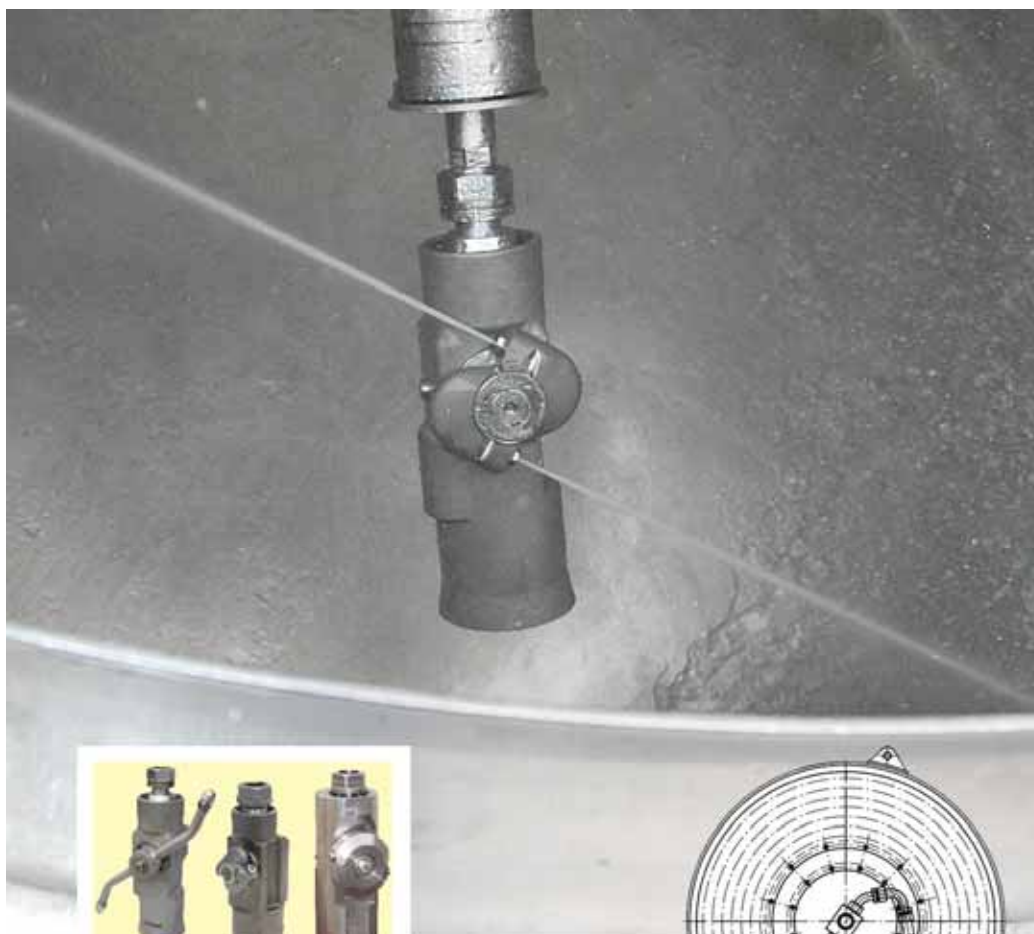
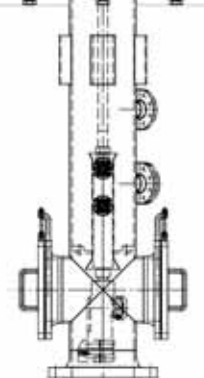
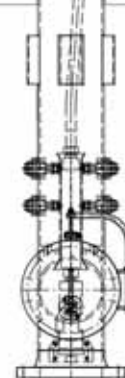
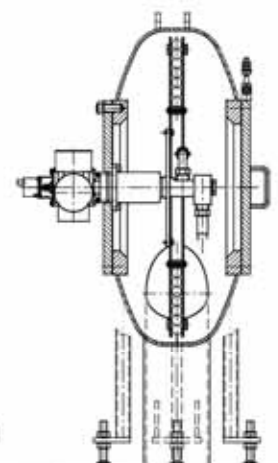
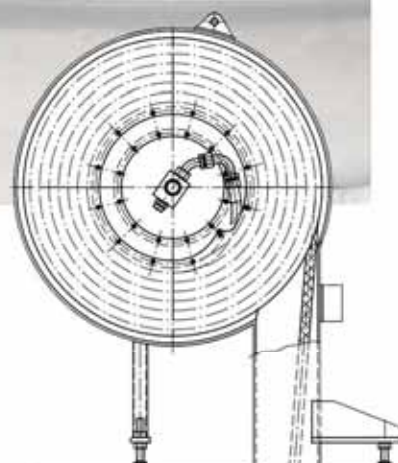


Product catalogue, tank cleaning systems



Aquamat®
Tank
cleaning
units

Aquarex®
Tank
cleaning
systems



Tank cleaning units

„L“

„XL“

„XXL“

High pressure lance pipes

Accessories



Tank cleaning systems

Lance systems

Lance/hose systems

Gas tight lance systems

Gas tight hose reel systems

Hose reel/ lance systems

Hose reel systems

Hose systems



Hammelman application engineering overview

Aquamat® Automatic tank cleaners

Both the “L” and “XL” units can be outfitted with impact protection and the XL is also available with a protective cage.

Sledge assemblies will convert the “L” and “XL” to pipe cleaning units incorporating a unique “kick plate” which utilises the force of the water jet to push the unit forwards through the pipe.



Type
L 1800
18 mm S-arm, 2 nozzles
max. 1800 bar / 150 l/min.
Min. Tank access: 135 mm



Type **L 1200-2**
with sledge for cleaning
pipes with bends
35 mm S-arm, 2 nozzles
max. 1200 bar / 150 l/min.
Min. Pipe -Ø: 210 mm



Type
XL 500-2
Chemical version
35 mm lever arm, 2 nozzles
max. 500 bar / 400 l/min.
Min. Tank access: 170 mm

Here are some examples from our wide range:



Type
L 1200-2
18 mm S-arm, 2 nozzles
max. 1200 bar / 150 l/min.
Min. Tank access: 140 mm



Type
XL 1600-2
13 mm V-arm, 2 nozzles
max. 1600 bar / 250 l/min.
Min. Tank access: 190 mm



Type
XL 1600-2
with protective
18 mm discarm, 2 nozzles
max. 1600 bar / 250 l/min.
Min. Tank access: 250 mm



Type
L 1200-2
with impact protection
56 mm lever arm, 2 nozzles
max. 1200 bar / 150 l/min.
Min. Tank access: 190 mm



Type **XL 1600-2**
with sledge for pipe cleaning
35 mm S-arm, 2 nozzles
max. 1600 bar / 250 l/min.
Min. Pipe -Ø: 320 mm



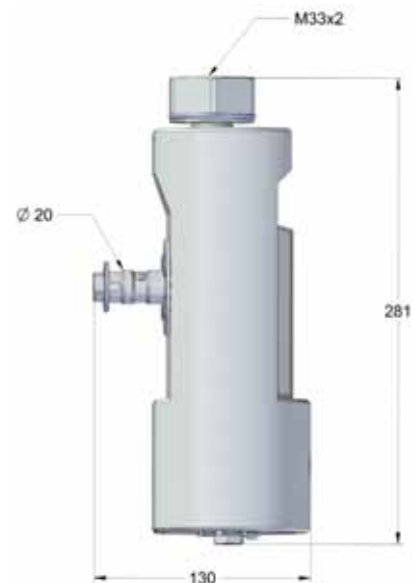
Type
XXL 1600-2
56 mm lever arm, 2 nozzles
max. 1600 bar / 500 l/min.
Min. Tank access: 290 mm

AQUAMAT[®]

Tank cleaning units and nozzle holders

Aquamat[®] design "L 1200"

Weight: 7,8 kg

Aquamat[®] design "L 1800"

Weight: 10,3 kg

Nozzle holder "S"

for designs „L“ und „XL“
 up to 1500 bar
 for very small tank openings
 Weight: 1,3 kg

**Nozzle holder "V"**

For design „L“
 Up to 1800 bar
 Choice of nozzle arm lengths

**Nozzle holder "V"**

for designs „L“ und „XL“
 up to 1600 bar
 Choice of nozzle arm lengths,
 suitable for very large vessels

**HAMMELMANN[®]**

AQUAMAT®

Tank cleaning units and nozzle holders

Aquamat® design "XL"



Weight: 14,8 kg

Nozzle holder "L"

For design „XL“
Standard, up to 1000 bar



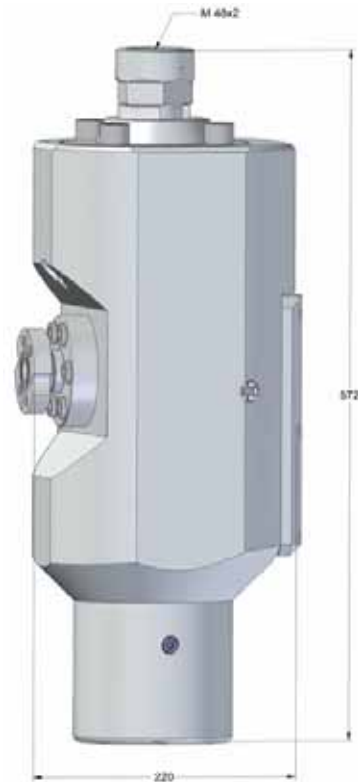
Nozzle holder "Z"

For design „XL“
Standard, up to 1000 bar
for small vessels



Nozzle holder "S" + „V“
(see page 16. A 1)

Aquamat® design "XXL"



Weight: 93 kg

Nozzle holder "Z"

For design „XXL“
up to 1600 bar



Tank cleaning units

Design "L" / nozzle holders

Basic unit (resistant to demineralised water) without nozzle holder

Design	Qty. of nozzles	max. operating pressure in bar	max. flow rate in l/min. at ΔP 10 bar	Code no.
L 1200	2	1200	150	09.00817.0001
L 1800	2	1800	150	00.01329.0002

Nozzle holder for nozzles type "A" (not included in price of tank cleaning unit)

Lever arm [mm]	Max. operating pressure in bar	Min. diameter ¹⁾ [mm]	Min. working space ²⁾ [mm]	Code no.	
13S	1800	150	150	00.01599.0393	
14V	1800	150	150	00.01599.0394	
18S	1200	120	140	00.01599.0308	
18S+	1200	--	--	00.01599.0314	
35S	1200	130	150	00.01599.0316	
35S+	1200	--	--	00.01599.0318	
56S	1000	150	190	00.01599.0320	
56S+	1000	--	--	00.01599.0200	
85S	1000	170	240	00.01599.0321	
18 V	Extension				
	without	1500	150	220	00.01599.0319
	110 mm	1500	150	360	00.01599.0309
	300 mm	1500	150	740	00.01599.0310
	500 mm	1500	150	1140	00.01599.0311
	750 mm	1500	150	1640	00.01599.0312
35 V	without	1500	170	250	00.01599.0322
	110 mm	1500	170	390	00.01599.0323
	300 mm	1500	170	750	00.01599.0324
	500 mm	1500	170	1150	00.01599.0325
	750 mm	1500	170	1650	00.01599.0326
	1000 mm	1500	170	2150	00.01599.0327
100 V	300 mm	1500	260	690	00.01599.0247

Nozzle holder for nozzles type "L" (not included in price of tank cleaning unit)

14V	1800	150	220	00.01599.0392
18S	1200	150	170	00.01599.0315

+ = Suitable for impact protection,

¹⁾ Min. diameter of tank orifice (manual deployment)

²⁾ Min. diameter of tank orifice (automatic deployment)
Dimensions with impact protection upon request.

