ASME)	8	1/2"(12,7)	1,65	17	69	27	---	---	47
thread	BSP	6	G 1/8"	---	17	43	7	---	---	25
thread	NPT	6	1/8"	---	17	43	7	---	---	25
thread	NPS	6	1/8"	---	17	43	7	---	---	25

weld on **clip on**


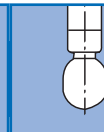
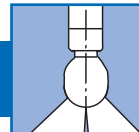
Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

TANKO® S20 360°
 thread


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	 g
Clip on	series A (DIN)	8	10,2	---	17	43	7	3	2,2	25
Clip on	series B (ISO)	6	10,4	---	17	43	7	3	2,2	25
weld on	series A (DIN)	8	10,0	1	17	69	27	---	---	47
weld on	series A (DIN)	10	13,0	1,5	17	69	27	---	---	47
weld on	series B (ISO)	8	13,5	1,6	17	69	27	---	---	47
weld on	series C (ASME)	8	1/2"(12,7)	1,65	17	69	27	---	---	47
thread	BSP	6	G 1/8"	---	17	43	7	---	---	25
thread	NPT	6	1/8"	---	17	43	7	---	---	25
thread	NPS	6	1/8"	---	17	43	7	---	---	25

weld on **clip on**


Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



TANKO® S20 270° upwards

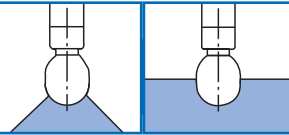
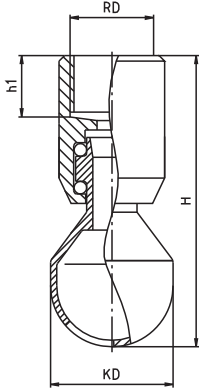
1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
8	215,00	665 02 39 00 6 2 5 1	185,00	665 02 39 00 6 2 3 1	890,00	665 02 39 00 6 2 8 1	890,00	665 02 39 00 6 2 7 1
6	215,00	665 02 74 00 6 2 5 1	185,00	665 02 74 00 6 2 3 1	890,00	665 02 74 00 6 2 8 1	890,00	665 02 74 00 6 2 7 1
8	215,00	665 02 39 00 6 6 5 1	185,00	665 02 39 00 6 6 3 1	890,00	665 02 39 00 6 6 8 1	890,00	665 02 39 00 6 6 7 1
10	215,00	665 02 40 00 6 6 5 1	185,00	665 02 40 00 6 6 3 1	890,00	665 02 40 00 6 6 8 1	890,00	665 02 40 00 6 6 7 1
8	215,00	665 02 75 00 6 6 5 1	185,00	665 02 75 00 6 6 3 1	890,00	665 02 75 00 6 6 8 1	890,00	665 02 75 00 6 6 7 1
8	215,00	665 02 89 00 6 6 5 1	185,00	665 02 89 00 6 6 3 1	890,00	665 02 89 00 6 6 8 1	890,00	665 02 89 00 6 6 7 1
6	215,00	665 02 74 00 6 3 5 1	185,00	665 02 74 00 6 3 3 1	890,00	665 02 74 00 6 3 8 1	890,00	665 02 74 00 6 3 7 1
6	215,00	665 02 74 00 6 4 5 1	185,00	665 02 74 00 6 4 3 1	890,00	665 02 74 00 6 4 8 1	890,00	665 02 74 00 6 4 7 1
6	215,00	665 02 74 00 6 A 5 1	185,00	665 02 74 00 6 A 3 1	890,00	665 02 74 00 6 A 8 1	890,00	665 02 74 00 6 A 7 1

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).

TANKO® S20 360°

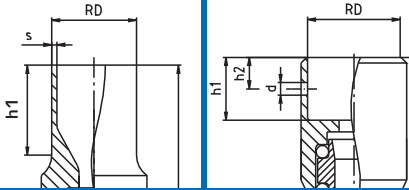
1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
8	215,00	665 02 39 00 1 2 5 1	185,00	665 02 39 00 1 2 3 1	890,00	665 02 39 00 1 2 8 1	890,00	665 02 39 00 1 2 7 1
6	215,00	665 02 74 00 1 2 5 1	185,00	665 02 74 00 1 2 3 1	890,00	665 02 74 00 1 2 8 1	890,00	665 02 74 00 1 2 7 1
8	215,00	665 02 39 00 1 6 5 1	185,00	665 02 39 00 1 6 3 1	890,00	665 02 39 00 1 6 8 1	890,00	665 02 39 00 1 6 7 1
10	215,00	665 02 40 00 1 6 5 1	185,00	665 02 40 00 1 6 3 1	890,00	665 02 40 00 1 6 8 1	890,00	665 02 40 00 1 6 7 1
8	215,00	665 02 75 00 1 6 5 1	185,00	665 02 75 00 1 6 3 1	890,00	665 02 75 00 1 6 8 1	890,00	665 02 75 00 1 6 7 1
8	215,00	665 02 89 00 1 6 5 1	185,00	665 02 89 00 1 6 3 1	890,00	665 02 89 00 1 6 8 1	890,00	665 02 89 00 1 6 7 1
6	215,00	665 02 74 00 1 3 5 1	185,00	665 02 74 00 1 3 3 1	890,00	665 02 74 00 1 3 8 1	890,00	665 02 74 00 1 3 7 1
6	215,00	665 02 74 00 1 4 5 1	185,00	665 02 74 00 1 4 3 1	890,00	665 02 74 00 1 4 8 1	890,00	665 02 74 00 1 4 7 1
6	215,00	665 02 74 00 1 A 5 1	185,00	665 02 74 00 1 A 3 1	890,00	665 02 74 00 1 A 8 1	890,00	665 02 74 00 1 A 7 1

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).

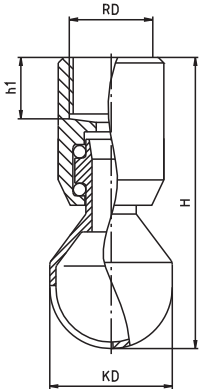

TANKO® S30 90° downwards
 thread


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	10	17,5	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	15	21,3	---	28,0	60	10,5	5	2,2	95
Clip on	series C (ASME)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series 1 DIN11850	15	18,3	---	28,0	60	10,5	5	2,2	95
weld on	series A (DIN)	15	19,0	1,5	28,0	83	26	---	---	123
weld on	series B (ISO)	10	17,2	1,6	28,0	83	26	---	---	123
weld on	series B (ISO)	15	21,3	1,6	28,0	83	26	---	---	123
weld on	series C (ASME)	15	3/4" (19,05)	1,65	28,0	83	26	---	---	123
thread	BSP	8	G 1/4"	---	28,0	60	10,5	---	---	95
thread	BSP	10	G 3/8"	---	28,0	60	10,5	---	---	95
thread	NPT	8	1/4"	---	28,0	60	10,5	---	---	95
thread	NPT	10	3/8"	---	28,0	60	10,5	---	---	95
thread	NPS	10	3/8"	---	28,0	60	10,5	---	---	95

weld on clip on

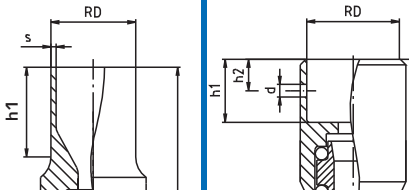


Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

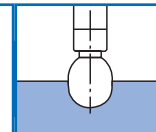
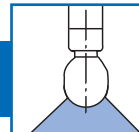
TANKO® S30 180° downwards
 thread


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	10	17,5	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	15	21,3	---	28,0	60	10,5	5	2,2	95
Clip on	series C (ASME)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series 1 DIN11850	15	18,3	---	28,0	60	10,5	5	2,2	95
weld on	series A (DIN)	15	19,0	1,5	28,0	83	26	---	---	123
weld on	series B (ISO)	10	17,2	1,6	28,0	83	26	---	---	123
weld on	series B (ISO)	15	21,3	1,6	28,0	83	26	---	---	123
weld on	series C (ASME)	15	3/4" (19,05)	1,65	28,0	83	26	---	---	123
thread	BSP	8	G 1/4"	---	28,0	60	10,5	---	---	95
thread	BSP	10	G 3/8"	---	28,0	60	10,5	---	---	95
thread	NPT	8	1/4"	---	28,0	60	10,5	---	---	95
thread	NPT	10	3/8"	---	28,0	60	10,5	---	---	95
thread	NPS	10	3/8"	---	28,0	60	10,5	---	---	95

weld on clip on



Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



TANKO® S30 90° downwards

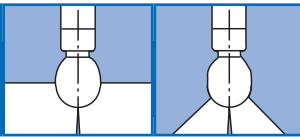
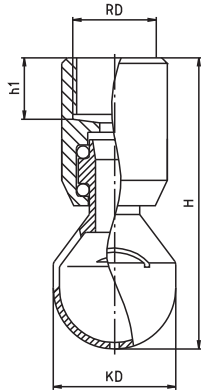
1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
15	215,00	665 03 41 00 3 2 5 1	185,00	665 03 41 00 3 2 3 1	890,00	665 03 41 00 3 2 8 1	890,00	665 03 41 00 3 2 7 1
10	215,00	665 03 76 00 3 2 5 1	185,00	665 03 76 00 3 2 3 1	890,00	665 03 76 00 3 2 8 1	890,00	665 03 76 00 3 2 7 1
15	215,00	665 03 77 00 3 2 5 1	185,00	665 03 77 00 3 2 3 1	890,00	665 03 77 00 3 2 8 1	890,00	665 03 77 00 3 2 7 1
15	215,00	665 03 90 00 3 2 5 1	185,00	665 03 90 00 3 2 3 1	890,00	665 03 90 00 3 2 8 1	890,00	665 03 90 00 3 2 7 1
15	215,00	665 03 A2 00 3 2 5 1	185,00	665 03 A2 00 3 2 3 1	890,00	665 03 A2 00 3 2 8 1	890,00	665 03 A2 00 3 2 7 1
15	215,00	665 03 41 00 3 6 5 1	185,00	665 03 41 00 3 6 3 1	890,00	665 03 41 00 3 6 8 1	890,00	665 03 41 00 3 6 7 1
10	215,00	665 03 76 00 3 6 5 1	185,00	665 03 76 00 3 6 3 1	890,00	665 03 76 00 3 6 8 1	890,00	665 03 76 00 3 6 7 1
15	215,00	665 03 77 00 3 6 5 1	185,00	665 03 77 00 3 6 3 1	890,00	665 03 77 00 3 6 8 1	890,00	665 03 77 00 3 6 7 1
15	215,00	665 03 90 00 3 6 5 1	185,00	665 03 90 00 3 6 3 1	890,00	665 03 90 00 3 6 8 1	890,00	665 03 90 00 3 6 7 1
8	215,00	665 03 75 00 3 3 5 1	185,00	665 03 75 00 3 3 3 1	890,00	665 03 75 00 3 3 8 1	890,00	665 03 75 00 3 3 7 1
10	215,00	665 03 76 00 3 3 5 1	185,00	665 03 76 00 3 3 3 1	890,00	665 03 76 00 3 3 8 1	890,00	665 03 76 00 3 3 7 1
8	215,00	665 03 75 00 3 4 5 1	185,00	665 03 75 00 3 4 3 1	890,00	665 03 75 00 3 4 8 1	890,00	665 03 75 00 3 4 7 1
10	215,00	665 03 76 00 3 4 5 1	185,00	665 03 76 00 3 4 3 1	890,00	665 03 76 00 3 4 8 1	890,00	665 03 76 00 3 4 7 1
10	215,00	665 03 76 00 3 A 5 1	185,00	665 03 76 00 3 A 3 1	890,00	665 03 76 00 3 A 8 1	890,00	665 03 76 00 3 A 7 1

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).

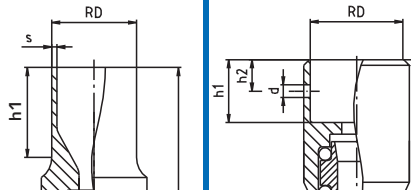
TANKO® S30 180° downwards

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
15	215,00	665 03 41 00 2 2 5 1	185,00	665 03 41 00 2 2 3 1	890,00	665 03 41 00 2 2 8 1	890,00	665 03 41 00 2 2 7 1
10	215,00	665 03 76 00 2 2 5 1	185,00	665 03 76 00 2 2 3 1	890,00	665 03 76 00 2 2 8 1	890,00	665 03 76 00 2 2 7 1
15	215,00	665 03 77 00 2 2 5 1	185,00	665 03 77 00 2 2 3 1	890,00	665 03 77 00 2 2 8 1	890,00	665 03 77 00 2 2 7 1
15	215,00	665 03 90 00 2 2 5 1	185,00	665 03 90 00 2 2 3 1	890,00	665 03 90 00 2 2 8 1	890,00	665 03 90 00 2 2 7 1
15	215,00	665 03 A2 00 2 2 5 1	185,00	665 03 A2 00 2 2 3 1	890,00	665 03 A2 00 2 2 8 1	890,00	665 03 A2 00 2 2 7 1
15	215,00	665 03 41 00 2 6 5 1	185,00	665 03 41 00 2 6 3 1	890,00	665 03 41 00 2 6 8 1	890,00	665 03 41 00 2 6 7 1
10	215,00	665 03 76 00 2 6 5 1	185,00	665 03 76 00 2 6 3 1	890,00	665 03 76 00 2 6 8 1	890,00	665 03 76 00 2 6 7 1
15	215,00	665 03 77 00 2 6 5 1	185,00	665 03 77 00 2 6 3 1	890,00	665 03 77 00 2 6 8 1	890,00	665 03 77 00 2 6 7 1
15	215,00	665 03 90 00 2 6 5 1	185,00	665 03 90 00 2 6 3 1	890,00	665 03 90 00 2 6 8 1	890,00	665 03 90 00 2 6 7 1
8	215,00	665 03 75 00 2 3 5 1	185,00	665 03 75 00 2 3 3 1	890,00	665 03 75 00 2 3 8 1	890,00	665 03 75 00 2 3 7 1
10	215,00	665 03 76 00 2 3 5 1	185,00	665 03 76 00 2 3 3 1	890,00	665 03 76 00 2 3 8 1	890,00	665 03 76 00 2 3 7 1
8	215,00	665 03 75 00 2 4 5 1	185,00	665 03 75 00 2 4 3 1	890,00	665 03 75 00 2 4 8 1	890,00	665 03 75 00 2 4 7 1
10	215,00	665 03 76 00 2 4 5 1	185,00	665 03 76 00 2 4 3 1	890,00	665 03 76 00 2 4 8 1	890,00	665 03 76 00 2 4 7 1
10	215,00	665 03 76 00 2 A 5 1	185,00	665 03 76 00 2 A 3 1	890,00	665 03 76 00 2 A 8 1	890,00	665 03 76 00 2 A 7 1

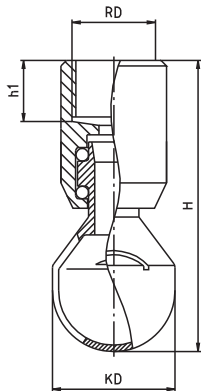
Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


TANKO® S30 180° upwards
 thread


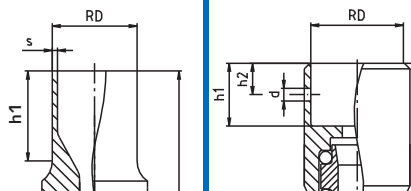
Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	10	17,5	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	15	21,3	---	28,0	60	10,5	5	2,2	95
Clip on	series C (ASME)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series 1 DIN11850	15	18,3	---	28,0	60	10,5	5	2,2	95
weld on	series A (DIN)	15	19,0	1,5	28,0	83	26	---	---	123
weld on	series B (ISO)	10	17,2	1,6	28,0	83	26	---	---	123
weld on	series B (ISO)	15	21,3	1,6	28,0	83	26	---	---	123
weld on	series C (ASME)	15	3/4" (19,05)	1,65	28,0	83	26	---	---	123
thread	BSP	8	G 1/4"	---	28,0	60	10,5	---	---	95
thread	BSP	10	G 3/8"	---	28,0	60	10,5	---	---	95
thread	NPT	8	1/4"	---	28,0	60	10,5	---	---	95
thread	NPT	10	3/8"	---	28,0	60	10,5	---	---	95
thread	NPS	10	3/8"	---	28,0	60	10,5	---	---	95

weld on **clip on**


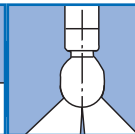
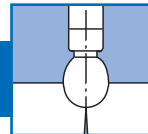
Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
 (page 24-25)

TANKO® S30 270° upwards
 thread


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	10	17,5	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	15	21,3	---	28,0	60	10,5	5	2,2	95
Clip on	series C (ASME)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series 1 DIN11850	15	18,3	---	28,0	60	10,5	5	2,2	95
weld on	series A (DIN)	15	19,0	1,5	28,0	83	26	---	---	123
weld on	series B (ISO)	10	17,2	1,6	28,0	83	26	---	---	123
weld on	series B (ISO)	15	21,3	1,6	28,0	83	26	---	---	123
weld on	series C (ASME)	15	3/4" (19,05)	1,65	28,0	83	26	---	---	123
thread	BSP	8	G 1/4"	---	28,0	60	10,5	---	---	95
thread	BSP	10	G 3/8"	---	28,0	60	10,5	---	---	95
thread	NPT	8	1/4"	---	28,0	60	10,5	---	---	95
thread	NPT	10	3/8"	---	28,0	60	10,5	---	---	95
thread	NPS	10	3/8"	---	28,0	60	10,5	---	---	95

weld on **clip on**


Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
 (page 24-25)



TANKO® S30 180° upwards

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
15	215,00	665 03 41 00 7 2 5 1	185,00	665 03 41 00 7 2 3 1	890,00	665 03 41 00 7 2 8 1	890,00	665 03 41 00 7 2 7 1
10	215,00	665 03 76 00 7 2 5 1	185,00	665 03 76 00 7 2 3 1	890,00	665 03 76 00 7 2 8 1	890,00	665 03 76 00 7 2 7 1
15	215,00	665 03 77 00 7 2 5 1	185,00	665 03 77 00 7 2 3 1	890,00	665 03 77 00 7 2 8 1	890,00	665 03 77 00 7 2 7 1
15	215,00	665 03 90 00 7 2 5 1	185,00	665 03 90 00 7 2 3 1	890,00	665 03 90 00 7 2 8 1	890,00	665 03 90 00 7 2 7 1
15	215,00	665 03 A2 00 7 2 5 1	185,00	665 03 A2 00 7 2 3 1	890,00	665 03 A2 00 7 2 8 1	890,00	665 03 A2 00 7 2 7 1
15	215,00	665 03 41 00 7 6 5 1	185,00	665 03 41 00 7 6 3 1	890,00	665 03 41 00 7 6 8 1	890,00	665 03 41 00 7 6 7 1
10	215,00	665 03 76 00 7 6 5 1	185,00	665 03 76 00 7 6 3 1	890,00	665 03 76 00 7 6 8 1	890,00	665 03 76 00 7 6 7 1
15	215,00	665 03 77 00 7 6 5 1	185,00	665 03 77 00 7 6 3 1	890,00	665 03 77 00 7 6 8 1	890,00	665 03 77 00 7 6 7 1
15	215,00	665 03 90 00 7 6 5 1	185,00	665 03 90 00 7 6 3 1	890,00	665 03 90 00 7 6 8 1	890,00	665 03 90 00 7 6 7 1
8	215,00	665 03 75 00 7 3 5 1	185,00	665 03 75 00 7 3 3 1	890,00	665 03 75 00 7 3 8 1	890,00	665 03 75 00 7 3 7 1
10	215,00	665 03 76 00 7 3 5 1	185,00	665 03 76 00 7 3 3 1	890,00	665 03 76 00 7 3 8 1	890,00	665 03 76 00 7 3 7 1
8	215,00	665 03 75 00 7 4 5 1	185,00	665 03 75 00 7 4 3 1	890,00	665 03 75 00 7 4 8 1	890,00	665 03 75 00 7 4 7 1
10	215,00	665 03 76 00 7 4 5 1	185,00	665 03 76 00 7 4 3 1	890,00	665 03 76 00 7 4 8 1	890,00	665 03 76 00 7 4 7 1
10	215,00	665 03 76 00 7 A 5 1	185,00	665 03 76 00 7 A 3 1	890,00	665 03 76 00 7 A 8 1	890,00	665 03 76 00 7 A 7 1

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).

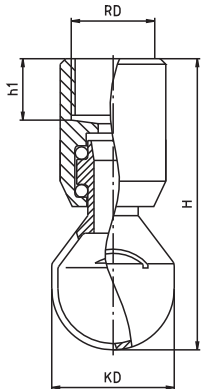
TANKO® S30 270° upwards

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
15	215,00	665 03 41 00 6 2 5 1	185,00	665 03 41 00 6 2 3 1	890,00	665 03 41 00 6 2 8 1	890,00	665 03 41 00 6 2 7 1
10	215,00	665 03 76 00 6 2 5 1	185,00	665 03 76 00 6 2 3 1	890,00	665 03 76 00 6 2 8 1	890,00	665 03 76 00 6 2 7 1
15	215,00	665 03 77 00 6 2 5 1	185,00	665 03 77 00 6 2 3 1	890,00	665 03 77 00 6 2 8 1	890,00	665 03 77 00 6 2 7 1
15	215,00	665 03 90 00 6 2 5 1	185,00	665 03 90 00 6 2 3 1	890,00	665 03 90 00 6 2 8 1	890,00	665 03 90 00 6 2 7 1
15	215,00	665 03 A2 00 6 2 5 1	185,00	665 03 A2 00 6 2 3 1	890,00	665 03 A2 00 6 2 8 1	890,00	665 03 A2 00 6 2 7 1
15	215,00	665 03 41 00 6 6 5 1	185,00	665 03 41 00 6 6 3 1	890,00	665 03 41 00 6 6 8 1	890,00	665 03 41 00 6 6 7 1
10	215,00	665 03 76 00 6 6 5 1	185,00	665 03 76 00 6 6 3 1	890,00	665 03 76 00 6 6 8 1	890,00	665 03 76 00 6 6 7 1
15	215,00	665 03 77 00 6 6 5 1	185,00	665 03 77 00 6 6 3 1	890,00	665 03 77 00 6 6 8 1	890,00	665 03 77 00 6 6 7 1
15	215,00	665 03 90 00 6 6 5 1	185,00	665 03 90 00 6 6 3 1	890,00	665 03 90 00 6 6 8 1	890,00	665 03 90 00 6 6 7 1
8	215,00	665 03 75 00 6 3 5 1	185,00	665 03 75 00 6 3 3 1	890,00	665 03 75 00 6 3 8 1	890,00	665 03 75 00 6 3 7 1
10	215,00	665 03 76 00 6 3 5 1	185,00	665 03 76 00 6 3 3 1	890,00	665 03 76 00 6 3 8 1	890,00	665 03 76 00 6 3 7 1
8	215,00	665 03 75 00 6 4 5 1	185,00	665 03 75 00 6 4 3 1	890,00	665 03 75 00 6 4 8 1	890,00	665 03 75 00 6 4 7 1
10	215,00	665 03 76 00 6 4 5 1	185,00	665 03 76 00 6 4 3 1	890,00	665 03 76 00 6 4 8 1	890,00	665 03 76 00 6 4 7 1
10	215,00	665 03 76 00 6 A 5 1	185,00	665 03 76 00 6 A 3 1	890,00	665 03 76 00 6 A 8 1	890,00	665 03 76 00 6 A 7 1

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).



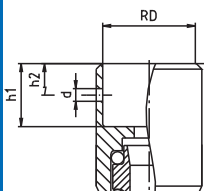
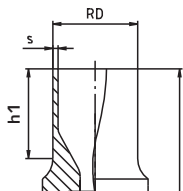
TANKO® S30 360°
thread



Conne- tion	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	10	17,5	---	28,0	60	10,5	5	2,2	95
Clip on	series B (ISO)	15	21,3	---	28,0	60	10,5	5	2,2	95
Clip on	series C (ASME)	15	19,3	---	28,0	60	10,5	5	2,2	95
Clip on	series 1 DIN11850	15	18,3	---	28,0	60	10,5	5	2,2	95
weld on	series A (DIN)	15	19,0	1,5	28,0	83	26	---	---	123
weld on	series B (ISO)	10	17,2	1,6	28,0	83	26	---	---	123
weld on	series B (ISO)	15	21,3	1,6	28,0	83	26	---	---	123
weld on	series C (ASME)	15	3/4" (19,05)	1,65	28,0	83	26	---	---	123
thread	BSP	8	G 1/4"	---	28,0	60	10,5	---	---	95
thread	BSP	10	G 3/8"	---	28,0	60	10,5	---	---	95
thread	NPT	8	1/4"	---	28,0	60	10,5	---	---	95
thread	NPT	10	3/8"	---	28,0	60	10,5	---	---	95
thread	NPS	10	3/8"	---	28,0	60	10,5	---	---	95

weld on

clip on



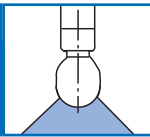
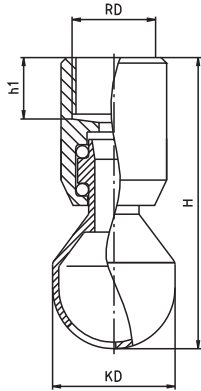
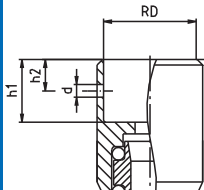
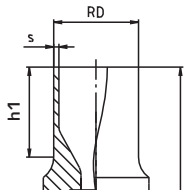
Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



TANKO® S30 360°

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC22)		2.4610 (HC4)	
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.
15	215,00	665 03 41 00 1 2 5 1	185,00	665 03 41 00 1 2 3 1	890,00	665 03 41 00 1 2 8 1	890,00	665 03 41 00 1 2 7 1
10	215,00	665 03 76 00 1 2 5 1	185,00	665 03 76 00 1 2 3 1	890,00	665 03 76 00 1 2 8 1	890,00	665 03 76 00 1 2 7 1
15	215,00	665 03 77 00 1 2 5 1	185,00	665 03 77 00 1 2 3 1	890,00	665 03 77 00 1 2 8 1	890,00	665 03 77 00 1 2 7 1
15	215,00	665 03 90 00 1 2 5 1	185,00	665 03 90 00 1 2 3 1	890,00	665 03 90 00 1 2 8 1	890,00	665 03 90 00 1 2 7 1
15	215,00	665 03 A2 00 1 2 5 1	185,00	665 03 A2 00 1 2 3 1	890,00	665 03 A2 00 1 2 8 1	890,00	665 03 A2 00 1 2 7 1
15	215,00	665 03 41 00 1 6 5 1	185,00	665 03 41 00 1 6 3 1	890,00	665 03 41 00 1 6 8 1	890,00	665 03 41 00 1 6 7 1
10	215,00	665 03 76 00 1 6 5 1	185,00	665 03 76 00 1 6 3 1	890,00	665 03 76 00 1 6 8 1	890,00	665 03 76 00 1 6 7 1
15	215,00	665 03 77 00 1 6 5 1	185,00	665 03 77 00 1 6 3 1	890,00	665 03 77 00 1 6 8 1	890,00	665 03 77 00 1 6 7 1
15	215,00	665 03 90 00 1 6 5 1	185,00	665 03 90 00 1 6 3 1	890,00	665 03 90 00 1 6 8 1	890,00	665 03 90 00 1 6 7 1
8	215,00	665 03 75 00 1 3 5 1	185,00	665 03 75 00 1 3 3 1	890,00	665 03 75 00 1 3 8 1	890,00	665 03 75 00 1 3 7 1
10	215,00	665 03 76 00 1 3 5 1	185,00	665 03 76 00 1 3 3 1	890,00	665 03 76 00 1 3 8 1	890,00	665 03 76 00 1 3 7 1
8	215,00	665 03 75 00 1 4 5 1	185,00	665 03 75 00 1 4 3 1	890,00	665 03 75 00 1 4 8 1	890,00	665 03 75 00 1 4 7 1
10	215,00	665 03 76 00 1 4 5 1	185,00	665 03 76 00 1 4 3 1	890,00	665 03 76 00 1 4 8 1	890,00	665 03 76 00 1 4 7 1
10	215,00	665 03 76 00 1 A 5 1	185,00	665 03 76 00 1 A 3 1	890,00	665 03 76 00 1 A 8 1	890,00	665 03 76 00 1 A 7 1

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


**TANKO® S40 90° downwards
thread**

weld on
clip on


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
-----------------	-----------------------	----------	------------	---------	------------	---------	----------	----------	-----------	---

Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279

thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
-----------------	-----------------------	----------	------------	---------	------------	---------	----------	----------	-----------	---

Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279

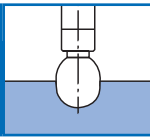
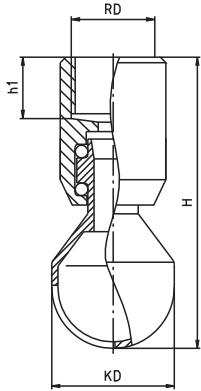
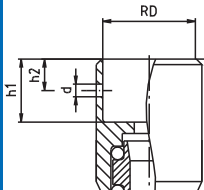
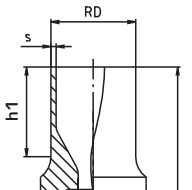
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

TANKO [®] S40 90° downwards								
1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	245,00	665 04 42 00 3 2 5 1	273,00	665 04 42 00 3 2 3 1	195,00	665 04 42 00 3 2 2 1		
25	245,00	665 04 43 00 3 2 5 1	273,00	665 04 43 00 3 2 3 1	195,00	665 04 43 00 3 2 2 1		
20	245,00	665 04 78 00 3 2 5 1	273,00	665 04 78 00 3 2 3 1	195,00	665 04 78 00 3 2 2 1		
25	245,00	665 04 79 00 3 2 5 1	273,00	665 04 79 00 3 2 3 1	195,00	665 04 79 00 3 2 2 1		
20	245,00	665 04 91 00 3 2 5 1	273,00	665 04 91 00 3 2 3 1	195,00	665 04 91 00 3 2 2 1		
20	245,00	665 04 A3 00 3 2 5 1	273,00	665 04 A3 00 3 2 3 1	195,00	665 04 A3 00 3 2 2 1		
20	245,00	665 04 B2 00 3 2 5 1	273,00	665 04 B2 00 3 2 3 1	195,00	665 04 B2 00 3 2 2 1		
15	245,00	665 04 41 00 3 6 5 1	273,00	665 04 41 00 3 6 3 1	195,00	665 04 41 00 3 6 2 1		
20	245,00	665 04 42 00 3 6 5 1	273,00	665 04 42 00 3 6 3 1	195,00	665 04 42 00 3 6 2 1		
25	245,00	665 04 43 00 3 6 5 1	273,00	665 04 43 00 3 6 3 1	195,00	665 04 43 00 3 6 2 1		
20	245,00	665 04 78 00 3 6 5 1	273,00	665 04 78 00 3 6 3 1	195,00	665 04 78 00 3 6 2 1		
25	245,00	665 04 79 00 3 6 5 1	273,00	665 04 79 00 3 6 3 1	195,00	665 04 79 00 3 6 2 1		
20	245,00	665 04 91 00 3 6 5 1	273,00	665 04 91 00 3 6 3 1	195,00	665 04 91 00 3 6 2 1		
15	245,00	665 04 77 00 3 3 5 1	273,00	665 04 77 00 3 3 3 1	195,00	665 04 77 00 3 3 2 1		
20	245,00	665 04 78 00 3 3 5 1	273,00	665 04 78 00 3 3 3 1	195,00	665 04 78 00 3 3 2 1		
15	245,00	665 04 77 00 3 4 5 1	273,00	665 04 77 00 3 4 3 1	195,00	665 04 77 00 3 4 2 1		
20	245,00	665 04 78 00 3 4 5 1	273,00	665 04 78 00 3 4 3 1	195,00	665 04 78 00 3 4 2 1		
20	245,00	665 04 78 00 3 A 5 1	273,00	665 04 78 00 3 A 3 1	195,00	665 04 78 00 3 A 2 1		

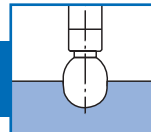
TANKO [®] S40 90° downwards								
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
20	940,00	665 04 42 00 3 2 8 1	940,00	665 04 42 00 3 2 7 1				
25	940,00	665 04 43 00 3 2 8 1	940,00	665 04 43 00 3 2 7 1				
20	940,00	665 04 78 00 3 2 8 1	940,00	665 04 78 00 3 2 7 1				
25	940,00	665 04 79 00 3 2 8 1	940,00	665 04 79 00 3 2 7 1				
20	940,00	665 04 91 00 3 2 8 1	940,00	665 04 91 00 3 2 7 1				
20	940,00	665 04 A3 00 3 2 8 1	940,00	665 04 A3 00 3 2 7 1				
20	940,00	665 04 B2 00 3 2 8 1	940,00	665 04 B2 00 3 2 7 1				
15	940,00	665 04 41 00 3 6 8 1	940,00	665 04 41 00 3 6 7 1				
20	940,00	665 04 42 00 3 6 8 1	940,00	665 04 42 00 3 6 7 1				
25	940,00	665 04 43 00 3 6 8 1	940,00	665 04 43 00 3 6 7 1				
20	940,00	665 04 78 00 3 6 8 1	940,00	665 04 78 00 3 6 7 1				
25	940,00	665 04 79 00 3 6 8 1	940,00	665 04 79 00 3 6 7 1				
20	940,00	665 04 91 00 3 6 8 1	940,00	665 04 91 00 3 6 7 1				
15	940,00	665 04 77 00 3 3 8 1	940,00	665 04 77 00 3 3 7 1				
20	940,00	665 04 78 00 3 3 8 1	940,00	665 04 78 00 3 3 7 1				
15	940,00	665 04 77 00 3 4 8 1	940,00	665 04 77 00 3 4 7 1				
20	940,00	665 04 78 00 3 4 8 1	940,00	665 04 78 00 3 4 7 1				
20	940,00	665 04 78 00 3 A 8 1	940,00	665 04 78 00 3 A 7 1				

Material specifications for TANKO[®] S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO[®] S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


**TANKO® S40 180° downwards
thread**

weld on
clip on


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281
Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



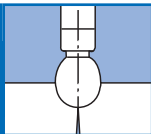
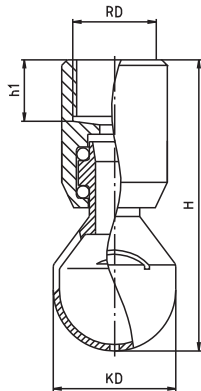
TANKO® S40 180° downwards

