

# CLEANING AND WASHING - high pressure

## High pressure cleaning and washing

Equipment for high pressure cleaning and washing is suitable for both industrial and home application. A wide range of working pressure of the equipment guarantees a solution for each application even at the working pressure as high as 500 bar (for working pressure above 500 bar see chapter HIGH PRESSURE - UHP equipment). The equipment for high pressure cleaning includes complete hose assemblies (with one or two braids) with fittings and bend restrictors, adapters, guns, lances, foam guns, nozzles and heads. Hoses are resistant to weather conditions and abrasion, while the entire high pressure cleaning equipment resists high pressure at temperature reaching +160°C and hot water with detergents. It is also very ergonomic and easy to install.

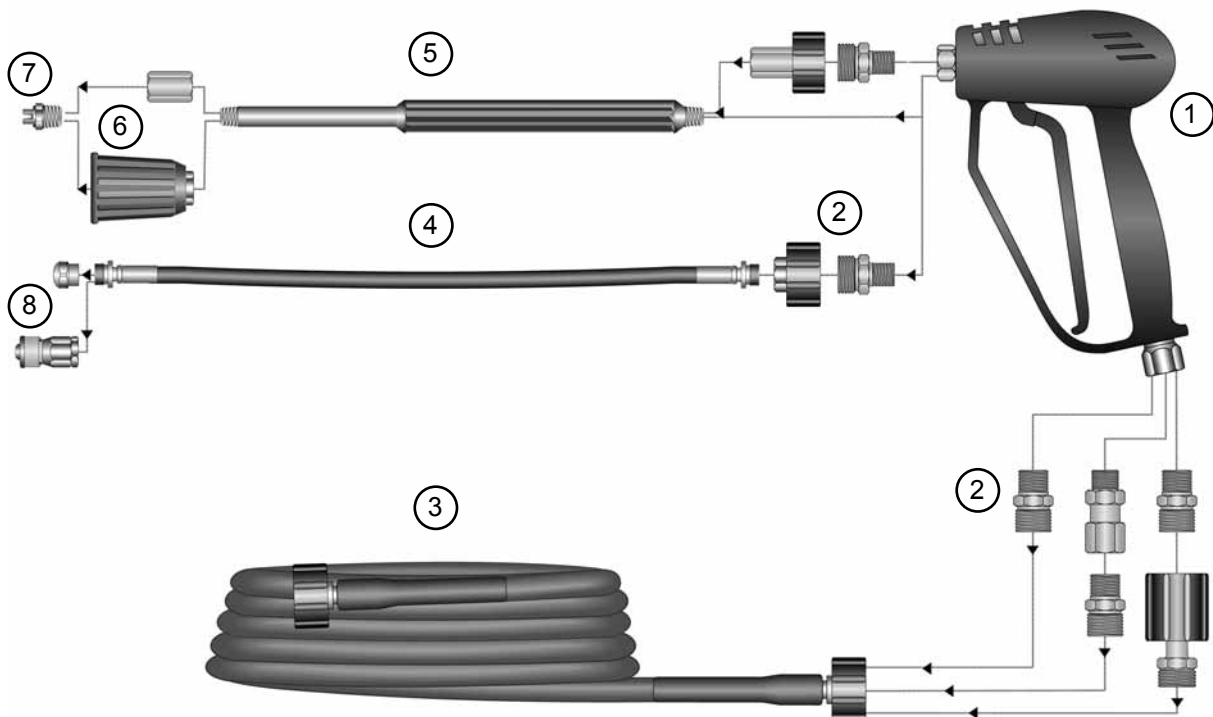
Guns for cold and hot water cleaning (up to 400 bar and +160°C), guns with a non-freezing outlet or an outlet with a quick release coupling socket as well as a scope of adapters, nozzles with varied spray angle (0°, 15°, 25° are 40°) and rotary heads calibrated from 030 to 10 are compatible with the majority of cleaning machines and devices.