Nozzle holder fitting	Code no.
Hexagon head screw	01.04750.0061
Washer	02.00440.0008

Special tool for mounting of:	Code no.
Magnet	01.06224.0032
Seal	01.06224.0076
Coupling	00.06224.0088

AQUAMAT[®]

Tank cleaning units

Design "L" / ancillary fittings

Extension lances for single nozzle holder type "V"			
Description	Code no.	Description	Code no.
Lance 110 mm	01.03559.0313	Cylinder ring	04.00742.0035
300 mm	01.03559.0314	Union nut, for nozzle type "A"	01.02833.0066
500 mm	01.03559.0315	Sleeve, for nozzle type "A"	00.01750.0426
750 mm	01.03559.0358	Union nut, for nozzle type "L"	01.02833.0080
1000 mm	01.03559.0330	Sleeve, for nozzle type "L"	00.01750.0461
2000 mm	01.03559.0332	Nozzle holder, for nozzle type "L" without extension lance	01.01599.0469
Lance in special length on request.		Banjo screw for nozzle type "L"	01.04732.0186
		Nipple, connection for the above mentioned lances (sealing by means of a. m. cylinder ring and sleeve)	01.02785.0063

Lance
110 mm



Double nipple with cylinder ring (not included in price of tank cleaning unit)		
Threaded connection	Max. operating pressure [bar]	Code no.
M 22 x 1,5 DKL (60°)	1040	08.13200.7002
M 24 x 1,5 DKO-S	1800	08.23200.9001
M 30 x 1,5 DKM	1620	08.15200.7002
M 36 x 2 DKO-S	1650	08.25200.9001
M 38 x 1,5 DKM	1000	08.16200.7002
M 42 x 2 DKO-S	950	08.26200.9001
Cylinder ring single	----	04.00742.0057

Selecting nozzle arm and speed see nomogram on the next page.

Denomination	Code no.
Swivelling pulling eye with a bore Ø 13 mm	00.06048.0015



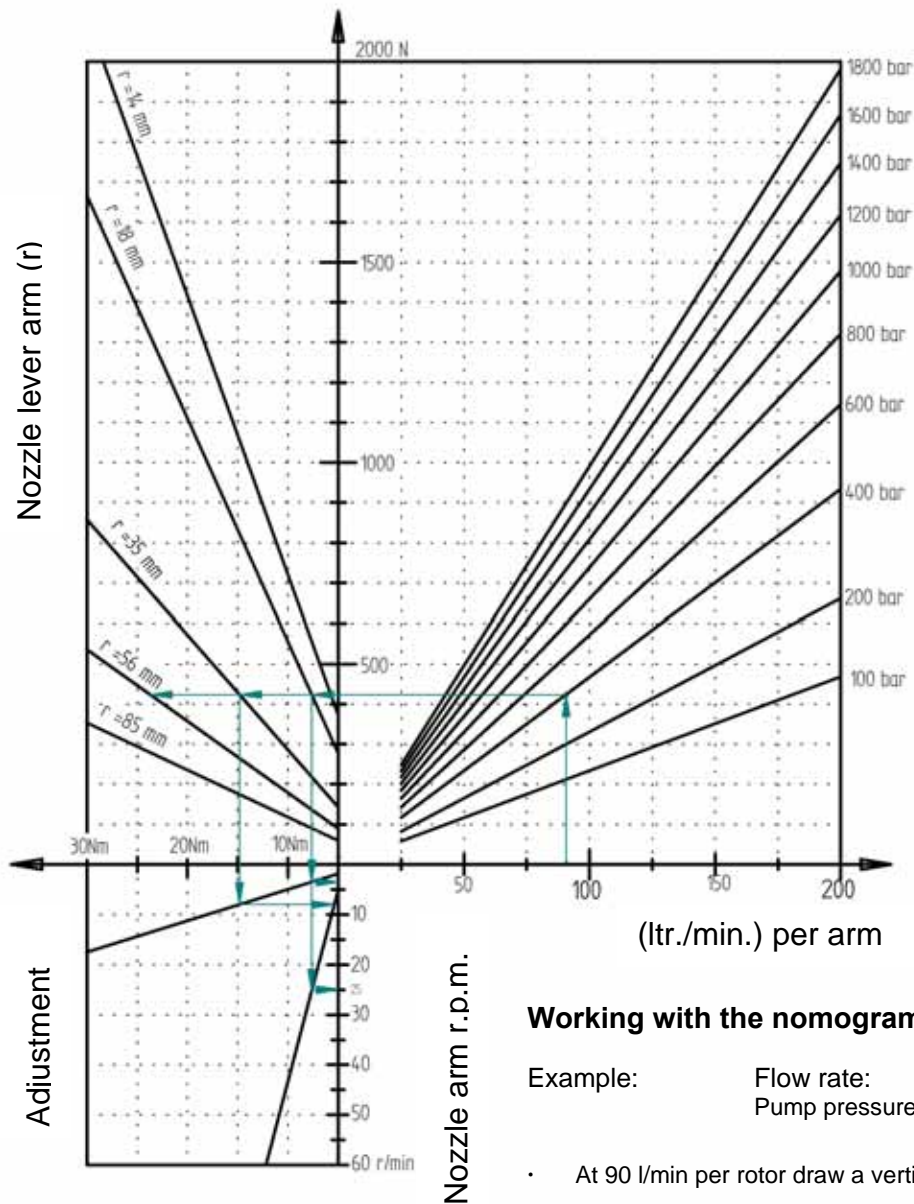
HAMMELMANN[®]

AQUAMAT®

Tank cleaning units

Designs "L 1200 and L 1800" / nomogram

Selecting nozzle arm and speed.

**Working with the nomogram:**

Example: Flow rate: 90 l/min.
 Pump pressure: 400 bar

- At 90 l/min per rotor draw a vertical line up to line 400 bar.
- From that point draw a horizontal line left, whereby the lever arms $r = 18 \text{ mm}$ and $r = 35 \text{ mm}$ are crossed.
- The vertical from this line shows the brake adjustment range. First you cross line "Brake max." (max. braking effect) and then the line "Brake min." (min. braking effect).
- Now draw a horizontal line to the r.p.m. line.
- You will see that the 35 mm lever offers a much wider range of rotation speed.
- At lever $r = 18 \text{ mm}$ the range of rotation speed is too small.
- At lever $r = 56 \text{ mm}$ the max. braking effect is too small.

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AQUAMAT[®]

Tank cleaning units

Design "XL"

Basic unit (resistant to demineralised water) without nozzle holder

Design	Qty. of nozzles	Max. operating pressure [bar]	Max. flow rate in l/min. at ΔP 10 bar	Code no.
XL 500-2	2	500	400	09.00814.0002
XL 500-4*	4	500	400	09.00814.0003
XL 1500-4*	4	1500	250	09.00815.0005
XL 1600-2	2	1600	250	09.00815.0003

*) Nozzle holder for 4 nozzles after consulting design appartement.

Chemical Industry Design without nozzle holder

Design	Qty. of nozzles	Max. operating pressure [bar]	Max. flow rate [l/min.]	Code no.
XL 500-2	2	500	400	09.00814.0001
XL 1200-2	2	1200	250	09.00815.0002

Nozzle holder for nozzles type "A" (not included in price of tank cleaning unit)

Lever arm [mm]	Max. operating pressure [bar]	Min. diameter ¹⁾ [mm] with		Min. working space ²⁾ [mm] with		Code no.	
		2 nozzles	4 nozzles	2 nozzles	4 nozzles		
13L	1000	170	200	400	415	00.01599.0354	
20L	1000	170	200	400	415	00.01599.0353	
35L	1000	170	200	400	415	00.01599.0352	
56L	1000	170	200	400	415	00.01599.0350	
85L	1000	170	200	400	415	00.01599.0351	
35S	1200	170	200	190	225	00.01599.0298	
56S	1000	190	225	210	415	00.01599.0357	
13Z	1000	170	200	250	250	00.01599.0358	
13Z+	1000	--	--	--	--	00.01599.0359	
20Z	1000	170	200	260	260	00.01599.0355	
20Z+	1000	--	--	--	--	00.01599.0360	
13 V	Extension						
	without	1600	180	220	260	270	00.01599.0334
	110 mm	1600	180	260	390	440	00.01599.0329
	300 mm	1600	180	--	740	--	00.01599.0330
	500 mm	1600	180	--	1140	--	00.01599.0331
	750 mm	1600	180	--	1640	--	00.01599.0332
20 V	without	1600	180	220	240	270	00.01599.0335
	110 mm	1600	180	300	370	440	00.01599.0336
	300 mm	1600	180	--	740	--	00.01599.0337
	500 mm	1600	180	--	1130	--	00.01599.0338
	750 mm	1600	180	--	1630	--	00.01599.0339
	1000 mm	1600	180	--	2130	--	00.01599.0340
35 V	without	1600	180	220	230	270	00.01599.0341
	110 mm	1600	180	300	360	440	00.01599.0343
	300 mm	1600	180	--	710	--	00.01599.0344
	500 mm	1600	180	--	1110	--	00.01599.0345
	750 mm	1600	180	--	1600	--	00.01599.0346
	1000 mm	1600	180	--	2100	--	00.01599.0347

HAMMELMANN[®]

Tank cleaning units Design "XL" / nozzle holders

By use of 4 nozzles		
Any nozzle holder for nozzles type "A" and additionally:	Max. operating pressure [bar]	Code no.
Nozzle holder straight (long design)	1000	00.01599.0113
Or nozzle holder straight (short design)	1200	00.01599.0119

Nozzle holder for nozzles type "A"				
For cleaning chimneys and vertical pipes (only with 4 nozzles and for TRG XL-4)!				
Lever arm [mm]	Max. operating pressure [bar]	Min. diameter ¹⁾ [mm] with 4 nozzles	Min. working space ²⁾ [mm] with 4 nozzles	Code no.
35 VK	1500	--	--	00.01599.0303 00.01599.0304

Nozzle holder for nozzles type "L" (not included in price of tank cleaning unit)						
Lever arm [mm]	Max. operating pressure [bar]	Min. diameter ¹⁾ [mm] with		Min. working space ²⁾ [mm] with		Code no.
		2 nozzles	4 nozzles	2 nozzles	4 nozzles	
35S	1500	170	--	190	--	00.01599.0297
35S+	1500	--	--	--	--	00.01599.0299
20Z	1000	160	--	310	--	00.01599.0362
20Z+	1000	--	--	--	--	00.01599.0361
13V without extension	1600	180	260	390	440	00.01599.0382
20V without extension	1600	180	260	390	440	00.01599.0383

+ = suitable for impact protection,

¹⁾ Min. diameter of tank orifice (at manual guidance)

²⁾ Min. diameter of tank orifice (at automatic guidance)
Measures by use of impact protection on request.


Nozzle holder fitting	Code no.
Hexagon head screw	01.04750.0061
Washer	01.04380.1075

Special tool for mounting of:	Code no.
Magnet	01.06224.0024
Seal	01.06224.0075
Coupling	00.06224.0087

AQUAMAT[®]

Tank cleaning units

Design "XL" / nozzle holders

Extension lances for single nozzle holder type "V"			
Description	Code no.	Description	Code no.
Lance 110 mm	01.03559.0313	Cylinder ring	04.00742.0035
300 mm	01.03559.0314	Union nut, for nozzle type "A"	01.02833.0066
500 mm	01.03559.0315	Sleeve, for nozzle type "A"	00.01750.0426
750 mm	01.03559.0358	Union nut, for nozzle type "L"	01.02833.0080
1000 mm	01.03559.0330	Sleeve, for nozzle type "L"	00.01750.0461
2000 mm	01.03559.0332	Nozzle holder, for nozzle type "L" without extension lance	01.01599.0469
Lance in special length on request.		Banjo screw for nozzle type "L"	01.04732.0186
		Nipple, connection for the above mentioned lances (sealing by means of a. m. cylinder ring and sleeve)	01.02785.0063

Lance
110 mm

Double nipple with cylinder ring (not included in price of tank cleaning unit)		
Threaded connection	Max. operating pressure [bar]	Code no.
M 22 x 1,5 DKL (60°)	1040	08.13200.7002
M 24 x 1,5 DKO-S	1800	08.23200.9001
M 30 x 1,5 DKM	1620	08.15200.7002
M 36 x 2 DKO-S	1650	08.25200.9001
M 38 x 1,5 DKM	1000	08.16200.7002
M 42 x 2 DKO-S	950	08.26200.9001
cylinder ring	----	04.00742.0057

Selecting nozzle arm and speed see nomogram on the next page.