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	245,00	665 04 42 00 2 2 5 1	273,00	665 04 42 00 2 2 3 1	195,00	665 04 42 00 2 2 2 1		
25	245,00	665 04 43 00 2 2 5 1	273,00	665 04 43 00 2 2 3 1	195,00	665 04 43 00 2 2 2 1		
20	245,00	665 04 78 00 2 2 5 1	273,00	665 04 78 00 2 2 3 1	195,00	665 04 78 00 2 2 2 1		
25	245,00	665 04 79 00 2 2 5 1	273,00	665 04 79 00 2 2 3 1	195,00	665 04 79 00 2 2 2 1		
20	245,00	665 04 91 00 2 2 5 1	273,00	665 04 91 00 2 2 3 1	195,00	665 04 91 00 2 2 2 1		
20	245,00	665 04 A3 00 2 2 5 1	273,00	665 04 A3 00 2 2 3 1	195,00	665 04 A3 00 2 2 2 1		
20	245,00	665 04 B2 00 2 2 5 1	273,00	665 04 B2 00 2 2 3 1	195,00	665 04 B2 00 2 2 2 1		
15	245,00	665 04 41 00 2 6 5 1	273,00	665 04 41 00 2 6 3 1	195,00	665 04 41 00 2 6 2 1		
20	245,00	665 04 42 00 2 6 5 1	273,00	665 04 42 00 2 6 3 1	195,00	665 04 42 00 2 6 2 1		
25	245,00	665 04 43 00 2 6 5 1	273,00	665 04 43 00 2 6 3 1	195,00	665 04 43 00 2 6 2 1		
20	245,00	665 04 78 00 2 6 5 1	273,00	665 04 78 00 2 6 3 1	195,00	665 04 78 00 2 6 2 1		
25	245,00	665 04 79 00 2 6 5 1	273,00	665 04 79 00 2 6 3 1	195,00	665 04 79 00 2 6 2 1		
20	245,00	665 04 91 00 2 6 5 1	273,00	665 04 91 00 2 6 3 1	195,00	665 04 91 00 2 6 2 1		
15	245,00	665 04 77 00 2 3 5 1	273,00	665 04 77 00 2 3 3 1	195,00	665 04 77 00 2 3 2 1		
20	245,00	665 04 78 00 2 3 5 1	273,00	665 04 78 00 2 3 3 1	195,00	665 04 78 00 2 3 2 1		
15	245,00	665 04 77 00 2 4 5 1	273,00	665 04 77 00 2 4 3 1	195,00	665 04 77 00 2 4 2 1		
20	245,00	665 04 78 00 2 4 5 1	273,00	665 04 78 00 2 4 3 1	195,00	665 04 78 00 2 4 2 1		
20	245,00	665 04 78 00 2 A 5 1	273,00	665 04 78 00 2 A 3 1	195,00	665 04 78 00 2 A 2 1		

TANKO® S40 180° downwards

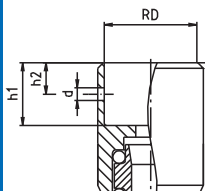
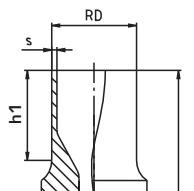
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
20	940,00	665 04 42 00 2 2 8 1	940,00	665 04 42 00 2 2 7 1				
25	940,00	665 04 43 00 2 2 8 1	940,00	665 04 43 00 2 2 7 1				
20	940,00	665 04 78 00 2 2 8 1	940,00	665 04 78 00 2 2 7 1				
25	940,00	665 04 79 00 2 2 8 1	940,00	665 04 79 00 2 2 7 1				
20	940,00	665 04 91 00 2 2 8 1	940,00	665 04 91 00 2 2 7 1				
20	940,00	665 04 A3 00 2 2 8 1	940,00	665 04 A3 00 2 2 7 1				
20	940,00	665 04 B2 00 2 2 8 1	940,00	665 04 B2 00 2 2 7 1				
15	940,00	665 04 41 00 2 6 8 1	940,00	665 04 41 00 2 6 7 1				
20	940,00	665 04 42 00 2 6 8 1	940,00	665 04 42 00 2 6 7 1				
25	940,00	665 04 43 00 2 6 8 1	940,00	665 04 43 00 2 6 7 1				
20	940,00	665 04 78 00 2 6 8 1	940,00	665 04 78 00 2 6 7 1				
25	940,00	665 04 79 00 2 6 8 1	940,00	665 04 79 00 2 6 7 1				
20	940,00	665 04 91 00 2 6 8 1	940,00	665 04 91 00 2 6 7 1				
15	940,00	665 04 77 00 2 3 8 1	940,00	665 04 77 00 2 3 7 1				
20	940,00	665 04 78 00 2 3 8 1	940,00	665 04 78 00 2 3 7 1				
15	940,00	665 04 77 00 2 4 8 1	940,00	665 04 77 00 2 4 7 1				
20	940,00	665 04 78 00 2 4 8 1	940,00	665 04 78 00 2 4 7 1				
20	940,00	665 04 78 00 2 A 8 1	940,00	665 04 78 00 2 A 7 1				

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


TANKO® S40 180° upwards
 thread


weld on

clip on



Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
-----------------	-----------------------	----------	------------	---------	------------	---------	----------	----------	-----------	---

Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279

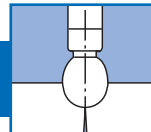
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
-----------------	-----------------------	----------	------------	---------	------------	---------	----------	----------	-----------	---

Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279

thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
 (page 24-25)



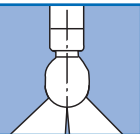
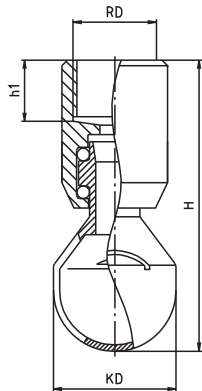
TANKO® S40 180° upwards

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	245,00	665 04 42 00 7 2 5 1	273,00	665 04 42 00 7 2 3 1	195,00	665 04 42 00 7 2 2 1		
25	245,00	665 04 43 00 7 2 5 1	273,00	665 04 43 00 7 2 3 1	195,00	665 04 43 00 7 2 2 1		
20	245,00	665 04 78 00 7 2 5 1	273,00	665 04 78 00 7 2 3 1	195,00	665 04 78 00 7 2 2 1		
25	245,00	665 04 79 00 7 2 5 1	273,00	665 04 79 00 7 2 3 1	195,00	665 04 79 00 7 2 2 1		
20	245,00	665 04 91 00 7 2 5 1	273,00	665 04 91 00 7 2 3 1	195,00	665 04 91 00 7 2 2 1		
20	245,00	665 04 A3 00 7 2 5 1	273,00	665 04 A3 00 7 2 3 1	195,00	665 04 A3 00 7 2 2 1		
20	245,00	665 04 B2 00 7 2 5 1	273,00	665 04 B2 00 7 2 3 1	195,00	665 04 B2 00 7 2 2 1		
15	245,00	665 04 41 00 7 6 5 1	273,00	665 04 41 00 7 6 3 1	195,00	665 04 41 00 7 6 2 1		
20	245,00	665 04 42 00 7 6 5 1	273,00	665 04 42 00 7 6 3 1	195,00	665 04 42 00 7 6 2 1		
25	245,00	665 04 43 00 7 6 5 1	273,00	665 04 43 00 7 6 3 1	195,00	665 04 43 00 7 6 2 1		
20	245,00	665 04 78 00 7 6 5 1	273,00	665 04 78 00 7 6 3 1	195,00	665 04 78 00 7 6 2 1		
25	245,00	665 04 79 00 7 6 5 1	273,00	665 04 79 00 7 6 3 1	195,00	665 04 79 00 7 6 2 1		
20	245,00	665 04 91 00 7 6 5 1	273,00	665 04 91 00 7 6 3 1	195,00	665 04 91 00 7 6 2 1		
15	245,00	665 04 77 00 7 3 5 1	273,00	665 04 77 00 7 3 3 1	195,00	665 04 77 00 7 3 2 1		
20	245,00	665 04 78 00 7 3 5 1	273,00	665 04 78 00 7 3 3 1	195,00	665 04 78 00 7 3 2 1		
15	245,00	665 04 77 00 7 4 5 1	273,00	665 04 77 00 7 4 3 1	195,00	665 04 77 00 7 4 2 1		
20	245,00	665 04 78 00 7 4 5 1	273,00	665 04 78 00 7 4 3 1	195,00	665 04 78 00 7 4 2 1		
20	245,00	665 04 78 00 7 A 5 1	273,00	665 04 78 00 7 A 3 1	195,00	665 04 78 00 7 A 2 1		

TANKO® S40 180° upwards

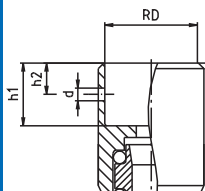
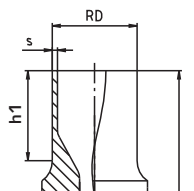
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
20	940,00	665 04 42 00 7 2 8 1	940,00	665 04 42 00 7 2 7 1				
25	940,00	665 04 43 00 7 2 8 1	940,00	665 04 43 00 7 2 7 1				
20	940,00	665 04 78 00 7 2 8 1	940,00	665 04 78 00 7 2 7 1				
25	940,00	665 04 79 00 7 2 8 1	940,00	665 04 79 00 7 2 7 1				
20	940,00	665 04 91 00 7 2 8 1	940,00	665 04 91 00 7 2 7 1				
20	940,00	665 04 A3 00 7 2 8 1	940,00	665 04 A3 00 7 2 7 1				
20	940,00	665 04 B2 00 7 2 8 1	940,00	665 04 B2 00 7 2 7 1				
15	940,00	665 04 41 00 7 6 8 1	940,00	665 04 41 00 7 6 7 1				
20	940,00	665 04 42 00 7 6 8 1	940,00	665 04 42 00 7 6 7 1				
25	940,00	665 04 43 00 7 6 8 1	940,00	665 04 43 00 7 6 7 1				
20	940,00	665 04 78 00 7 6 8 1	940,00	665 04 78 00 7 6 7 1				
25	940,00	665 04 79 00 7 6 8 1	940,00	665 04 79 00 7 6 7 1				
20	940,00	665 04 91 00 7 6 8 1	940,00	665 04 91 00 7 6 7 1				
15	940,00	665 04 77 00 7 3 8 1	940,00	665 04 77 00 7 3 7 1				
20	940,00	665 04 78 00 7 3 8 1	940,00	665 04 78 00 7 3 7 1				
15	940,00	665 04 77 00 7 4 8 1	940,00	665 04 77 00 7 4 7 1				
20	940,00	665 04 78 00 7 4 8 1	940,00	665 04 78 00 7 4 7 1				
20	940,00	665 04 78 00 7 A 8 1	940,00	665 04 78 00 7 A 7 1				

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


TANKO® S40 270° upwards
 thread


weld on

clip on



Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
-----------------	-----------------------	----------	------------	---------	------------	---------	----------	----------	-----------	---

Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279

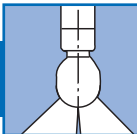
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
-----------------	-----------------------	----------	------------	---------	------------	---------	----------	----------	-----------	---

Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279

thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
 (page 24-25)



TANKO® S40 270° upwards

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	245,00	665 04 42 00 6 2 5 1	273,00	665 04 42 00 6 2 3 1	195,00	665 04 42 00 6 2 2 1		
25	245,00	665 04 43 00 6 2 5 1	273,00	665 04 43 00 6 2 3 1	195,00	665 04 43 00 6 2 2 1		
20	245,00	665 04 78 00 6 2 5 1	273,00	665 04 78 00 6 2 3 1	195,00	665 04 78 00 6 2 2 1		
25	245,00	665 04 79 00 6 2 5 1	273,00	665 04 79 00 6 2 3 1	195,00	665 04 79 00 6 2 2 1		
20	245,00	665 04 91 00 6 2 5 1	273,00	665 04 91 00 6 2 3 1	195,00	665 04 91 00 6 2 2 1		
20	245,00	665 04 A3 00 6 2 5 1	273,00	665 04 A3 00 6 2 3 1	195,00	665 04 A3 00 6 2 2 1		
20	245,00	665 04 B2 00 6 2 5 1	273,00	665 04 B2 00 6 2 3 1	195,00	665 04 B2 00 6 2 2 1		
15	245,00	665 04 41 00 6 6 5 1	273,00	665 04 41 00 6 6 3 1	195,00	665 04 41 00 6 6 2 1		
20	245,00	665 04 42 00 6 6 5 1	273,00	665 04 42 00 6 6 3 1	195,00	665 04 42 00 6 6 2 1		
25	245,00	665 04 43 00 6 6 5 1	273,00	665 04 43 00 6 6 3 1	195,00	665 04 43 00 6 6 2 1		
20	245,00	665 04 78 00 6 6 5 1	273,00	665 04 78 00 6 6 3 1	195,00	665 04 78 00 6 6 2 1		
25	245,00	665 04 79 00 6 6 5 1	273,00	665 04 79 00 6 6 3 1	195,00	665 04 79 00 6 6 2 1		
20	245,00	665 04 91 00 6 6 5 1	273,00	665 04 91 00 6 6 3 1	195,00	665 04 91 00 6 6 2 1		
15	245,00	665 04 77 00 6 3 5 1	273,00	665 04 77 00 6 3 3 1	195,00	665 04 77 00 6 3 2 1		
20	245,00	665 04 78 00 6 3 5 1	273,00	665 04 78 00 6 3 3 1	195,00	665 04 78 00 6 3 2 1		
15	245,00	665 04 77 00 6 4 5 1	273,00	665 04 77 00 6 4 3 1	195,00	665 04 77 00 6 4 2 1		
20	245,00	665 04 78 00 6 4 5 1	273,00	665 04 78 00 6 4 3 1	195,00	665 04 78 00 6 4 2 1		
20	245,00	665 04 78 00 6 A 5 1	273,00	665 04 78 00 6 A 3 1	195,00	665 04 78 00 6 A 2 1		

TANKO® S40 270° upwards

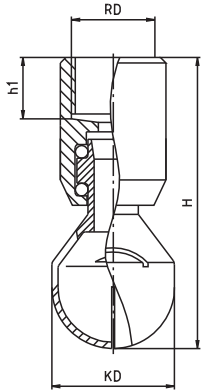
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
20	940,00	665 04 42 00 6 2 8 1	940,00	665 04 42 00 6 2 7 1				
25	940,00	665 04 43 00 6 2 8 1	940,00	665 04 43 00 6 2 7 1				
20	940,00	665 04 78 00 6 2 8 1	940,00	665 04 78 00 6 2 7 1				
25	940,00	665 04 79 00 6 2 8 1	940,00	665 04 79 00 6 2 7 1				
20	940,00	665 04 91 00 6 2 8 1	940,00	665 04 91 00 6 2 7 1				
20	940,00	665 04 A3 00 6 2 8 1	940,00	665 04 A3 00 6 2 7 1				
20	940,00	665 04 B2 00 6 2 8 1	940,00	665 04 B2 00 6 2 7 1				
15	940,00	665 04 41 00 6 6 8 1	940,00	665 04 41 00 6 6 7 1				
20	940,00	665 04 42 00 6 6 8 1	940,00	665 04 42 00 6 6 7 1				
25	940,00	665 04 43 00 6 6 8 1	940,00	665 04 43 00 6 6 7 1				
20	940,00	665 04 78 00 6 6 8 1	940,00	665 04 78 00 6 6 7 1				
25	940,00	665 04 79 00 6 6 8 1	940,00	665 04 79 00 6 6 7 1				
20	940,00	665 04 91 00 6 6 8 1	940,00	665 04 91 00 6 6 7 1				
15	940,00	665 04 77 00 6 3 8 1	940,00	665 04 77 00 6 3 7 1				
20	940,00	665 04 78 00 6 3 8 1	940,00	665 04 78 00 6 3 7 1				
15	940,00	665 04 77 00 6 4 8 1	940,00	665 04 77 00 6 4 7 1				
20	940,00	665 04 78 00 6 4 8 1	940,00	665 04 78 00 6 4 7 1				
20	940,00	665 04 78 00 6 A 8 1	940,00	665 04 78 00 6 A 7 1				

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).



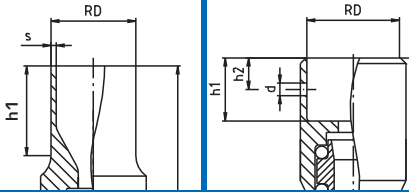
TANKO® S40 360°

thread



weld on

clip on



Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281
Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	284
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	247
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	261
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	287
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	271
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	259
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	272
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	292
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	286
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	321
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	279
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	281
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	281
thread	NPS	20	3/4"	---	39,0	93	19	---	---	281

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
 (page 24-25)



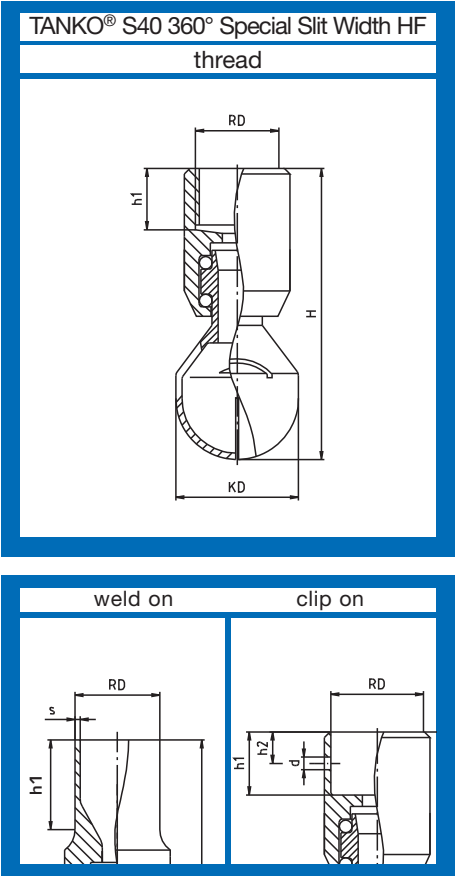
TANKO® S40 360°

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	245,00	665 04 42 00 1 2 5 1	273,00	665 04 42 00 1 2 3 1	195,00	665 04 42 00 1 2 2 1		
25	245,00	665 04 43 00 1 2 5 1	273,00	665 04 43 00 1 2 3 1	195,00	665 04 43 00 1 2 2 1		
20	245,00	665 04 78 00 1 2 5 1	273,00	665 04 78 00 1 2 3 1	195,00	665 04 78 00 1 2 2 1		
25	245,00	665 04 79 00 1 2 5 1	273,00	665 04 79 00 1 2 3 1	195,00	665 04 79 00 1 2 2 1		
20	245,00	665 04 91 00 1 2 5 1	273,00	665 04 91 00 1 2 3 1	195,00	665 04 91 00 1 2 2 1		
20	245,00	665 04 A3 00 1 2 5 1	273,00	665 04 A3 00 1 2 3 1	195,00	665 04 A3 00 1 2 2 1		
20	245,00	665 04 B2 00 1 2 5 1	273,00	665 04 B2 00 1 2 3 1	195,00	665 04 B2 00 1 2 2 1		
15	245,00	665 04 41 00 1 6 5 1	273,00	665 04 41 00 1 6 3 1	195,00	665 04 41 00 1 6 2 1		
20	245,00	665 04 42 00 1 6 5 1	273,00	665 04 42 00 1 6 3 1	195,00	665 04 42 00 1 6 2 1		
25	245,00	665 04 43 00 1 6 5 1	273,00	665 04 43 00 1 6 3 1	195,00	665 04 43 00 1 6 2 1		
20	245,00	665 04 78 00 1 6 5 1	273,00	665 04 78 00 1 6 3 1	195,00	665 04 78 00 1 6 2 1		
25	245,00	665 04 79 00 1 6 5 1	273,00	665 04 79 00 1 6 3 1	195,00	665 04 79 00 1 6 2 1		
20	245,00	665 04 91 00 1 6 5 1	273,00	665 04 91 00 1 6 3 1	195,00	665 04 91 00 1 6 2 1		
15	245,00	665 04 77 00 1 3 5 1	273,00	665 04 77 00 1 3 3 1	195,00	665 04 77 00 1 3 2 1		
20	245,00	665 04 78 00 1 3 5 1	273,00	665 04 78 00 1 3 3 1	195,00	665 04 78 00 1 3 2 1		
15	245,00	665 04 77 00 1 4 5 1	273,00	665 04 77 00 1 4 3 1	195,00	665 04 77 00 1 4 2 1		
20	245,00	665 04 78 00 1 4 5 1	273,00	665 04 78 00 1 4 3 1	195,00	665 04 78 00 1 4 2 1		
20	245,00	665 04 78 00 1 A 5 1	273,00	665 04 78 00 1 A 3 1	195,00	665 04 78 00 1 A 2 1		

TANKO® S40 360°

2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
20	940,00	665 04 42 00 1 2 8 1	940,00	665 04 42 00 1 2 7 1				
25	940,00	665 04 43 00 1 2 8 1	940,00	665 04 43 00 1 2 7 1				
20	940,00	665 04 78 00 1 2 8 1	940,00	665 04 78 00 1 2 7 1				
25	940,00	665 04 79 00 1 2 8 1	940,00	665 04 79 00 1 2 7 1				
20	940,00	665 04 91 00 1 2 8 1	940,00	665 04 91 00 1 2 7 1				
20	940,00	665 04 A3 00 1 2 8 1	940,00	665 04 A3 00 1 2 7 1				
20	940,00	665 04 B2 00 1 2 8 1	940,00	665 04 B2 00 1 2 7 1				
15	940,00	665 04 41 00 1 6 8 1	940,00	665 04 41 00 1 6 7 1				
20	940,00	665 04 42 00 1 6 8 1	940,00	665 04 42 00 1 6 7 1				
25	940,00	665 04 43 00 1 6 8 1	940,00	665 04 43 00 1 6 7 1				
20	940,00	665 04 78 00 1 6 8 1	940,00	665 04 78 00 1 6 7 1				
25	940,00	665 04 79 00 1 6 8 1	940,00	665 04 79 00 1 6 7 1				
20	940,00	665 04 91 00 1 6 8 1	940,00	665 04 91 00 1 6 7 1				
15	940,00	665 04 77 00 1 3 8 1	940,00	665 04 77 00 1 3 7 1				
20	940,00	665 04 78 00 1 3 8 1	940,00	665 04 78 00 1 3 7 1				
15	940,00	665 04 77 00 1 4 8 1	940,00	665 04 77 00 1 4 7 1				
20	940,00	665 04 78 00 1 4 8 1	940,00	665 04 78 00 1 4 7 1				
20	940,00	665 04 78 00 1 A 8 1	940,00	665 04 78 00 1 A 7 1				

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).



Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	279
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	243
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	260
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	284
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	270
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	254
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	267
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	285
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	280
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	319
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	277
weld on	series SMS	20	25,0	1,2	39,0	108	28	---	---	277
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	280
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	280
thread	NPS	20	3/4"	---	39,0	93	19	---	---	280

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	20	23,5	---	39,0	93	19	10	4,0	279
Clip on	series A (DIN)	25	29,5	---	39,0	93	19	10	4,0	243
Clip on	series B (ISO)	20	27,5	---	39,0	93	19	10	4,0	260
Clip on	series B (ISO)	25	34,2	---	39,0	93	19	10	4,0	284
Clip on	series C (ASME)	20	26,0	---	39,0	93	19	10	4,0	270
Clip on	series 1 DIN11850	20	22,6	---	39,0	93	19	10	4,0	271
Clip on	series SMS	20	25,3	---	39,0	93	19	10	4,0	271
weld on	series A (DIN)	15	19,0	1,5	39,0	108	27	---	---	254
weld on	series A (DIN)	20	23,0	1,5	39,0	108	27	---	---	267
weld on	series A (DIN)	25	29,0	1,5	39,0	108	29	---	---	285
weld on	series B (ISO)	20	26,9	1,6	39,0	108	28	---	---	280
weld on	series B (ISO)	25	33,7	2,0	39,0	108	34	---	---	319
weld on	series C (ASME)	20	1" (25,4)	1,65	39,0	108	28	---	---	277
weld on	series SMS	20	25,0	1,2	39,0	108	28	---	---	277
thread	BSP	15	G 1/2"	---	39,0	93	19	---	---	301
thread	BSP	20	G 3/4"	---	39,0	93	19	---	---	280
thread	NPT	15	1/2"	---	39,0	93	19	---	---	301
thread	NPT	20	3/4"	---	39,0	93	19	---	---	280
thread	NPS	20	3/4"	---	39,0	93	19	---	---	280

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



TANKO® S40 Special Slit Width HF



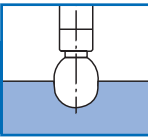
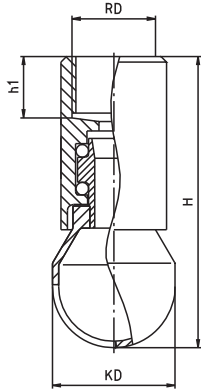
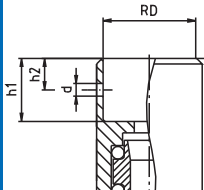
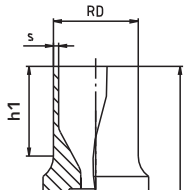
S40 HF

360°

TANKO® S40 360° Special Slit Width HF								
1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	245,00	665 14 42 00 1 2 5 1	273,00	665 14 42 00 1 2 3 1	195,00	665 14 42 00 1 2 2 1		
25	245,00	665 14 43 00 1 2 5 1	273,00	665 14 43 00 1 2 3 1	195,00	665 14 43 00 1 2 2 1		
20	245,00	665 14 78 00 1 2 5 1	273,00	665 14 78 00 1 2 3 1	195,00	665 14 78 00 1 2 2 1		
25	245,00	665 14 79 00 1 2 5 1	273,00	665 14 79 00 1 2 3 1	195,00	665 14 79 00 1 2 2 1		
20	245,00	665 14 91 00 1 2 5 1	273,00	665 14 91 00 1 2 3 1	195,00	665 14 91 00 1 2 2 1		
20	245,00	665 14 A3 00 1 2 5 1	273,00	665 14 A3 00 1 2 3 1	195,00	665 14 A3 00 1 2 2 1		
20	245,00	665 14 B2 00 1 2 5 1	273,00	665 14 B2 00 1 2 3 1	195,00	665 14 B2 00 1 2 2 1		
15	245,00	665 14 41 00 1 6 5 1	273,00	665 14 41 00 1 6 3 1	195,00	665 14 41 00 1 6 2 1		
20	245,00	665 14 42 00 1 6 5 1	273,00	665 14 42 00 1 6 3 1	195,00	665 14 42 00 1 6 2 1		
25	245,00	665 14 43 00 1 6 5 1	273,00	665 14 43 00 1 6 3 1	195,00	665 14 43 00 1 6 2 1		
20	245,00	665 14 78 00 1 6 5 1	273,00	665 14 78 00 1 6 3 1	195,00	665 14 78 00 1 6 2 1		
25	245,00	665 14 79 00 1 6 5 1	273,00	665 14 79 00 1 6 3 1	195,00	665 14 79 00 1 6 2 1		
20	245,00	665 14 91 00 1 6 5 1	273,00	665 14 91 00 1 6 3 1	195,00	665 14 91 00 1 6 2 1		
20	245,00	665 14 B2 00 1 6 5 1	273,00	665 14 B2 00 1 6 3 1	195,00	665 14 B2 00 1 6 2 1		
15	245,00	665 14 77 00 1 3 5 1	273,00	665 14 77 00 1 3 3 1	195,00	665 14 77 00 1 3 2 1		
20	245,00	665 14 78 00 1 3 5 1	273,00	665 14 78 00 1 3 3 1	195,00	665 14 78 00 1 3 2 1		
15	245,00	665 14 77 00 1 4 5 1	273,00	665 14 77 00 1 4 3 1	195,00	665 14 77 00 1 4 2 1		
20	245,00	665 14 78 00 1 4 5 1	273,00	665 14 78 00 1 4 3 1	195,00	665 14 78 00 1 4 2 1		
20	245,00	665 14 78 00 1 A 5 1	273,00	665 14 78 00 1 A 3 1	195,00	665 14 78 00 1 A 2 1		

TANKO® S40 360° Special Slit Width HF								
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
20	940,00	665 14 42 00 1 2 8 1	940,00	665 14 42 00 1 2 7 1				
25	940,00	665 14 43 00 1 2 8 1	940,00	665 14 43 00 1 2 7 1				
20	940,00	665 14 78 00 1 2 8 1	940,00	665 14 78 00 1 2 7 1				
25	940,00	665 14 79 00 1 2 8 1	940,00	665 14 79 00 1 2 7 1				
20	940,00	665 14 91 00 1 2 8 1	940,00	665 14 91 00 1 2 7 1				
20	940,00	665 14 A3 00 1 2 8 1	940,00	665 14 A3 00 1 2 7 1				
20	940,00	665 14 B2 00 1 2 8 1	940,00	665 14 B2 00 1 2 7 1				
15	940,00	665 14 41 00 1 6 8 1	940,00	665 14 41 00 1 6 7 1				
20	940,00	665 14 42 00 1 6 8 1	940,00	665 14 42 00 1 6 7 1				
25	940,00	665 14 43 00 1 6 8 1	940,00	665 14 43 00 1 6 7 1				
20	940,00	665 14 78 00 1 6 8 1	940,00	665 14 78 00 1 6 7 1				
25	940,00	665 14 79 00 1 6 8 1	940,00	665 14 79 00 1 6 7 1				
20	940,00	665 14 91 00 1 6 8 1	940,00	665 14 91 00 1 6 7 1				
20	940,00	665 14 B2 00 1 6 8 1	940,00	665 14 B2 00 1 6 7 1				
15	940,00	665 14 77 00 1 3 8 1	940,00	665 14 77 00 1 3 7 1				
20	940,00	665 14 78 00 1 3 8 1	940,00	665 14 78 00 1 3 7 1				
15	940,00	665 14 77 00 1 4 8 1	940,00	665 14 77 00 1 4 7 1				
20	940,00	665 14 78 00 1 4 8 1	940,00	665 14 78 00 1 4 7 1				
20	940,00	665 14 78 00 1 A 8 1	940,00	665 14 78 00 1 A 7 1				

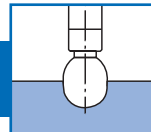
Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


**TANKO® S50 180° downwards
thread**

weld on
clip on


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



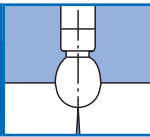
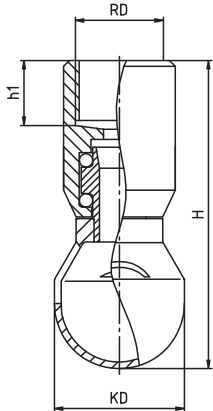
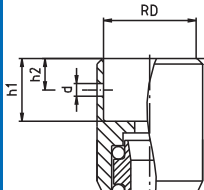
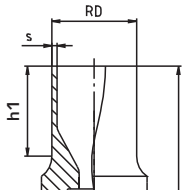
TANKO® S50 180° downwards

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
40	339,00	665 05 45 00 2 2 5 0	359,00	665 05 45 00 2 2 3 0	295,00	665 05 45 00 2 2 2 0		
50	339,00	665 05 46 00 2 2 5 0	359,00	665 05 46 00 2 2 3 0	295,00	665 05 46 00 2 2 2 0		
40	339,00	665 05 81 00 2 2 5 0	359,00	665 05 81 00 2 2 3 0	295,00	665 05 81 00 2 2 2 0		
40	339,00	665 05 93 00 2 2 5 0	359,00	665 05 93 00 2 2 3 0	295,00	665 05 93 00 2 2 2 0		
40	339,00	665 05 B4 00 2 2 5 0	359,00	665 05 B4 00 2 2 3 0	295,00	665 05 B4 00 2 2 2 0		
50	339,00	665 05 46 00 2 6 5 0	359,00	665 05 46 00 2 6 3 0	295,00	665 05 46 00 2 6 2 0		
40	339,00	665 05 45 00 2 6 5 0	359,00	665 05 45 00 2 6 3 0	295,00	665 05 45 00 2 6 2 0		
40	339,00	665 05 81 00 2 6 5 0	359,00	665 05 81 00 2 6 3 0	295,00	665 05 81 00 2 6 2 0		
50	339,00	665 05 82 00 2 6 5 0	359,00	665 05 82 00 2 6 3 0	295,00	665 05 82 00 2 6 2 0		
40	339,00	665 05 93 00 2 6 5 0	359,00	665 05 93 00 2 6 3 0	295,00	665 05 93 00 2 6 2 0		
50	339,00	665 05 36 00 2 6 5 0	359,00	665 05 36 00 2 6 3 0	295,00	665 05 36 00 2 6 2 0		
32	339,00	665 05 B3 00 2 6 5 0	359,00	665 05 B3 00 2 6 3 0	295,00	665 05 B3 00 2 6 2 0		
40	339,00	665 05 B4 00 2 6 5 0	359,00	665 05 B4 00 2 6 3 0	295,00	665 05 B4 00 2 6 2 0		
32	339,00	665 05 80 00 2 3 5 0	359,00	665 05 80 00 2 3 3 0	295,00	665 05 80 00 2 3 2 0		
32	339,00	665 05 80 00 2 4 5 0	359,00	665 05 80 00 2 4 3 0	295,00	665 05 80 00 2 4 2 0		
40	339,00	665 05 81 00 2 3 5 0	359,00	665 05 81 00 2 3 3 0	295,00	665 05 81 00 2 3 2 0		
40	339,00	665 05 81 00 2 4 5 0	359,00	665 05 81 00 2 4 3 0	295,00	665 05 81 00 2 4 2 0		
40	339,00	665 05 81 00 2 A 5 0	359,00	665 05 81 00 2 A 3 0	295,00	665 05 81 00 2 A 2 0		

TANKO® S50 180° downwards

2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
40	on request	665 05 45 00 2 2 8 0	on request	665 05 45 00 2 2 7 0				
50	on request	665 05 46 00 2 2 8 0	on request	665 05 46 00 2 2 7 0				
40	on request	665 05 81 00 2 2 8 0	on request	665 05 81 00 2 2 7 0				
40	on request	665 05 93 00 2 2 8 0	on request	665 05 93 00 2 2 7 0				
40	on request	665 05 B4 00 2 2 8 0	on request	665 05 B4 00 2 2 7 0				
50	on request	665 05 46 00 2 6 8 0	on request	665 05 46 00 2 6 7 0				
40	on request	665 05 45 00 2 6 8 0	on request	665 05 45 00 2 6 7 0				
40	on request	665 05 81 00 2 6 8 0	on request	665 05 81 00 2 6 7 0				
50	on request	665 05 82 00 2 6 8 0	on request	665 05 82 00 2 6 7 0				
40	on request	665 05 93 00 2 6 8 0	on request	665 05 93 00 2 6 7 0				
50	on request	665 05 36 00 2 6 8 0	on request	665 05 36 00 2 6 7 0				
32	on request	665 05 B3 00 2 6 8 0	on request	665 05 B3 00 2 6 7 0				
40	on request	665 05 B4 00 2 6 8 0	on request	665 05 B4 00 2 6 7 0				
32	on request	665 05 80 00 2 3 8 0	on request	665 05 80 00 2 3 7 0				
32	on request	665 05 80 00 2 4 8 0	on request	665 05 80 00 2 4 7 0				
40	on request	665 05 81 00 2 3 8 0	on request	665 05 81 00 2 3 7 0				
40	on request	665 05 81 00 2 4 8 0	on request	665 05 81 00 2 4 7 0				
40	on request	665 05 81 00 2 A 8 0	on request	665 05 81 00 2 A 7 0				