A wide range of lances for spray guns:

- material (zinc-plated carbon steel or stainless steel),
- various lengths (from 250 mm to 2000 mm),
- single and double lances,
- different insulations,
- various connections,

allows precise selection to conform to the most stringent operation conditions and ensures safety of the operator.

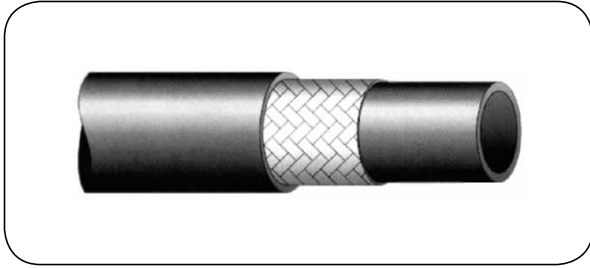
Assembly of high pressure spray gun accessories



1. Spray gun,
2. Adapters: 1, 2, 3-piece,
3. Hoses supplied as complete hose assemblies with fittings and protectors,
4. Sewer cleaning hose assemblies,
5. Insulated and non-insulated lances,
6. Heads, protectors and adapters,
7. Nozzles for high pressure cleaning equipment,
8. Sewer cleaning nozzles.

## CLEANING AND WASHING - high pressure

### Hoses for high pressure cleaning equipment

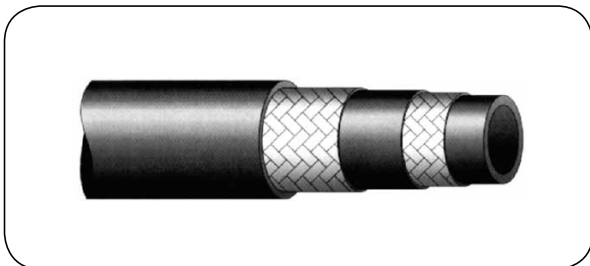


#### SUPER HYDRO WASH 1SC

**Internal layer:** Black, smooth synthetic rubber  
**Reinforcement:** One steel wire braid  
**External layer:** Pinpricked polyurethane  
**Working temp.** From -40°C up to +120°C  
 (with peaks up to +155°C)

Hose designed for hot water high pressure cleaning equipment. Resistant to detergents, oils, ozone and weather conditions. Excellent resistance to elongation and abrasion. The hose features exceptionally long service life. Assembly - contact Technical Department of TUBES INTERNATIONAL®.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/100 m]
HW-SHWASH1SC-06BL-PU	6.4	12.4	230	900	75	18.40
HW-SHWASH1SC-08BL-PU	7.9	14.1	230	860	85	21.60
HW-SHWASH1SC-10BL-PU	9.5	16.1	210	720	90	28.10



#### SUPER HYDRO WASH 2SC

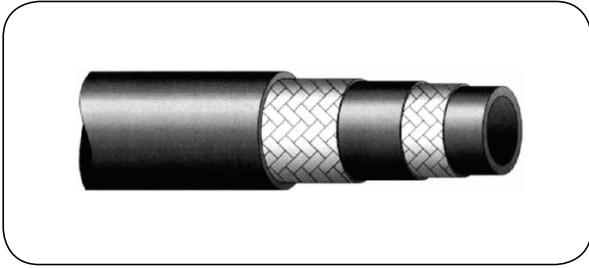
**Internal layer:** Black, smooth synthetic rubber  
**Reinforcement:** Two steel wire braid  
**External layer:** Pinpricked polyurethane  
**Working temp.** From -40°C up to +120°C  
 (with peaks up to +155°C)

Hose designed for hot water high pressure cleaning equipment. Resistant to detergents, oils, ozone and weather conditions. Excellent resistance to elongation and abrasion. The hose features exceptionally long service life. Assembly - contact Technical Department of TUBES INTERNATIONAL®.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/100 m]
HW-SHWASH2SC-06BL-PU	6.4	13.2	400	1600	80	26.00
HW-SHWASH2SC-08BL-PU	7.9	14.5	400	1400	95	31.00
HW-SHWASH2SC-10BL-PU	9.5	17	400	1320	105	37.00