Denomination	Code no.
Swivelling pulling eye with a bore \varnothing 13 mm.	00.06048.0019



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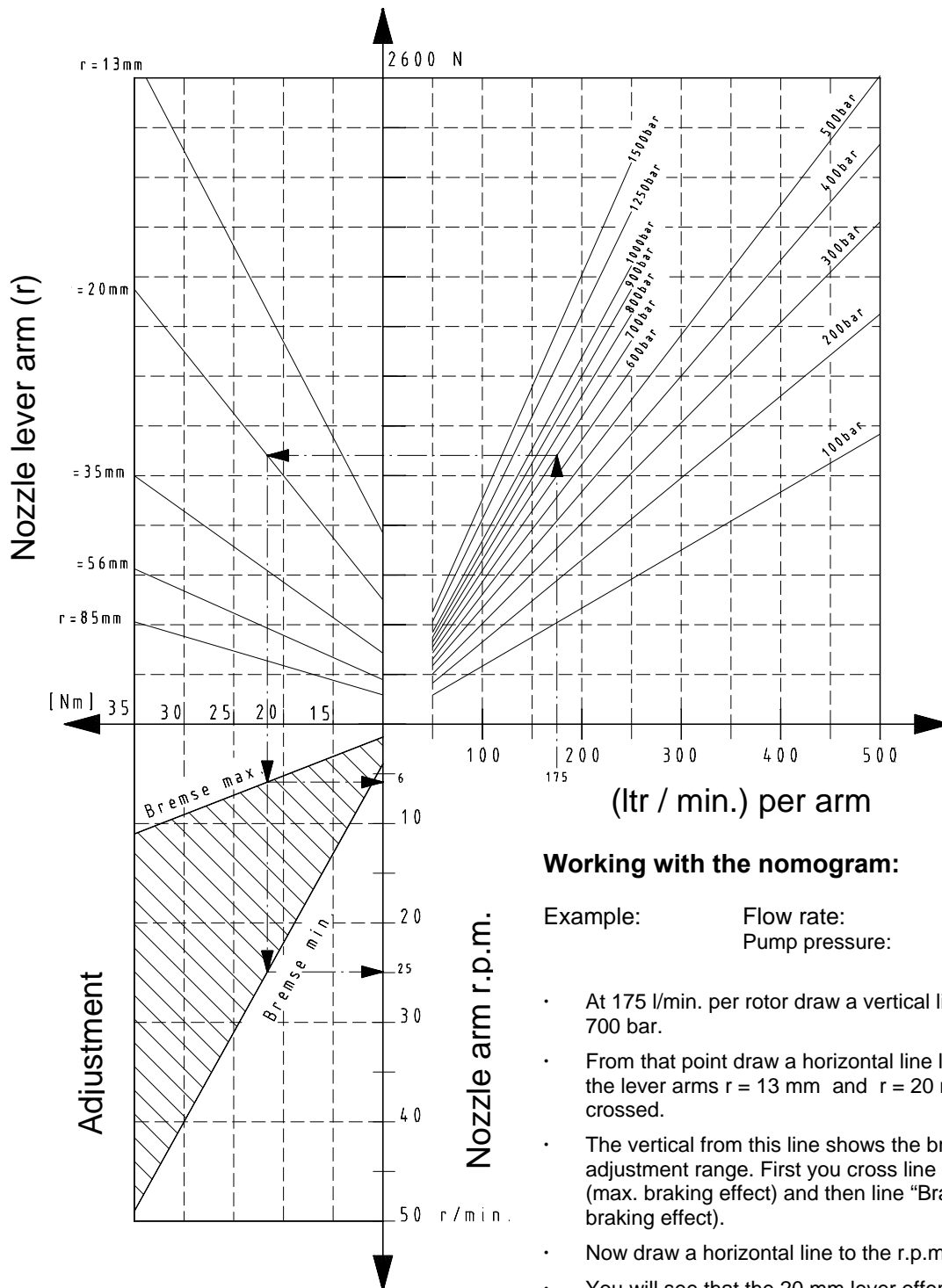
Aquamat[®]

Tank cleaning units

Design "XL" / nomogram

16.C.4 – 08/10

Selecting nozzle arm and speed

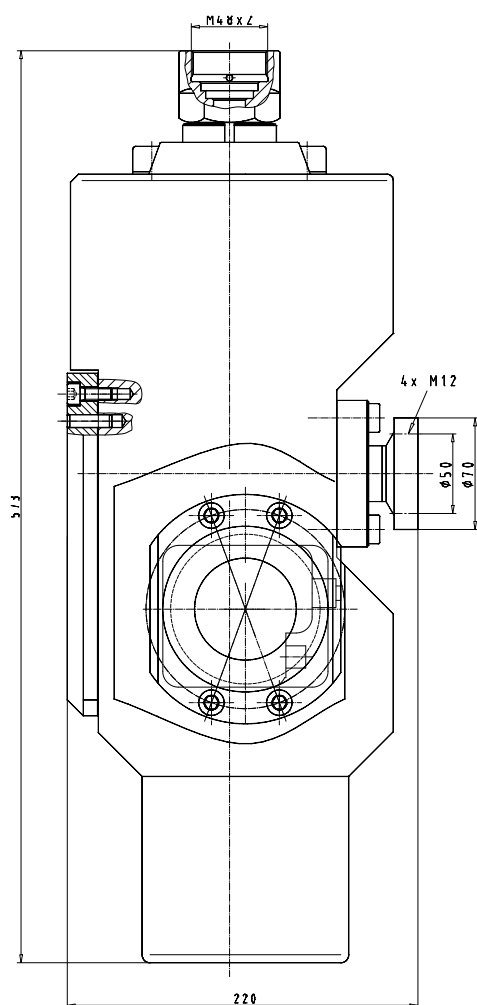


HAMMELMANN[®]

AQUAMAT®

Tank cleaning unit design XXL

The XXL automatic tank cleaning unit has been developed to remove particularly strong adhering, extremely hard scale build up from large tanks and vessels in aluminium refining plants.



Code no.
09.00818.0001

Technical data

Flow rate:	500 l/min
Op. pressure:	1600 bar
Qty. of nozzles:	2
Min. Tank access:	300 mm
Material:	stainless steel
Weight:	93 kg
Connection thread:	M 48 x 2

Nozzle holder for nozzle type „L“		
Lever arm [mm]	Max. op. pressure [bar]	Code no.
13 Z	1600	00.01599.0363
20 Z	1600	00.01599.0269
35 Z	1600	00.01599.0270
56 Z	1600	00.01599.0271

Accessories	Code no.
Suspension	00.00165.0012
Swivelling pulling eye with a bore Ø 13 mm.	00.06048.0021

Special tool for mounting of:	Code no.
Magnet	01.06224.0024

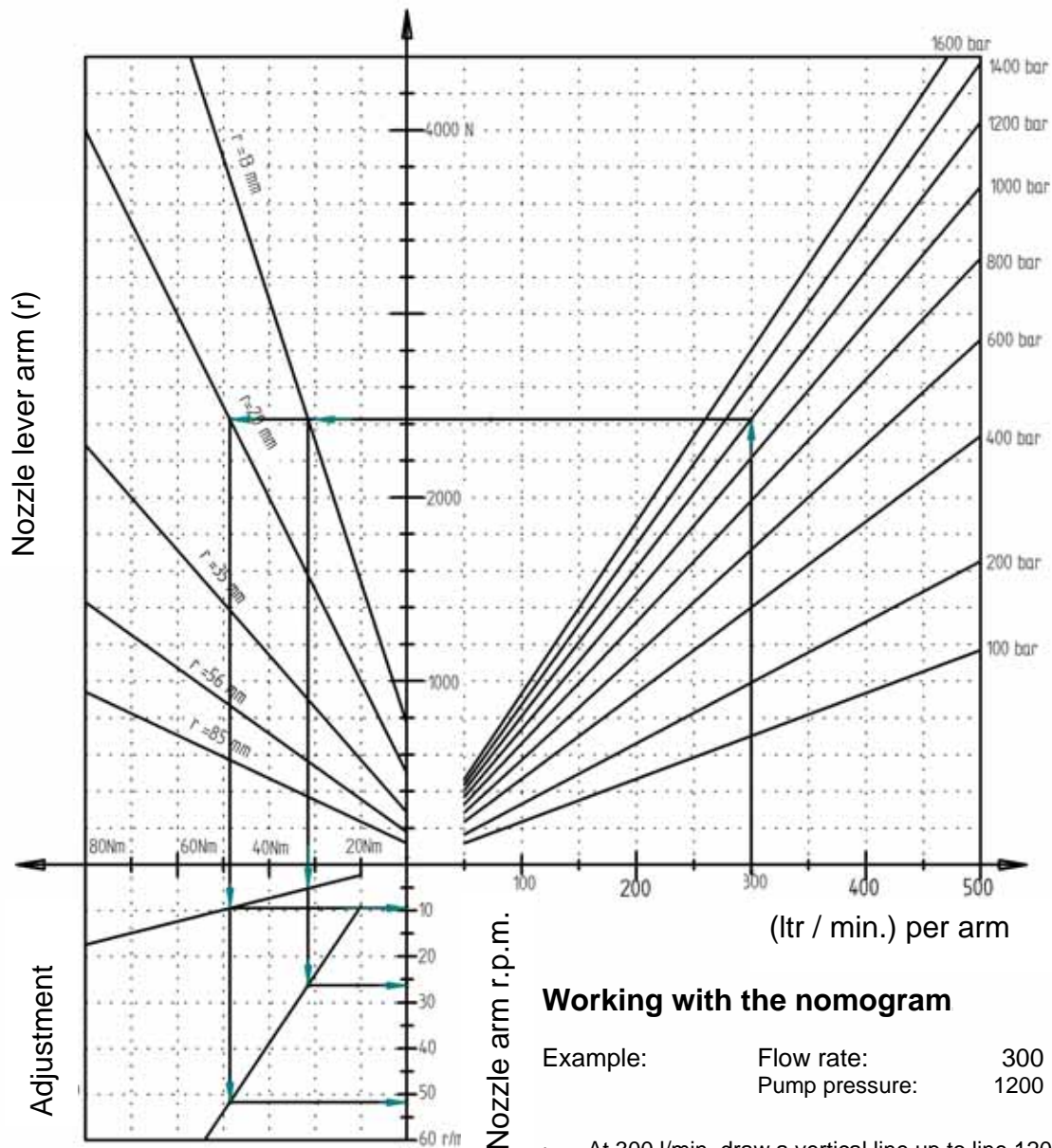
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Aquamat[®]

Tank cleaning units

Design "XXL" / nomogram

16.D.2 – 08/10



Working with the nomogram

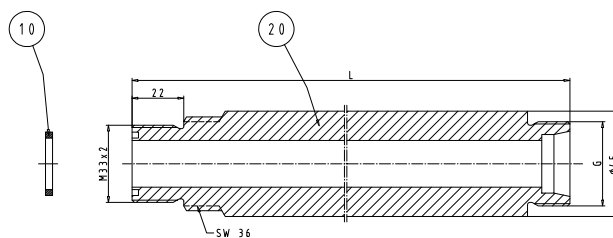
Example: Flow rate: 300 l/min.
Pump pressure: 1200 bar

- At 300 l/min. draw a vertical line up to line 1200 bar.
- From that point draw a horizontal line left, whereby the lever arms $r = 13$ mm and $r = 20$ mm are crossed.
- The vertical from this line shows the brake adjustment range. First you cross line "Brake max." (max. braking effect) and then line "Brake min." (min. braking effect).
- Now draw a horizontal line to the r.p.m. line.
- You will see that the 20 mm lever offers a much wider range of rotation speed so in this case the 20 mm lever arm should be selected.
- At lever $r = 13$ mm the range of rotation speed is too small.
- At lever $r = 35$ mm the max. braking effect (80 Nm) is too small.