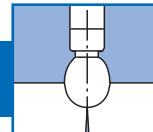
Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


**TANKO® S50 180° upwards
thread**

weld on
clip on


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



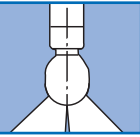
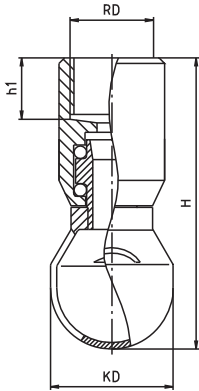
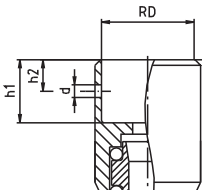
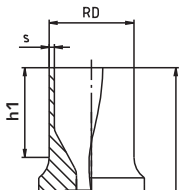
TANKO® S50 180° upwards

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
40	339,00	665 05 45 00 7 2 5 0	359,00	665 05 45 00 7 2 3 0	295,00	665 05 45 00 7 2 2 0		
50	339,00	665 05 46 00 7 2 5 0	359,00	665 05 46 00 7 2 3 0	295,00	665 05 46 00 7 2 2 0		
40	339,00	665 05 81 00 7 2 5 0	359,00	665 05 81 00 7 2 3 0	295,00	665 05 81 00 7 2 2 0		
40	339,00	665 05 93 00 7 2 5 0	359,00	665 05 93 00 7 2 3 0	295,00	665 05 93 00 7 2 2 0		
40	339,00	665 05 B4 00 7 2 5 0	359,00	665 05 B4 00 7 2 3 0	295,00	665 05 B4 00 7 2 2 0		
50	339,00	665 05 46 00 7 6 5 0	359,00	665 05 46 00 7 6 3 0	295,00	665 05 46 00 7 6 2 0		
40	339,00	665 05 45 00 7 6 5 0	359,00	665 05 45 00 7 6 3 0	295,00	665 05 45 00 7 6 2 0		
40	339,00	665 05 81 00 7 6 5 0	359,00	665 05 81 00 7 6 3 0	295,00	665 05 81 00 7 6 2 0		
50	339,00	665 05 82 00 7 6 5 0	359,00	665 05 82 00 7 6 3 0	295,00	665 05 82 00 7 6 2 0		
40	339,00	665 05 93 00 7 6 5 0	359,00	665 05 93 00 7 6 3 0	295,00	665 05 93 00 7 6 2 0		
50	339,00	665 05 36 00 7 6 5 0	359,00	665 05 36 00 7 6 3 0	295,00	665 05 36 00 7 6 2 0		
32	339,00	665 05 B3 00 7 6 5 0	359,00	665 05 B3 00 7 6 3 0	295,00	665 05 B3 00 7 6 2 0		
40	339,00	665 05 B4 00 7 6 5 0	359,00	665 05 B4 00 7 6 3 0	295,00	665 05 B4 00 7 6 2 0		
32	339,00	665 05 80 00 7 3 5 0	359,00	665 05 80 00 7 3 3 0	295,00	665 05 80 00 7 3 2 0		
32	339,00	665 05 80 00 7 4 5 0	359,00	665 05 80 00 7 4 3 0	295,00	665 05 80 00 7 4 2 0		
40	339,00	665 05 81 00 7 3 5 0	359,00	665 05 81 00 7 3 3 0	295,00	665 05 81 00 7 3 2 0		
40	339,00	665 05 81 00 7 4 5 0	359,00	665 05 81 00 7 4 3 0	295,00	665 05 81 00 7 4 2 0		
40	339,00	665 05 81 00 7 A 5 0	359,00	665 05 81 00 7 A 3 0	295,00	665 05 81 00 7 A 2 0		

TANKO® S50 180° upwards

2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
40	on request	665 05 45 00 7 2 8 0	on request	665 05 45 00 7 2 7 0				
50	on request	665 05 46 00 7 2 8 0	on request	665 05 46 00 7 2 7 0				
40	on request	665 05 81 00 7 2 8 0	on request	665 05 81 00 7 2 7 0				
40	on request	665 05 93 00 7 2 8 0	on request	665 05 93 00 7 2 7 0				
40	on request	665 05 B4 00 7 2 8 0	on request	665 05 B4 00 7 2 7 0				
50	on request	665 05 46 00 7 6 8 0	on request	665 05 46 00 7 6 7 0				
40	on request	665 05 45 00 7 6 8 0	on request	665 05 45 00 7 6 7 0				
40	on request	665 05 81 00 7 6 8 0	on request	665 05 81 00 7 6 7 0				
50	on request	665 05 82 00 7 6 8 0	on request	665 05 82 00 7 6 7 0				
40	on request	665 05 93 00 7 6 8 0	on request	665 05 93 00 7 6 7 0				
50	on request	665 05 36 00 7 6 8 0	on request	665 05 36 00 7 6 7 0				
32	on request	665 05 B3 00 7 6 8 0	on request	665 05 B3 00 7 6 7 0				
40	on request	665 05 B4 00 7 6 8 0	on request	665 05 B4 00 7 6 7 0				
32	on request	665 05 80 00 7 3 8 0	on request	665 05 80 00 7 3 7 0				
32	on request	665 05 80 00 7 4 8 0	on request	665 05 80 00 7 4 7 0				
40	on request	665 05 81 00 7 3 8 0	on request	665 05 81 00 7 3 7 0				
40	on request	665 05 81 00 7 4 8 0	on request	665 05 81 00 7 4 7 0				
40	on request	665 05 81 00 7 A 8 0	on request	665 05 81 00 7 A 7 0				

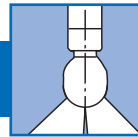
Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).


**TANKO® S50 270° upwards
thread**

weld on
clip on


Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



TANKO® S50 270° upwards

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
40	339,00	665 05 45 00 6 2 5 0	359,00	665 05 45 00 6 2 3 0	295,00	665 05 45 00 6 2 2 0		
50	339,00	665 05 46 00 6 2 5 0	359,00	665 05 46 00 6 2 3 0	295,00	665 05 46 00 6 2 2 0		
40	339,00	665 05 81 00 6 2 5 0	359,00	665 05 81 00 6 2 3 0	295,00	665 05 81 00 6 2 2 0		
40	339,00	665 05 93 00 6 2 5 0	359,00	665 05 93 00 6 2 3 0	295,00	665 05 93 00 6 2 2 0		
40	339,00	665 05 B4 00 6 2 5 0	359,00	665 05 B4 00 6 2 3 0	295,00	665 05 B4 00 6 2 2 0		
50	339,00	665 05 46 00 6 6 5 0	359,00	665 05 46 00 6 6 3 0	295,00	665 05 46 00 6 6 2 0		
40	339,00	665 05 45 00 6 6 5 0	359,00	665 05 45 00 6 6 3 0	295,00	665 05 45 00 6 6 2 0		
40	339,00	665 05 81 00 6 6 5 0	359,00	665 05 81 00 6 6 3 0	295,00	665 05 81 00 6 6 2 0		
50	339,00	665 05 82 00 6 6 5 0	359,00	665 05 82 00 6 6 3 0	295,00	665 05 82 00 6 6 2 0		
40	339,00	665 05 93 00 6 6 5 0	359,00	665 05 93 00 6 6 3 0	295,00	665 05 93 00 6 6 2 0		
50	339,00	665 05 36 00 6 6 5 0	359,00	665 05 36 00 6 6 3 0	295,00	665 05 36 00 6 6 2 0		
32	339,00	665 05 B3 00 6 6 5 0	359,00	665 05 B3 00 6 6 3 0	295,00	665 05 B3 00 6 6 2 0		
40	339,00	665 05 B4 00 6 6 5 0	359,00	665 05 B4 00 6 6 3 0	295,00	665 05 B4 00 6 6 2 0		
32	339,00	665 05 80 00 6 3 5 0	359,00	665 05 80 00 6 3 3 0	295,00	665 05 80 00 6 3 2 0		
32	339,00	665 05 80 00 6 4 5 0	359,00	665 05 80 00 6 4 3 0	295,00	665 05 80 00 6 4 2 0		
40	339,00	665 05 81 00 6 3 5 0	359,00	665 05 81 00 6 3 3 0	295,00	665 05 81 00 6 3 2 0		
40	339,00	665 05 81 00 6 4 5 0	359,00	665 05 81 00 6 4 3 0	295,00	665 05 81 00 6 4 2 0		
40	339,00	665 05 81 00 6 A 5 0	359,00	665 05 81 00 6 A 3 0	295,00	665 05 81 00 6 A 2 0		

TANKO® S50 270° upwards

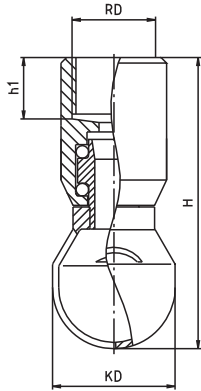
2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
40	on request	665 05 45 00 6 2 8 0	on request	665 05 45 00 6 2 7 0				
50	on request	665 05 46 00 6 2 8 0	on request	665 05 46 00 6 2 7 0				
40	on request	665 05 81 00 6 2 8 0	on request	665 05 81 00 6 2 7 0				
40	on request	665 05 93 00 6 2 8 0	on request	665 05 93 00 6 2 7 0				
40	on request	665 05 B4 00 6 2 8 0	on request	665 05 B4 00 6 2 7 0				
50	on request	665 05 46 00 6 6 8 0	on request	665 05 46 00 6 6 7 0				
40	on request	665 05 45 00 6 6 8 0	on request	665 05 45 00 6 6 7 0				
40	on request	665 05 81 00 6 6 8 0	on request	665 05 81 00 6 6 7 0				
50	on request	665 05 82 00 6 6 8 0	on request	665 05 82 00 6 6 7 0				
40	on request	665 05 93 00 6 6 8 0	on request	665 05 93 00 6 6 7 0				
50	on request	665 05 36 00 6 6 8 0	on request	665 05 36 00 6 6 7 0				
32	on request	665 05 B3 00 6 6 8 0	on request	665 05 B3 00 6 6 7 0				
40	on request	665 05 B4 00 6 6 8 0	on request	665 05 B4 00 6 6 7 0				
32	on request	665 05 80 00 6 3 8 0	on request	665 05 80 00 6 3 7 0				
32	on request	665 05 80 00 6 4 8 0	on request	665 05 80 00 6 4 7 0				
40	on request	665 05 81 00 6 3 8 0	on request	665 05 81 00 6 3 7 0				
40	on request	665 05 81 00 6 4 8 0	on request	665 05 81 00 6 4 7 0				
40	on request	665 05 81 00 6 A 8 0	on request	665 05 81 00 6 A 7 0				

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).



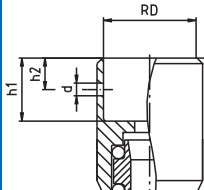
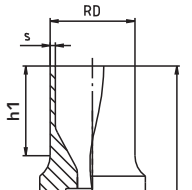
TANKO® S50 360°

thread



weld on

clip on



Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Conne- ction	Standard DIN 11866	DN mm	RD Ø mm	s mm	KD Ø mm	H mm	h1 mm	h2 mm	d Ø mm	g
Clip on	series A (DIN)	40	41,5	---	69,5	172	35,2	24,2	5,5	1650
Clip on	series A (DIN)	50	54,3	---	69,5	158	19	10	5,5	1650
Clip on	series B (ISO)	40	49,6	---	69,5	158	19	10	5,5	1650
Clip on	series C (ASME)	40	52,0	---	69,5	158	19	10	5,5	1650
Clip on	series SMS	40	51,0	---	69,5	158	19	10	5,5	1650
weld on	series A (DIN)	50	53,0	1,5	69,5	180	34	---	---	1780
weld on	series A (DIN)	40	41,0	1,5	69,5	180	27	---	---	1780
weld on	series B (ISO)	40	48,3	2,0	69,5	180	31	---	---	1780
weld on	series B (ISO)	50	60,3	2,0	69,5	180	31	---	---	1780
weld on	series C (ASME)	40	2" (50,8)	1,65	69,5	180	32	---	---	1780
weld on	series 3 DIN 11850	50	54,0	2,0	69,5	180	34	---	---	1780
weld on	series SMS	32	38,0	1,2	69,5	180	27	---	---	1780
weld on	series SMS	40	51,0	1,2	69,5	180	32	---	---	1780
thread	BSP	32	G 1 1/4"	---	69,5	158	21	---	---	1650
thread	NPT	32	1 1/4"	---	69,5	158	21	---	---	1650
thread	BSP	40	G 1 1/2"	---	69,5	158	21	---	---	1650
thread	NPT	40	1 1/2"	---	69,5	158	21	---	---	1650
thread	NPS	40	1 1/2"	---	69,5	158	21	---	---	1650

Combine the TANKO®-S connection NPS-thread with the weld-on nipple NPSM.
 (page 24-25)



TANKO® S50 360°

1.4571 (316Ti)			1.4435 (316L)		1.4404 (316L)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
40	339,00	665 05 45 00 1 2 5 0	359,00	665 05 45 00 1 2 3 0	295,00	665 05 45 00 1 2 2 0		
50	339,00	665 05 46 00 1 2 5 0	359,00	665 05 46 00 1 2 3 0	295,00	665 05 46 00 1 2 2 0		
40	339,00	665 05 81 00 1 2 5 0	359,00	665 05 81 00 1 2 3 0	295,00	665 05 81 00 1 2 2 0		
40	339,00	665 05 93 00 1 2 5 0	359,00	665 05 93 00 1 2 3 0	295,00	665 05 93 00 1 2 2 0		
40	339,00	665 05 B4 00 1 2 5 0	359,00	665 05 B4 00 1 2 3 0	295,00	665 05 B4 00 1 2 2 0		
50	339,00	665 05 46 00 1 6 5 0	359,00	665 05 46 00 1 6 3 0	295,00	665 05 46 00 1 6 2 0		
40	339,00	665 05 45 00 1 6 5 0	359,00	665 05 45 00 1 6 3 0	295,00	665 05 45 00 1 6 2 0		
40	339,00	665 05 81 00 1 6 5 0	359,00	665 05 81 00 1 6 3 0	295,00	665 05 81 00 1 6 2 0		
50	339,00	665 05 82 00 1 6 5 0	359,00	665 05 82 00 1 6 3 0	295,00	665 05 82 00 1 6 2 0		
40	339,00	665 05 93 00 1 6 5 0	359,00	665 05 93 00 1 6 3 0	295,00	665 05 93 00 1 6 2 0		
50	339,00	665 05 36 00 1 6 5 0	359,00	665 05 36 00 1 6 3 0	295,00	665 05 36 00 1 6 2 0		
32	339,00	665 05 B3 00 1 6 5 0	359,00	665 05 B3 00 1 6 3 0	295,00	665 05 B3 00 1 6 2 0		
40	339,00	665 05 B4 00 1 6 5 0	359,00	665 05 B4 00 1 6 3 0	295,00	665 05 B4 00 1 6 2 0		
32	339,00	665 05 80 00 1 3 5 0	359,00	665 05 80 00 1 3 3 0	295,00	665 05 80 00 1 3 2 0		
32	339,00	665 05 80 00 1 4 5 0	359,00	665 05 80 00 1 4 3 0	295,00	665 05 80 00 1 4 2 0		
40	339,00	665 05 81 00 1 3 5 0	359,00	665 05 81 00 1 3 3 0	295,00	665 05 81 00 1 3 2 0		
40	339,00	665 05 81 00 1 4 5 0	359,00	665 05 81 00 1 4 3 0	295,00	665 05 81 00 1 4 2 0		
40	339,00	665 05 81 00 1 A 5 0	359,00	665 05 81 00 1 A 3 0	295,00	665 05 81 00 1 A 2 0		

TANKO® S50 360°

2.4602 (HC22)			2.4610 (HC4)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
40	on request	665 05 45 00 1 2 8 0	on request	665 05 45 00 1 2 7 0				
50	on request	665 05 46 00 1 2 8 0	on request	665 05 46 00 1 2 7 0				
40	on request	665 05 81 00 1 2 8 0	on request	665 05 81 00 1 2 7 0				
40	on request	665 05 93 00 1 2 8 0	on request	665 05 93 00 1 2 7 0				
40	on request	665 05 B4 00 1 2 8 0	on request	665 05 B4 00 1 2 7 0				
50	on request	665 05 46 00 1 6 8 0	on request	665 05 46 00 1 6 7 0				
40	on request	665 05 45 00 1 6 8 0	on request	665 05 45 00 1 6 7 0				
40	on request	665 05 81 00 1 6 8 0	on request	665 05 81 00 1 6 7 0				
50	on request	665 05 82 00 1 6 8 0	on request	665 05 82 00 1 6 7 0				
40	on request	665 05 93 00 1 6 8 0	on request	665 05 93 00 1 6 7 0				
50	on request	665 05 36 00 1 6 8 0	on request	665 05 36 00 1 6 7 0				
32	on request	665 05 B3 00 1 6 8 0	on request	665 05 B3 00 1 6 7 0				
40	on request	665 05 B4 00 1 6 8 0	on request	665 05 B4 00 1 6 7 0				
32	on request	665 05 80 00 1 3 8 0	on request	665 05 80 00 1 3 7 0				
32	on request	665 05 80 00 1 4 8 0	on request	665 05 80 00 1 4 7 0				
40	on request	665 05 81 00 1 3 8 0	on request	665 05 81 00 1 3 7 0				
40	on request	665 05 81 00 1 4 8 0	on request	665 05 81 00 1 4 7 0				
40	on request	665 05 81 00 1 A 8 0	on request	665 05 81 00 1 A 7 0				

Material specifications for TANKO® S such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® S made of 2.4610 HC 4 or 2.4602 HC 22 the base plate, spray head and ball bearings are made of 2.4610 (HC 4) or 2.4602 (HC 22).

When baffles are a nuisance

Dynamic CIP systems clean even the remotest corners

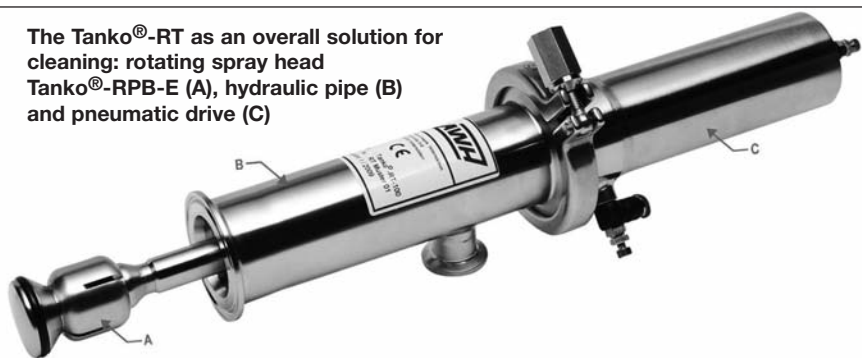
Where to attach the spray head? This question arises with nearly every CIP installation. In most cases, spray shadows caused by baffles, such as agitators, manholes, inspection glasses and a host of other muffs complicate the setup of an efficient CIP cleaning. The solution for this is a traveling cleaning systems.

The number and location of the cleaning devices are defined by the operating mode of the container; the intended application within the production process and the structural conditions. If, in addition, an agitator limits the space for assembly, it becomes close to impossible to work out a sensible solution for the location of a spray head. Important criteria, such as self-cleansing, a design without dead spots, the required efficient cleaning performance and the attainment of all problematic areas inside the container make great demands on the cleaning device. An elegant solution is a so-called refractor using flood cleaners (Tanko-S or -RPB-E, respectively). A pneumatic drive extends the flood cleaner to its place of operation.

This in itself is nothing new: technical variations have been known on the market for many years. The refractor version presented below, that of the Tanko-RT, combines this fundamental idea with the modern demands on a CIP cleaning system. One important component of the refractor is the cleaning head.

Solutions for spray heads currently available on the market do not offer a variation of the flow rate, which is frequently way too high. Containers, in particular smaller ones, thus run the risk of flooding. A cleansing of the contaminated container walls by flooding same with a detergent and a subsequent evacuation to the drain of the container then becomes impossible. At best, a flooding and cleansing of the upper container area is obtained. Now if the drain cannot evacuate this high volume of detergent, a sump results. The dirt removed from the container's upper section is transported into that sump. Depending on the sojourn / draining time until evacuation from the container, the suspended particles are prone to sedimentation. As a consequence, the suspended particles removed from the upper container section can now be found on the lower interior wall of the container. In order to prevent flooding or the creation of a sump, an adaptation of the spray head consumption to the respective working conditions is required.

The Tanko®-RT as an overall solution for cleaning: rotating spray head Tanko®-RPB-E (A), hydraulic pipe (B) and pneumatic drive (C)



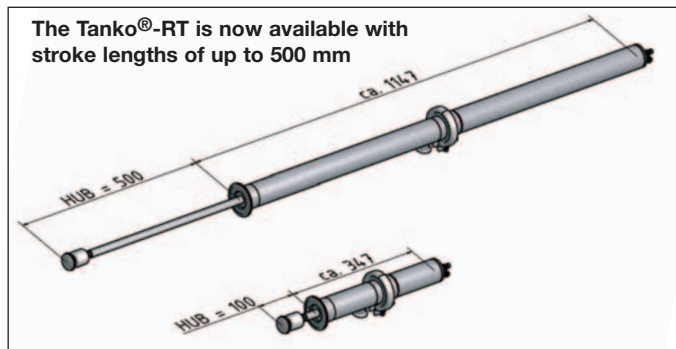
Sump prevented

This task has been realized in the Tanko-RT. The Tanko-RPB-E spray head employed permits a flexible adaptation of the required detergent flow rate. Depending on the cleaning head model and the working pressure, flow rates between 1 and 7 m³/h are currently possible. A detergent pressure between 1 and 8 bars can be selected. Typical working pressure rates for flood cleaners are 3 to 5 bars. Thanks to its wide diameter (big slot widths) and high speed (working pressure), the droplet ejected from the flood cleaner obtains its best cleansing performance at this pressure.

The Tanko-RPB-E was designed based on the excellent hygienic experience gathered with the Tanko-S, which has been employed for many years. The disadvantages of a friction bearing spray head do not have any effect. The use of the Tanko-RPB-E in combination with the Tanko-RT easily thwarts the creation of a sump.

Another important component of the Tanko-RT is the hydraulic pipe. Employing the new pipe standard DIN II 866 permitted a considerable reduction of the installation size and thus of the cavity into which the spray head is retracted. After deploying the spray head, this area is filled first to build up pressure in the direction of the spray head.

The Tanko®-RT is now available with stroke lengths of up to 500 mm



This detergent quantity is not being used for the cleansing operation of the container wall. Following the CIP operation, the storage space for the flood cleaner has to be emptied and frequently dried by compressed air. Consequently, reducing the size of this area represents a considerable improvement as compared to existing concepts. The fact that a ponding inside the Tanko-RT is prevented by suitably inclined bores is another important point. Drying by air becomes a lot easier and produces best results.

The pneumatic drive for deployment (dry) has been separated from the part carrying the detergent (wet) by a proven sealing system. An inserted magnet permits safe position recognition with an externally placed sensor. The available standard stroke lengths of 100, 150, 250 and now 500 mm as well set further standards. The additional stroke length of 500 mm opens the door to the solution of additional tasks.

A solution to check for leaks between the hydraulic and the pneumatic sections, similar to that of double seat or leakage disk valves, is under preparation. This way, an even safer hygienic operation can be guaranteed. The O-ring wear and tear is detected at the leakage exit. Thus, product contamination in case of faulty or aged O-rings by pneumatically pushed back water can be ruled out.

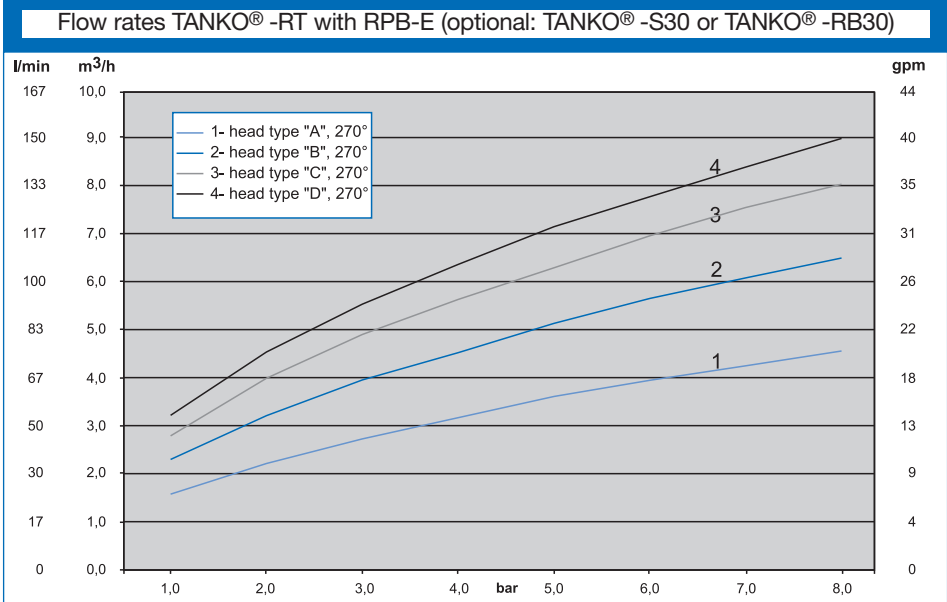
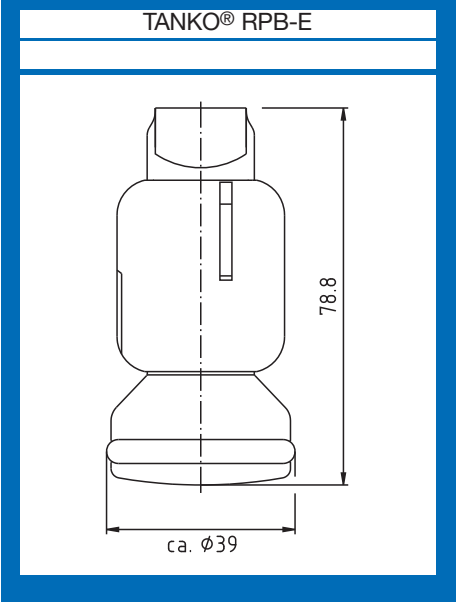
Up to 500 mm of stroke length

Typically, the working pressure for compressed air is 6 bars. As long as the selected pressure of the detergent does not exceed 5 bars, the locking pressure is sufficient to maintain the closed position of the Tanko-RPB-E.

With the Tanko-RT, AWH has introduced another cleaning unit on the market. The modular concept results in the shortest possible delivery times. The unit is completely made of stainless steel (316 or 316L with 3.1 certificate) and EPDM seals (FDA-conform) for contact with detergents. The stainless steel types do not pose any problem in the evaluation for FDA conformity. By selecting these materials, a use in the chemical industry, in breweries, the foodstuffs industry and the highly sensitive pharmaceutical industry and in biotechnology is possible.



Flow rates TANKO® -RT with different spray head types

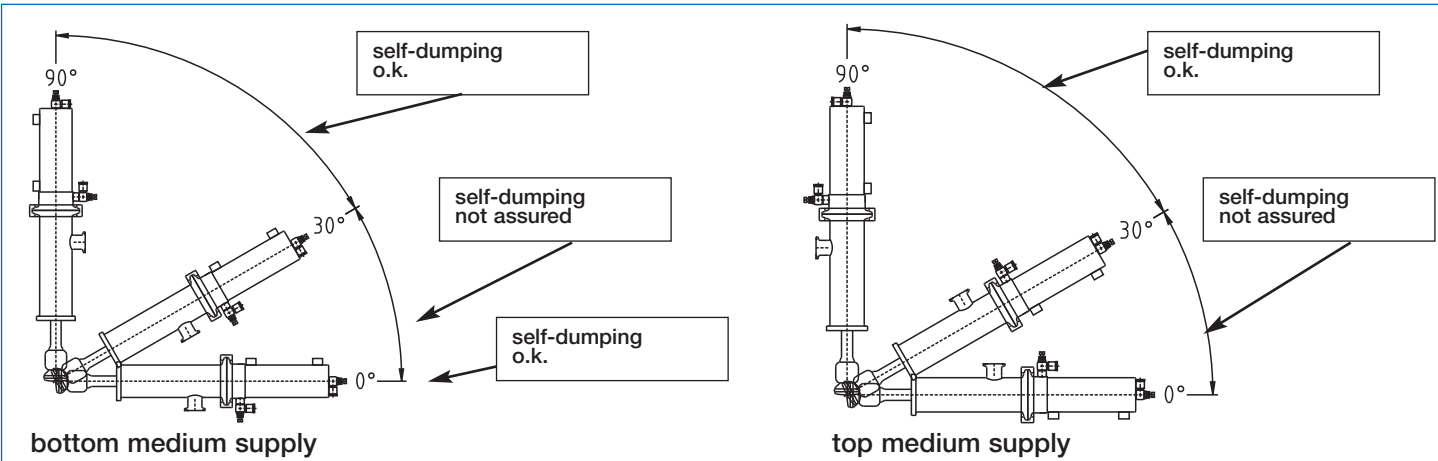


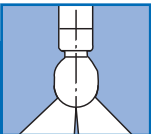
Price/EUR	Item no.	
on request	664BA030 4 09DT	operating manual in German
on request	664BA030 4 09EN	operating manual in English

Scope of delivery TANKO® -RT (Retractor)

- 1 pc. Basic device with pneumatic drive , materials (medium affected): 1.4435 (316L), EPDM or VITON process connection according to order (customers enquiry)
 - 1 pc. Spray head, material: 1.4435 (316L) (ball bearing: 1.4401 (316), optional HC4)
 - 2 pcs. Final position switches incl. mounting material
 - 2 pcs. Throttle check valves (pneumatic connection) for outer pipe diameter 6mm
- For stroke lengths of 250mm or above an additional pipe clamp is recommended to release the retractable system.