# CLEANING AND WASHING - high pressure

## Hoses for high pressure cleaning equipment



### STAR WASH 500

**Internal layer:** Black, smooth synthetic rubber  
**Reinforcement:** Two steel wire braids  
**External layer:** Black, pinpricked synthetic rubber  
**Working temp.** From -10°C up to +155°C

Hose designed for hot water pressure cleaning equipment. Resistant to detergents, oils, ozone and weather conditions.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
SO-STARWASH500-06	6.6	13.1	500	1600	75	0.28
SO-STARWASH500-08	8.3	14.5	500	1600	60	0.34
SO-STARWASH500-10	9.9	17.1	500	1540	70	0.44
SO-STARWASH500-13	13	20.7	500	1380	90	0.54

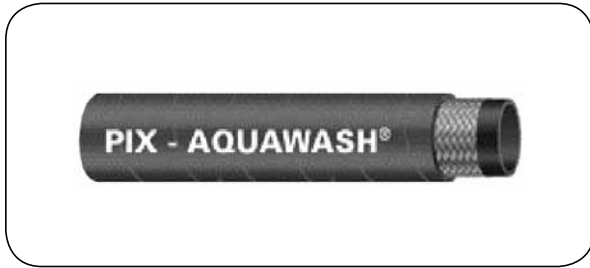
The standard complete hose assemblies with fittings and protectors. Other lengths and fittings - contact Technical Department of TUBES INTERNATIONAL®.

code	I.D. [mm]	O.D. [mm]	thread size (inlet)	thread size (outlet)	working pressure [bar]	length [m]
SO-STARWASH500-P1-10-10	9.9	17.1	M22x1.5 female	M22x1.5 female	500	10
SO-STARWASH500-P1-10-15						15
SO-STARWASH500-P1-10-20						20
SO-STARWASH500-P1-10-25						25
SO-STARWASH500-P2-10-10	9.9	17.1	3/8" BSP female	3/8" BSP female	500	10
SO-STARWASH500-P2-10-15						15
SO-STARWASH500-P2-10-20						20
SO-STARWASH500-P2-10-25						25
SO-STARWASH500-P3-10-10	9.9	17.1	M22x1.5 female	3/8" BSP female	500	10
SO-STARWASH500-P3-10-15						15
SO-STARWASH500-P3-10-20						20
SO-STARWASH500-P3-10-25						25



# CLEANING AND WASHING - high pressure

## Hoses for high pressure cleaning equipment



### AQUAWASH 1SN

**Internal layer:** Black synthetic rubber  
**Reinforcement:** One steel wire braid  
**External layer:** Black or blue synthetic rubber  
**Working temp.:** From -40°C up to +160°C

Hose designed for hot and cold water high pressure cleaning equipment. Resistant to abrasion, ozone and detergents. Not suitable for steam cleaning.

Standards - EN 1829-2:2008, EN 853 1SN - dimensional compatibility.

Assembly - contact TUBES INTERNATIONAL® Technical Department.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
HW-AQUA1SN-06BK	6.4	13.2	250	900	100	0.23
HW-AQUA1SN-08BK	7.9	15	250	850	115	0.28
HW-AQUA1SN-10BK	9.5	17.3	250	825	130	0.36
HW-AQUA1SN-12BK	12.7	20.6	210	770	180	0.42

Code example:

- black hose: HW-AQUA1SN-06BK
- blue hose: HW-AQUA1SN-06BL



### AQUAWASH 2SN

**Internal layer:** Black synthetic rubber  
**Reinforcement:** Two steel wire braids  
**External layer:** Black or blue synthetic rubber  
**Working temp.:** From -40°C up to +160°C

Hose designed for hot and cold water high pressure cleaning equipment. Resistant to abrasion, ozone and detergents. Not suitable for steam cleaning.

Standards - EN 1829-2:2008, EN 853 2SN - dimensional compatibility.