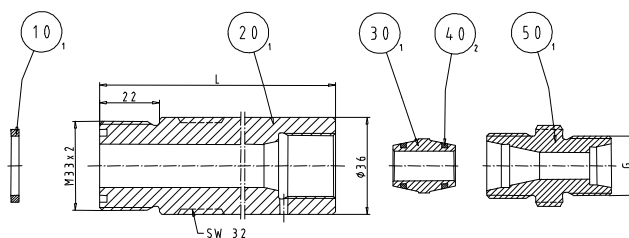
HAMMELMANN[®]

High pressure lances up to 1600 bar

Rigid connection between tank cleaning, rotorjet, nozzle holder etc. and high pressure hose.



For maximal 480 bar operating pressure				
Threaded connection G	Length [mm]	Pos. 10	Pos. 20	Code no.
		Cylinder ring	Deployment pipe	
M 36 x 2 DKO-S	1000	04.00742.0057	01.03559.0259	08.02046.1101
	2000		01.03559.0260	08.04046.1101
	3000		01.03559.0261	08.06046.1101
	4000		01.03559.0262	08.08046.1101
	5000		01.03559.0263	08.10046.1101
M 42 x 2 DKO-S	1000		01.03559.0253	08.02048.1101
	2000		01.03559.0264	08.04048.1101
	3000		01.03559.0265	08.06048.1101
	4000		01.03559.0266	08.08048.1101
	5000		01.03559.0267	08.10048.1101



For maximal 1000 bar operating pressure							
Threaded connection G	Length [mm]	Pos. 10	Pos. 20	Pos. 30	Pos. 40	Pos. 50	Code no.
		Cylinder ring	Lance	Seal cone	O ring	Connector	
M 22 x 1,5 DKO-S	1000	04.00742.0057	01.03559.0241	01.01946.0009	04.00730.0052 (2 pieces)	01.02981.0284	08.02042.1001
	2000		01.03559.0244				08.04042.1001
	3000		01.03559.0268				08.06042.1001
	4000		01.03559.0269				08.08042.1001
	5000		01.03559.0270				08.10042.1001
M 24 x 1,5 DKO-S	1000		01.03559.0241			08.02044.1001	
	2000		01.03559.0244			08.04044.1001	
	3000		01.03559.0268			08.06044.1001	
	4000		01.03559.0269			08.08044.1001	
	5000		01.03559.0270			08.10044.1001	
M 36 x 2 DKO-S	1000		01.03559.0241			08.02046.1001	
	2000		01.03559.0244			08.04046.1001	
	3000		01.03559.0268			08.06046.1001	
	4000		01.03559.0269			08.08046.1001	
	5000		01.03559.0270			08.10046.1001	



High pressure lances up to 1600 bar

16.E.2 – 08/10

Rigid connection between tank cleaning, rotorjet, nozzle holder etc. and high pressure hose.

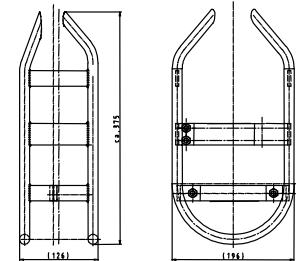


DN15 / For maximal 1600 bar operating pressure			
Threaded connection G	Length [mm]	Cylinder ring	Code no.
M 36 x 2 DKO-S	500	04.00742.0004	01.03559.0489
	1000		01.03559.0490
	1500		01.03559.0464
	2000		01.03559.0511
	3000		01.03559.0425

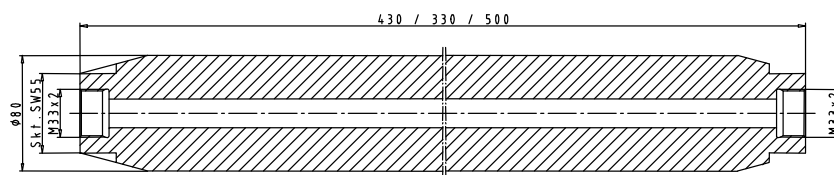
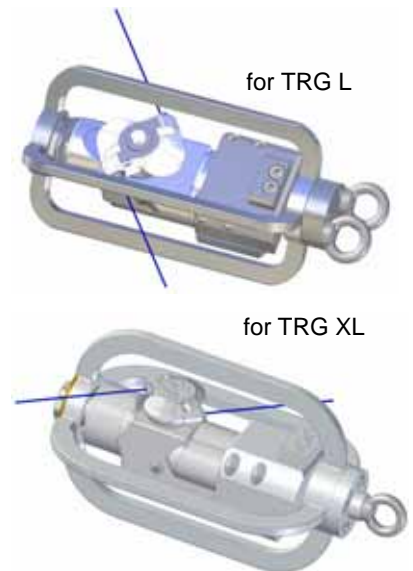
HAMMELMANN[®]

Accessories for tank cleaning units "L / XL"

Protective cage for type "XL"	Code no.
Manufactured from rust and acid resistant stainless steel with rubber coated frame sections. Offers all round protection when fitted with type "Z" and "S" nozzle arms. An impact absorbing cover for the arm is recommended (available on request).	08.00810.0007
As above but <u>without</u> rubber coating	08.00810.0006
Protective cage for type "L"	
As above but <u>without</u> rubber coating	08.00810.0010
Only useable with nozzle holder 18S and 35S!	



Guide 1)	
To convert tank cleaning unit to a pipe cleaning unit. The TCU is fixed in the centre of the guide. Fitted with an added pulling eye. Kick plate for self propulsion available upon request.	
for TCU "L-1200" pipes id > 200 mm (only for nozzle holder 35 S, as well as 18 S, length: 400 mm, width: 190 mm)	08.00810.0009
for TCU "L-1800" pipes id > 200 mm (only for nozzle holder 13 S, 18 S and 35 S, length: 400 mm, width: 190 mm)	00.04631.0012
for TCU "XL" pipes id > 320 mm (only for nozzle holder 35 S, as well as DH 13 V, 20 V, 35 V but without extension)	08.00810.0008



Deployment pipe for TCU "L / XL"	Code no.
To stabilise the TCU. Recommended for units that are freely suspended on a hose with the brake adjusted to maximum (max. 1000 bar).	
standard design	approx. 14 kg, 430 mm
for smaller space	approx. 11 kg, 330 mm
for larger space	approx. 16 kg, 500 mm
(Nipple between TCU and connection pipe 01.02978.0121, with 2 cylinder rings code no. 04.00742.0057).	
	01.03537.0072
	01.03537.0073
	01.03537.0074

1) When ordering please check with technical department. Guides must be individually sized.



Accessories for tank cleaning units "L / XL"

Protection for tank cleaning units and nozzle holders Material: shock resistant plastic	Code no.
Protection for L tank cleaning unit One nozzle holder: 18S	08.00810.1001
Protection for L tank cleaning unit One nozzle holder: 18S (for nozzle Type "L")	00.04870.0053
Protection for L tank cleaning unit One nozzle holder: 35S	08.00810.1006
Protection for L tank cleaning unit One nozzle holder: 56S	08.00810.1002
Protection for XL tank cleaning unit One nozzle holder: 13Z	00.04870.0052
Protection for XL tank cleaning unit One nozzle holder: 20Z	08.00810.1003
Protection for XL tank cleaning unit (4 nozzles) One nozzle holder: 20Z + One nozzle holder without lever arm	08.00810.1004
Protection for XL tank cleaning unit One nozzle holder: 35S	08.00810.1007
Protection for XL tank cleaning unit One nozzle holder: 56S	00.04870.0060

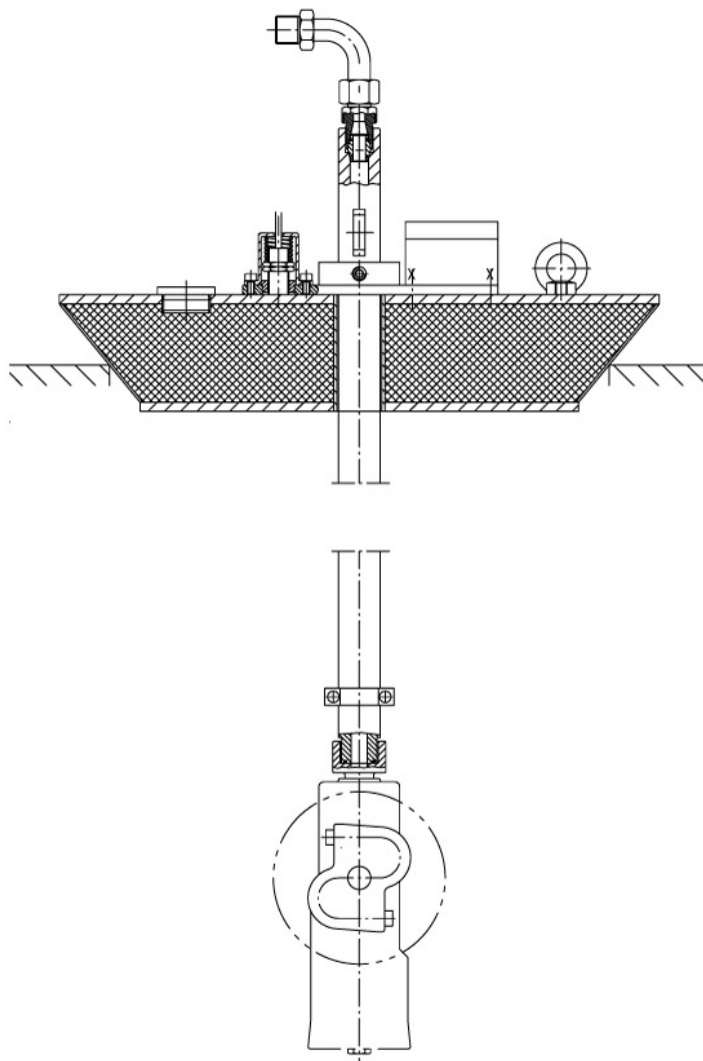
Protection for other nozzle holder arms on request.