Installation advise regarding self-dumping

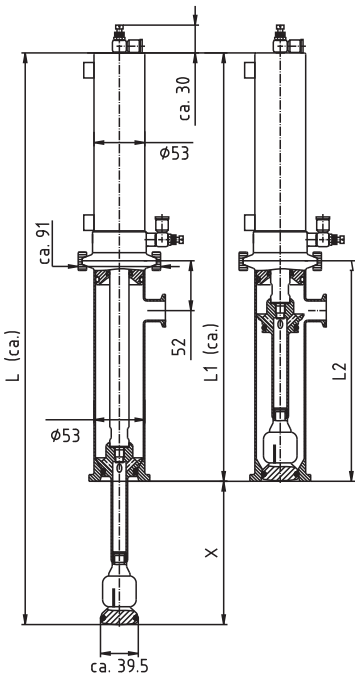




TANKO®-RT Retractor

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TANKO® -RT Retractor



stroke length	L mm	L1 mm	L2 mm	Spray head type	sealing material	final position switches	pneumatic connection	kg
100	447	347	180	A	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	A	VITON / VITON	type 1	type 1 (Ø6)	3,3
100	447	347	180	B	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	B	VITON / VITON	type 1	type 1 (Ø6)	3,3
100	447	347	180	C	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	C	VITON / VITON	type 1	type 1 (Ø6)	3,3
100	447	347	180	D	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	D	VITON / VITON	type 1	type 1 (Ø6)	3,3
150	597	447	230	A	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	A	VITON / VITON	type 1	type 1 (Ø6)	4,1
150	597	447	230	B	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	B	VITON / VITON	type 1	type 1 (Ø6)	4,1
150	597	447	230	C	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	C	VITON / VITON	type 1	type 1 (Ø6)	4,1
150	597	447	230	D	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	D	VITON / VITON	type 1	type 1 (Ø6)	4,1
250	897	647	330	A	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	A	VITON / VITON	type 1	type 1 (Ø6)	5,4
250	897	647	330	B	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	B	VITON / VITON	type 1	type 1 (Ø6)	5,4
250	897	647	330	C	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	C	VITON / VITON	type 1	type 1 (Ø6)	5,4
250	897	647	330	D	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	D	VITON / VITON	type 1	type 1 (Ø6)	5,4
500	1647	1147	480	A	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	A	VITON / VITON	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	B	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	B	VITON / VITON	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	C	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	C	VITON / VITON	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	D	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	D	VITON / VITON	type 1	type 1 (Ø6)	7,9

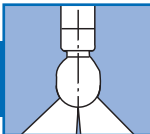
Standard medium connection:
clamp acc. to DIN 32676 (series A) DN25

materials:
medium affected: 1.4435 (316L), (ball bearing 1.4401 (316), optional HC4), EPDM (optional: VITON)
others (pneumatic side): AISI 304, 430F, 316L, 316Ti, PEEK, PU, NBR (optional: VITON)

Temperature limits	Combination EPDM / NBR	Combination VITON / VITON
max. working temperature (cleaning medium):	140°C	on request
max. ambient temperature (inside tank)	150°C	on request
max. ambient temperature (outside tank)	60°C	60°C



TANKO®-RT Retractor

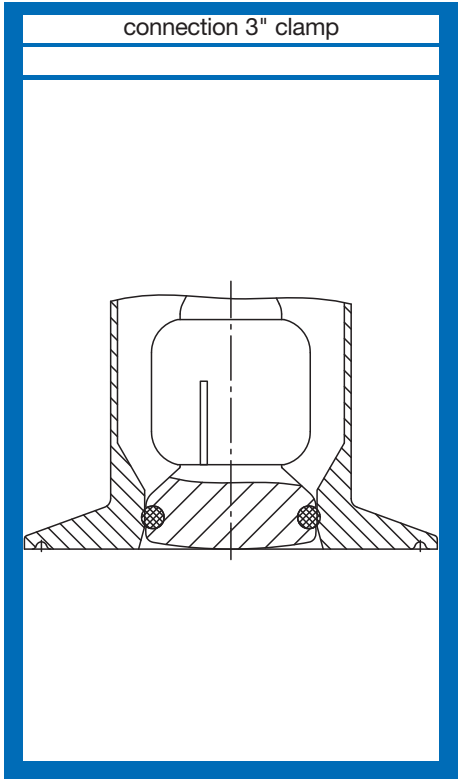
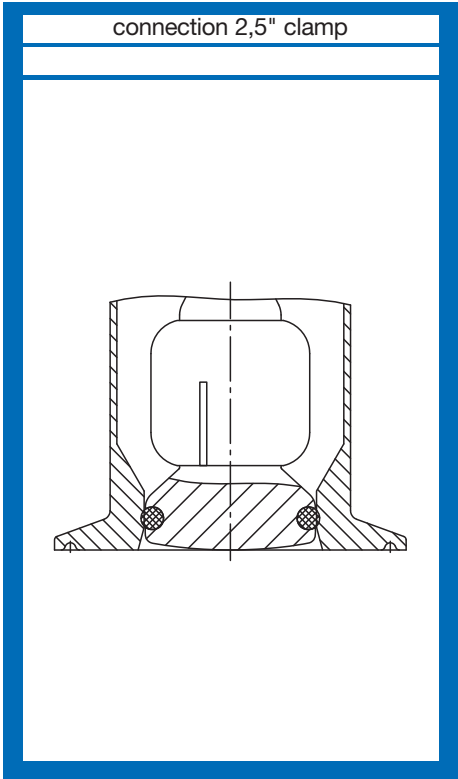
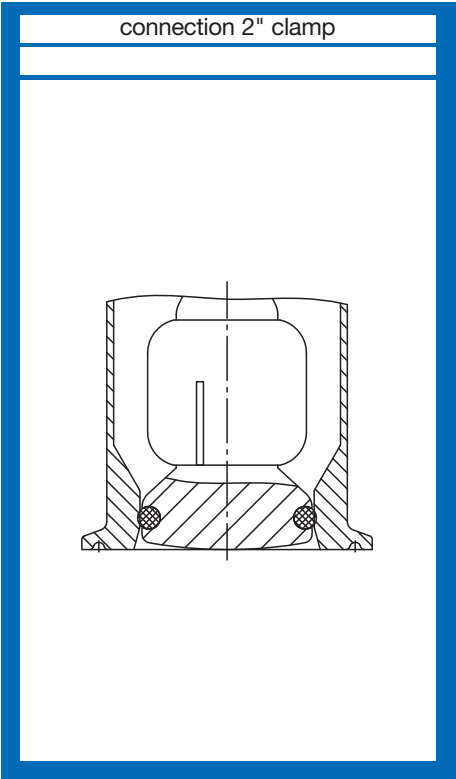


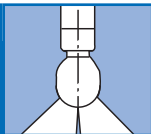
RT

270° ↑

TANKO® -RT Retractor process connection: Clamp acc. to DIN 32676 (series C, ASME)

stroke length	2"		2,5"		3"			
	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
100	2480,00	66R311019253110	2480,00	66R311019263110	2480,00	66R311019273110		
100	2535,00	66R331019253110	2535,00	66R331019263110	2535,00	66R331019273110		
100	2480,00	66R411019253110	2480,00	66R411019263110	2480,00	66R411019273110		
100	2535,00	66R431019253110	2535,00	66R431019263110	2535,00	66R431019273110		
100	2480,00	66R511019253110	2480,00	66R511019263110	2480,00	66R511019273110		
100	2535,00	66R531019253110	2535,00	66R531019263110	2535,00	66R531019273110		
100	2480,00	66R611019253110	2480,00	66R611019263110	2480,00	66R611019273110		
100	2535,00	66R631019253110	2535,00	66R631019263110	2535,00	66R631019273110		
150	2660,00	66R311519253110	2660,00	66R311519263110	2660,00	66R311519273110		
150	2715,00	66R331519253110	2715,00	66R331519263110	2715,00	66R331519273110		
150	2660,00	66R411519253110	2660,00	66R411519263110	2660,00	66R411519273110		
150	2715,00	66R431519253110	2715,00	66R431519263110	2715,00	66R431519273110		
150	2660,00	66R511519253110	2660,00	66R511519263110	2660,00	66R511519273110		
150	2715,00	66R531519253110	2715,00	66R531519263110	2715,00	66R531519273110		
150	2660,00	66R611519253110	2660,00	66R611519263110	2660,00	66R611519273110		
150	2715,00	66R631519253110	2715,00	66R631519263110	2715,00	66R631519273110		
250	2710,00	66R312519253110	2710,00	66R312519263110	2710,00	66R312519273110		
250	2765,00	66R332519253110	2765,00	66R332519263110	2765,00	66R332519273110		
250	2710,00	66R412519253110	2710,00	66R412519263110	2710,00	66R412519273110		
250	2765,00	66R432519253110	2765,00	66R432519263110	2765,00	66R432519273110		
250	2710,00	66R512519253110	2710,00	66R512519263110	2710,00	66R512519273110		
250	2765,00	66R532519253110	2765,00	66R532519263110	2765,00	66R532519273110		
250	2710,00	66R612519253110	2710,00	66R612519263110	2710,00	66R612519273110		
250	2765,00	66R632519253110	2765,00	66R632519263110	2765,00	66R632519273110		
500	3170,00	66R315019253110	3170,00	66R315019263110	3170,00	66R315019273110		
500	3225,00	66R335019253110	3225,00	66R335019263110	3225,00	66R335019273110		
500	3170,00	66R415019253110	3170,00	66R415019263110	3170,00	66R415019273110		
500	3225,00	66R435019253110	3225,00	66R435019263110	3225,00	66R435019273110		
500	3170,00	66R515019253110	3170,00	66R515019263110	3170,00	66R515019273110		
500	3225,00	66R535019253110	3225,00	66R535019263110	3225,00	66R535019273110		
500	3170,00	66R615019253110	3170,00	66R615019263110	3170,00	66R615019273110		
500	3225,00	66R635019253110	3225,00	66R635019263110	3225,00	66R635019273110		

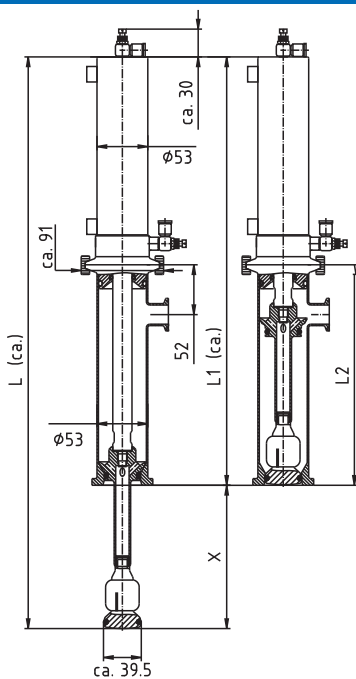




TANKO®-RT Retractor

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TANKO®-RT Retractor



stroke length	L mm	L1 mm	L2 mm	Spray head type	sealing material	final position switches	pneumatic connection	kg
100	447	347	180	A	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	A	VITON / VITON	type 1	type 1 (Ø6)	3,3
100	447	347	180	B	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	B	VITON / VITON	type 1	type 1 (Ø6)	3,3
100	447	347	180	C	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	C	VITON / VITON	type 1	type 1 (Ø6)	3,3
100	447	347	180	D	EPDM / NBR	type 1	type 1 (Ø6)	3,3
100	447	347	180	D	VITON / VITON	type 1	type 1 (Ø6)	3,3
150	597	447	230	A	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	A	VITON / VITON	type 1	type 1 (Ø6)	4,1
150	597	447	230	B	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	B	VITON / VITON	type 1	type 1 (Ø6)	4,1
150	597	447	230	C	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	C	VITON / VITON	type 1	type 1 (Ø6)	4,1
150	597	447	230	D	EPDM / NBR	type 1	type 1 (Ø6)	4,1
150	597	447	230	D	VITON / VITON	type 1	type 1 (Ø6)	4,1
250	897	647	330	A	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	A	VITON / VITON	type 1	type 1 (Ø6)	5,4
250	897	647	330	B	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	B	VITON / VITON	type 1	type 1 (Ø6)	5,4
250	897	647	330	C	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	C	VITON / VITON	type 1	type 1 (Ø6)	5,4
250	897	647	330	D	EPDM / NBR	type 1	type 1 (Ø6)	5,4
250	897	647	330	D	VITON / VITON	type 1	type 1 (Ø6)	5,4
500	1647	1147	480	A	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	A	VITON / VITON	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	B	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	B	VITON / VITON	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	C	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	C	VITON / VITON	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	D	EPDM / NBR	type 1	type 1 (Ø6)	7,9
500	1647	1147	480	D	VITON / VITON	type 1	type 1 (Ø6)	7,9

Standard medium connection:

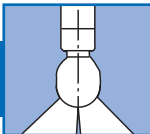
clamp acc. to DIN 32676 (series A) DN25

materials:

medium affected: 1.4435 (316L), (ball bearing 1.4401 (316), optional HC4), EPDM (optional: VITON)

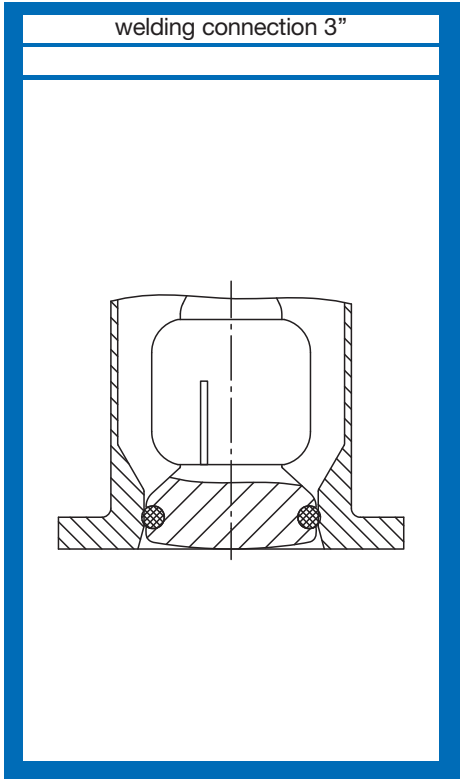
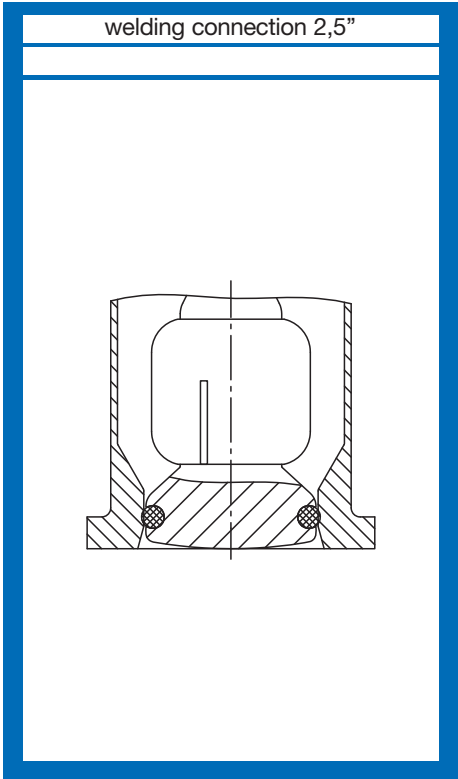
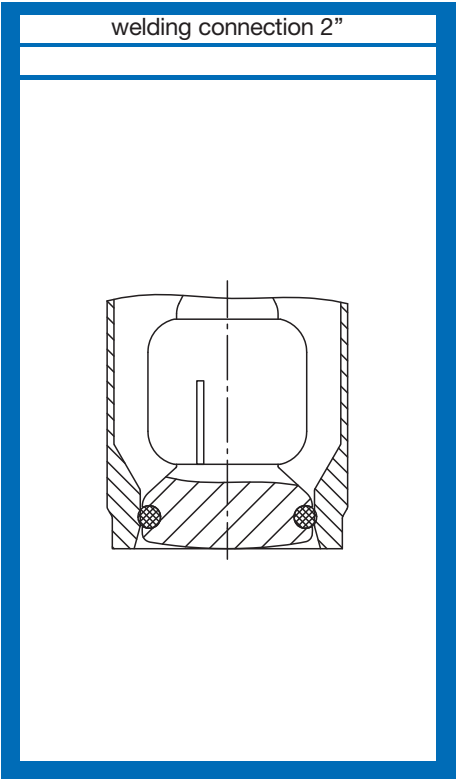
others (pneumatic side): AISI 304, 430F, 316L, 316Ti, PEEK, PU, NBR (optional: VITON)

Temperature limits	Combination EPDM / NBR	Combination VITON / VITON
max. working temperature (cleaning medium):	140°C	on request
max. ambient temperature (inside tank)	150°C	on request
max. ambient temperature (outside tank)	60°C	60°C



TANKO® -RT Retractor process connection: Welding connection

stroke length	2"		2,5"		3"			
	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
100	2480,00	66R311019353110	2480,00	66R311019363110	2480,00	66R311019373110		
100	2535,00	66R331019353110	2535,00	66R331019363110	2535,00	66R331019373110		
100	2480,00	66R411019353110	2480,00	66R411019363110	2480,00	66R411019373110		
100	2535,00	66R431019353110	2535,00	66R431019363110	2535,00	66R431019373110		
100	2480,00	66R511019353110	2480,00	66R511019363110	2480,00	66R511019373110		
100	2535,00	66R531019353110	2535,00	66R531019363110	2535,00	66R531019373110		
100	2480,00	66R611019353110	2480,00	66R611019363110	2480,00	66R611019373110		
100	2535,00	66R631019353110	2535,00	66R631019363110	2535,00	66R631019373110		
150	2660,00	66R311519353110	2660,00	66R311519363110	2660,00	66R311519373110		
150	2715,00	66R331519353110	2715,00	66R331519363110	2715,00	66R331519373110		
150	2660,00	66R411519353110	2660,00	66R411519363110	2660,00	66R411519373110		
150	2715,00	66R431519353110	2715,00	66R431519363110	2715,00	66R431519373110		
150	2660,00	66R511519353110	2660,00	66R511519363110	2660,00	66R511519373110		
150	2715,00	66R531519353110	2715,00	66R531519363110	2715,00	66R531519373110		
150	2660,00	66R611519353110	2660,00	66R611519363110	2660,00	66R611519373110		
150	2715,00	66R631519353110	2715,00	66R631519363110	2715,00	66R631519373110		
250	2710,00	66R312519353110	2710,00	66R312519363110	2710,00	66R312519373110		
250	2765,00	66R332519353110	2765,00	66R332519363110	2765,00	66R332519373110		
250	2710,00	66R412519353110	2710,00	66R412519363110	2710,00	66R412519373110		
250	2765,00	66R432519353110	2765,00	66R432519363110	2765,00	66R432519373110		
250	2710,00	66R512519353110	2710,00	66R512519363110	2710,00	66R512519373110		
250	2765,00	66R532519353110	2765,00	66R532519363110	2765,00	66R532519373110		
250	2710,00	66R612519353110	2710,00	66R612519363110	2710,00	66R612519373110		
250	2765,00	66R632519353110	2765,00	66R632519363110	2765,00	66R632519373110		
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500	3225,00	66R335019353110	3225,00	66R335019363110	3225,00	66R335019373110		
500	3170,00	66R415019353110	3170,00	66R415019363110	3170,00	66R415019373110		
500	3225,00	66R435019353110	3225,00	66R435019363110	3225,00	66R435019373110		
500	3170,00	66R515019353110	3170,00	66R515019363110	3170,00	66R515019373110		
500	3225,00	66R535019353110	3225,00	66R535019363110	3225,00	66R535019373110		
500	3170,00	66R615019353110	3170,00	66R615019363110	3170,00	66R615019373110		
500	3225,00	66R635019353110	3225,00	66R635019363110	3225,00	66R635019373110		



TANKO® RB, the rotating Spray Head

ATEX
versions + details
see page 8

TANKO® - RB 30 - 360° clip on

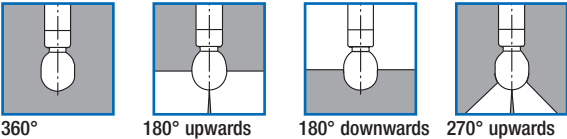


TANKO® - RB 40 - 360° clip on



- Material**
1.4571 (316Ti), 1.4435 (316L), 2.4602 (HC22)
- Bearing balls**
1.4401 (316)
- Working pressure**
< 1 to 3 bar
- maximum working temperature**
90°C, higher upon request
- maximum ambient temperature**
180°C, higher upon request
- maximum vessel diameter**
see product description
- volume flow rate [l/min]**
see product description
- volume flow rate [m³/h]**
see product description
- Application:** for homogenous and rapid distribution of large quantities.

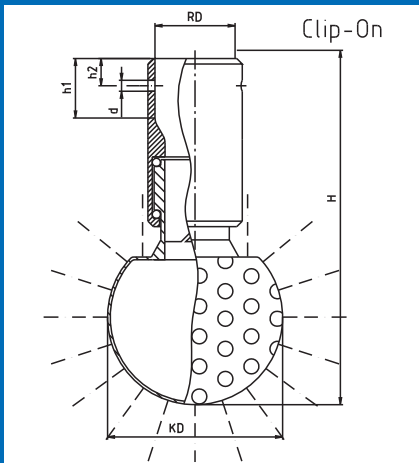
Spray pattern



TANKO®-RB
The combination of the well-proven drive with ball bearing with a static spray head for improved coating of the vessel's surface.

TANKO® RB-30 - 360°

Spray head, 360° rotating
cleaning ball



Conne- ction	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	10	13,2	30	17	8	2,2	78	1,0 - 1,5	2,4	3,2
Clip on	series B (ISO)	10	17,4	30	17	8	2,2	78	1,0 - 1,5	2,4	3,2
Clip on	series C (ASME)	8	12,9	30	17	8	2,2	78	1,0 - 1,5	2,4	3,2
weld on	series A (DIN)	15	19,0	30	26	---	---	90	1,0 - 1,5	2,4	3,2
weld on	series B (ISO)	10	17,2	30	26	---	---	90	1,0 - 1,5	2,4	3,2
weld on	series C (ASME)	15	19,05	30	26	---	---	90	1,0 - 1,5	2,4	3,2
thread	BSP	8	G 1/4"	30	12	---	---	70	1,0 - 1,5	2,4	3,2
thread	NPT	8	1/4"	30	12	---	---	70	1,0 - 1,5	2,4	3,2
thread	BSP	8	G 3/8"	30	12	---	---	70	1,0 - 1,5	2,4	3,2
thread	NPT	8	3/8"	30	12	---	---	70	1,0 - 1,5	2,4	3,2
thread	NPS	8	3/8"	30	12	---	---	70	1,0 - 1,5	2,4	3,2

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



The AWH-TANKO® RB unites the well-known features of a static spray ball with the advantages of a rotating system. Owing to the spray ball rotation large quantities of cleansing agent are spread homogenously onto the inner surface of your vessels/your barrels in shortest time. The results are a considerable reduction of cleansing agent consumption and cleaning duration. Even in case of a failure of the rotating system, the cleaning function of the now static spray ball is maintained.

A typical area of application is the low-pressure range, which does not require a jet cleaner, but higher flow rates, than our TANKO® S types can provide. Existing plants can be retrofitted with the AWH -TANKO® RB, without modification of the currently validated application.

Likewise to the TANKO® S types, the double-bearing TANKO® RB can be operated in any fitting position desired.

Product range:

Spray angles:	360° / 180° downwards / 180° upwards / 270° upwards
Connections:	clip-on, thread and orbital welding acc. to DIN 11866
Material:	1.4435 (316L), 1.4571 (316Ti) and Hasteloy 2.4602 (HC 22)
Bearing:	spray ball supported in double bearings

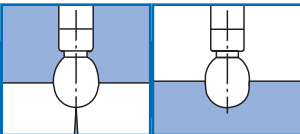
size	approx. weight (g)
TANKO® RB 30	95
TANKO® RB 40	122
TANKO® RB 64	300
TANKO® RB 90	722

TANKO® RB-30 - 360°

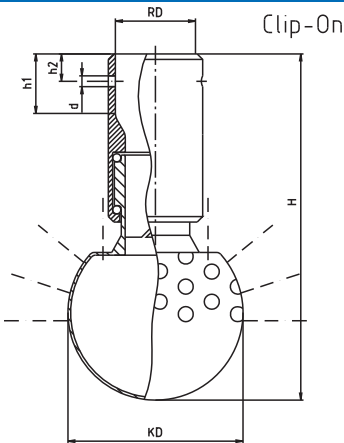
Rotating spray head, perforation 360°

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC 22)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
10	218,00	6 6 1 03 40 00 1 2 5 0	265,00	6 6 1 03 40 00 1 2 3 0	on request	6 6 1 03 40 00 1 2 8 0		
10	218,00	6 6 1 03 76 00 1 2 5 0	265,00	6 6 1 03 76 00 1 2 3 0	on request	6 6 1 03 76 00 1 2 8 0		
8	218,00	6 6 1 03 89 00 1 2 5 0	265,00	6 6 1 03 89 00 1 2 3 0	on request	6 6 1 03 89 00 1 2 8 0		
15	218,00	6 6 1 03 41 00 1 6 5 0	265,00	6 6 1 03 41 00 1 6 3 0	on request	6 6 1 03 41 00 1 6 8 0		
10	218,00	6 6 1 03 76 00 1 6 5 0	265,00	6 6 1 03 76 00 1 6 3 0	on request	6 6 1 03 76 00 1 6 8 0		
15	218,00	6 6 1 03 90 00 1 6 5 0	265,00	6 6 1 03 90 00 1 6 3 0	on request	6 6 1 03 90 00 1 6 8 0		
8	218,00	6 6 1 03 75 00 1 3 5 0	265,00	6 6 1 03 75 00 1 3 3 0	on request	6 6 1 03 75 00 1 3 8 0		
8	218,00	6 6 1 03 75 00 1 4 5 0	265,00	6 6 1 03 75 00 1 4 3 0	on request	6 6 1 03 75 00 1 4 8 0		
8	218,00	6 6 1 03 76 00 1 3 5 0	265,00	6 6 1 03 76 00 1 3 3 0	on request	6 6 1 03 76 00 1 3 8 0		
8	218,00	6 6 1 03 76 00 1 4 5 0	265,00	6 6 1 03 76 00 1 4 3 0	on request	6 6 1 03 76 00 1 4 8 0		
8	218,00	6 6 1 03 76 00 1 7 5 0	265,00	6 6 1 03 76 00 1 7 3 0	on request	6 6 1 03 76 00 1 7 8 0		

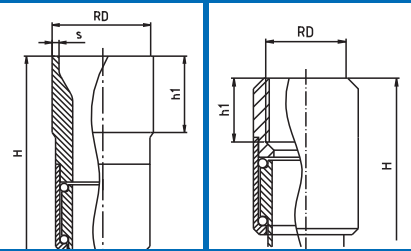
Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).



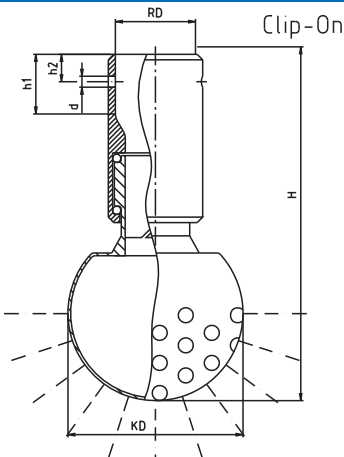
Spray head, 180° upwards, rotating cleaning ball



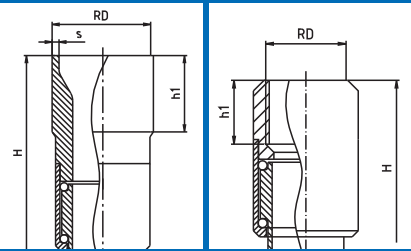
weld on thread



Spray head, 180° downwards, rotating cleaning ball



weld on thread

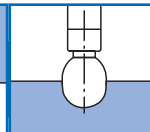
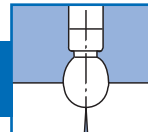


Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	10	13,2	30	17	8	2,2	78	1,0 - 1,5	2,3	3,2
Clip on	series B (ISO)	10	17,4	30	17	8	2,2	78	1,0 - 1,5	2,3	3,2
Clip on	series C (ASME)	8	12,9	30	17	8	2,2	78	1,0 - 1,5	2,3	3,2
weld on	series A (DIN)	15	19,0	30	26	---	---	90	1,0 - 1,5	2,3	3,2
weld on	series B (ISO)	10	17,2	30	26	---	---	90	1,0 - 1,5	2,3	3,2
weld on	series C (ASME)	15	19,05	30	26	---	---	90	1,0 - 1,5	2,3	3,2
thread	BSP	8	G 1/4"	30	12	---	---	70	1,0 - 1,5	2,3	3,2
thread	NPT	8	1/4"	30	12	---	---	70	1,0 - 1,5	2,3	3,2
thread	BSP	8	G 3/8"	30	12	---	---	70	1,0 - 1,5	2,3	3,2
thread	NPT	8	3/8"	30	12	---	---	70	1,0 - 1,5	2,3	3,2
thread	NPS	8	3/8"	30	12	---	---	70	1,0 - 1,5	2,3	3,2

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	10	13,2	30	17	8	2,2	78	1,0 - 1,5	2,3	3,1
Clip on	series B (ISO)	10	17,4	30	17	8	2,2	78	1,0 - 1,5	2,3	3,1
Clip on	series C (ASME)	8	12,9	30	17	8	2,2	78	1,0 - 1,5	2,3	3,1
weld on	series A (DIN)	15	19,0	30	26	---	---	90	1,0 - 1,5	2,3	3,1
weld on	series B (ISO)	10	17,2	30	26	---	---	90	1,0 - 1,5	2,3	3,1
weld on	series C (ASME)	15	19,05	30	26	---	---	90	1,0 - 1,5	2,3	3,1
thread	BSP	8	G 1/4"	30	12	---	---	70	1,0 - 1,5	2,3	3,1
thread	NPT	8	1/4"	30	12	---	---	70	1,0 - 1,5	2,3	3,1
thread	BSP	8	G 3/8"	30	12	---	---	70	1,0 - 1,5	2,3	3,1
thread	NPT	8	3/8"	30	12	---	---	70	1,0 - 1,5	2,3	3,1
thread	NPS	8	3/8"	30	12	---	---	70	1,0 - 1,5	2,3	3,1

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



Rotating spray head, perforation 180° upwards

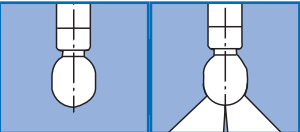
1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC 22)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
10	218,00	6 6 1 03 40 00 4 2 5 0	265,00	6 6 1 03 40 00 4 2 3 0	on request	6 6 1 03 40 00 4 2 8 0		
10	218,00	6 6 1 03 76 00 4 2 5 0	265,00	6 6 1 03 76 00 4 2 3 0	on request	6 6 1 03 76 00 4 2 8 0		
8	218,00	6 6 1 03 89 00 4 2 5 0	265,00	6 6 1 03 89 00 4 2 3 0	on request	6 6 1 03 89 00 4 2 8 0		
15	218,00	6 6 1 03 41 00 4 6 5 0	265,00	6 6 1 03 41 00 4 6 3 0	on request	6 6 1 03 41 00 4 6 8 0		
10	218,00	6 6 1 03 76 00 4 6 5 0	265,00	6 6 1 03 76 00 4 6 3 0	on request	6 6 1 03 76 00 4 6 8 0		
15	218,00	6 6 1 03 90 00 4 6 5 0	265,00	6 6 1 03 90 00 4 6 3 0	on request	6 6 1 03 90 00 4 6 8 0		
8	218,00	6 6 1 03 75 00 4 3 5 0	265,00	6 6 1 03 75 00 4 3 3 0	on request	6 6 1 03 75 00 4 3 8 0		
8	218,00	6 6 1 03 75 00 4 4 5 0	265,00	6 6 1 03 75 00 4 4 3 0	on request	6 6 1 03 75 00 4 4 8 0		
8	218,00	6 6 1 03 76 00 4 3 5 0	265,00	6 6 1 03 76 00 4 3 3 0	on request	6 6 1 03 76 00 4 3 8 0		
8	218,00	6 6 1 03 76 00 4 4 5 0	265,00	6 6 1 03 76 00 4 4 3 0	on request	6 6 1 03 76 00 4 4 8 0		
8	218,00	6 6 1 03 76 00 4 7 5 0	265,00	6 6 1 03 76 00 4 7 3 0	on request	6 6 1 03 76 00 4 7 8 0		

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

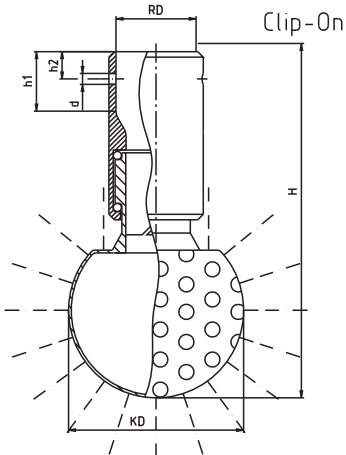
Rotating spray head, perforation 180° downwards

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC 22)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
10	218,00	6 6 1 03 40 00 5 2 5 0	265,00	6 6 1 03 40 00 5 2 3 0	on request	6 6 1 03 40 00 5 2 8 0		
10	218,00	6 6 1 03 76 00 5 2 5 0	265,00	6 6 1 03 76 00 5 2 3 0	on request	6 6 1 03 76 00 5 2 8 0		
8	218,00	6 6 1 03 89 00 5 2 5 0	265,00	6 6 1 03 89 00 5 2 3 0	on request	6 6 1 03 89 00 5 2 8 0		
15	218,00	6 6 1 03 41 00 5 6 5 0	265,00	6 6 1 03 41 00 5 6 3 0	on request	6 6 1 03 41 00 5 6 8 0		
10	218,00	6 6 1 03 76 00 5 6 5 0	265,00	6 6 1 03 76 00 5 6 3 0	on request	6 6 1 03 76 00 5 6 8 0		
15	218,00	6 6 1 03 90 00 5 6 5 0	265,00	6 6 1 03 90 00 5 6 3 0	on request	6 6 1 03 90 00 5 6 8 0		
8	218,00	6 6 1 03 75 00 5 3 5 0	265,00	6 6 1 03 75 00 5 3 3 0	on request	6 6 1 03 75 00 5 3 8 0		
8	218,00	6 6 1 03 75 00 5 4 5 0	265,00	6 6 1 03 75 00 5 4 3 0	on request	6 6 1 03 75 00 5 4 8 0		
8	218,00	6 6 1 03 76 00 5 3 5 0	265,00	6 6 1 03 76 00 5 3 3 0	on request	6 6 1 03 76 00 5 3 8 0		
8	218,00	6 6 1 03 76 00 5 4 5 0	265,00	6 6 1 03 76 00 5 4 3 0	on request	6 6 1 03 76 00 5 4 8 0		
8	218,00	6 6 1 03 76 00 5 7 5 0	265,00	6 6 1 03 76 00 5 7 3 0	on request	6 6 1 03 76 00 5 7 8 0		

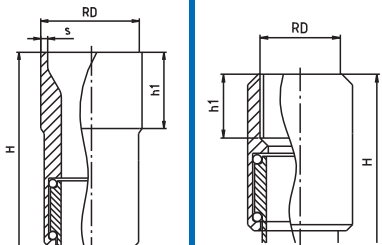
Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).