Example:
Code No. 08.00810.1002

Tank cleaning devices - Lance system -

16.G.1 – 08/10



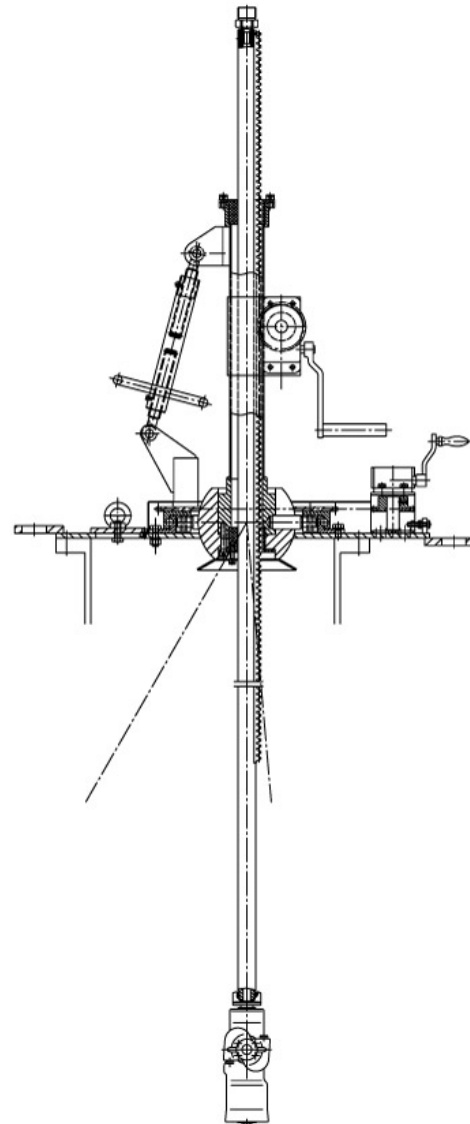
Tank cleaning device	Code no.
<p>for automatic internal EURO-Container cleaning, comprising:</p> <ul style="list-style-type: none">• Manhole cover with safety control,• High pressure lance with connection for high pressure hose and tank cleaning unit. <p>The device is lowered into the EURO container opening. It centres itself due to its own weight. The TCD is fixed in the centre of the container.</p> <p>The price does not include the tank cleaning unit.</p> <p>Tank shut off devices for high pressure water are not standard components for the tank cleaning devices and must be individually selected.</p> <p>The tank cleaning device is built to customer's requirements.</p>	<p>09.00801.0050</p>

HAMMELMANN[®]

Tank cleaning devices

- Lance system -

16.G.2 – 08/10



Tank cleaning device

for semiautomatic internal cleaning of tanks, comprising:

- Manhole cover with pivot and tilting device (cover in accordance with customer requirements)
- High pressure lance max. 3000 mm.

The lance is deployed into and retracted out of the tank by means of a manual rack and pinion. The device can be deployed both vertically and horizontally!

The tilting angle – max. 30° – is set via an adjusting spindle. The telescope can be turned 360° around its axis so each point of the tank wall can be reached.

The price does not include the tank cleaning unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

Code no.

09.00801.0076

HAMMELMANN®

Tank cleaning devices

- Lance hose system -



Tank cleaning device

for semiautomatic internal cleaning of tanks, comprising:

- Connection cover pivot and tilting device (cover in accordance with customer requirements)
- 4 plug in elements, each element approx. 1000 mm long (extension with 3 elements possible).

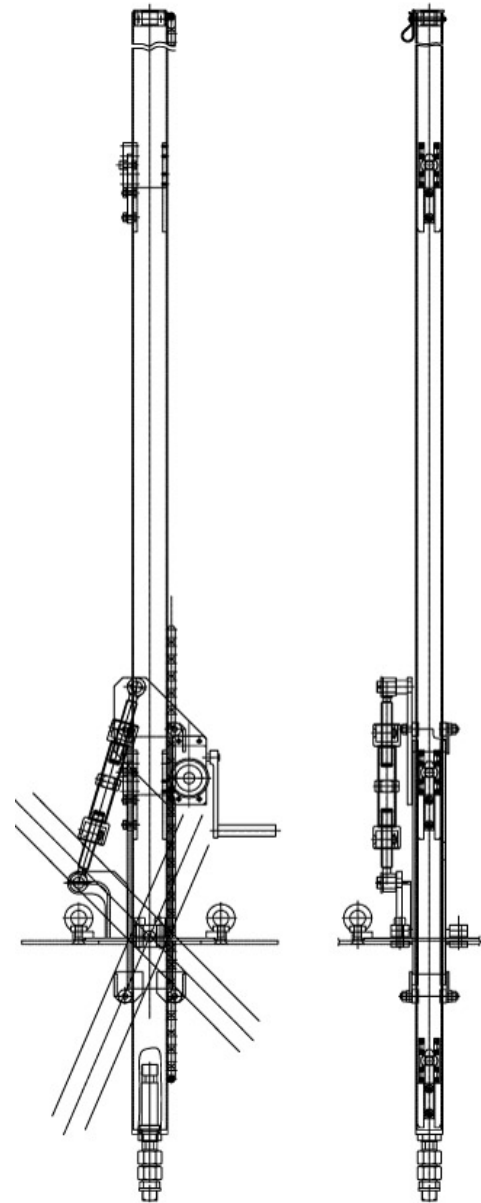
The plug in elements containing the HP hoses are wound into or out of the tank by a manual chain drive. The plug in elements are connected to each other by a simple mechanical action. The device can be deployed both vertically and horizontally!

The tilting angle – max. 30° – is set via an adjusting spindle. The telescope can be turned 360° around its axis so each point of the tank wall can be reached.

The price does not include the tank cleaning unit and manhole cover.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.



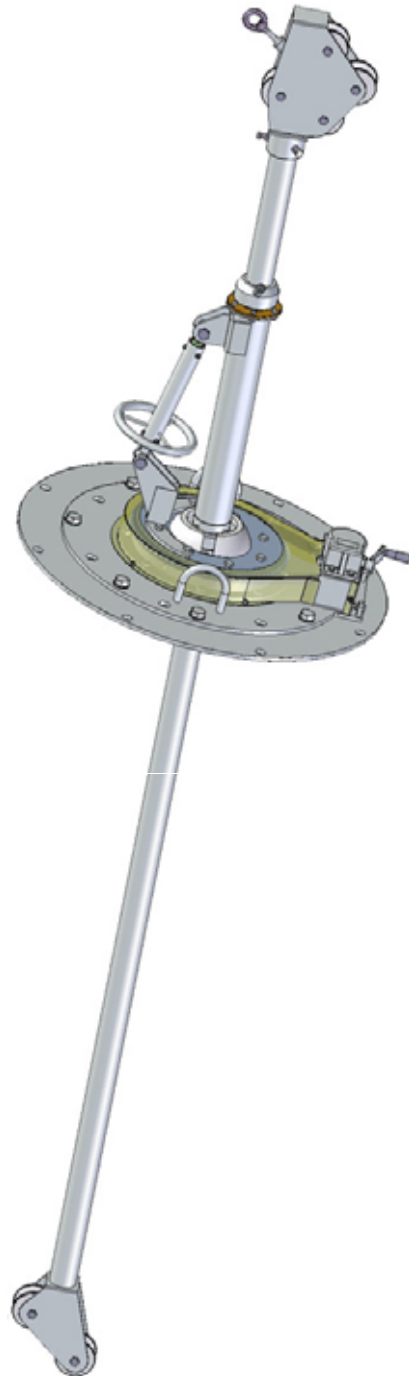
Code no.

09.00800.0090

HAMMELMANN®

Tank cleaning devices - Lance hose system -

16.G.4 – 08/10



Tank cleaning device

for semiautomatic internal cleaning of tanks,
comprising:

- Manhole cover pivot and tilting device
(cover in accordance with customer requirements),
- Hose guide tube with clamping device, 3000 mm long.

The cleaning position is adjusted by manually pushing in or pulling out the guide tube. The hose is extended manually until the required cleaning position is reached and then it is clamped.

The tilting angle – max. 30° – is set via an adjusting spindle. The telescope can be turned 360° around its axis so each point of the tank wall can be reached.

The price does not include the tank cleaning unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

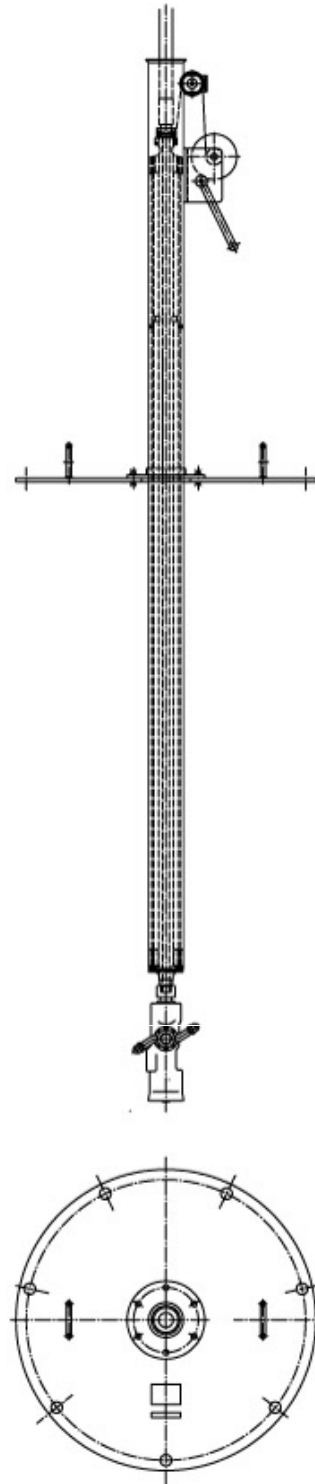
Code no.

09.00800.0107

HAMMELMANN®

Tank cleaning devices

- Lance system -



Tank cleaning device

for semiautomatic internal cleaning of tanks, comprising:

- Manhole cover, (cover in accordance with customer requirements)
- 4 stage telescope, max. stroke 6000 mm,

When the winch is unwound the telescope extends into the tank under its own weight.

The device is not suitable for horizontal use!

The price does not include the tank cleaning unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

Code no.

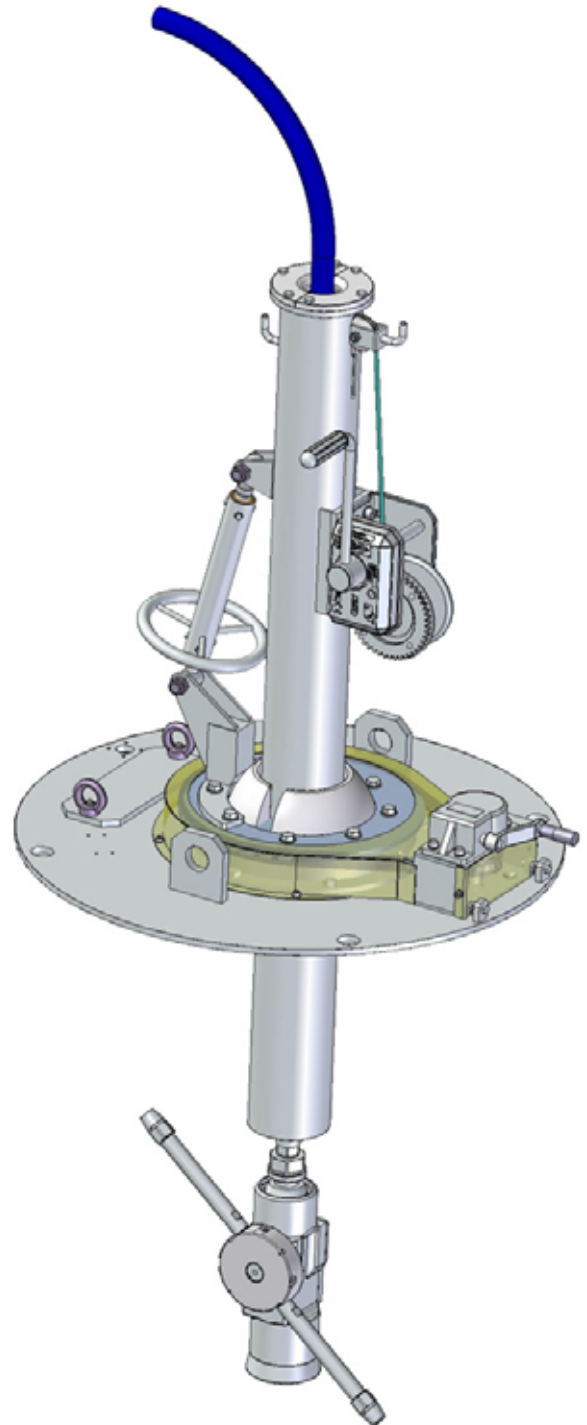
09.00800.0071

HAMMELMANN®

Tank cleaning devices

- Lance system -

16.G.6 – 08/10



Tank cleaning device

for semiautomatic internal cleaning of tanks, comprising:

- Manhole cover pivot and tilting device, (cover in accordance with customer requirements)
- 4 stage telescope, max. stroke 6000 mm.

When the winch is unwound the telescope extends into the tank under its own weight. The tilting angle - max. 30° - is set via an adjusting spindle. The telescope can be turned 360° around its axis so each point of the tank wall can be reached.

The device is not suitable for horizontal use!

The price for the standard design with man hole cover plate, ø 500 mm and stroke, 4000 mm does not include the tank cleaning unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

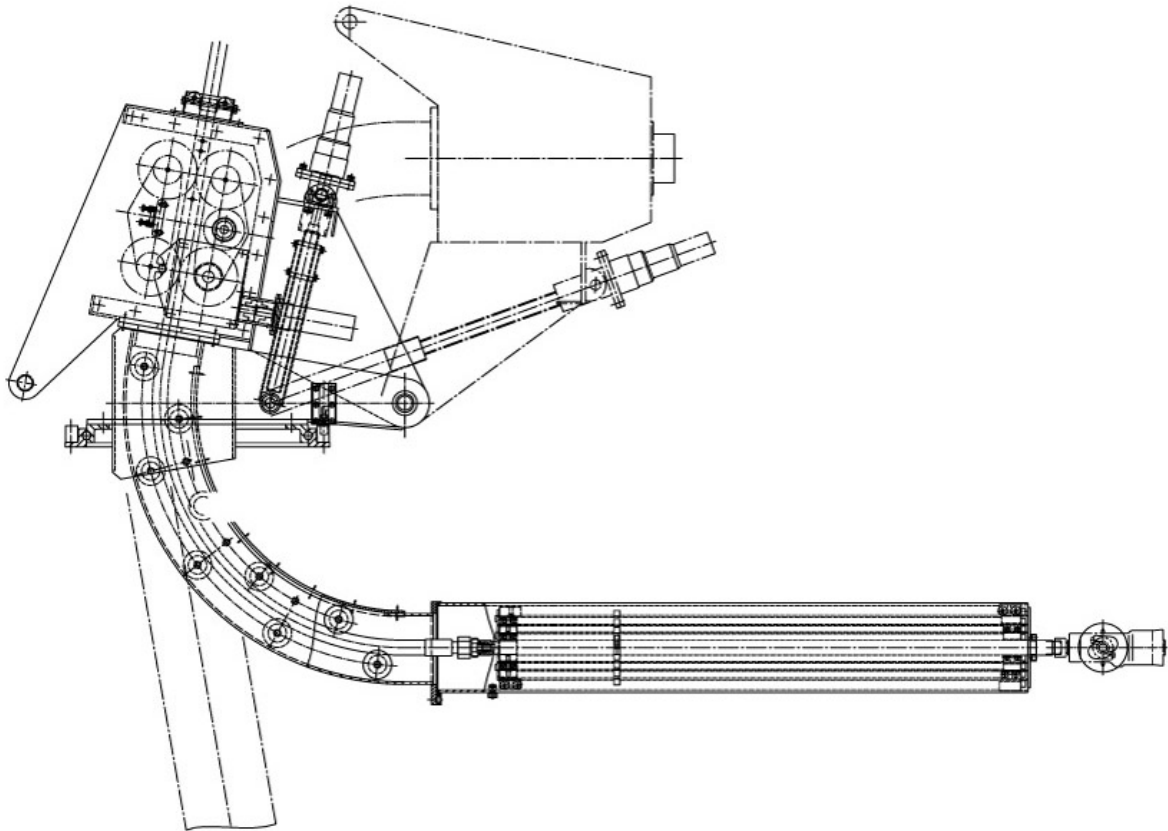
Code no.	
max. 1000 bar	00.06035.0438
max. 1400 bar	00.06035.0408

HAMMELMANN®

Tank cleaning devices

- Lance system -

16.G.7 – 08/10

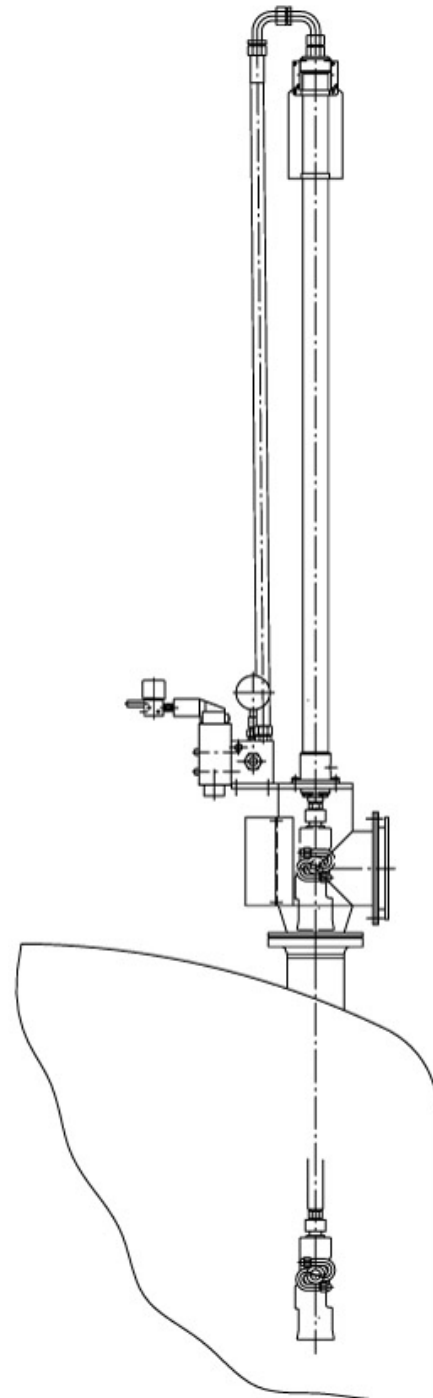


Tank cleaning device	Code No.
<p>for semiautomatic internal cleaning of rail tankers, comprising:</p> <ul style="list-style-type: none"> • Mounting flange with turntable (mild steel primed and painted). • Telescopic device chain, worm gear and pneumatic motor. The extension stroke is 3750 mm giving a total length of 6000 mm. • Slewing angle adjusting unit with pneumatic drive to position the telescope. <p>An external air supply of approx. 63 m³/hr. at 7 to 8 bar is necessary.</p> <p>Many cleaning positions can be achieved using the portable remote control. The slewing angle and length of extension are indicated by markings on the housing and on the hp hose.</p> <p>The price does not include tank cleaning unit.</p> <p>The tank and pipe cleaning device is built to customer's requirements.</p>	<p>09.00800.0089</p>
<p>Tank cleaning device</p> <p>as described above but with control system to automate the internal cleaning of rail tankers.</p>	<p>09.00800.0033</p>

HAMMELMANN®

Tank cleaning devices

- Lance system - (automatic)



Tank cleaning device

for automatic internal cleaning of tanks, comprising:

- Double acting stroke cylinder with signal for park position,
- Control block with shut-off valve,
- Park housing for tank cleaning unit with flange and maintenance access (flange dimensions in accordance with customer requirements).

Stroke length: up to 2000 mm

Stroke cylinder: single stage

Operating pressure: max. 400 bar

Extension of the lance via high pressure water.

Retraction of the lance via compressed air.

The price does not include tank cleaning unit and electric control.

The tank and pipe cleaning device is built to customer's requirements.

Code no.

09.00800.0053

HAMMELMANN®

Tank cleaning device

- Lance system - (automatic)

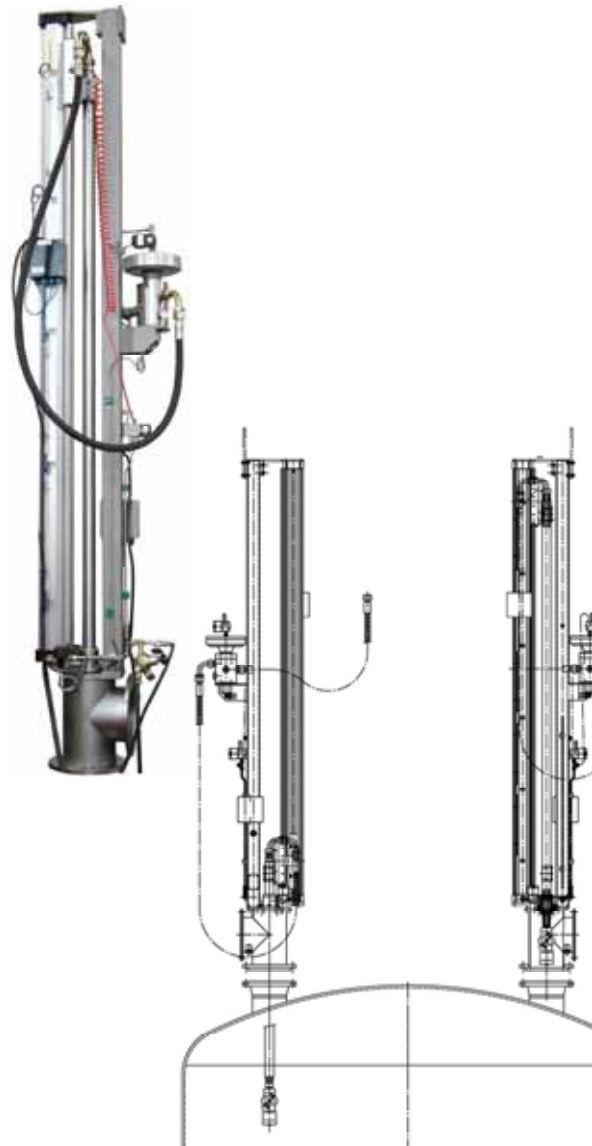
Twin lance reactor cleaning system

for automatic internal cleaning of tanks, comprising:

- **2 x park (for the tank cleaning head) housing**
200 mm i/d manufactured from rust and acid resistant stainless steel with integrated sight glass / access cover and an ANSI or DIN standard (200 mm) flange to mount to the reactor. The park housing also serves as the mounting base for the pneumatic lance drive assembly and the associated support framework. Larger flange diameters and pressure/gas tight designs are available.
- **2 x support framework** for the lance drive assembly manufactured from stainless steel. An upper fastening method must be provided by the client for this vertical structure.
- **2 x lance drive assembly**
Up to 6000 mm stroke, pneumatic cylinder of suitable diameter in "piston rod free" design with carrier for the high pressure lance and tank cleaning head. It includes pneumatic solenoid valves to control the deployment / retraction actions and throttle valves to control the speed of the actions. An integral "stop lock" brake device prevents accidental or uncontrolled deployment action of the cylinder. Also incorporates a set of proximity switches in explosion proof design, mounted (adjustable) in (reactor cleaning) positions as required by the client on the stroke cylinder of the pneumatic lance drive assembly and 2 installed as upper and lower end limit monitors.
or above 6000 mm stroke, chain drive powered by a geared electric motor to control the deployment/retraction/stop actions and with impulse counter transmitter to control tank cleaning head positioning within the reactor.
- **2 x high pressure water lance** 20 mm i/d, length as necessary manufactured from rust and acid resistant stainless steel complete with threaded connections for a high pressure hose and a tank cleaning head. Park position is monitored by a limit switch.
- **2 x pneumatic 2/2 way high pressure water valve** acting as pressure ON / OFF valve, 1000 bar max. operating pressure, 300 l/min. max. flow rate Includes connections for high pressure water hoses and optional pressure gauge or pressure transmitter. Equipped with 3/2 way pneumatic control valve with explosion proof (E Ex em II T 6) 24 V solenoid and 2 off 24 V, Exi proximity switches.
- **2 x high pressure water hose** 20 mm i/d. 900 bar max. operating pressure with M36 union nut fitted both ends. length selected to allow torsion free movement without snagging support or surrounding structures.

The system is designed to be operated by PLC control with or without a local control panel. Cleaning positions and timings to be selected by the client. Non pressure/gas tight units require a client installed shut off valve between the reactor flange and the park housing.