Spray head, 360° rotating
cleaning ball



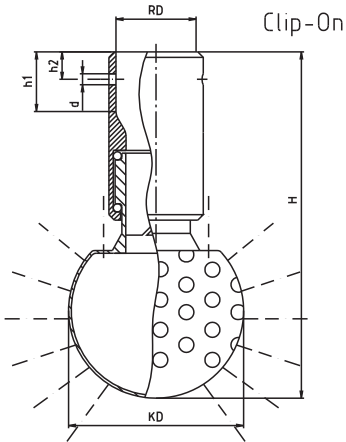
weld on thread



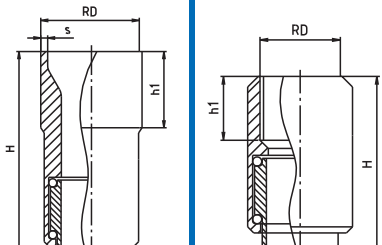
Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,8	8,2
Clip on	series B (ISO)	15	21,6	40	17	8	3,0	88	2,0 - 2,5	5,8	8,2
Clip on	series C (ASME)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,8	8,2
weld on	series A (DIN)	20	23,0	40	27	---	---	102	2,0 - 2,5	5,3	7,4
weld on	series B (ISO)	15	21,3	40	27	---	---	102	2,0 - 2,5	5,3	7,4
weld on	series C (ASME)	15	19,05	40	27	---	---	102	2,0 - 2,5	5,3	7,4
thread	BSP	10	G 3/8"	40	12	---	---	80	2,0 - 2,5	5,3	7,4
thread	NPT	10	3/8"	40	12	---	---	80	2,0 - 2,5	5,3	7,4
thread	BSP	10	G 1/2"	40	12	---	---	80	2,0 - 2,5	5,3	7,4
thread	NPT	10	1/2"	40	12	---	---	80	2,0 - 2,5	5,3	7,4
thread	NPS	10	1/2"	40	12	---	---	80	2,0 - 2,5	5,3	7,4

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

Spray head, 270° upwards, rotating
cleaning ball

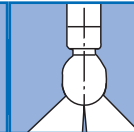


weld on thread



Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,6	8,0
Clip on	series B (ISO)	15	21,6	40	17	8	3,0	88	2,0 - 2,5	5,6	8,0
Clip on	series C (ASME)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,6	8,0
weld on	series A (DIN)	20	23,0	40	27	---	---	102	2,0 - 2,5	5,1	7,2
weld on	series B (ISO)	15	21,3	40	27	---	---	102	2,0 - 2,5	5,1	7,2
weld on	series C (ASME)	15	19,05	40	27	---	---	102	2,0 - 2,5	5,1	7,2
thread	BSP	10	G 3/8"	40	12	---	---	80	2,0 - 2,5	5,1	7,2
thread	NPT	10	3/8"	40	12	---	---	80	2,0 - 2,5	5,1	7,2
thread	BSP	10	G 1/2"	40	12	---	---	80	2,0 - 2,5	5,1	7,2
thread	NPT	10	1/2"	40	12	---	---	80	2,0 - 2,5	5,1	7,2
thread	NPS	10	1/2"	40	12	---	---	80	2,0 - 2,5	5,1	7,2

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



Rotating spray head, perforation 360°

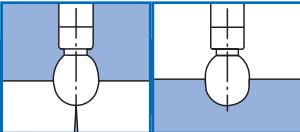
1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC 22)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
15	234,00	6 6 1 04 41 00 1 2 5 0	273,00	6 6 1 04 41 00 1 2 3 0	on request	6 6 1 04 41 00 1 2 8 0		
15	234,00	6 6 1 04 77 00 1 2 5 0	273,00	6 6 1 04 77 00 1 2 3 0	on request	6 6 1 04 77 00 1 2 8 0		
15	234,00	6 6 1 04 90 00 1 2 5 0	273,00	6 6 1 04 90 00 1 2 3 0	on request	6 6 1 04 90 00 1 2 8 0		
20	234,00	6 6 1 04 42 00 1 6 5 0	273,00	6 6 1 04 42 00 1 6 3 0	on request	6 6 1 04 42 00 1 6 8 0		
15	234,00	6 6 1 04 77 00 1 6 5 0	273,00	6 6 1 04 77 00 1 6 3 0	on request	6 6 1 04 77 00 1 6 8 0		
15	234,00	6 6 1 04 90 00 1 6 5 0	273,00	6 6 1 04 90 00 1 6 3 0	on request	6 6 1 04 90 00 1 6 8 0		
10	234,00	6 6 1 04 76 00 1 3 5 0	273,00	6 6 1 04 76 00 1 3 3 0	on request	6 6 1 04 76 00 1 3 8 0		
10	234,00	6 6 1 04 76 00 1 4 5 0	273,00	6 6 1 04 76 00 1 4 3 0	on request	6 6 1 04 76 00 1 4 8 0		
10	234,00	6 6 1 04 77 00 1 3 5 0	273,00	6 6 1 04 77 00 1 3 3 0	on request	6 6 1 04 77 00 1 3 8 0		
10	234,00	6 6 1 04 77 00 1 4 5 0	273,00	6 6 1 04 77 00 1 4 3 0	on request	6 6 1 04 77 00 1 4 8 0		
10	234,00	6 6 1 04 77 00 1 7 5 0	273,00	6 6 1 04 77 00 1 7 3 0	on request	6 6 1 04 77 00 1 7 8 0		

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

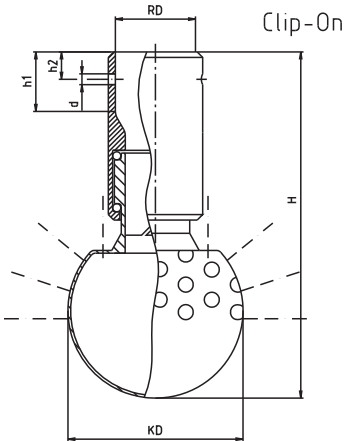
Rotating spray head, perforation 270° upwards

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC 22)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
15	234,00	6 6 1 04 41 00 2 2 5 0	273,00	6 6 1 04 41 00 2 2 3 0	on request	6 6 1 04 41 00 2 2 8 0		
15	234,00	6 6 1 04 77 00 2 2 5 0	273,00	6 6 1 04 77 00 2 2 3 0	on request	6 6 1 04 77 00 2 2 8 0		
15	234,00	6 6 1 04 90 00 2 2 5 0	273,00	6 6 1 04 90 00 2 2 3 0	on request	6 6 1 04 90 00 2 2 8 0		
20	234,00	6 6 1 04 42 00 2 6 5 0	273,00	6 6 1 04 42 00 2 6 3 0	on request	6 6 1 04 42 00 2 6 8 0		
15	234,00	6 6 1 04 77 00 2 6 5 0	273,00	6 6 1 04 77 00 2 6 3 0	on request	6 6 1 04 77 00 2 6 8 0		
15	234,00	6 6 1 04 90 00 2 6 5 0	273,00	6 6 1 04 90 00 2 6 3 0	on request	6 6 1 04 90 00 2 6 8 0		
10	234,00	6 6 1 04 76 00 2 3 5 0	273,00	6 6 1 04 76 00 2 3 3 0	on request	6 6 1 04 76 00 2 3 8 0		
10	234,00	6 6 1 04 76 00 2 4 5 0	273,00	6 6 1 04 76 00 2 4 3 0	on request	6 6 1 04 76 00 2 4 8 0		
10	234,00	6 6 1 04 77 00 2 3 5 0	273,00	6 6 1 04 77 00 2 3 3 0	on request	6 6 1 04 77 00 2 3 8 0		
10	234,00	6 6 1 04 77 00 2 4 5 0	273,00	6 6 1 04 77 00 2 4 3 0	on request	6 6 1 04 77 00 2 4 8 0		
10	234,00	6 6 1 04 77 00 2 7 5 0	273,00	6 6 1 04 77 00 2 7 3 0	on request	6 6 1 04 77 00 2 7 8 0		

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).



Spray head, 180° upwards, rotating cleaning ball

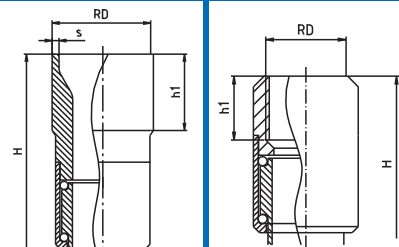


Conne- ction	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,5	7,9
Clip on	series B (ISO)	15	21,6	40	17	8	3,0	88	2,0 - 2,5	5,5	7,9
Clip on	series C (ASME)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,5	7,9
weld on	series A (DIN)	20	23,0	40	27	---	---	102	2,0 - 2,5	5,0	7,1
weld on	series B (ISO)	15	21,3	40	27	---	---	102	2,0 - 2,5	5,0	7,1
weld on	series C (ASME)	15	19,05	40	27	---	---	102	2,0 - 2,5	5,0	7,1
thread	BSP	10	G 3/8"	40	12	---	---	80	2,0 - 2,5	5,0	7,1
thread	NPT	10	3/8"	40	12	---	---	80	2,0 - 2,5	5,0	7,1
thread	BSP	10	G 1/2"	40	12	---	---	80	2,0 - 2,5	5,0	7,1
thread	NPT	10	1/2"	40	12	---	---	80	2,0 - 2,5	5,0	7,1
thread	NPS	10	1/2"	40	12	---	---	80	2,0 - 2,5	5,0	7,1

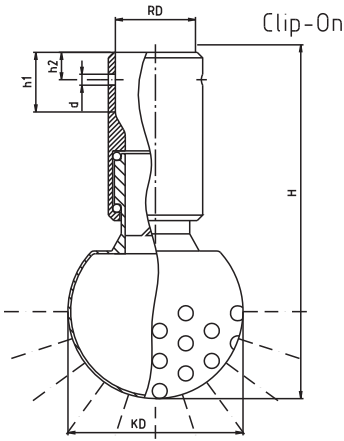
Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

weld on

thread



Spray head, 180° downwards, rotating cleaning ball

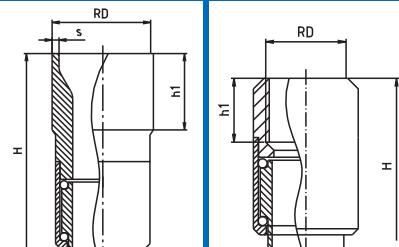


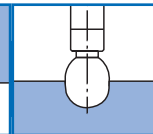
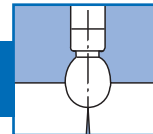
Conne- ction	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,4	7,8
Clip on	series B (ISO)	15	21,6	40	17	8	3,0	88	2,0 - 2,5	5,4	7,8
Clip on	series C (ASME)	15	19,3	40	17	8	3,0	88	2,0 - 2,5	5,4	7,8
weld on	series A (DIN)	20	23,0	40	27	---	---	102	2,0 - 2,5	4,9	7,0
weld on	series B (ISO)	15	21,3	40	27	---	---	102	2,0 - 2,5	4,9	7,0
weld on	series C (ASME)	15	19,05	40	27	---	---	102	2,0 - 2,5	4,9	7,0
thread	BSP	10	G 3/8"	40	12	---	---	80	2,0 - 2,5	4,9	7,0
thread	NPT	10	3/8"	40	12	---	---	80	2,0 - 2,5	4,9	7,0
thread	BSP	10	G 1/2"	40	12	---	---	80	2,0 - 2,5	4,9	7,0
thread	NPT	10	1/2"	40	12	---	---	80	2,0 - 2,5	4,9	7,0
thread	NPS	10	1/2"	40	12	---	---	80	2,0 - 2,5	4,9	7,0

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

weld on

thread





Rotating spray head, perforation 180° upwards

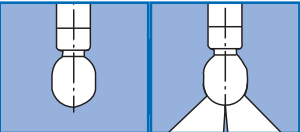
1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC 22)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
15	234,00	6 6 1 04 41 00 4 2 5 0	273,00	6 6 1 04 41 00 4 2 3 0	on request	6 6 1 04 41 00 4 2 8 0		
15	234,00	6 6 1 04 77 00 4 2 5 0	273,00	6 6 1 04 77 00 4 2 3 0	on request	6 6 1 04 77 00 4 2 8 0		
15	234,00	6 6 1 04 90 00 4 2 5 0	273,00	6 6 1 04 90 00 4 2 3 0	on request	6 6 1 04 90 00 4 2 8 0		
20	234,00	6 6 1 04 42 00 4 6 5 0	273,00	6 6 1 04 42 00 4 6 3 0	on request	6 6 1 04 42 00 4 6 8 0		
15	234,00	6 6 1 04 77 00 4 6 5 0	273,00	6 6 1 04 77 00 4 6 3 0	on request	6 6 1 04 77 00 4 6 8 0		
15	234,00	6 6 1 04 90 00 4 6 5 0	273,00	6 6 1 04 90 00 4 6 3 0	on request	6 6 1 04 90 00 4 6 8 0		
10	234,00	6 6 1 04 76 00 4 3 5 0	273,00	6 6 1 04 76 00 4 3 3 0	on request	6 6 1 04 76 00 4 3 8 0		
10	234,00	6 6 1 04 76 00 4 4 5 0	273,00	6 6 1 04 76 00 4 4 3 0	on request	6 6 1 04 76 00 4 4 8 0		
10	234,00	6 6 1 04 77 00 4 3 5 0	273,00	6 6 1 04 77 00 4 3 3 0	on request	6 6 1 04 77 00 4 3 8 0		
10	234,00	6 6 1 04 77 00 4 4 5 0	273,00	6 6 1 04 77 00 4 4 3 0	on request	6 6 1 04 77 00 4 4 8 0		
10	234,00	6 6 1 04 77 00 4 7 5 0	273,00	6 6 1 04 77 00 4 7 3 0	on request	6 6 1 04 77 00 4 7 8 0		

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

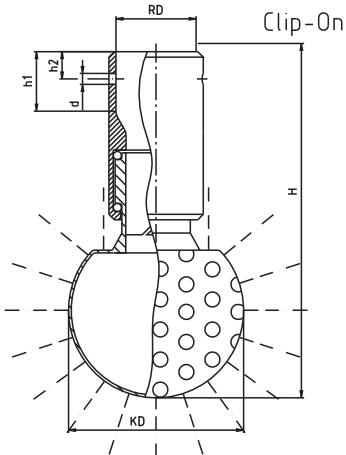
Rotating spray head, perforation 180° downwards

1.4571 (316Ti)			1.4435 (316L)		2.4602 (HC 22)			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
15	234,00	6 6 1 04 41 00 5 2 5 0	273,00	6 6 1 04 41 00 5 2 3 0	on request	6 6 1 04 41 00 5 2 8 0		
15	234,00	6 6 1 04 77 00 5 2 5 0	273,00	6 6 1 04 77 00 5 2 3 0	on request	6 6 1 04 77 00 5 2 8 0		
15	234,00	6 6 1 04 90 00 5 2 5 0	273,00	6 6 1 04 90 00 5 2 3 0	on request	6 6 1 04 90 00 5 2 8 0		
20	234,00	6 6 1 04 42 00 5 6 5 0	273,00	6 6 1 04 42 00 5 6 3 0	on request	6 6 1 04 42 00 5 6 8 0		
15	234,00	6 6 1 04 77 00 5 6 5 0	273,00	6 6 1 04 77 00 5 6 3 0	on request	6 6 1 04 77 00 5 6 8 0		
15	234,00	6 6 1 04 90 00 5 6 5 0	273,00	6 6 1 04 90 00 5 6 3 0	on request	6 6 1 04 90 00 5 6 8 0		
10	234,00	6 6 1 04 76 00 5 3 5 0	273,00	6 6 1 04 76 00 5 3 3 0	on request	6 6 1 04 76 00 5 3 8 0		
10	234,00	6 6 1 04 76 00 5 4 5 0	273,00	6 6 1 04 76 00 5 4 3 0	on request	6 6 1 04 76 00 5 4 8 0		
10	234,00	6 6 1 04 77 00 5 3 5 0	273,00	6 6 1 04 77 00 5 3 3 0	on request	6 6 1 04 77 00 5 3 8 0		
10	234,00	6 6 1 04 77 00 5 4 5 0	273,00	6 6 1 04 77 00 5 4 3 0	on request	6 6 1 04 77 00 5 4 8 0		
10	234,00	6 6 1 04 77 00 5 7 5 0	273,00	6 6 1 04 77 00 5 7 3 0	on request	6 6 1 04 77 00 5 7 8 0		

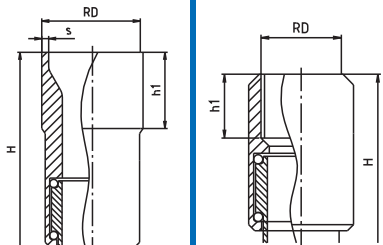
Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).



Spray head, 360° rotating
cleaning ball



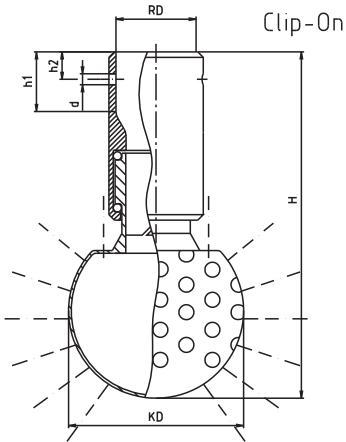
weld on thread



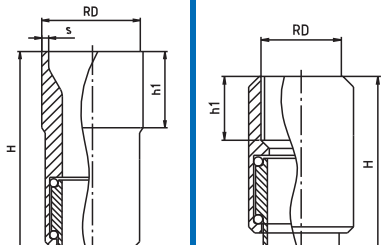
Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	25	29,3	64	21	10	4,0	130	2,0 - 3,0	11,9	15,3
Clip on	series B (ISO)	20	27,2	64	21	10	4,0	130	2,0 - 3,0	11,9	15,3
Clip on	series C (ASME)	20	25,7	64	21	10	4,0	130	2,0 - 3,0	11,9	15,3
weld on	series A (DIN)	32	35,0	64	27	---	---	140	2,0 - 3,0	10,9	15,1
weld on	series B (ISO)	25	33,7	64	27	---	---	140	2,0 - 3,0	10,9	15,1
weld on	series C (ASME)	20	25,4	64	27	---	---	140	2,0 - 3,0	10,9	15,1
thread	BSP	20	G 3/4"	64	21	---	---	120	2,0 - 3,0	10,9	15,1
thread	NPT	20	3/4"	64	21	---	---	120	2,0 - 3,0	10,9	15,1
thread	NPS	20	3/4"	64	21	---	---	120	2,0 - 3,0	10,9	15,1

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

Spray head, 270° upwards, rotating
cleaning ball

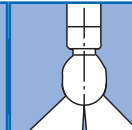


weld on thread



Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	25	29,3	64	21	10	4,0	130	2,0 - 3,0	10,9	14,3
Clip on	series B (ISO)	20	27,2	64	21	10	4,0	130	2,0 - 3,0	10,9	14,3
Clip on	series C (ASME)	20	25,7	64	21	10	4,0	130	2,0 - 3,0	10,9	14,3
weld on	series A (DIN)	32	35,0	64	27	---	---	140	2,0 - 3,0	10,0	14,1
weld on	series B (ISO)	25	33,7	64	27	---	---	140	2,0 - 3,0	10,0	14,1
weld on	series C (ASME)	20	25,4	64	27	---	---	140	2,0 - 3,0	10,0	14,1
thread	BSP	20	G 3/4"	64	21	---	---	120	2,0 - 3,0	10,0	14,1
thread	NPT	20	3/4"	64	21	---	---	120	2,0 - 3,0	10,0	14,1
thread	NPS	20	3/4"	64	21	---	---	120	2,0 - 3,0	10,0	14,1

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



Rotating spray head, perforation 360°

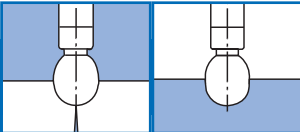
1.4571 (316Ti)			1.4435 (316L)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
25	256,00	6 6 1 05 43 00 1 2 5 0	305,00	6 6 1 05 43 00 1 2 3 0				
20	256,00	6 6 1 05 78 00 1 2 5 0	305,00	6 6 1 05 78 00 1 2 3 0				
20	256,00	6 6 1 05 91 00 1 2 5 0	305,00	6 6 1 05 91 00 1 2 3 0				
32	256,00	6 6 1 05 44 00 1 6 5 0	305,00	6 6 1 05 44 00 1 6 3 0				
25	256,00	6 6 1 05 79 00 1 6 5 0	305,00	6 6 1 05 79 00 1 6 3 0				
20	256,00	6 6 1 05 91 00 1 6 5 0	305,00	6 6 1 05 91 00 1 6 3 0				
20	256,00	6 6 1 05 78 00 1 3 5 0	305,00	6 6 1 05 78 00 1 3 3 0				
20	256,00	6 6 1 05 78 00 1 4 5 0	305,00	6 6 1 05 78 00 1 4 3 0				
20	256,00	6 6 1 05 78 00 1 7 5 0	305,00	6 6 1 05 78 00 1 7 3 0				

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

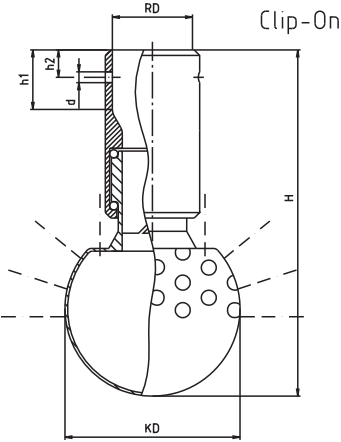
Rotating spray head, perforation 270° upwards

1.4571 (316Ti)			1.4435 (316L)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
25	255,00	6 6 1 05 43 00 2 2 5 0	305,00	6 6 1 05 43 00 2 2 3 0				
20	255,00	6 6 1 05 78 00 2 2 5 0	305,00	6 6 1 05 78 00 2 2 3 0				
20	255,00	6 6 1 05 91 00 2 2 5 0	305,00	6 6 1 05 91 00 2 2 3 0				
32	255,00	6 6 1 05 44 00 2 6 5 0	305,00	6 6 1 05 44 00 2 6 3 0				
25	255,00	6 6 1 05 79 00 2 6 5 0	305,00	6 6 1 05 79 00 2 6 3 0				
20	255,00	6 6 1 05 91 00 2 6 5 0	305,00	6 6 1 05 91 00 2 6 3 0				
20	255,00	6 6 1 05 78 00 2 3 5 0	305,00	6 6 1 05 78 00 2 3 3 0				
20	255,00	6 6 1 05 78 00 2 4 5 0	305,00	6 6 1 05 78 00 2 4 3 0				
20	255,00	6 6 1 05 78 00 2 7 5 0	305,00	6 6 1 05 78 00 2 7 3 0				

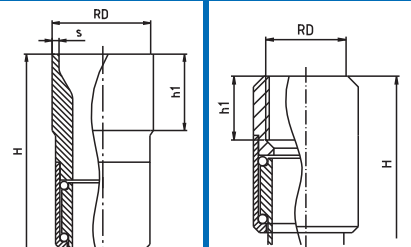
Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).



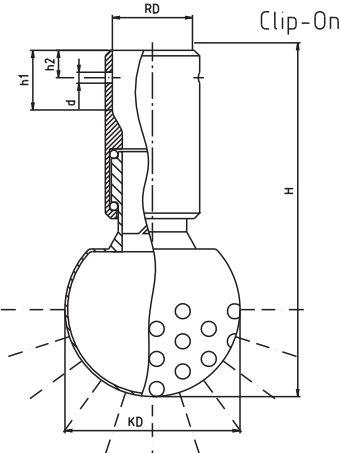
Spray head, 180° upwards, rotating cleaning ball



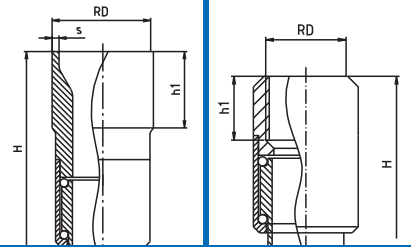
weld on thread



Spray head, 180° downwards, rotating cleaning ball



weld on thread

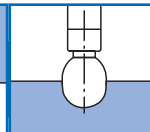
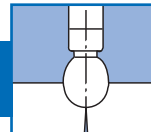


Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	25	29,3	64	21	10	4,0	130	2,0 - 3,0	10,2	14,3
Clip on	series B (ISO)	20	27,2	64	21	10	4,0	130	2,0 - 3,0	10,2	14,3
Clip on	series C (ASME)	20	25,7	64	21	10	4,0	130	2,0 - 3,0	10,2	14,3
weld on	series A (DIN)	32	35,0	64	27	---	---	140	2,0 - 3,0	9,3	13,1
weld on	series B (ISO)	25	33,7	64	27	---	---	140	2,0 - 3,0	9,3	13,1
weld on	series C (ASME)	20	25,4	64	27	---	---	140	2,0 - 3,0	9,3	13,1
thread	BSP	20	G 3/4"	64	21	---	---	120	2,0 - 3,0	9,3	13,1
thread	NPT	20	3/4"	64	21	---	---	120	2,0 - 3,0	9,3	13,1
thread	NPS	20	3/4"	64	21	---	---	120	2,0 - 3,0	9,3	13,1

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	25	29,3	64	21	10	4,0	130	2,0 - 3,0	9,4	13,1
Clip on	series B (ISO)	20	27,2	64	21	10	4,0	130	2,0 - 3,0	9,4	13,1
Clip on	series C (ASME)	20	25,7	64	21	10	4,0	130	2,0 - 3,0	9,4	13,1
weld on	series A (DIN)	32	35,0	64	27	---	---	140	2,0 - 3,0	8,6	12,2
weld on	series B (ISO)	25	33,7	64	27	---	---	140	2,0 - 3,0	8,6	12,2
weld on	series C (ASME)	20	25,4	64	27	---	---	140	2,0 - 3,0	8,6	12,2
thread	BSP	20	G 3/4"	64	21	---	---	120	2,0 - 3,0	8,6	12,2
thread	NPT	20	3/4"	64	21	---	---	120	2,0 - 3,0	8,6	12,2
thread	NPS	20	3/4"	64	21	---	---	120	2,0 - 3,0	8,6	12,2

Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)



Rotating spray head, perforation 180° upwards

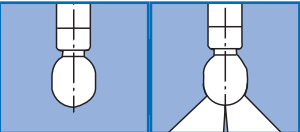
1.4571 (316Ti)			1.4435 (316L)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
25	255,00	6 6 1 05 43 00 4 2 5 0	305,00	6 6 1 05 43 00 4 2 3 0				
20	255,00	6 6 1 05 78 00 4 2 5 0	305,00	6 6 1 05 78 00 4 2 3 0				
20	255,00	6 6 1 05 91 00 4 2 5 0	305,00	6 6 1 05 91 00 4 2 3 0				
32	255,00	6 6 1 05 44 00 4 6 5 0	305,00	6 6 1 05 44 00 4 6 3 0				
25	255,00	6 6 1 05 79 00 4 6 5 0	305,00	6 6 1 05 79 00 4 6 3 0				
20	255,00	6 6 1 05 91 00 4 6 5 0	305,00	6 6 1 05 91 00 4 6 3 0				
20	255,00	6 6 1 05 78 00 4 3 5 0	305,00	6 6 1 05 78 00 4 3 3 0				
20	255,00	6 6 1 05 78 00 4 4 5 0	305,00	6 6 1 05 78 00 4 4 3 0				
20	255,00	6 6 1 05 78 00 4 7 5 0	305,00	6 6 1 05 78 00 4 7 3 0				

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

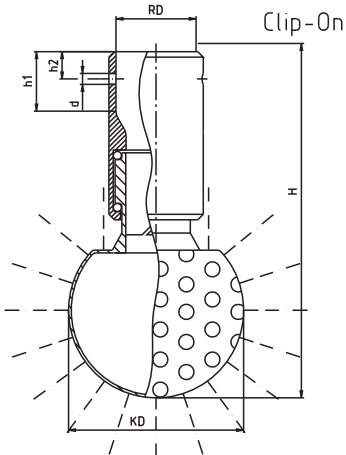
Rotating spray head, perforation 180° downwards

1.4571 (316Ti)			1.4435 (316L)					
DN	Price/EUR	Item no.	Price/EUR	Item no.				
25	255,00	6 6 1 05 43 00 5 2 5 0	305,00	6 6 1 05 43 00 5 2 3 0				
20	255,00	6 6 1 05 78 00 5 2 5 0	305,00	6 6 1 05 78 00 5 2 3 0				
20	255,00	6 6 1 05 91 00 5 2 5 0	305,00	6 6 1 05 91 00 5 2 3 0				
32	255,00	6 6 1 05 44 00 5 6 5 0	305,00	6 6 1 05 44 00 5 6 3 0				
25	255,00	6 6 1 05 79 00 5 6 5 0	305,00	6 6 1 05 79 00 5 6 3 0				
20	255,00	6 6 1 05 91 00 5 6 5 0	305,00	6 6 1 05 91 00 5 6 3 0				
20	255,00	6 6 1 05 78 00 5 3 5 0	305,00	6 6 1 05 78 00 5 3 3 0				
20	255,00	6 6 1 05 78 00 5 4 5 0	305,00	6 6 1 05 78 00 5 4 3 0				
20	255,00	6 6 1 05 78 00 5 7 5 0	305,00	6 6 1 05 78 00 5 7 3 0				

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

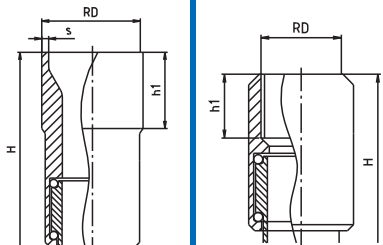


Spray head, 360° rotating
cleaning ball



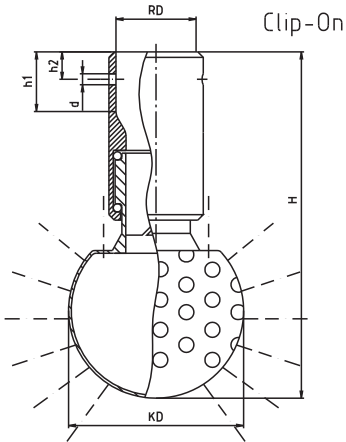
Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	40	41,3	90	28	13	5,5	183	4,0 - 5,0	20,8	28,9
Clip on	series B (ISO)	32	42,7	90	28	13	5,5	183	4,0 - 5,0	20,8	28,9
Clip on	series C (ASME)	32	38,4	90	28	13	5,5	183	4,0 - 5,0	20,8	28,9
Clip on	series 1 (DIN 11850)	32	34,3	90	28	13	5,5	183	4,0 - 4,5	20,8	28,9
Clip on	series 1 (DIN 11850)	40	40,3	90	28	13	5,5	183	4,0 - 4,5	20,8	28,9
weld on	series A (DIN)	40	41,0	90	32	---	---	185	4,0 - 5,0	19,3	26,7
weld on	series B (ISO)	32	42,4	90	32	---	---	185	4,0 - 5,0	19,3	26,7
weld on	series C (ASME)	32	38,1	90	32	---	---	185	4,0 - 5,0	19,3	26,7
thread	BSP	25	G 1"	90	25	---	---	160	4,0 - 5,0	19,3	26,7
thread	NPT	25	1"	90	25	---	---	160	4,0 - 5,0	19,3	26,7
thread	NPS	25	1"	90	25	---	---	160	4,0 - 5,0	19,3	26,7

weld on thread



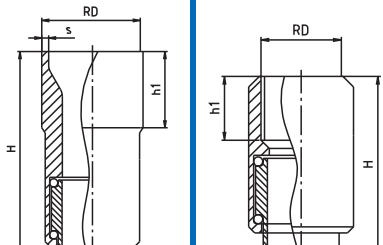
Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

Spray head, 270° upwards, rotating
cleaning ball



Conne- tion	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	40	41,3	90	28	13	5,5	183	4,0 - 4,5	20,4	28,7
Clip on	series B (ISO)	32	42,7	90	28	13	5,5	183	4,0 - 4,5	20,4	28,7
Clip on	series C (ASME)	32	38,4	90	28	13	5,5	183	4,0 - 4,5	20,4	28,7
Clip on	series 1 (DIN 11850)	32	34,3	90	28	13	5,5	183	4,0 - 4,5	20,4	28,7
Clip on	series 1 (DIN 11850)	40	40,3	90	28	13	5,5	183	4,0 - 4,5	20,4	28,7
weld on	series A (DIN)	40	41,0	90	32	---	---	185	4,0 - 4,5	18,9	26,5
weld on	series B (ISO)	32	42,4	90	32	---	---	185	4,0 - 4,5	18,9	26,5
weld on	series C (ASME)	32	38,1	90	32	---	---	185	4,0 - 4,5	18,9	26,5
thread	BSP	25	G 1"	90	25	---	---	160	4,0 - 4,5	18,9	26,5
thread	NPT	25	1"	90	25	---	---	160	4,0 - 4,5	18,9	26,5
thread	NPS	25	1"	90	25	---	---	160	4,0 - 4,5	18,9	26,5

weld on thread



Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

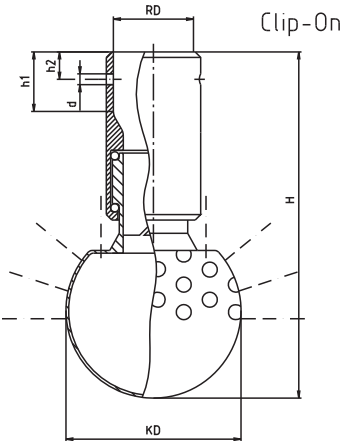
Rotating spray head, perforation 360°								
1.4571 (316Ti)								
DN	Price/EUR	Item no.						
40	385,00	6 6 1 06 45 00 1 2 5 0						
32	385,00	6 6 1 06 80 00 1 2 5 0						
32	385,00	6 6 1 06 92 00 1 2 5 0						
32	385,00	6 6 1 06 A5 00 1 2 5 0						
40	385,00	6 6 1 06 A6 00 1 2 5 0						
40	385,00	6 6 1 06 45 00 1 6 5 0						
32	385,00	6 6 1 06 80 00 1 6 5 0						
32	385,00	6 6 1 06 92 00 1 6 5 0						
25	385,00	6 6 1 06 79 00 1 3 5 0						
25	385,00	6 6 1 06 79 00 1 4 5 0						
25	385,00	6 6 1 06 79 00 1 7 5 0						

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

Rotating spray head, perforation 270° upwards								
1.4571 (316Ti)								
DN	Price/EUR	Item no.						
40	385,00	6 6 1 06 45 00 2 2 5 0						
32	385,00	6 6 1 06 80 00 2 2 5 0						
32	385,00	6 6 1 06 92 00 2 2 5 0						
32	385,00	6 6 1 06 A5 00 2 2 5 0						
40	385,00	6 6 1 06 A6 00 2 2 5 0						
40	385,00	6 6 1 06 45 00 2 6 5 0						
32	385,00	6 6 1 06 80 00 2 6 5 0						
32	385,00	6 6 1 06 92 00 2 6 5 0						
25	385,00	6 6 1 06 79 00 2 3 5 0						
25	385,00	6 6 1 06 79 00 2 4 5 0						
25	385,00	6 6 1 06 79 00 2 7 5 0						

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

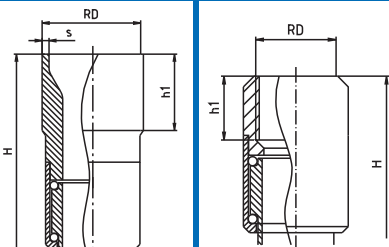
Spray head, 180° upwards, rotating cleaning ball



Conne- ction	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	40	41,3	90	28	13	5,5	183	4,0 - 4,5	17,4	25,9
Clip on	series B (ISO)	32	42,7	90	28	13	5,5	183	4,0 - 4,5	17,4	25,9
Clip on	series C (ASME)	32	38,4	90	28	13	5,5	183	4,0 - 4,5	17,4	25,9
weld on	series A (DIN)	40	41,0	90	32	---	---	185	4,0 - 4,5	16,9	23,7
weld on	series B (ISO)	32	42,4	90	32	---	---	185	4,0 - 4,5	16,9	23,7
weld on	series C (ASME)	32	38,1	90	32	---	---	185	4,0 - 4,5	16,9	23,7
thread	BSP	25	G 1"	90	25	---	---	160	4,0 - 4,5	16,9	23,7
thread	NPT	25	1"	90	25	---	---	160	4,0 - 4,5	16,9	23,7
thread	NPS	25	1"	90	25	---	---	160	4,0 - 4,5	16,9	23,7

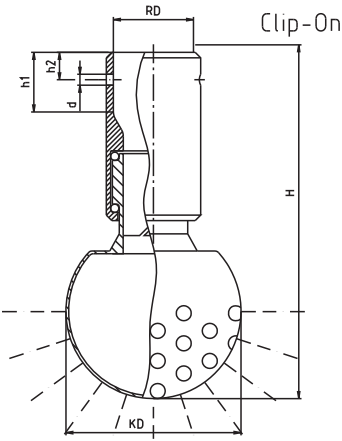
weld on

thread



Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

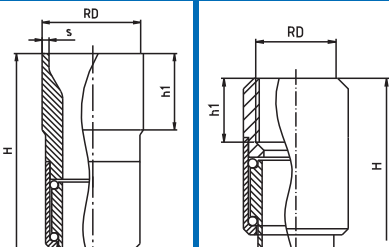
Spray head, 180° downwards, rotating cleaning ball



Conne- ction	Standard DIN 11866	DN mm	RD Ømm	KD Ømm	h1 mm	h2 mm	d Ømm	H mm	Spray diameter Øm	Throughput 1,5 bar	m3/h 3 bar
Clip on	series A (DIN)	40	41,3	90	28	13	5,5	183	4,0 - 4,5	17,8	25,2
Clip on	series B (ISO)	32	42,7	90	28	13	5,5	183	4,0 - 4,5	17,8	25,2
Clip on	series C (ASME)	32	38,4	90	28	13	5,5	183	4,0 - 4,5	17,8	25,2
weld on	series A (DIN)	40	41,0	90	32	---	---	185	4,0 - 4,5	16,3	23,0
weld on	series B (ISO)	32	42,4	90	32	---	---	185	4,0 - 4,5	16,3	23,0
weld on	series C (ASME)	32	38,1	90	32	---	---	185	4,0 - 4,5	16,3	23,0
thread	BSP	25	G 1"	90	25	---	---	160	4,0 - 4,5	16,3	23,0
thread	NPT	25	1"	90	25	---	---	160	4,0 - 4,5	16,3	23,0
thread	NPS	25	1"	90	25	---	---	160	4,0 - 4,5	16,3	23,0

weld on

thread



Combine the TANKO®-RB connection NPS-thread with the weld-on nipple NPSM.
(page 24-25)

Rotating spray head, perforation 180° upwards

1.4571 (316Ti)								
DN	Price/EUR	Item no.						
40	364,00	6 6 1 06 45 00 4 2 5 0						
32	364,00	6 6 1 06 80 00 4 2 5 0						
32	364,00	6 6 1 06 92 00 4 2 5 0						
40	364,00	6 6 1 06 45 00 4 6 5 0						
32	364,00	6 6 1 06 80 00 4 6 5 0						
32	364,00	6 6 1 06 92 00 4 6 5 0						
25	364,00	6 6 1 06 79 00 4 3 5 0						
25	364,00	6 6 1 06 79 00 4 4 5 0						
25	364,00	6 6 1 06 79 00 4 7 5 0						

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).