NB: The Tank Cleaning Head and electronic control unit are not included in the price and must specified separately.



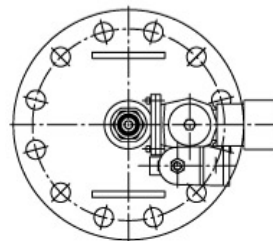
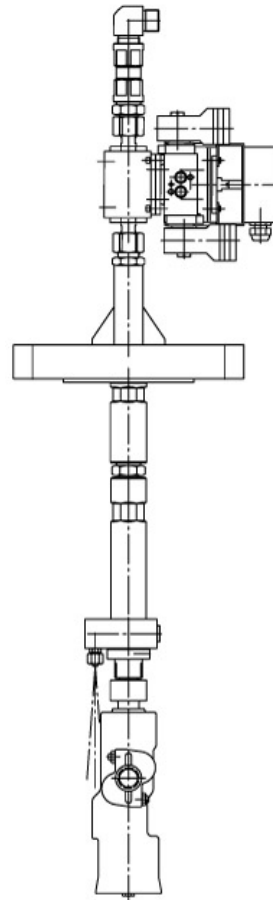
Code no.

09.00800.0113

HAMMELMANN®

Tank cleaning device

- Lance system - gastight (automatic)



Tank cleaning device

for automatic internal tank cleaning, comprising:

- Connection flange with high pressure lance pipe (flange dimensions in accordance with customer requirements).
- Water connection with additional adjustable fan jet nozzle to enable external cleaning of the Tank Cleaning Device. This will require approx. 10 l/min of the high pressure water flow.
- Non return valve installed between the lance and the TCD external cleaning.
- 2/2 way high pressure ball valve actuated by pneumatic servo drive (5 bar air pressure required).

The price does not include tank cleaning unit and electric control.

The tank and pipe cleaning device is built to customer's requirements.

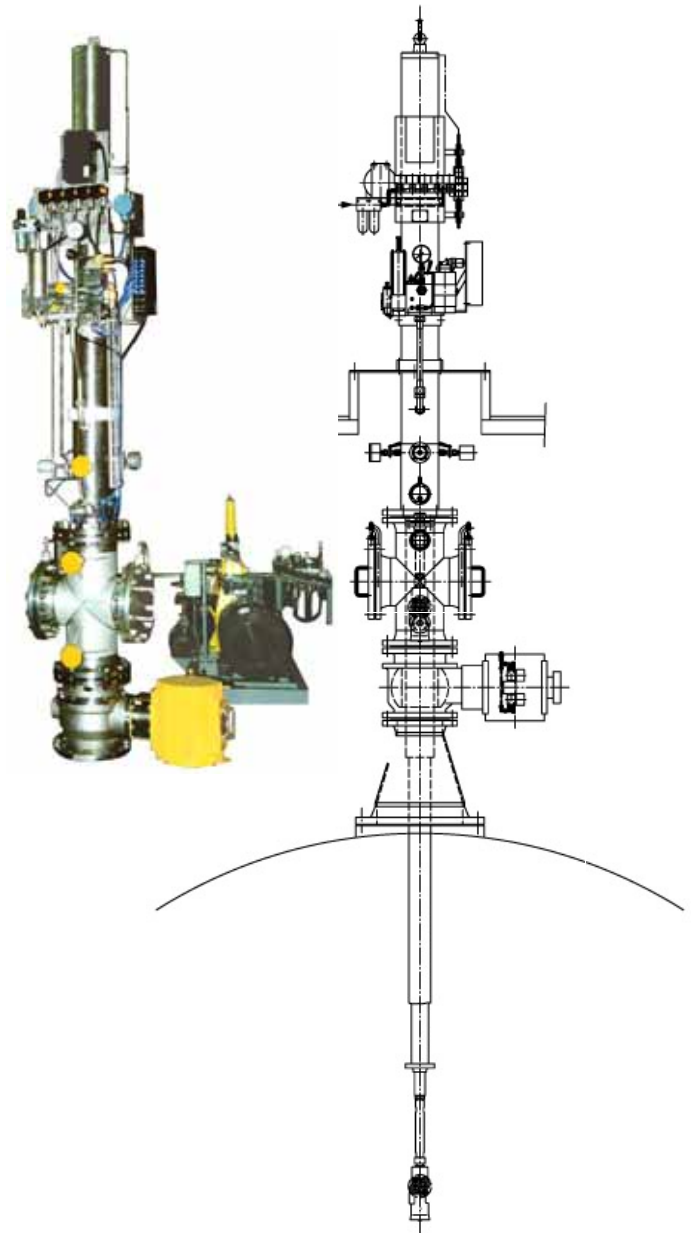
Code no.

09.00801.0043

HAMMELMANN®

Tank cleaning device

- Lance system – gastight (automatic)



Tank cleaning device

for automatic internal tank cleaning, comprising:

- All stainless steel, four stage telescope cylinder,. Stroke max. 7500 mm, operating pressure max. 400 bar, output max. 300 l/min.
- Stroke indicator to determine the positions of the tank cleaning unit in the tank.
- High pressure control block with necessary valves to control the high pressure cylinders via high pressure water.
- Two double acting cylinders to lock the telescope in park position.
- Park housing DN 250 PN 25 with two access flanges for maintenance purposes.
- Flange for safety valve and injection of barrier medium (nitrogen).
- Safety valve to protect the park housing.
- Ball valve between park housing and reactor (tank) ID 250/200 PN 25, with metallic sealing, leakage rate 2 to DIN 3320 with double acting pneumatic drive and necessary solenoid valves.

The cleaning device is driven by high pressure water. The cleaning is fully automatic via free programmable control computer.

The price does not include tank cleaning unit and electric control unit.

The telescopic tank cleaning device is built to customer's requirements.

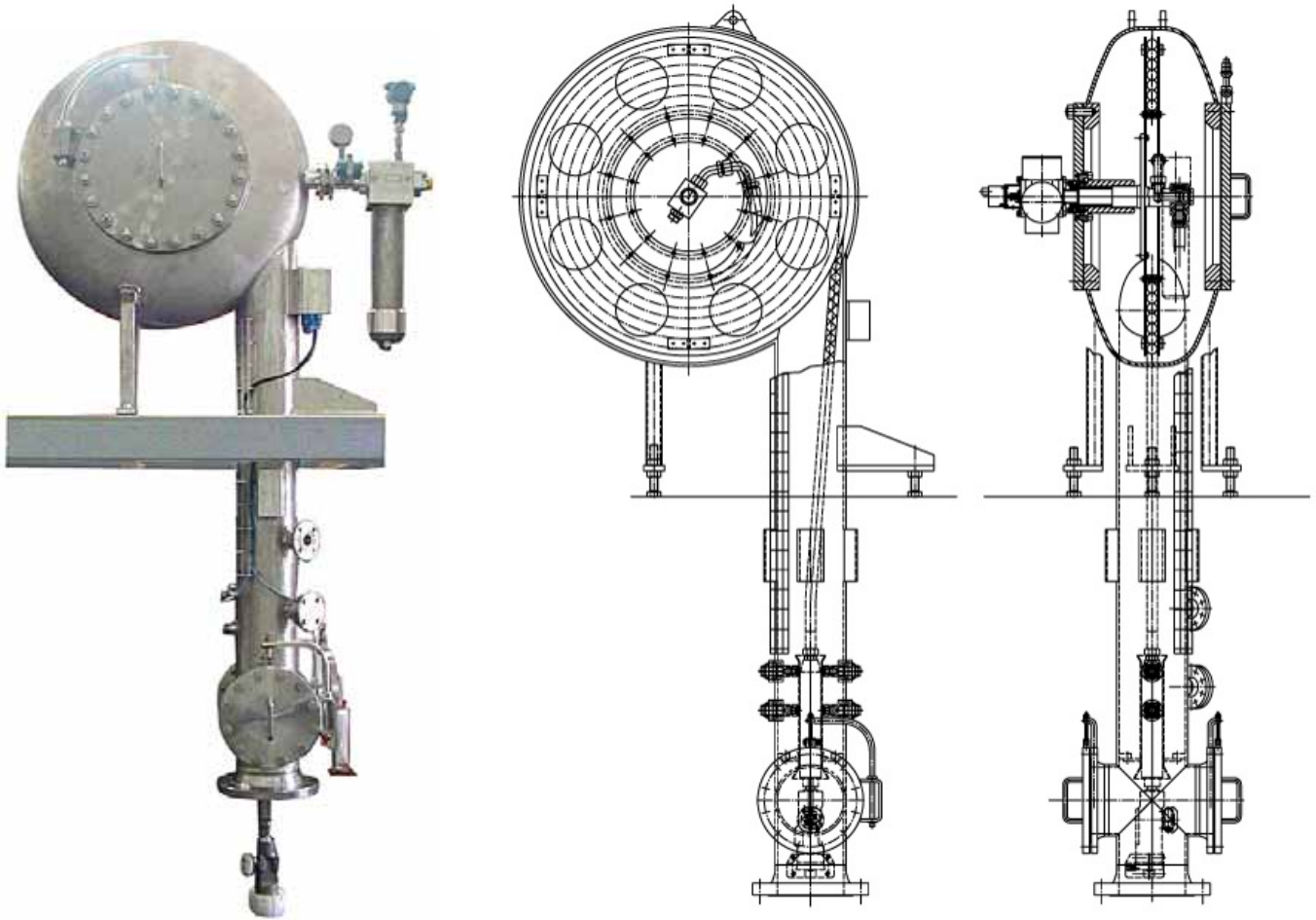
Code no.

09.00800.0039

HAMMELMANN®

Tank cleaning devices

- Reel system - gastight (automatic)



Tank cleaning device

for automatic internal tank cleaning, comprising:

- Hose reel for 20 m of 25 mm ID high pressure hose driven by an explosion proof gear motor with electric brake,
- Installed in a pressure resistant housing, 14 bar g, 1 bar vacuum, two access hatches for tank cleaning unit maintenance and one access hatch for hose reel maintenance,
- 20 m high pressure hose with stainless steel fittings,
- Proximity switches to control the cleaning sequence.

The cleaning program is fully automatic via free programmable computer with frequency converter for the reel motor.

The price does not include tank cleaning unit and electric control unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

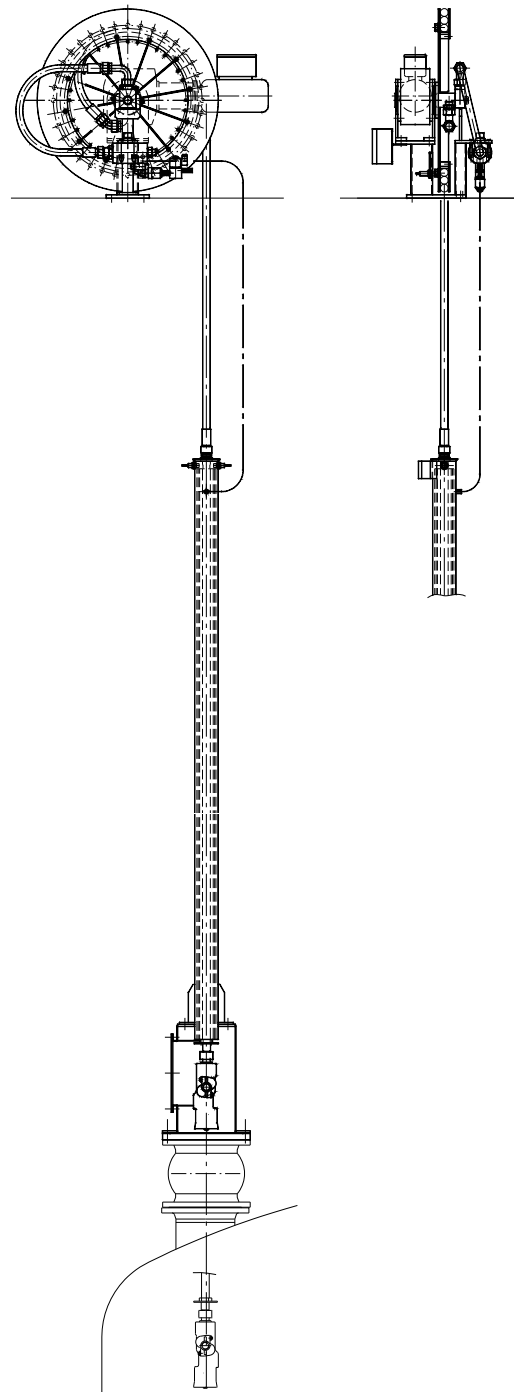
Code no.