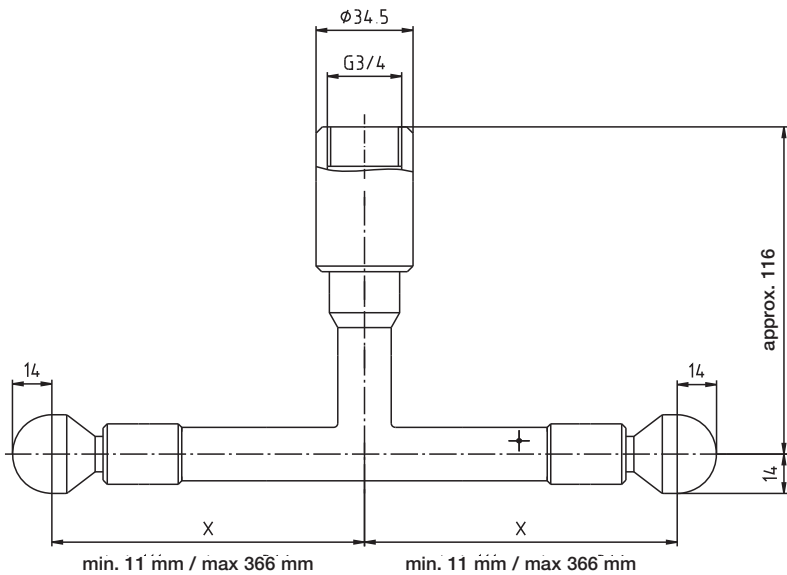
Rotating spray head, perforation 180° downwards

1.4571 (316Ti)								
DN	Price/EUR	Item no.						
40	364,00	6 6 1 06 45 00 5 2 5 0						
32	364,00	6 6 1 06 80 00 5 2 5 0						
32	364,00	6 6 1 06 92 00 5 2 5 0						
40	364,00	6 6 1 06 45 00 5 6 5 0						
32	364,00	6 6 1 06 80 00 5 6 5 0						
32	364,00	6 6 1 06 92 00 5 6 5 0						
25	364,00	6 6 1 06 79 00 5 3 5 0						
25	364,00	6 6 1 06 79 00 5 4 5 0						
25	364,00	6 6 1 06 79 00 5 7 5 0						

Material specifications for TANKO® RB such as 1.4571 (316Ti), 1.4435 (316L) or 1.4404 (316L), apply only to the base plate and the spray head. The bearing balls are made of 1.4401 (316), due to their longer service life. Alternatively HC bearing balls are available; for additional charges see page 12. For the TANKO® RB made of 2.4602 (HC 22) the base plate, spray head and ball bearings are made of 2.4602 (HC 22).



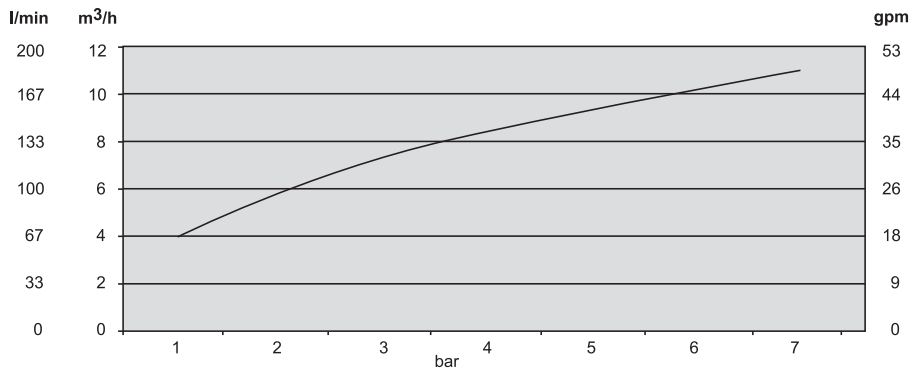
Dimensions



Material
1.4435 (316L)
Supply connection:
3/4" BSP
Connections TANKO® S 30:
3/8" BSP
Surface:
hand-polished
Combineable with
TANKO® S 30:
See pages 38-43

The TANKO® R64T rotates on a vertical axis
Nozzles located with difficult access are optimally cleaned in connection with two TANKO® S 30.

Flow rates TANKO®-R64T with 2 pcs. TANKO®-S30 360°



R64T			
	1.4435 (316L)	X	Standard
Price/EUR	Item no.		
710,00	66T051341313131	111 mm	A
710,00	66T051341313132	201 mm	B
710,00	66T051341313133	291 mm	C
710,00	66T051341313134	366 mm	D
710,00	66T051341313130	- mm	length depending on customers request

Static Spray Heads

Spray head Typ B 3-3



The static spray balls have proven their efficiency for barrel and vessel cleaning.

Typical fields of utilization are simple cleaning tasks at low pressure, ranging between 0.5 and 3.0 bar.

It should be considered that the choice of static spray balls is often favored, due to the lower purchasing costs.

Here, the exact analysis of the various reasons for this decision is very helpful:

- Barrel / vessel dimensions
- Utilization of the barrel or vessel
- Purchasing costs
- Operating costs (cleansing agent consumption)
- Operating costs (pump and line rating)
- Cleansing agent discharge from the vessel to be cleaned
- Cleaning time

We will gladly assist you in selecting the appropriate solution

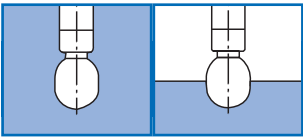
Additionally, some information on selection and application of static spray heads:

For considerable contamination, provided that rotating spray heads or jet cleaners are not yet necessary, the employment of a spray ball with an all-round spray angle of 360° is recommended.

For a lower degree of contamination, we recommend a 180° spray head that applies the cleansing agent to the upper area of the barrel or vessel. The cleansing agent flowing down rinses the lower area. For this, the installation position is decisive for selecting a spray head with 180° upwards or downwards. Any built-in equipment and the resulting "cleaning shadows" have to be taken into account. The cleaning shadows could require installation of another spray head.

Concerning the depth for installation of the spray head the following empirical values are available:

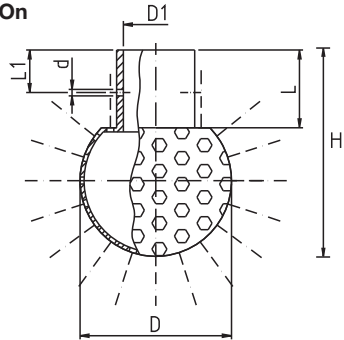
Type	Pressure at the head in bar	Installation depth in	Type	weight (g)
M	0,5 - 1,5	200	M	10
X	0,5 - 1,5	300	X	15
Y	0,5 - 1,5	300 - 400	Y	23
A	1,5 - 2,0	500	A	50
B	1,0 - 2,5	500 - 700	B	139
F	1,0 - 2,5	500 - 700	F	143
C	1,0 - 2,5	500 - 700	C	161
D	1,5 - 3,0	600 - 800	D	353



Spray heads

Spray head, 360°
cleaning ball

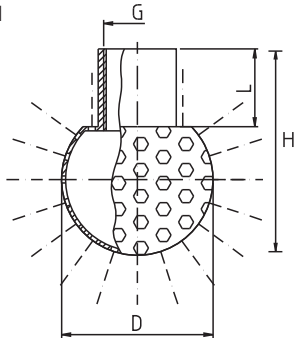
clip On



DN	D1 mm	Ball Ømm	d (Clip) Ømm	H mm	L mm	L1 mm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
8	8,2	20	2,0	32,5	15,0	9	0,6		max. 0,5
10	12,2	24	2,2	37,5	17,0	9	2,1		0,5-1,0
15	18,2	30	2,2	42,0	18,0	9	4,2		1,0-1,5
20	22,2	40	2,5	53,0	21,0	9	7,7	12,2	2,0-2,5
25	28,2	64	2,8	90,0	35,0	18	11,0	17,3	2,0-3,0
25/1	28,2	64	2,8	90,0	35,0	18	17,5	28,1	3,0-4,0
32	34,2	64	2,8	90,0	35,0	18	16,5	19,5	2,5-3,5
32/1	34,2	64	2,8	90,0	35,0	18	21,7	32,2	3,0-4,0
40	40,3	64	2,8	90,0	35,0	18	11,8	19,2	2,5-3,5
40/1	40,3	64	2,8	90,0	35,0	18	22,8	36,8	3,0-4,0
50	52,3	90	3,3	121,5	47,5	25	28,6	41,7	4,0-5,0
50/1	52,3	90	3,3	121,5	47,5	25	49,1	67,0	6,0

Spray head, 360°
cleaning ball

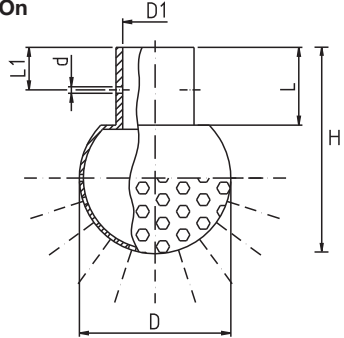
thread



DN	G thread	Ball Ømm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
8	G 1/8" A	20	0,6		max. 0,5
10	G 1/8" I	24	2,1		0,5-1,0
15	G 1/4" I	30	4,2		1,0-1,5
15	G 3/8" I	30	4,2		1,0-1,5
20	G 1/2" I	40	7,7	12,2	2,0-2,5
25	G 1" I	64	11,0	17,3	2,0-3,0
25/1	G 1" I	64	17,5	28,1	3,0-4,0
32	G 1" I	64	16,5	19,5	2,5-3,5
50	G 2" I	90	28,6	41,7	4,0-5,0
50/1	G 2" I	90	49,1	67,0	6,0

Spray head, 180° downwards
cleaning ball

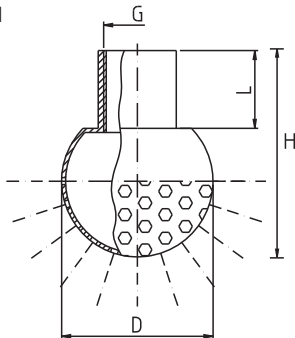
clip On



DN	D1 mm	Ball Ømm	d (Clip) Ømm	H mm	L mm	L1 mm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
10	12,2	24	2,2	37,5	17,0	9	1,1		0,5-1,0
15	18,2	30	2,2	42,0	18,0	9	2,5		1,0-1,5
20	22,2	40	2,5	53,0	21,0	9	6,3	9,8	2,0-2,5
25	28,2	64	2,8	90,0	35,0	18	7,0	10,9	2,0-3,0
25/1	28,2	64	2,8	90,0	35,0	18	12,4	20,0	3,0-4,0
32	34,2	64	2,8	90,0	35,0	18	7,8	12,5	2,5-3,5
32/1	34,2	64	2,8	90,0	35,0	18	13,7	22,0	3,0-4,0
40	40,3	64	2,8	90,0	35,0	18	10,9	16,6	2,5-3,5
40/1	40,3	64	2,8	90,0	35,0	18	14,0	22,2	3,0-4,0
50	52,3	90	3,3	121,5	47,5	25	17,0	28,0	4,0-4,5
50/1	52,3	90	3,3	121,5	47,5	25	30,7	49,7	6,0

Spray head, 180° downwards
cleaning ball

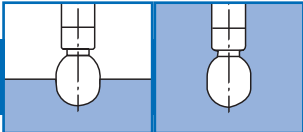
thread



DN	G thread	Ball Ømm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
10	G 1/8" I	24	1,1		0,5-1,0
15	G 1/4" I	30	2,5		1,0-1,5
15	G 3/8" I	30	2,5		1,0-1,5
20	G 1/2" I	40	6,3	9,8	2,0-2,5
25	G 1" I	64	7,0	10,9	2,0-3,0
25/1	G 1" I	64	12,4	20,0	3,0-4,0
32	G 1" I	64	7,8	12,5	2,5-3,5
50	G 2" I	90	17,0	28,0	4,0-4,5
50/1	G 2" I	90	30,7	49,7	6,0

For thread connections approx. 10% less cleansing agent consumption.

Spray heads



Spray head, perforation 360°

1.4571 (316Ti) clip-On			1.4435 (316L) clip-On		2.4602 (HC 22) clip-On			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
8	69,64	69M1-1-3825	83,57	69M1-1-3823				
10	69,64	69X1-1-0125	83,57	69X1-1-0123	289,53	69X1-1-0128		
15	74,24	69Y1-1-0325	89,14	69Y1-1-0323	296,49	69Y1-1-0328		
20	75,14	69A2-1-0425	90,12	69A2-1-0423	341,06	69A2-1-0428		
25	79,46	69B3-1-0525	95,34	69B3-1-0523	411,45	69B3-1-0528		
25/1	102,17	69B5-1-0525	122,50	69B5-1-0523				
32	103,70	69F4-1-0625	124,45	69F4-1-0623	459,46	69F4-1-0628		
32/1	127,73	69F5-1-0625	153,21	69F5-1-0623				
40	108,64	69C4-1-0725	130,37	69C4-1-0723	495,76	69C4-1-0728		
40/1	133,44	69C5-1-0725	160,04	69C5-1-0723				
50	165,05	69D4-1-0825						
50/1	209,69	69D5-1-0825						

Spray head, perforation 360°

1.4571 (316Ti) thread			1.4435 (316L) thread		2.4602 (HC 22) thread			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
8	69,64	69M1-1-7485	83,57	69M1-1-7483				
10	69,64	69X1-1-7435	83,57	69X1-1-7433	289,53	69X1-1-7438		
15	74,24	69Y1-1-7535	89,14	69Y1-1-7533	296,49	69Y1-1-7538		
15	74,24	69Y1-1-7635	89,14	69Y1-1-7633	296,49	69Y1-1-7638		
20	75,14	69A2-1-7735	90,12	69A2-1-7733	341,06	69A2-1-7738		
25	79,46	69B3-1-7935	95,34	69B3-1-7933	411,45	69B3-1-7938		
25/1	102,17	69B5-1-7935	122,50	69B5-1-7933				
32	103,70	69F4-1-7935	124,45	69F4-1-7933	459,46	69F4-1-7938		
50	165,05	69D4-1-8235						
50/1	209,69	69D5-1-8235						

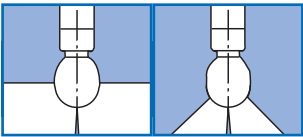
Spray head, perforation 180° downwards

1.4571 (316Ti) clip-On			1.4435 (316L) clip-On		2.4602 (HC 22) clip-On			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
10	69,64	69X1-3-0125	83,57	69X1-3-0123	289,53	69X1-3-0128		
15	74,24	69Y1-3-0325	89,14	69Y1-3-0323	296,49	69Y1-30328		
20	73,47	69A2-3-0425	88,10	69A2-3-0423	341,06	69A2-3-0428		
25	75,98	69B3-3-0525	91,23	69B3-3-0523	411,45	69B3-3-0528		
25/1	96,80	69B5-3-0525	116,09	69B5-3-0523				
32	97,78	69F4-3-0625	117,35	69F4-3-0623	459,46	69F4-3-0628		
32/1	121,94	69F5-3-0625	146,32	69F5-3-0623				
40	102,17	69C4-3-0725	122,50	69C4-3-0723	495,76	69C4-3-0728		
40/1	126,75	69C5-3-0725	160,04	69C5-3-0723				
50	154,54	69D4-3-0825						
50/1	198,34	69D5-3-0825						

Spray head, perforation 180° downwards

1.4571 (316Ti) thread			1.4435 (316L) thread		2.4602 (HC 22) thread			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
10	69,64	69X1-3-7435	83,57	69X1-3-7433	289,53	69X1-3-7438		
15	74,24	69Y1-3-7535	89,14	69Y1-3-7533	296,49	69Y1-3-7538		
15	74,24	69Y1-3-7635	89,14	69Y1-3-7633	296,49	69Y1-3-7638		
20	73,47	69A2-3-7735	88,10	69A2-3-7733	341,06	69A2-3-7738		
25	75,98	69B3-3-7935	91,23	69B3-3-7933	411,45	69B3-3-7938		
25/1	96,80	69B5-3-7935	116,09	69B5-3-7933				
32	97,78	69F4-3-7935	117,35	69F4-3-7933	459,46	69F4-3-7938		
50	154,54	69D4-3-8235						
50/1	198,34	69D5-3-8235						

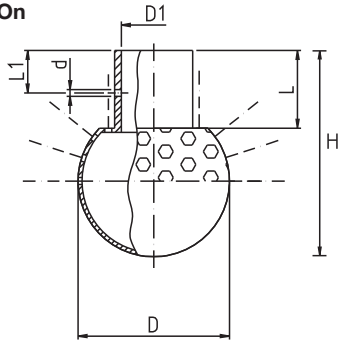
For thread connections approx. 10% less cleansing agent consumption.



Spray heads

Spray head, 180° upwards
cleaning ball

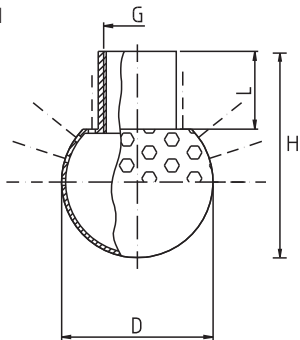
clip On



DN	D1 mm	Ball Ømm	d (Clip) Ømm	H mm	L mm	L1 mm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
10	12,2	24	2,2	37,5	17,0	9	1,5		0,5-1,0
15	18,2	30	2,2	42,0	18,0	9	2,1		1,0-1,5
20	22,2	40	2,5	53,0	21,0	9	5,6	8,8	2,0-2,5
25	28,2	64	2,8	90,0	35,0	18	8,7	12,8	2,5-3,0
25/1	28,2	64	2,8	90,0	35,0	18	14,2	23,0	3,0-4,0
32	34,2	64	2,8	90,0	35,0	18	9,8	15,6	2,5-3,5
32/1	34,2	64	2,8	90,0	35,0	18	16,0	26,7	3,0-4,0
40	40,3	64	2,8	90,0	35,0	18	9,6	14,8	2,5-3,5
40/1	40,3	64	2,8	90,0	35,0	18	14,9	24,8	3,0-4,0
50	52,3	90	3,3	121,5	47,5	25	19,5	30,6	4,0-4,5
50/1	52,3	90	3,3	121,5	47,5	25	31,0	51,0	6
50/3	52,3	90	3,3	121,5	47,5	25	36,1	60,0	10

Spray head, 180° upwards
cleaning ball

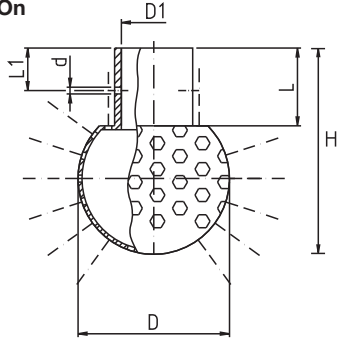
thread



DN	G thread	Ball Ømm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
10	G 1/8" I	24	1,5		0,5-1,0
15	G 1/4" I	30	2,1		1,0-1,5
15	G 3/8" I	30	2,1		1,0-1,5
20	G 1/2" I	40	5,6	8,8	2,0-2,5
25	G 1" I	64	8,7	12,8	2,5-3,0
25/1	G 1" I	64	14,2	23,0	3,0-4,0
32	G 1" I	64	9,8	15,6	2,5-3,5
50	G 2" I	90	19,5	30,6	4,0-4,5
50/1	G 2" I	90	31,0	51,0	6
50/3	G 2" I	90	36,1	60,0	10

Spray head, 270° upwards
cleaning ball

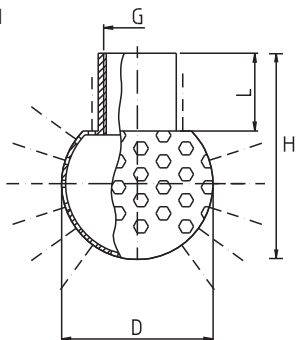
clip On



DN	D1 mm	Ball Ømm	d (Clip) Ømm	H mm	L mm	L1 mm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
20	22,2	40	2,5	53,0	21,0	9	7,5	11,8	2,0-2,5
25	28,2	64	2,8	90,0	35,0	18	10,0	15,8	2,0-3,0
25/1	28,2	64	2,8	90,0	35,0	18	16,0	26,2	3,0-4,0
32	34,2	64	2,8	90,0	35,0	18	11,4	18,6	2,5-3,5
32/1	34,2	64	2,8	90,0	35,0	18	20,0	32,6	3,0-4,0
40	40,3	64	2,8	90,0	35,0	18	10,4	16,2	2,5-3,5
40/1	40,3	64	2,8	90,0	35,0	18	18,0	30,0	3,0-4,0
50	52,3	90	3,3	121,5	47,5	25	27,7	45,0	4,0-4,5
50/1	52,3	90	3,3	121,5	47,5	25	45,0	74,3	6,0

Spray head, 270° upwards
cleaning ball

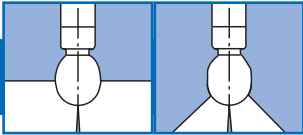
thread



DN	G thread	Ball Ømm	Throughput m³/h 1bar	Throughput m³/h 2,5 bar	Spray dia- meter Øm
20	G 1/2" I	40	7,5	11,8	2,0-2,5
25	G 1" I	64	10,0	15,8	2,0-3,0
25/1	G 1" I	64	16,0	26,2	3,0-4,0
32	G 1" I	64	11,4	18,6	2,5-3,5
50	G 2" I	90	27,7	45,0	4,0-4,5
50/1	G 2" I	90	45,0	74,3	6,0

For thread connections approx. 10% less cleansing agent consumption.

Spray heads



Spray head, perforation 180° upwards

1.4571 (316Ti) clip-On			1.4435 (316L) clip-On		2.4602 (HC 22) clip-On			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
10	69,64	69X1-2-0125	83,57	69X1-2-0123	289,53	69X1-2-0128		
15	74,52	69Y1-2-0325	89,14	69Y1-2-0323	296,49	69Y1-2-0328		
20	73,47	69A2-2-0425	88,10	69A2-2-0423	341,06	69A2-2-0428		
25	75,98	69B3-2-0525	91,23	69B3-2-0523	411,45	69B3-2-0528		
25/1	97,29	69B5-2-0525	116,72	69B5-2-0523				
32	97,78	69F4-2-0625	117,35	69F4-2-0623	459,46	69F4-2-0628		
32/1	121,94	69F5-2-0625	146,32	69F5-2-0623				
40	102,03	69C4-2-0725	122,50	69C4-2-0723	495,76	69C4-2-0728		
40/1	126,75	69C5-2-0725	152,10	69C5-2-0723				
50	154,54	69D4-2-0825						
50/1	198,34	69D5-2-0825						
50/3	259,42	69D6-2-0825						

Spray head, perforation 180° upwards

1.4571 (316Ti) thread			1.4435 (316L) thread		2.4602 (HC 22) thread			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
10	69,64	69X1-2-7435	83,57	69X1-2-7433	289,53	69X1-2-7438		
15	74,52	69Y1-2-7535	89,14	69Y1-2-7533	296,49	69Y1-2-7538		
15	74,52	69Y1-2-7635	89,14	69Y1-2-7633	296,49	69Y1-2-7638		
20	73,47	69A2-2-7735	88,10	69A2-2-7733	341,06	69A2-2-7738		
25	75,98	69B3-2-7935	91,23	69B3-2-7933	411,45	69B3-2-7938		
25/1	97,29	69B5-2-7935	116,72	69B5-2-7933				
32	97,78	69F4-2-7935	117,35	69F4-2-7933	459,46	69F4-2-7938		
50	154,54	69D4-2-8235						
50/1	198,34	69D5-2-8235						
50/3	259,42	69D6-2-8235						

Spray head, perforation 270° upwards

1.4571 (316Ti) clip-On			1.4435 (316L) clip-On		2.4602 (HC 22) clip-On			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	75,14	69A2-4-0425	90,12	69A2-4-0423	341,06	69A2-4-0428		
25	75,98	69B3-4-0525	91,23	69B3-4-0523	411,45	69B3-4-0528		
25/1	97,29	69B5-4-0525	116,72	69B5-4-0523				
32	103,70	69F4-4-0625	124,45	69F4-4-0623	459,46	69F4-4-0628		
32/1	127,73	69F5-4-0625	153,21	69F5-4-0623				
40	108,64	69C4-4-0725	130,37	69C4-4-0723	495,76	69C4-4-0728		
40/1	133,44	69C5-4-0725	160,04	69C5-4-0723				
50	165,05	69D4-4-0825						
50/1	169,23	69D5-4-0825						

Spray head, perforation 270° upwards

1.4571 (316Ti) thread			1.4435 (316L) thread		2.4602 (HC 22) thread			
DN	Price/EUR	Item no.	Price/EUR	Item no.	Price/EUR	Item no.		
20	75,14	69A2-4-7735	90,12	69A2-4-7733	341,06	69A2-4-7738		
25	75,98	69B3-4-7935	91,23	69B3-4-7933	411,45	69B3-4-7938		
25/1	97,29	69B5-4-7935	116,72	69B5-4-7933				
32	103,70	69F4-4-7935	124,45	69F4-4-7933	459,46	69F4-4-7938		
50	165,05	69D4-4-8235						
50/1	169,23	69D5-4-8235						

For thread connections approx. 10% less cleansing agent consumption.

Jet Cleaners

Cleaning devices for particular requirements

Examples of application

- effective cleaning of tanks even with complex geometries (installations, nozzles, etc.) in the
 - pharmaceutical industry
 - food industry (breweries, dairy)
 - chemical industry (coloring, varnish, polymer processing)
- high cleaning power with adhesive products
- suitable for all vessel sizes (up to 16m diameter)

motor-powered

TANKO®-JX-70-2

TANKO®-JX-75-2

TANKO®-JX-80-2

(all models also available as ATEX Version)



- efficient
 - economical
 - high cleaning power
 - low cleansing agent consumption due to external drive
 - best optimization of your cleaning process due to
 - adjustment of rotation/cycle time
 - variation of pressure area
- JX-70 from 2 to 60 bar
JX-75 / JX-80 from 2 to 35 bar (to 60 bar upon request)

Materials:

- media affected 1.4571 (316Ti)
- others 1.4404 (316L)
- elastomeres

Modular system for versatile customer requirements:

- 1, 2, 3 or 4 nozzles
- down pipe length
- various drives (electric, pneumatic)
- process flange at customer's option
- special constructions

medium-driven

Orbi G4

Jumbo 6-500

TANKMAN



S. 100

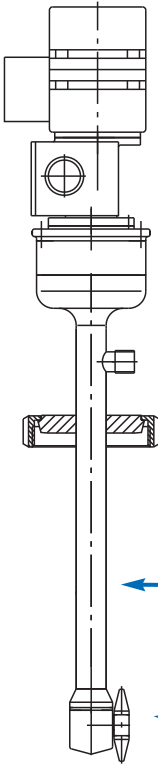
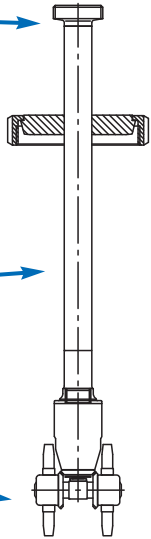


S. 102



S. 106

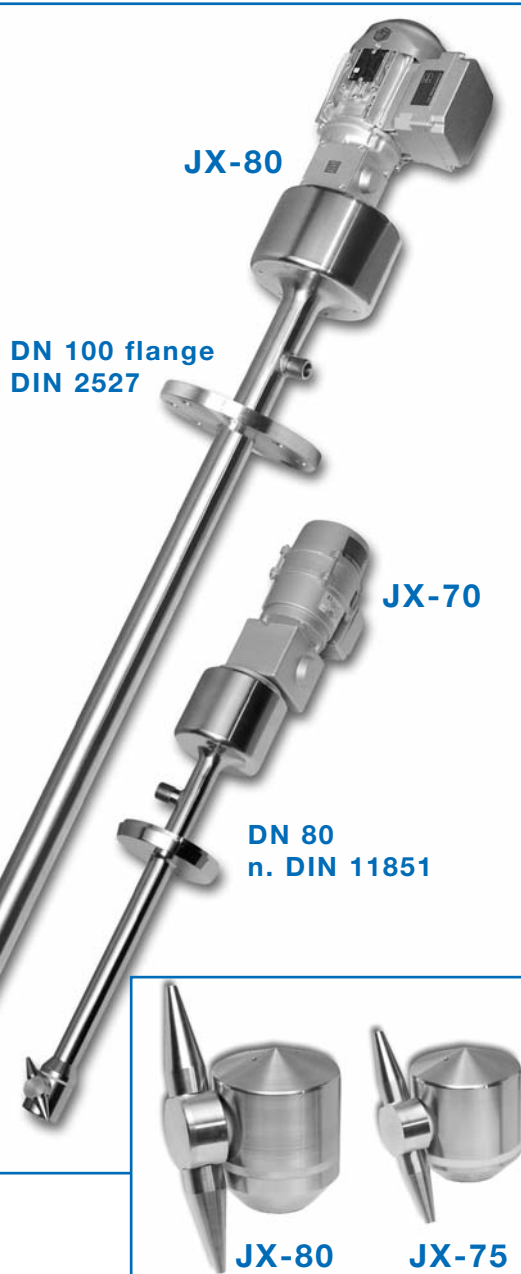
Comparison Jet Cleaner

Motor-powered	construction (examples of execution)	medium-driven
	drive (electr./pneumatic) (TANKO®-JX) magnetic coupling (TANKO®-JX) connection for cleansing agent process connection DN 125 down pipe, length approx. 1m cleaning nozzle / Jet	

ill. similar

TANKO®-JX 80		JUMBO 6-500
Motor-powered		medium-driven
incl.	Process flange DN 125	excl.
incl.	down pipe (1m)	excl.
incl.	welding	excl.
3.660,00 EUR	Jet Cleaner (Jet) list price	2.550,00 EUR
0,00 EUR	surcharge down pipe process flange and welding	589,00 EUR
3.660,00 EUR	package price for entire unit (same construction)	3.139,00 EUR
	Materials 1.4404 (316L) or 1.4571 (316Ti) for TANKO®-JX)	

technical data		
Motor-powered		medium-driven
0,5 - 10m³/h	consumption cleansing agent	11,5 - 25m³/h
2 - 35 bar (2 - 60 bar upon request)	working pressure	3 - 10 bar
1, 2, 3 or 4-nozzle	system	4-nozzle
approx. 8 - 10m	for maximum vessel diameter up to	approx. 9m



The combination of the technically feasible options and their interaction in connection with state-of-the-art manufacturing technology describe the AWH- TANKO® JX.

Basic properties such as:

- External drive with magnetic coupling
- Dismountable device for maintenance
- Variable number of nozzles and their layout
- Adjusted installation depth into the vessel demonstrate the options of solutions for the most various customer requirements.

This product group unites high cleaning power with a particularly economical handling of cleansing agent. Owing to the external electric motor, the rotation does not require cleansing agent. Hence the rotation and its speed can easily be adapted to the cleaning process. The geometry of the nozzles defines the throughput of cleansing agent, the range of the system and thus the possible cleaning power.

With these systems highest cleaning power on the surface to be cleaned can be achieved.

Some important features at a glance:

- Optimized flow rate
- Magnetic coupling as a standard
- Jet head construction with an internal security system, no terminal screw required anymore
- Protection of the drive connection for preventing disturbances (important among others for the ATEX qualification approval)
- ATEX qualification approval acc. to the status in 05-2006



Example of installation:
test tank with Monitoring System
CIPMon-SC-II

TANKO®-JX 70, 75, 80 spare parts (head)			TANKO®-JX 70, 75, 80 - ATEX spare parts (head)		
Item no.		Price/EUR	Item no.		Price/EUR
66C0F0E029051	spare parts set (head) JX70	85,00	66C0X0E029051	spare parts set (head) JX70-ATEX	85,00
66D0F0E029051	spare parts set (head) JX75	85,00	66D0X0E029051	spare parts set (head) JX75-ATEX	85,00
66A0F0E029051	spare parts set (head) JX80	85,00	66A0X0E029051	spare parts set (head) JX80-ATEX	85,00

The series production provides short lead times (typically 2 – 4 weeks) at a favorable price:

TANKO®-JX-70 with

- Down pipe length at process connection flange: 300 mm
- 2 nozzles with each 3mm diameter
- Materials: 1.4571, PTFE, EPDM
- IP 54 – 230V-400V electric motor with 14 RPM.
- Process connection: DN 80 acc. to DIN 11851
- Cleansing agent connection: 1/2" thread

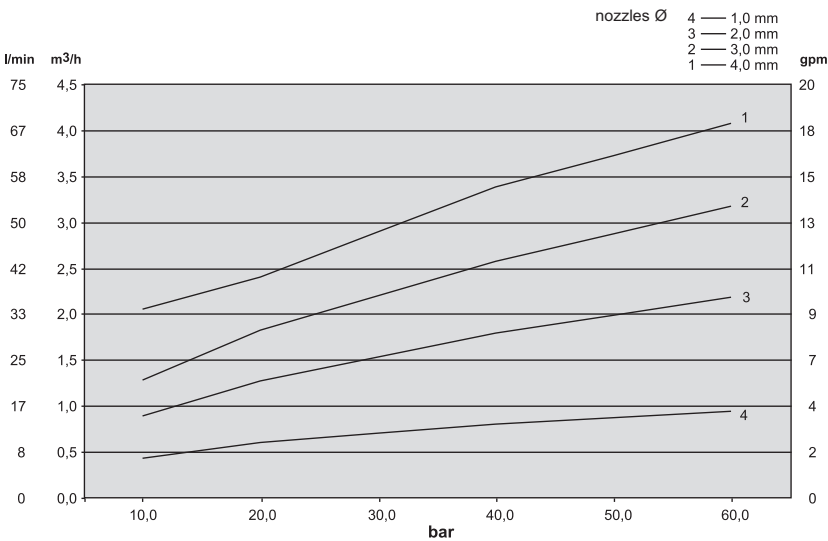
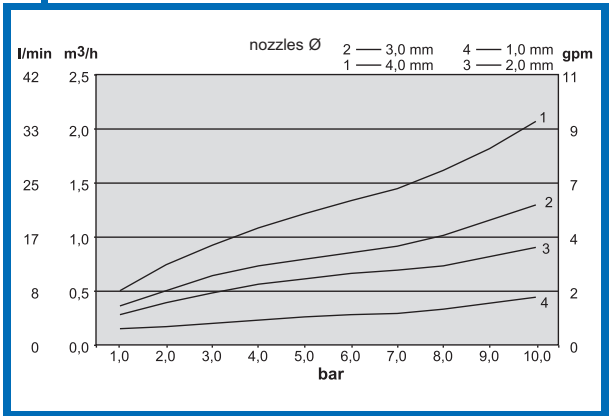
3.660,00 € / piece

TANKO®-JX-80 with

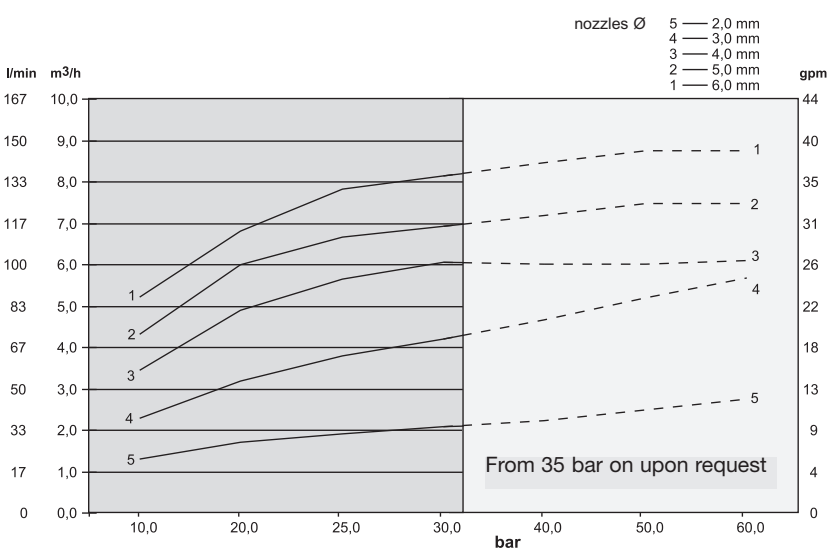
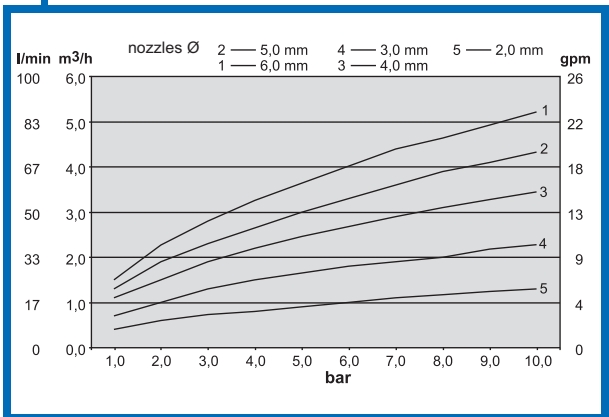
- Down pipe length at process connection flange: 500 mm
- 2 nozzles with each 3mm diameter
- Materials: 1.4571, PTFE, EPDM
- IP 54 – 230V-400V electric motor with 14 RPM.
- Process connection: DN 125 acc. to DIN 11851
- Cleansing agent connection: 3/4" thread

3.660,00 € / piece

TANKO® JX-70 2-nozzles



TANKO® JX-75 / 80 2-nozzles

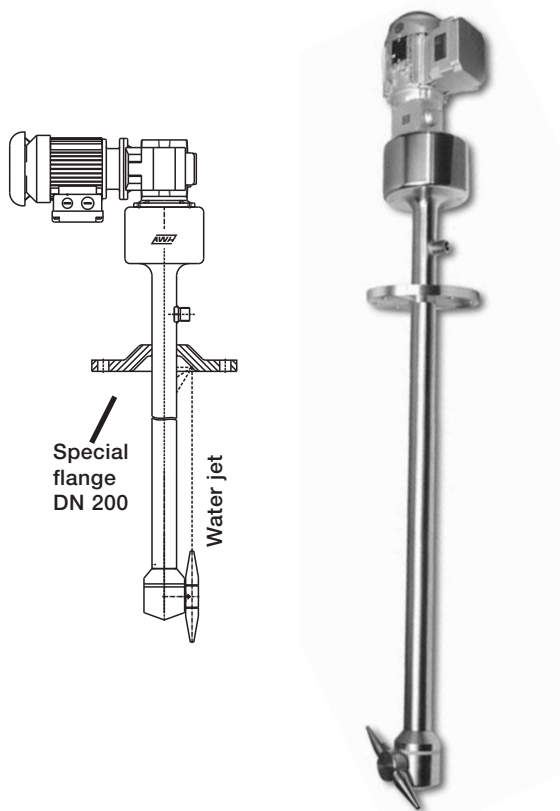


The standard product description (technical modifications possible):

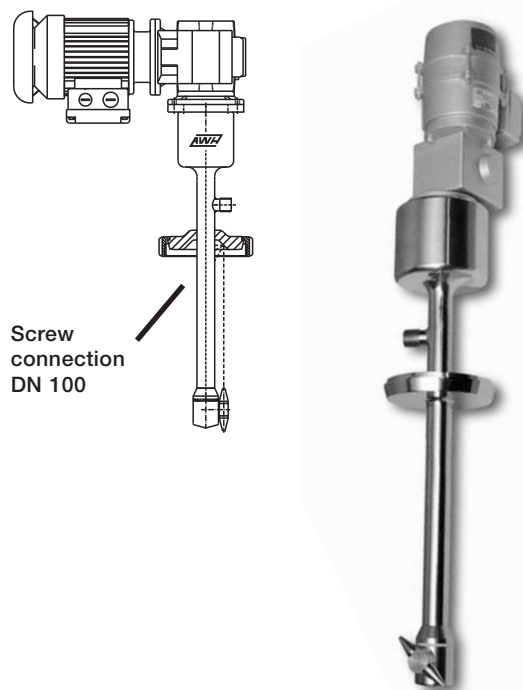
	TANKO® JX-70	TANKO® JX-75	TANKO® JX-80
Stainless steel grades	1.4571 (316Ti) 1.4435 (316L) 1.4404 (316L) HC 4 HC 22	1.4571 (316Ti) 1.4435 (316L) 1.4404 (316L) HC 4 HC 22	1.4571 (316Ti) 1.4435 (316L) 1.4404 (316L) HC 4 HC 22
Operating pressure	2 – 60 bar	2 – 35 bar (2 – 60 bar upon request)	2 – 35 bar (2 – 60 bar upon request)
Maximum working temperature	110 °C	110 °C	110 °C
Drive	electric or peumatic	electric or peumatic	electric or peumatic
Minimum installation dimensions	58 mm	98 mm	110 mm
Installation depth (typically)	from 300 to 1000 mm	from 300 to 4000 mm	from 300 to 4000 mm

Examples of execution (execution varies acc. to customer requirements)

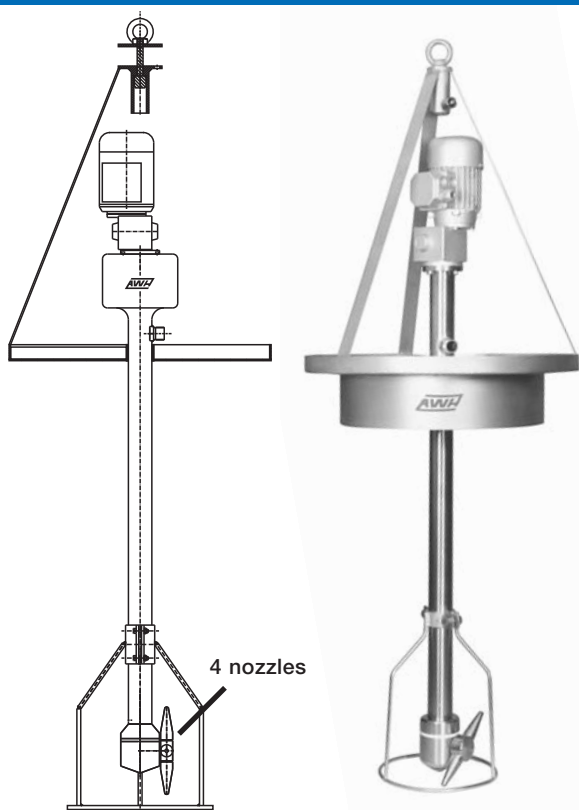
TANKO® JX-80



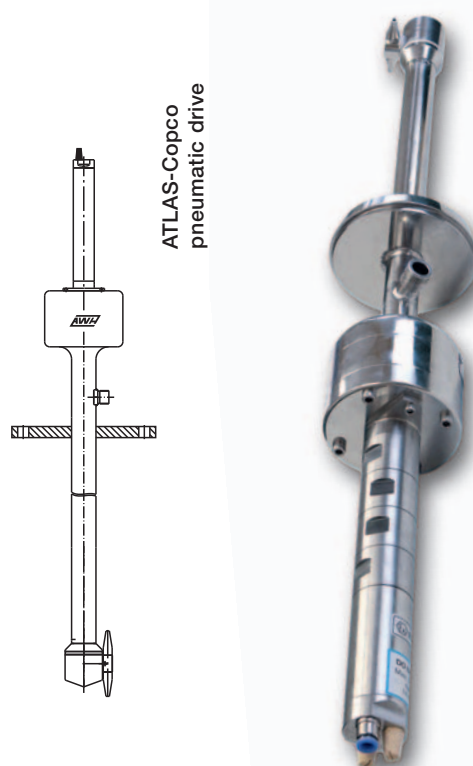
TANKO® JX-70



TANKO® JX-80-TW



TANKO® JX



Operating parameter	TANKO-JX-70	TANKO-JX-75	TANKO-JX-80
Maximum vessel diameter	1,5-2 m	10m	16m
Maximum working temperature of cleansing agent	110°C	110°C	110°C
Maximum ambient temperature	180°C	180°C	180°C
Maximum ambient temperature of motor	60°C	60°C	60°C
Cleansing agent	water	water	water
Working pressure	2-60 bar	2-35 bar	2-35 bar
	The device is planned according to your requirements:		
Process flange	acc. to DIN 11851 DN 80 screw connection optionally: · DIN 11851 DN 100 · Clamp lid acc. to DIN 32676 DN 65 up to 150 · flange acc. to DIN 2527 DN 80	acc. to DIN 11851 DN 125 screw connection optionally: · DIN 11851 DN 100 / 150 · Clamp lid acc. to DIN 32676 DN 100 / 125 / 150 · flange acc. to DIN 2527 DN 100 / 125 / 150	acc. to DIN 11851 DN 125 screw connection optionally: · DIN 11851 DN 150 / 200 · Clamp lid acc. to DIN 32676 DN 125 / 150 · flange acc. to DIN 2527 DN 100 / 125 / 150
Cleansing agent connection	1/2" BSP male thread · other upon request	3/4" BSP male thread · other upon request	3/4" BSP male thread · other upon request
Length of down pipe	300mm optional: 500mm (other up to 1000mm upon request)	500mm optional: 750mm, 1000mm (other from 300 - 1200 upon request)	500mm optional: 750mm, 1000mm (other from 300 - 1200 upon request)
Down pipe extension	—	500 / 1000 other upon request	500 / 1000 other upon request
Number of nozzles	2 optional: 1, 3 or 4	2 optional: 3 or 4	2 optional: 3 or 4
Spray hole	1,0 - 4,0 mm depends on expected cleaning performance	2,0 - 8,0 mm depends on expected cleaning performance	2,0 - 8,0 mm depends on expected cleaning performance
Motor	45W RGM-Motor, 230/400V, 50Hz, IP 54; 14 RPM -> 124s per cycle optional: · 90W RGM-Motor; · SEW motors; · other rotation speed / protection systems; · Execution with frequency converter; · compressed air motor	90W RGM-Motor, 230/400V, 50Hz, IP 54; 14 RPM -> 124s per cycle optional: · 120W RGM-Motor; · SEW motors; · other rotation speed / protection systems; · Execution with frequency converter; · compressed air motor	90W RGM-Motor, 230/400V, 50Hz, IP 54; 14 RPM -> 124s per cycle optional: · 120W RGM-Motor; · SEW motors; · other rotation speed / protection systems; · Execution with frequency converter; · compressed air motor
Materials basic device - media affected - exterior	1.4571 (316Ti) 1.4404 (316L), 1.4301 (304)	1.4571 (316Ti) 1.4404 (316L), 1.4301 (304)	1.4571 (316Ti) 1.4404 (316L), 1.4301 (304)
ball bearing	1.4571 (316Ti) / PEEK optional: · 1.4571 or higher grade up to 95°C; · 1.4571 with Minlon cage up to 60°C, ATEX-compliant; · 1.4571 with Acetal cage up to 80°C, FDA-conform	1.4571 (316Ti) / PEEK optional: · 1.4571 or higher grade up to 95°C; · 1.4571 with Minlon cage up to 60°C, ATEX-compliant; · 1.4571 with Acetal cage up to 80°C, FDA-conform	1.4571 (316Ti) / PEEK optional: · 1.4571 or higher grade up to 95°C; · 1.4571 with Minlon cage up to 60°C, ATEX-compliant; · 1.4571 with Acetal cage up to 80°C, FDA-conform
Seal (O-ring)	EPDM (FDA-conform) optional: · Viton · FKM with FEP coat	EPDM (FDA-conform) optional: · Viton · FKM with FEP coat	EPDM (FDA-conform) optional: · Viton · FKM with FEP coat
Thrust discs	A500 (FDA-conform) optional: XTM (ATEX-compliant)	A500 (FDA-conform) optional: XTM (ATEX-compliant)	A500 (FDA-conform) optional: XTM (ATEX-compliant)
Bushing	PTFE, PEEK	PTFE, PEEK	PTFE, PEEK
	Additionally, we can deliver:		
Certificates	material and roughness certificates see pages 10-11		

Conversion table

Pressure	
bar	psi
1	15
2	29
3	44
4	58
5	73
6	87
7	102
8	116
9	131
10	145
11	160
12	174
13	189
14	203
15	218
16	232
17	247
18	261
19	276
20	290
21	305
22	319
23	334
24	348
25	363
26	377
27	392
28	405
29	421
30	435
31	450
32	464
33	479
34	493
35	508
36	522
37	537
38	551
39	566
40	580
41	595
42	609
43	624
44	638
45	653
46	667
47	682
48	696
49	711
50	725
51	740
52	754

Volume Flow Rate		
m ³ /h	gal/min (gpm)	l/min
1	4,4	16,7
2	8,8	33,3
3	13,2	50,0
4	17,6	66,7
5	22,0	83,3
6	26,4	100,0
7	30,8	116,7
8	35,2	133,3
9	39,6	150,0
10	44,0	166,7
11	48,4	183,3
12	52,8	200,0
13	57,2	216,7
14	61,6	233,3
15	66,0	250,0
16	70,4	266,7
17	74,9	283,3
18	79,3	300,0
19	83,7	316,7
20	88,1	333,3
21	92,5	350,0
22	96,9	366,7
23	101,3	383,3
24	105,7	400,0
25	110,1	416,7
26	114,5	433,3
27	118,9	450,0
28	123,3	466,7
29	127,7	483,3
30	132,1	500,0
31	136,5	516,7
32	140,9	533,3
33	145,3	550,0
34	149,7	566,7
35	154,1	583,3
36	158,5	600,0
37	162,9	616,7
38	167,3	633,3
39	171,7	650,0
40	176,1	666,7
41	180,5	683,3
42	184,9	700,0
43	189,3	716,7
44	193,7	733,3
45	198,1	750,0
46	202,5	766,7
47	206,9	783,3
48	211,3	800,0
49	215,7	816,7
50	220,2	833,3
51	224,6	850,0
52	229,0	866,7

Medium-driven jet cleaners

Medium-driven jet cleaners facilitate a particularly good and economically efficient choice for the appropriate application. With these devices a rotary power is generated by means of both, the cleansing agent flow and pressure. This is translated onto two axes, thus resulting in a real 360° rotation of the nozzles. The options of technical design are based on the nozzle geometry (length and diameter) in connection with the cleansing agent pressure. The design and selection of a suitable system is defined together with the user. A detailed analysis of the cleaning tasks forms the basis to find an economically efficient cleansing concept.

The **Orbi G4** provides a cleaning radius of more than 4 m and a considerably high cleansing agent impact. After every 360° rotation the jet starts at a slightly staggered place to return exactly to its starting point after 45 rotations. The Orbi G4 can be run at a cleansing agent pressure of 3 bar and above (max. 20 bar). The maximum flow rate of 7 m³/h at a maximum



TANKMAN 80-300 at very low operating pressure



JUMBO 6-500 at very low operating pressure

working temperature of 121° C describes the economical efficiency and the broad range of possible applications.

The **JUMBO 6 - 500** is available as standard version and as high-temperature version (up to 260° C). The operating mode corresponds to the one of the Orbi G4. However, the larger construction enables the use of much higher amounts of cleansing agent.

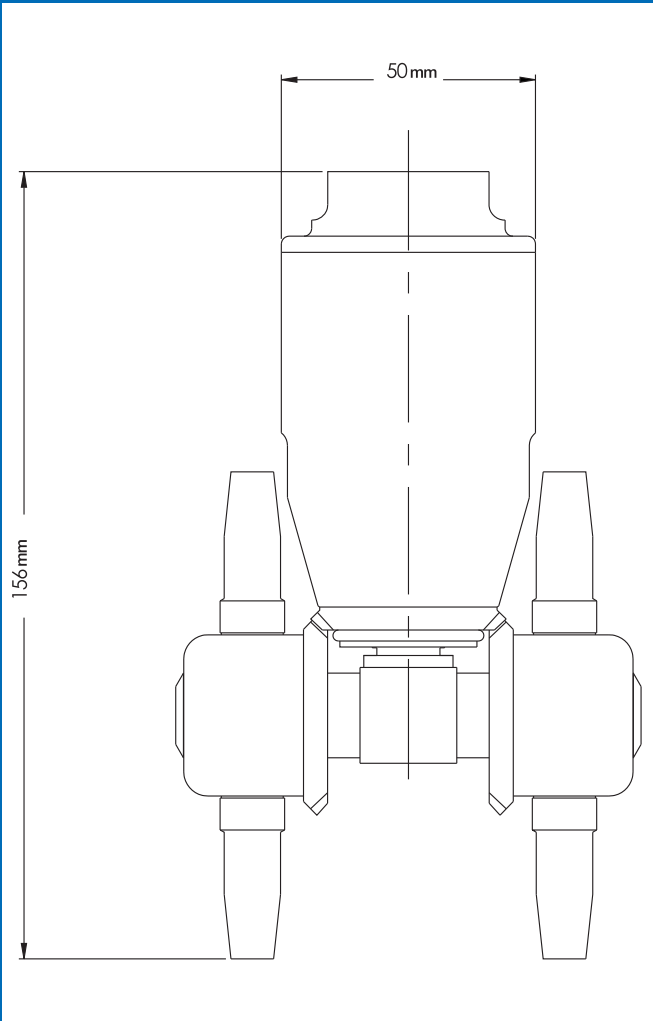
The robust concept of the **TANKMAN** is ideal for large vessels up to a diameter of 16 m. The 2 and 3 nozzle concept facilitates feeding the tank within the pressure range of 4 to 14 bar with larger amounts of cleansing agent with a directed 360° jet system. Hence, Cleaning with subsequent rinsing is ensured.



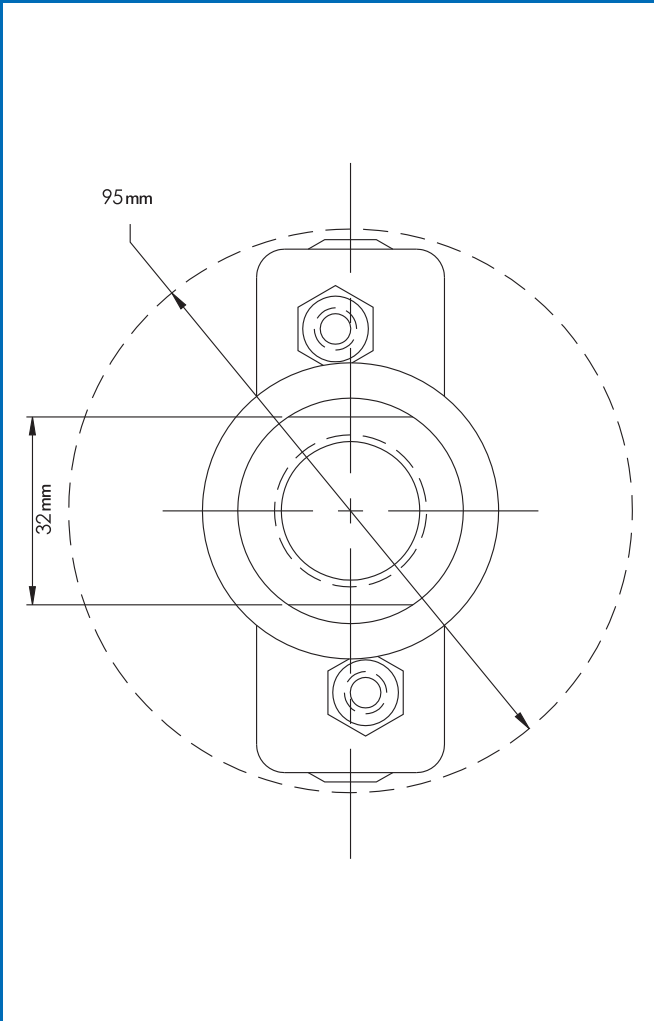
The ORBI-G4 is a 360°angle Jet Cleaner. Its compact design allows the installation of the ORBI G4 into tanks with only DN 100 flanges. Constructed for best cleaning results with high impact performance, self-cleaning and with low consumption values.

Material AISI 316, Teflon and UHMW-PE	Volume flow rate [m³/h] 1,8 - 7,5
Connection 3/4" BSP- or NPT thread	Volume flow rate [l/min] 30 - 125
Working pressure (bar) 3,0 - 20	Number of revolutions (RPM) 7 - 17
Max. working temperature (°C) 121	Max. vessel diameter for cleaning Typically up to approx. 4 m; max. 8 m
Weight [kg/g] 0,9 Kg	Installation position: Vertical, others upon request

dimensions

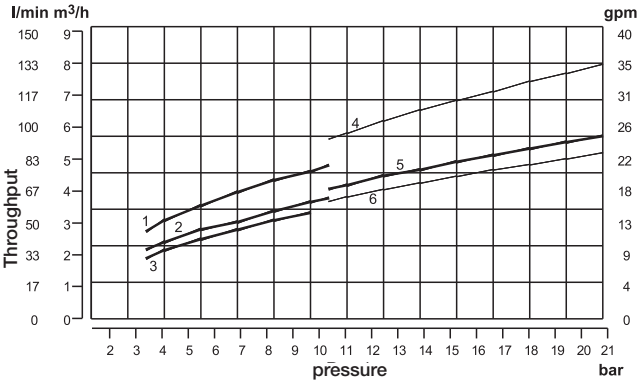


min. installation dimensions



Medium-driven Jet Cleaner - Orbi G4

Consumption data



Consumption data

1	4,37 mm / 0,172"	Ø nozzle - 1861 CLP
2	3,56 mm / 0,140"	Ø nozzle - 1861 BLP
3	3,18 mm / 0,125"	Ø nozzle - 1861 DLP
4	4,37 mm / 0,172"	Ø nozzle - 1861 C
5	3,56 mm / 0,140"	Ø nozzle - 1861 B
6	3,18 mm / 0,125"	Ø nozzle - 1861 D

Orbi G4			
	Price/EUR	Item no.	
	1.480,00	6775-1861CLP	Orbi G4 with 4x 4,37 mm / 0,172" nozzles
	1.480,00	6775-1861BLP	Orbi G4 with 4x 3,56 mm / 0,140" nozzles
	1.480,00	6775-1861DLP	Orbi G4 with 4x 3,18 mm / 0,125" nozzles
	1.480,00	6775-1861C	Orbi G4 with 4x 4,37 mm / 0,172" nozzles
	1.480,00	6775-1861B	Orbi G4 with 4x 3,56 mm / 0,140" nozzles
	1.480,00	6775-1861D	Orbi G4 with 4x 3,18 mm / 0,125" nozzles
Spare parts set			
	182,00	6775-1861-spk	ware parts set
	53,30	6775-186 11010	Assembly- Disassembly -tools for drive system
Upon request		664BA14010700	Manual in German
Upon request		664BA140107EN	Manual in English

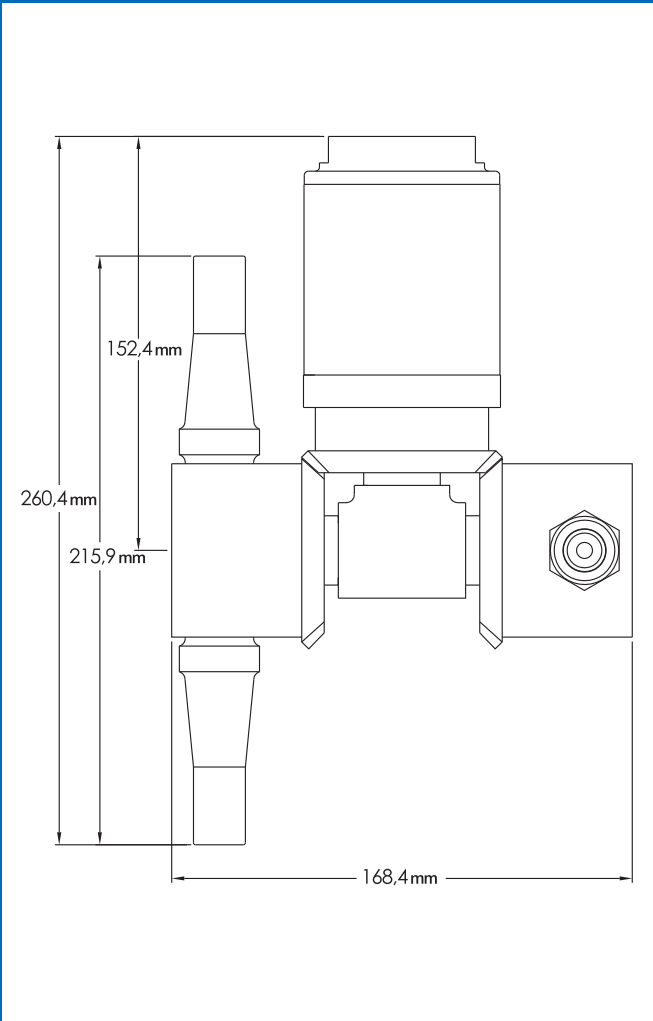


The Jumbo 6-500 belongs to the new generation of 360° jet cleaners. It completes the product range for applications that require high impact performance as well as a higher cleansing agent volume for rinsing. The state-of-the-art design allows a flexible adjustment to any application of this type.

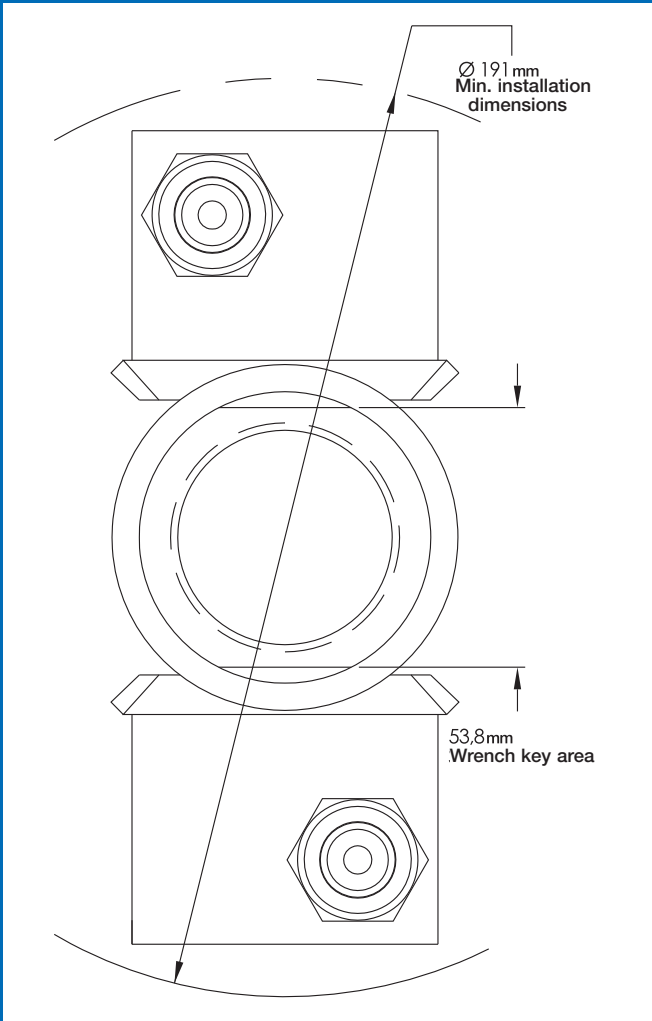
- J 6-500-XX Standard configuration
- J 6-500-BD-XX suited for low pressures
- J 6-500-HT-XX suited for high temperatures

Material AISI 316, Teflon and UHMW-PE	Volume flow rate [m³/h] 11,3 - 25
Connection 1 1/2" BSP- or NPT thread	Volume flow rate [l/min] 189 - 416
Working pressure (bar) 3 - 10	Number of revolutions (RPM) 5 - 40
Max. working temperature (°C) 121	Max. vessel diameter for cleaning up to approx. 9 m
Weight [kg/g] 5,3 Kg	Installation position: Vertical, others upon request

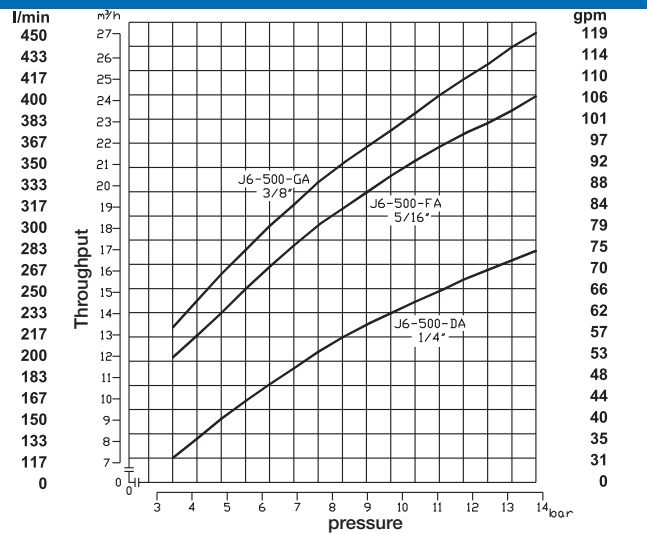
dimensions



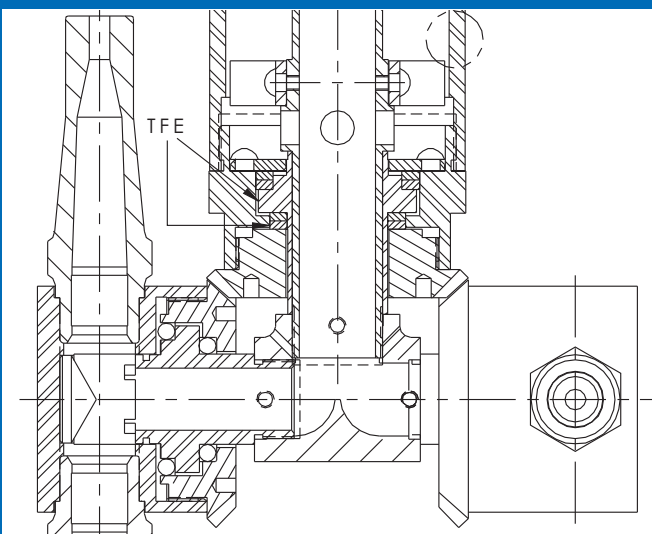
min. installation dimensions



JUMBO 6 - 500 - Standard



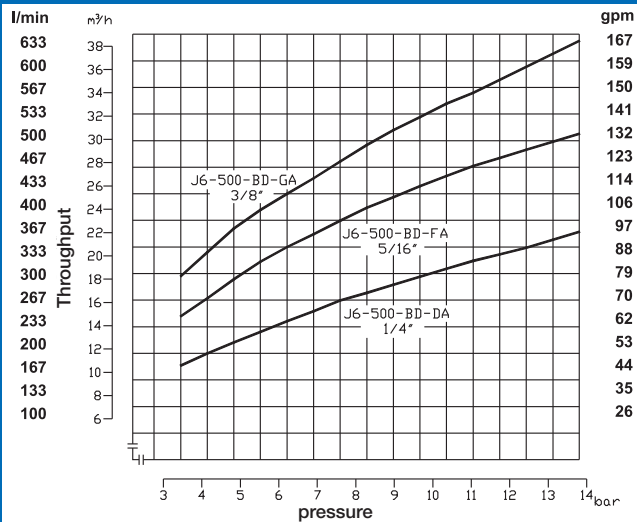
JUMBO 6 - 500 - Standard



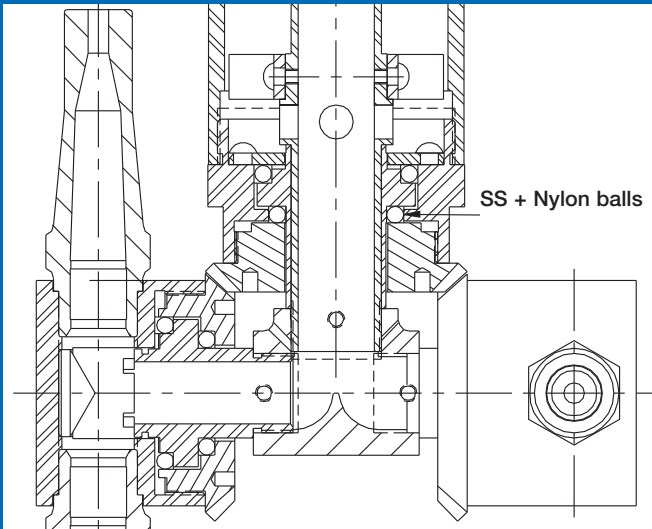
JUMBO 6 - 500

JUMBO 6 - 500			
	Price/EUR	Item no.	
	1.950,00	67J6-500DA	JUMBO 6-500 Standard with 4 x 6,35 mm / 1/4" nozzles
	1.950,00	67J6-500FA	JUMBO 6-500 Standard with 4 x 7,93 mm / 5/16" nozzles
	1.950,00	67J6-500GA	JUMBO 6-500 Standard with 4 x 9,53 mm / 3/8" nozzles
Spare parts set			
	295,00	67J6-500SPK	ware parts set
	92,00	67J6-TMN1010	Special wrench for gear installation
Upon request		664BA13010500	Manual in German
Upon request		664BA130105EN	Manual in English