09.00803.0041

HAMMELMANN®

Tank cleaning devices - Reel / lance system

16.H.2 – 09/09



Tank cleaning device

for automatic internal tank cleaning, comprising:

- Hose reel for with explosion proof electric drive with self controlling gear motor,
- 4 stage telescopic lance connected to the hose reel by high pressure hose,
- Changeover valve,
- Park housing with flange.

The telescope and park housing are stainless steel. The telescope extends under its own weight when the hose reel is wound out. The stroke is defined via an impulse counter.

The price does not include tank cleaning unit and electric control unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

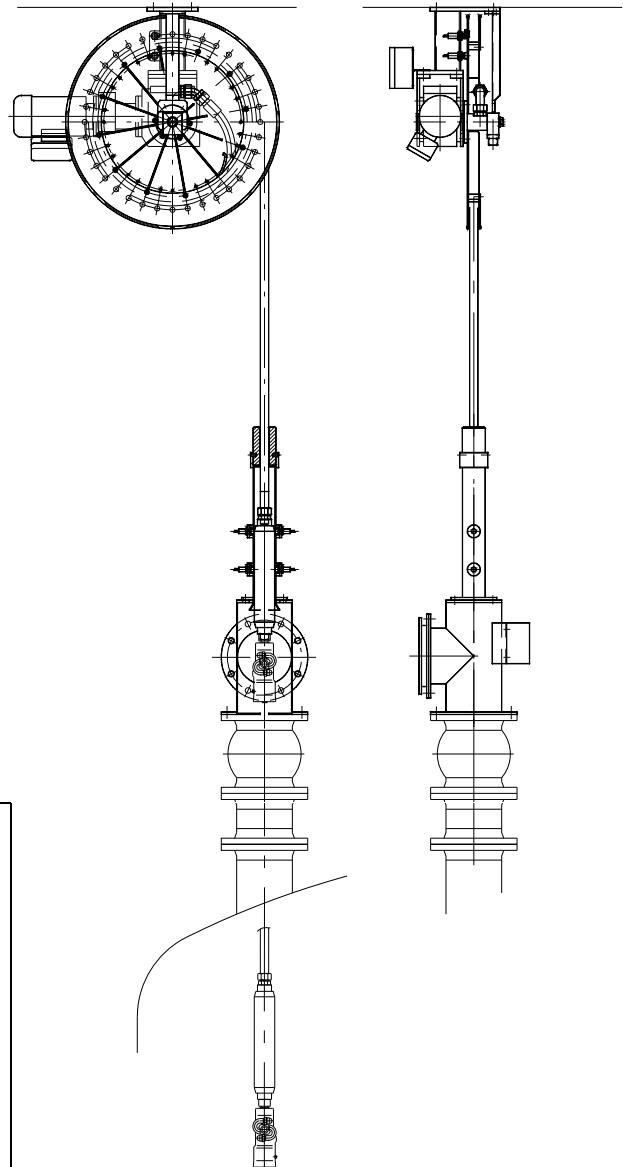
Code no.

09.00803.0072

HAMMELMANN®

Tank cleaning device - Reel system -

16.H.3 – 09/09



Tank cleaning device

for automatic internal tank cleaning, comprising:

- Hose reel for with explosion proof electric drive with self controlling gear motor,
- Park housing with flange and guide tube (flange dimensions according customer's details),
- Connection pipe.

The stroke is defined via an impulse counter.

The price does not include tank cleaning unit and electric control unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

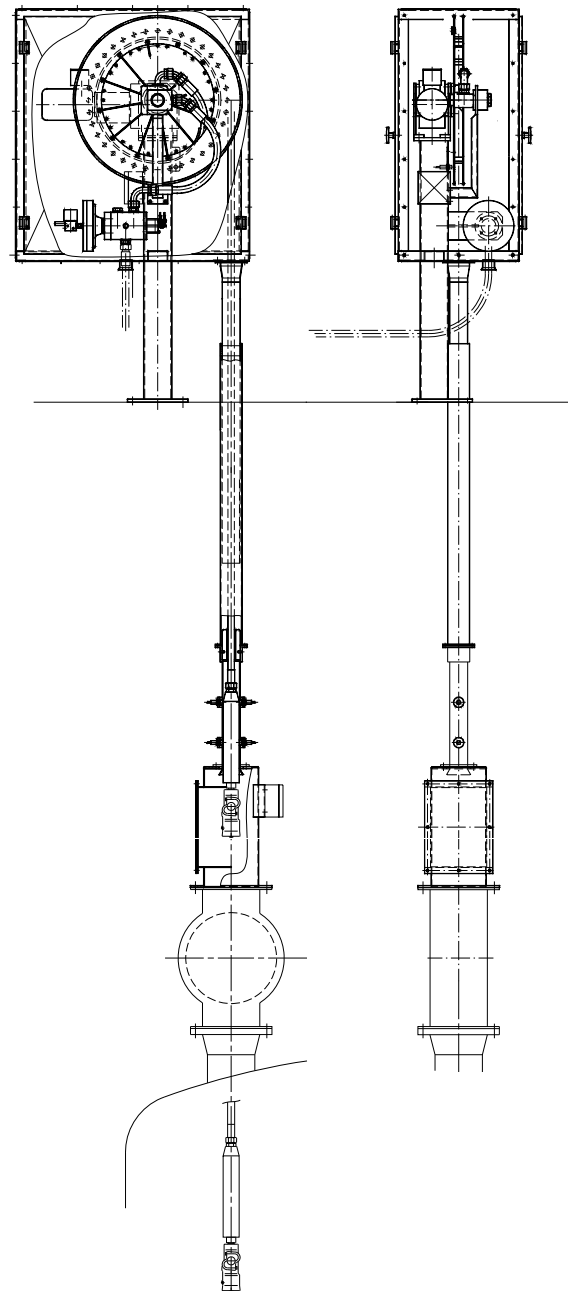
Code no.

09.00803.0069

HAMMELMANN®

Tank cleaning device

- Reel system -



Tank cleaning device

for automatic internal tank cleaning, comprising:

- Hose reel for with explosion proof electric drive with self controlling gear motor,
- Park housing with flange and guide tube (flange dimensions in accordance with customer requirements),
- Changeover valve,
- Connection pipe,
- Protective housing for the complete system.
- The stroke is defined via an impulse counter.

The price does not include tank cleaning unit and electric control unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

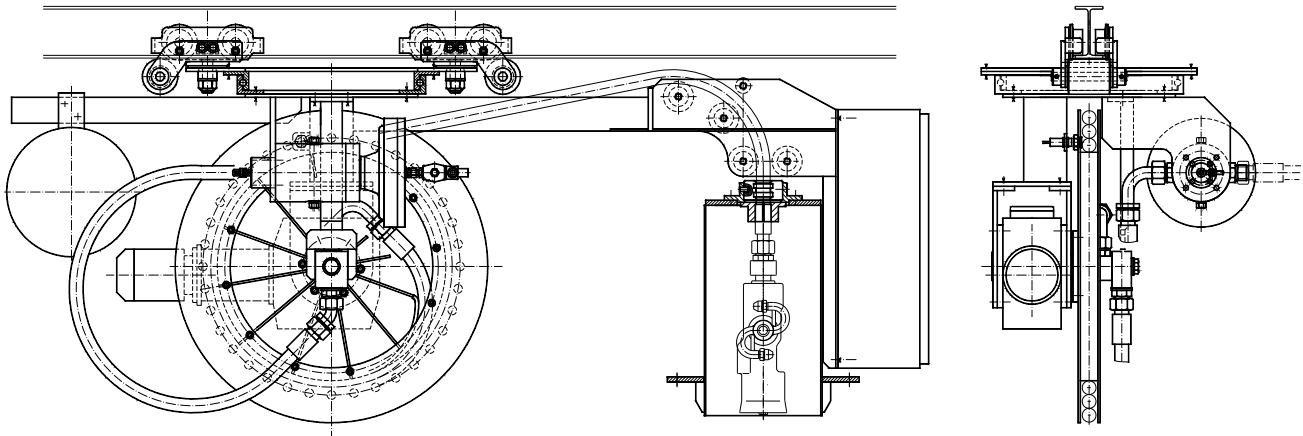
Code no.

09.00803.0050

HAMMELMANN®

Tank cleaning device - Reel system -

16.H.5 – 09/09



Tank cleaning device

for automatic internal tank cleaning, comprising:

- Hose reel for with explosion proof electric drive with self controlling gear motor,
- Trolley with swivel ball fitting and extension arm,
- Park housing with flange and guide tube (flange dimensions in accordance with customer requirements)
- Changeover valve,
- The stroke is defined via an impulse counter.

The price does not include tank cleaning unit and electric control unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

Code no.

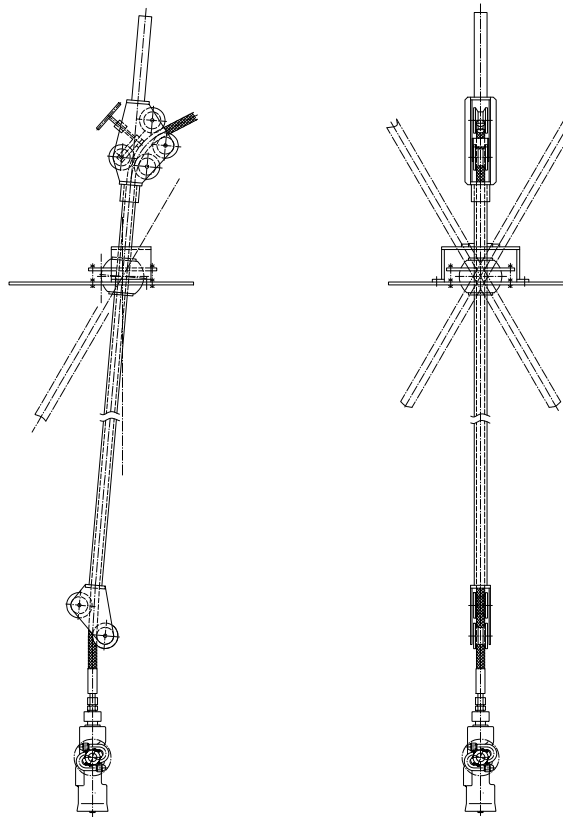
09.00803.0049

HAMMELMANN®

Tank cleaning devices

- Hose system -

16.J.1 – 09/09



Tank cleaning device

for manual positioning of the tank cleaning head in the tank, comprising:

- Manhole cover made of stainless steel,
- Ball joint with adjusting and tilting device,
- Guide tube with hose rollers, clamping device and guide rollers.

The hose is extended manually until the required cleaning position is reached and then it is clamped.

The price does not include the tank cleaning unit.

Tank shut off devices for high pressure water are not standard components of the tank cleaning devices and must be individually selected.

The tank cleaning device is built to customer's requirements.

Code no.

09.00801.0017

HAMMELMANN®

Application engineering

Standard



Surface blasting



Tank cleaning



Tube bundle cleaning



Pipe and sewer cleaning



Water hydraulic



Abrasive cutting