JUMBO 6 - 500 - supported in ball bearing



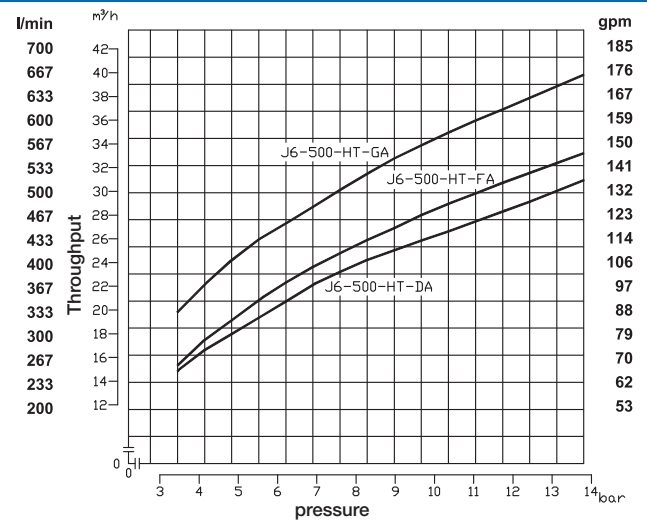
JUMBO 6 - 500 - supported in ball bearing



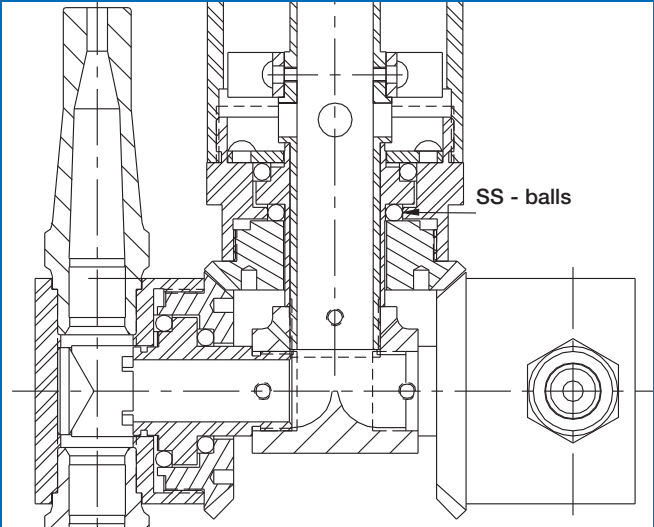
JUMBO 6 - 500

JUMBO 6 - 500			
	Price/EUR	Item no.	
	2.550,00	67J6-500BDGA	JUMBO 6-500 ball bearing with 4 x 6,35 mm / 1/4" nozzles
	2.550,00	67J6-500BDFA	JUMBO 6-500 ball bearing with 4 x 7,93 mm / 5/16" nozzles
	2.550,00	67J6-500BDGA	JUMBO 6-500 ball bearing with 4 x 9,53 mm / 3/8" nozzles
Spare parts set			
	224,00	67J6-500BDSPK	ware parts set
	92,00	67J6-TMN1010	Special wrench for gear installation
Upon request		664BA13010500	Manual in German
Upon request		664BA130105EN	Manual in English

JUMBO 6 - 500 - High temperature



JUMBO 6 - 500 - High temperature



JUMBO 6 - 500

JUMBO 6 - 500			
	Price/EUR	Item no.	
	2.550,00	67J6-500HTDA	JUMBO 6-500 high temperature with 4 x 6,35 mm / 1/4" nozzles
	2.550,00	67J6-500HTFA	JUMBO 6-500 high temperature with 4 x 7,93 mm / 5/16" nozzles
	2.550,00	67J6-500HTGA	JUMBO 6-500 high temperature with 4 x 9,53 mm / 3/8" nozzles
Spare parts set			
	219,00	67J6-500HTSPK	ware parts set
	92,00	67J6-TMN1010	Special wrench for gear installation
Upon request		664BA13010500	Manual in German
Upon request		664BA130105EN	Manual in English

2 or 3 nozzles

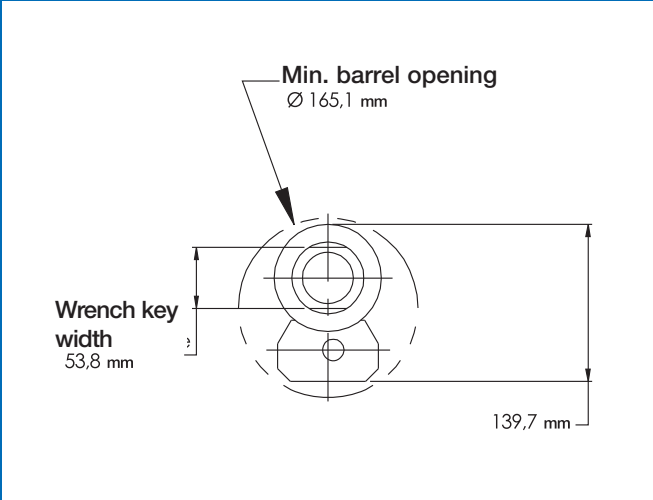
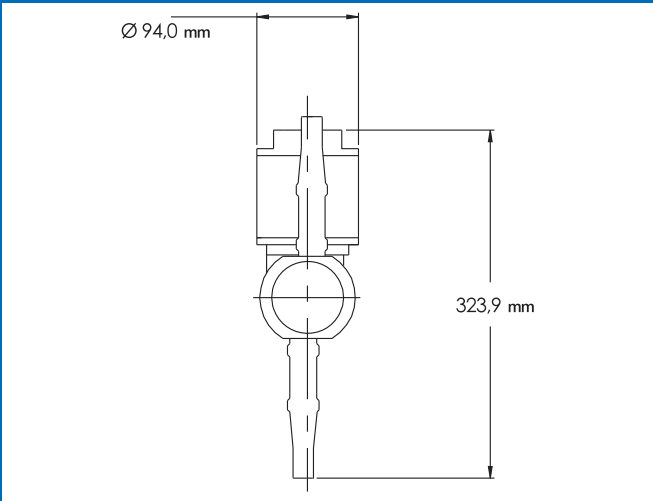


Example: TANKMAN 3 Jet Nozzles

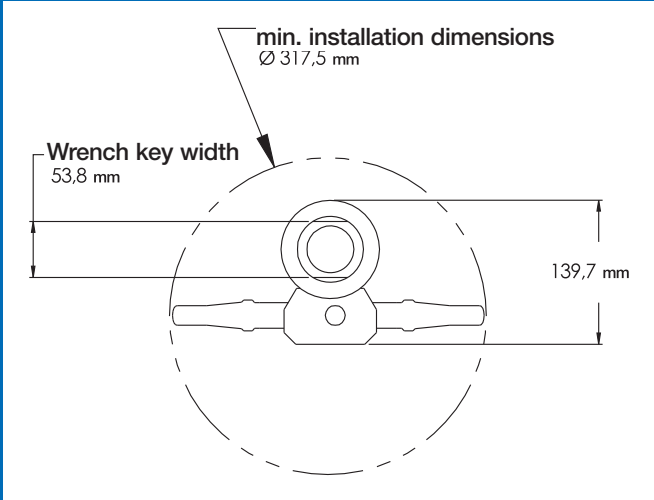
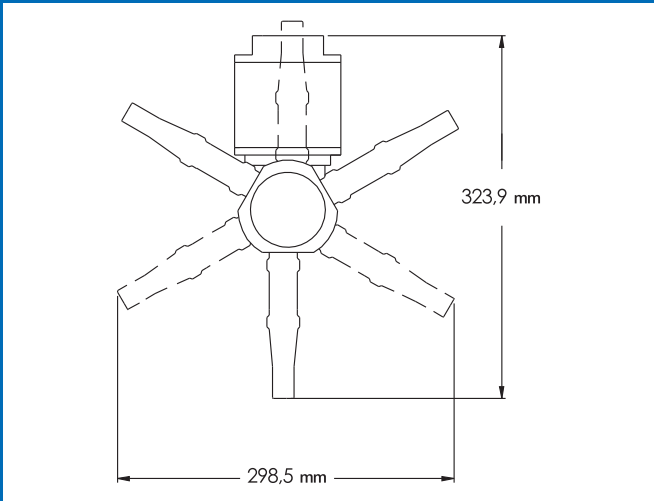
The TANKMAN is applied in tanks, where range and cleansing agent quantities are significant parameters. The most cost-efficient concept allows an economical cleaning in many areas of tank cleaning. The slow rotation of the jet nozzle system provides high ranges. Various jet nozzles enable an adjustment of the cleansing agent quantities.

Material AISI 316, Teflon and UHMW-PE	Volume flow rate [m³/h] 2 nozzles : 9,1 – 25 3 nozzles: 14 – 31,5
Connection 1 1/2" BSP- or NPT thread	Volume flow rate [l/min] 2 nozzles : 151 - 417 3 nozzles : 233 - 525
Working pressure (bar) 4 (5,2 with 3 nozzles) – 13,8	Number of revolutions (RPM) 3 - 20
Max. working temperature (°C) 121	Max. vessel diameter for cleaning up to 16 m
Weight [kg/g] 6,8 Kg	Installation position: Vertical, others upon request

TANKMAN 2 nozzles



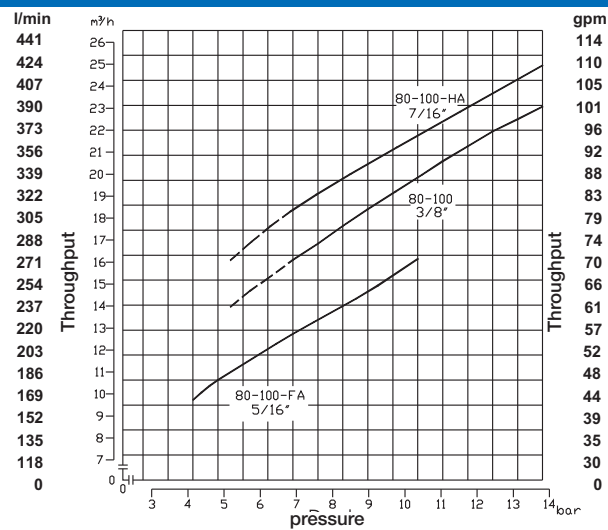
TANKMAN 3 nozzles



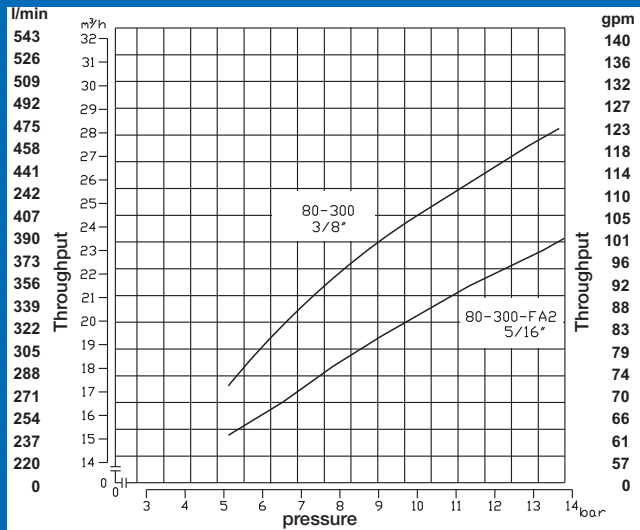
Medium-driven Jet Cleaner - TANKMAN

2 or 3 nozzles

TANKMAN 2 nozzles



TANKMAN 3 nozzles



TANKMAN 2 nozzles

Price/EUR	Item no.	
2.730,00	6780-100	TANKMAN with 2 x 9,53 mm / 3/8" nozzles
2.730,00	6780-100-FA	TANKMAN with 2 x 7,93 mm / 5/16" nozzles
2.730,00	6780-100-HA4	TANKMAN with 2 x 11,11 mm / 7/16" nozzles
Spare parts set		
147,20	6780-120	ware parts set
92,00	67J6-TMN1010	Special wrench for gear installation
Upon request	664BA12080500	Manual in German
Upon request	664BA120805EN	Manual in English

TANKMAN 3 nozzles

Price/EUR	Item no.	
2.120,00	6780-300	TANKMAN with 3 x 9,53 mm / 3/8" nozzles
2.120,00	6780-300-FA2	TANKMAN with 3 x 7,94 mm / 5/16" nozzles
Spare parts set		
147,20	6780-120	ware parts set
92,00	67J6-TMN1010	Special wrench for gear installation
Upon request	664BA12080500	Manual in German
Upon request	664BA120805EN	Manual in English

Tank Cleaning Trolley JM-C1

Example for Assembly
JM-C1 + J6-500



Applicable for:

- Jumbo 6-500
- Orbi G4
- TANKMAN
- TANKO®-RB-64
- TANKO®-S-50

Material
1.4404

Connection supply:
DN 50; Threaded connection
acc. to DIN 11851

Connection Jet Cleaner:
1 1/2" BSP

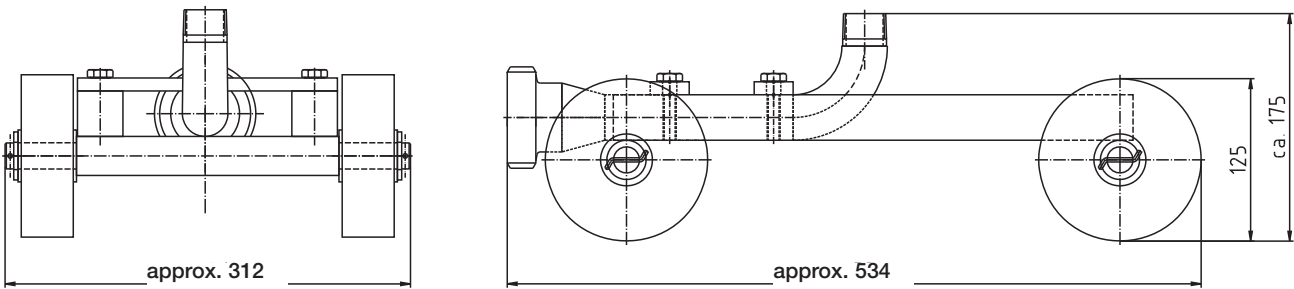
Reducing flange:
1.4436

Locking pin:
1.4430

Wheels:
PP, FDA-conform

Surface:
Metal-brigth or hand-polished

Dimensions JM-C1



Tank Cleaning Trolley JM-C1

Price/EUR	Item no.			Weight Kg
680,00	666 101 57 00 120	Tank Cleaning Trolley JM-C1	Surface: Metal-bright	12,5
472,00	666 101 57 01 120	Tank Cleaning Trolley JM-C1	Surface: Metal-bright	5,3
Upon request	666 101 57 00 121	Tank Cleaning Trolley JM-C1	Surface: Hand-polished	12,5

CIP-Monitoring System (CIPMon SC II)

For monitoring Jet Cleaners and rotating spray heads (TANKO®-S, TANKO®-RB)

Control - CIP

Validation - CIP

Documentation - CIP

CIPMon SC II



-> Applied in the

- food industry
- pharmaceutical industry
- chemical industry

-> For cleaning, e.g.

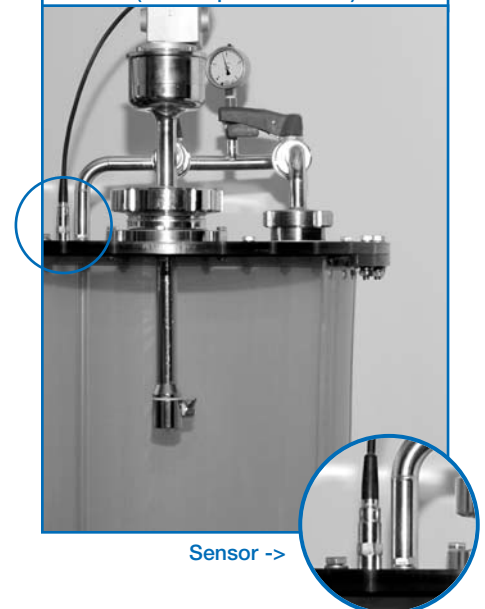
- storage tanks (jet cleaners)
- Reactors
- Fermenters

-> Monitors

- the rotation of the cleaning devices
- the impact of the cleansing agent onto the vessel's wall

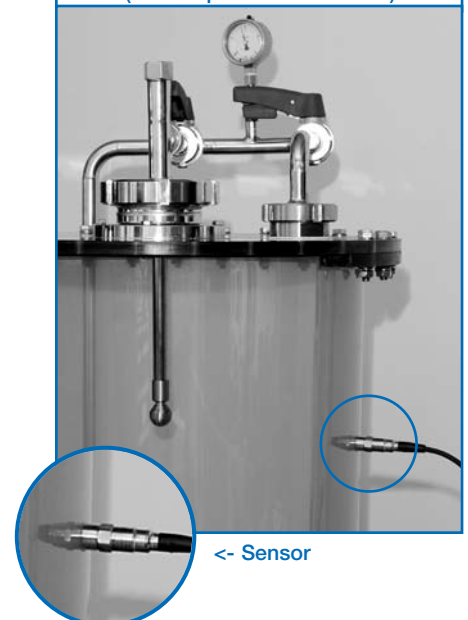
**Raises an alarm
immediately in the event
of malfunctions during
the cleaning process!**

Monitoring of a TANKO®-JX (Sensor placed above)



Sensor ->

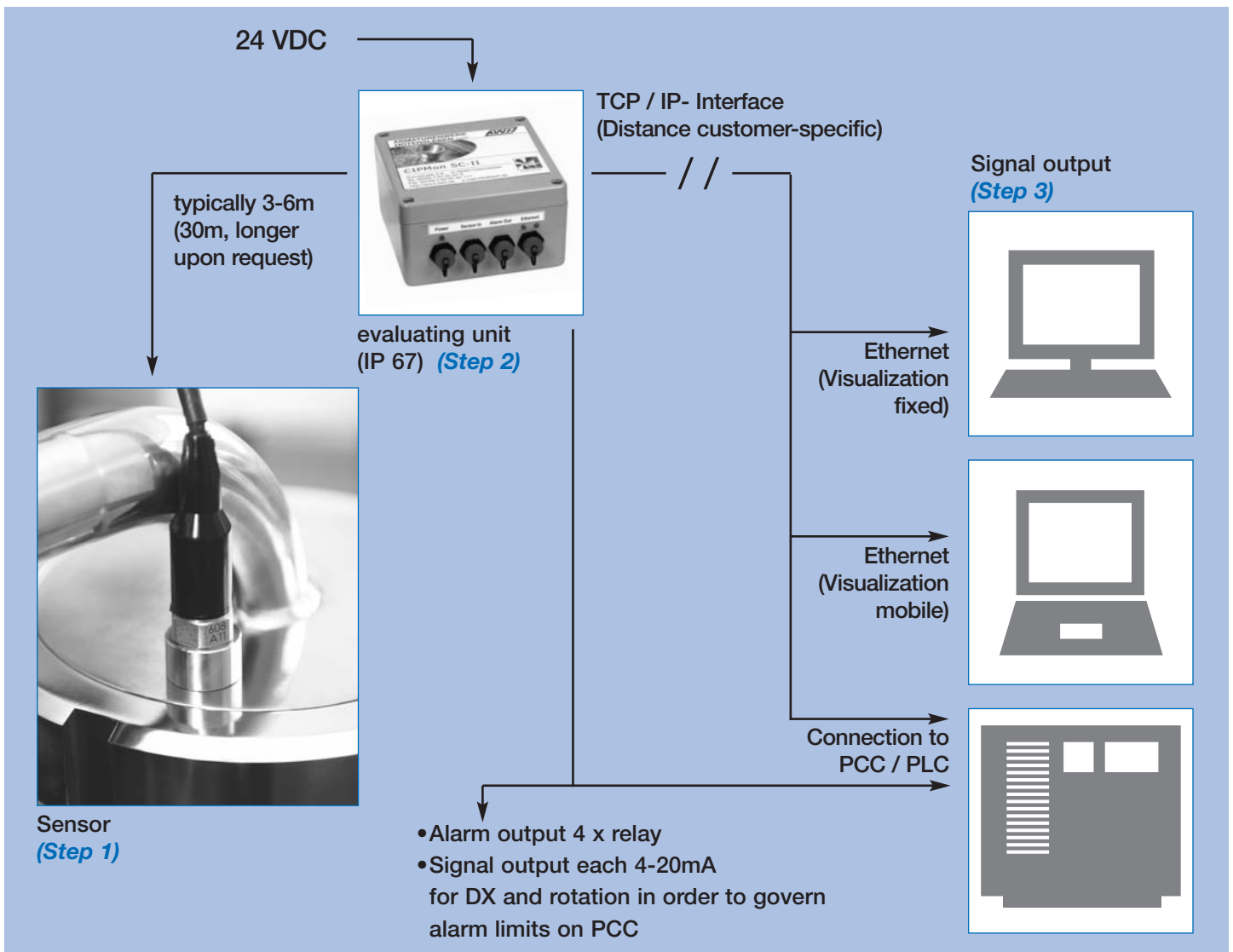
Monitoring of a TANKO®-S (Sensor placed on the side)



<- Sensor

CIP-Monitoring System (CIPMon SC II)

Layout:



5 steps to CIP-monitoring

(Step 1):

Selection of an appropriate position of the sensor (Tank lid, wall with uninsulated vessels) and installation of the sensor holder on the outside of the tank

(Step 2):

Installation of the evaluating processor unit on site

(Step 3):

Connection to operating network or PC – digital measurement value processing and Measurement signal output as 4 x relay (upward compatible for 4-20 mA)

Step 4:

Installation of the software

Step 5:

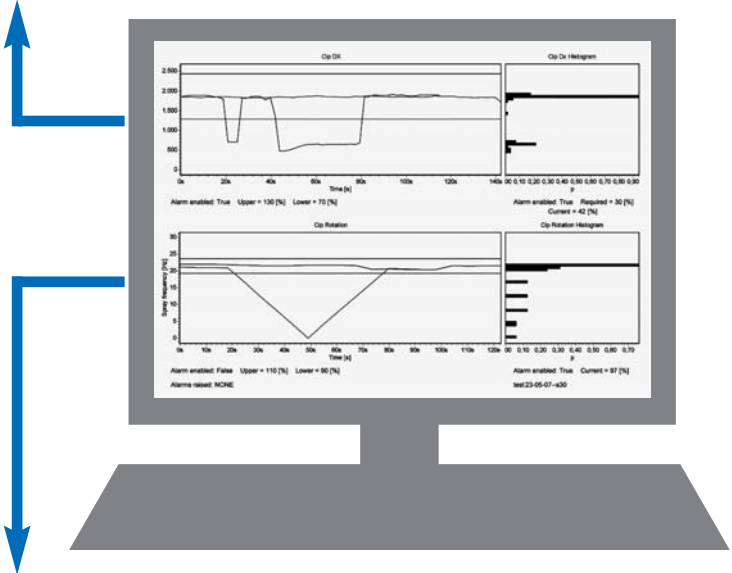
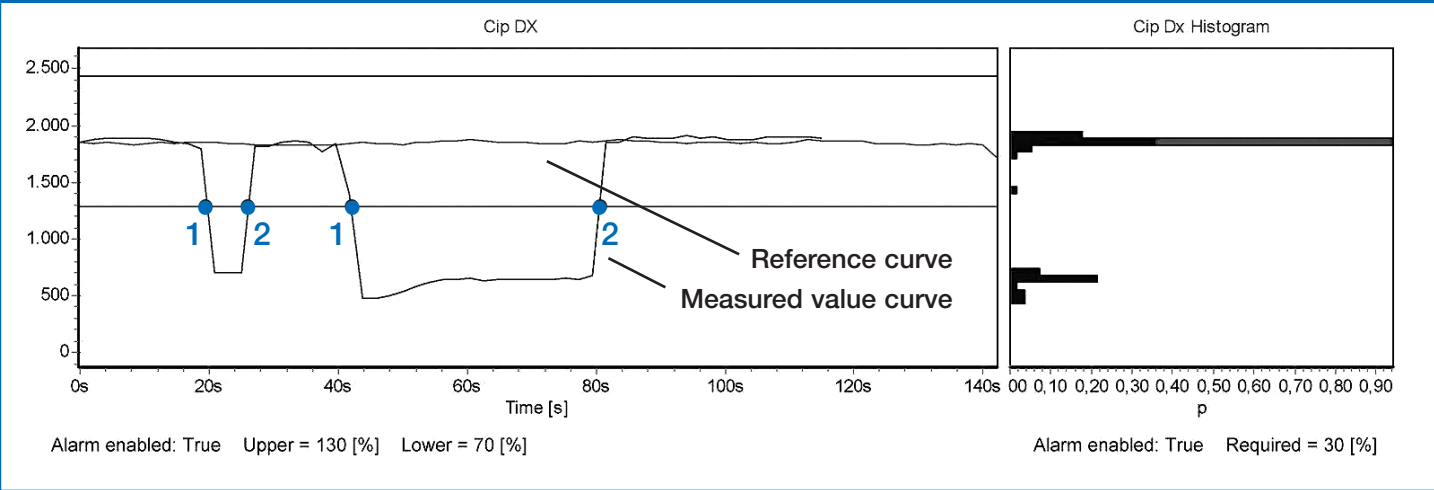
Record of a reference cycle for impact (force of cleansing agent on inner wall) and rotation (duration depends on CIP program)

CIP-Monitoring System (CIPMon SC II)

Analysis of the recorded values

Changes regarding the performance of the cleaning device (pressure, volume flow rate, also external drive) cause deviations of the relative impact and/or rotation signals, thus indicate a failure or changed processing. In the event of exceedance of the bottom or top limit of the limit values an alarm is raised.

Reference and Measured value curve Impact DX



Reference curve

Recorded output reference values for each cleaning unit

Measured value curve

The signals recorded during CIP monitoring are compared to the reference values, for evaluation and documentation.

Alarms

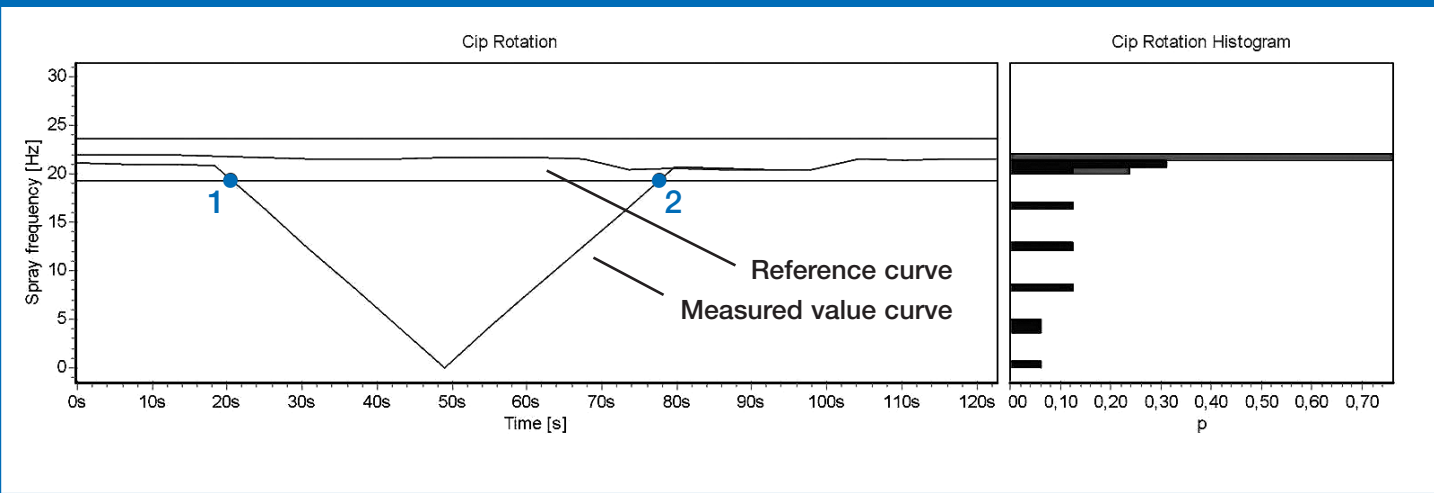
Alarms are raised, as soon as the measured signal exceeds the bottom or top limit

Alarm limits can be adjusted and modified in any way by the user

1: Alarm comes

2: Alarm goes

Reference and Measured value curve Rotation



CIP-Monitoring System (CIPMon SC II)

CIPMon-SC-II-evaluation device		Price/EUR
	Monitoring device for Spate and Jet Cleaners	
	Basic device (for a measuring channel / a measuring point)	
	Incl. Software light, incl. 1 manual	
	without sensor cable, without interface cable or connector.	
	Item no.	
Outputs: 4 alarm relays	68CIPMonSCII-01	on request
Outputs: 4 alarm relays + 2x 4/-20mA	68CIPMonSCII-02	on request
Sensor cable		Price/EUR
	Assembled with connector, housing stainless steel	
	Type of protection: IP 68, Temperature: -50 to 121 °C	
	Item no.	
Sensor cable 3 m	68CIPMon-Sen3m	on request
Sensor cable 6 m	68CIPMon-Sen6m	on request
Sensor cable 15 m	68CIPMon-Sen15m	on request
Sensor cable 30 m	68CIPMon-Sen30m	on request
Relay Kabel		Price/EUR
Relay cable for 4 alarm values	1. side: CIPMon-SC-II-connector, 2. side open connecting cable, for 60 W, 62,5 VA; 220 V DC, 250 V AC / 50 / 60 Hz	
	Switching current: 1 Amp (max. non-inductive), direct current: 1 Amp (max) for single-pole contact	
	Item no.	
Relay cable 3 m	68CIPMon-Rcb3m	on request
Relay cable 6 m	68CIPMon-Rcb6m	on request
Relay cable 15 m	68CIPMon-Rcb15m	on request
Relay cable 30 m	68CIPMon-Rcb30m	on request
Relay Cable 4/20mA		Price/EUR
Relay cable outputs: 4 relays + 2x 4/20mA	1. side: CIPMon-SC-II-connector, 2. side open connecting line, relay: for 60W, 62,5 VA; 220 VDC, 250 VAC / 50 / 60 Hz	
	2. side open connecting line, 4/20mA: 20mA in 900ohm and 12-30 (typ.24)VDC (external)	
	Item no.	
Relay cable 4/20mA, 3 m	68CIPMon-lpcb3m	on request
Relay cable 4/20mA, 6 m	68CIPMon-lpcb6m	on request
Relay cable 4/20mA, 15 m	68CIPMon-lpcb15m	on request
Relay cable 4/20mA, 30 m	68CIPMon-lpcb30m	on request
Ethernet cable network		Price/EUR
Cat 5 UTP - cable	1. side: CIPMon-SC-II-connector 2. side: Ethernet plug for connection to network	
	Item no.	
Ethernet cable 3 m	68CIPMon-Ecb3m	on request
Ethernet cable 6 m	68CIPMon-Ecb6m	on request
Ethernet cable 15 m	68CIPMon-Ecb15m	on request
Ethernet cable 30 m	68CIPMon-Ecb30m	on request
Ethernet-Cable PC		Price/EUR
Cat 5 UTP - crossed cables	1. side: CIPMon-SC-II-connector 2. side: Ethernet plug for connection to PC	
	Item no.	
Ethernet cable 1 m	68CIPMon-Ncb1m	on request
Ethernet cable 3 m	68CIPMon-Ncb3m	on request
Ethernet cable 6 m	68CIPMon-Ncb6m	on request
Ethernet cable 15 m	68CIPMon-Ncb15m	on request
Ethernet cable 30 m	68CIPMon-Ncb30m	on request
Power supply unit for CIPMon-SC-II		Price/EUR
	1. side: CIPMon-SC-II-connector, 2. side: power plug 24VDC - 100/240VAC	
	Item no.	
	68CIPMon-PowEU	on request
power cable 24V-supply		Price/EUR
for connection to customer-24V-supply	1. side: CIPMon-SC-II-connector, 2. side: open connecting line (end of cable)	
	Item no.	
Power cable 1 m	68CIPMon-Pwcb1m	on request
Power cable 3 m	68CIPMon-Pwcb3m	on request
Sensoring „Donat“		Price/EUR
	for mounting the sensor	
	Item no.	
	68CIPMon-Donat	on request

CIP-Monitoring System (CIPMon SC II)

What's new about the CIPMon SC-II compared to its predecessor

- Every instrument housing has an own TCP/IP-address.
Hence, access via the operating or standard network is granted.
- The data processing is carried out digitally, thus faster and more precisely
- Lower costs, thanks to only 3 m special sensor cable
- IP67 data evaluation housing (WxDxH: 160x160x90)
- Measurement outputs
 - A) IP 68 connector for 4 x relay-output
 - B) IP 68 connector for Ethernet cable for PC/laptop connection
 - IP 68 connector for Ethernet cable for network connection
- Installation of an on-top board provides the measured value output as 4-20mA -signal

The following is required for a successful CIP-process:

Continuous pressure of cleansing agent

Constant impact (DX)

- > Possible failures:
sudden pressure decline with cleansing agent supply
- > Result / consequence:
Reduction of the impact
- > Reaction by means of CIPMon:
Alarm

Continuos cycle times

Constant rotation speed

- > Possible failures:
Change of device rotation due to pressure
or volume flow rate changes, missing drive
- > Result / consequence:
Cycle is not performed completely
- > Reaction by means of CIPMon:
Alarm

***We will gladly assist you in selection the appropriate CIP-Monitoring-System for you.
Please approach us. CIP@awh.de***



**ARMATURENWERK
HÖTENSLEBEN** GmbH



Armaturenwerk Hötensleben GmbH
Schulstraße 5-6
D-39393 Hötensleben
Germany
phone: +49(0)39405-92-0
fax: +49(0)39405-92-111
<http://www.awh.de>
e-mail: info@awh.de