Assembly - contact Technical Department of TUBES INTERNATIONAL®.

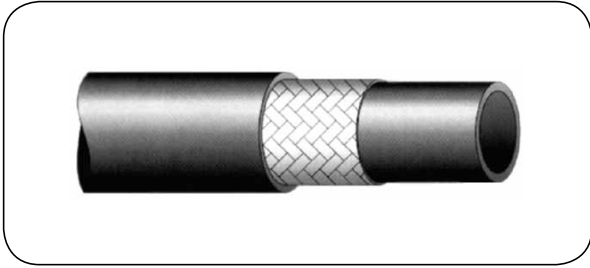
code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
HW-AQUA2SN-06BK	6.4	14.9	400	1600	100	0.40
HW-AQUA2SN-08BK	7.9	16.7	400	1400	115	0.46
HW-AQUA2SN-10BK	9.5	19.1	400	1300	130	0.55
HW-AQUA2SN-12BK	12.7	22.1	400	1200	180	0.64

Code example:

- black hose: HW-AQUA2SN-06BK
- blue hose: HW-AQUA2SN-06BL

# CLEANING AND WASHING - high pressure

## Hoses for high pressure cleaning equipment



### HYDROWASH / 1

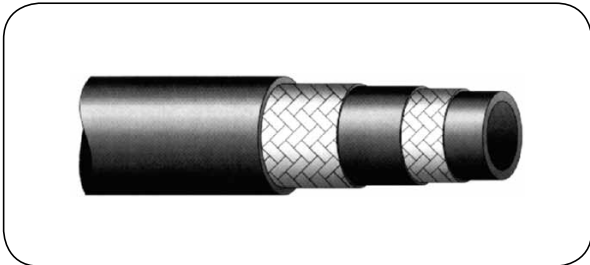
**Internal layer:** Black synthetic rubber  
**Reinforcement:** One steel wire braid  
**External layer:** Black or blue synthetic rubber (pinpricked)  
**Working temp.:** From -40°C up to +150°C

Hose designed for hot water pressure cleaning equipment. Internal layer resistant to detergents, external layer to abrasion, oil, ozone and weather conditions.  
 Assembly - use Z type fittings (non-skived).

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
HW-HWASH1T-06	6.4	13.2	250	1000	100	0.22
HW-HWASH1T-08	8	14.8	250	1000	115	0.26
HW-HWASH1T-10	9.5	17.2	250	1000	130	0.34
HW-HWASH1T-12	12.7	20.4	250	1000	180	0.41

Code example:

- black hose: HW-HWASH1T-06BK
- blue hose: HW-HWASH1T-06BL



### HYDROWASH / 2

**Internal layer:** Black synthetic rubber  
**Reinforcement:** Two steel wire braids  
**External layer:** Black or blue synthetic rubber (pinpricked)  
**Working temp.:** From -40°C up to +150°C

Hose designed for hot water pressure cleaning equipment. Internal layer resistant to detergents, external layer to abrasion, oil, ozone and weather conditions.  
 Assembly - use Z type fittings (non-skived).

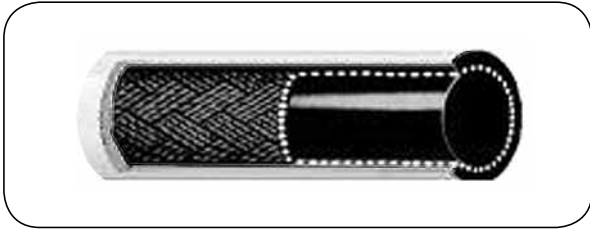
code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
HW-HWASH2T-06	6.4	15	400	1600	100	0.38
HW-HWASH2T-08	8	16.5	400	1600	115	0.44
HW-HWASH2T-10	9.5	18.9	400	1600	130	0.55
HW-HWASH2T-12	12.7	22.2	400	1600	180	0.64

Code example:

- black hose: HW-HWASH2T-06BK
- blue hose: HW-HWASH2T-06BL

# CLEANING AND WASHING - high pressure

## Hoses for high pressure cleaning equipment

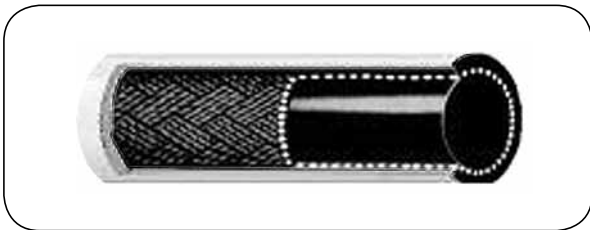


### GAUNTLET 1500

**Internal layer:** Black NBR rubber  
**Reinforcement:** One textile braid  
**External layer:** Yellow Carbyn / NBR compound  
**Working temp.:** From -30°C up to +93°C

Hose designed for hot water pressure cleaning equipment. External layer resistant to abrasion, oil, animal fat and poultry fat. High flexibility of the hose facilitates operation.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
GY-GAUNTLET1500-06	6.4	15	103	410	65	0.16
GY-GAUNTLET1500-10	9.5	19.1	103	410	95	0.27
GY-GAUNTLET1500-13	12.7	21.3	83	330	125	0.29
GY-GAUNTLET1500-19	19.1	31.8	103	410	190	0.61

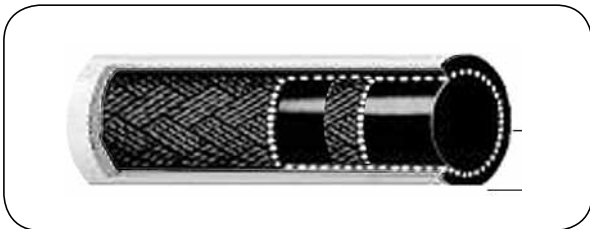


### GAUNTLET 3000

**Internal layer:** Black NBR rubber  
**Reinforcement:** One steel wire braid  
**External layer:** Yellow Carbyn / NBR compound  
**Working temp.:** From -30°C up to +120°C

Hose designed for hot water pressure cleaning equipment. External layer resistant to abrasion, oil, animal fat and poultry fat. High flexibility of the hose facilitates operation.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
GY-GAUNTLET3000-10	9.5	17.5	206	824	100	0.36
GY-GAUNTLET3000-13	12.7	20.8	206	824	120	0.48



### GAUNTLET 4500

**Internal layer:** Black NBR rubber  
**Reinforcement:** Two steel wire braids  
**External layer:** Yellow Carbyn / NBR compound  
**Working temp.:** From -30°C up to +120°C

Hose designed for hot water pressure cleaning equipment. External layer resistant to abrasion, oil, animal fat and poultry fat. High flexibility of the hose facilitates operation.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	bending radius [mm]	weight [kg/m]
GY-GAUNTLET4500-10	9.5	17.5	310	1240	-	0.40
GY-GAUNTLET4500-13	12.7	20.8	310	1240	-	0.51

## CLEANING AND WASHING - high pressure

### Hoses for high pressure cleaning equipment



#### FORTRESS 1000®

**Internal layer:** Black NBR rubber compound  
**Reinforcement:** Synthetic cord  
**External layer:** Blue Carbryn® rubber protected by Microban® cover  
**Working temp.:** From -30°C up to +93°C

High-quality, flexible, non-staining, kink and torsion resistant hose. Widely used for washdown applications in food, pharmaceutical and cosmetic industry due to Microban® antimicrobial external protection layer that inhibits the growth of bacteria, mold, and fungi. In compliance with ISO 1307. Use with hydraulic fittings (TI-Z...) crimped with appropriate ferrules.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	weight [kg/m]	standard length [m]
GY-FORT1000-10	9.5	19.1	69	276	0.27	152.5
GY-FORT1000-13	12.7	21.8	69	276	0.30	152.5
GY-FORT1000-19	19.1	30.5	69	276	0.63	152.5



#### FORTRESS 3000®

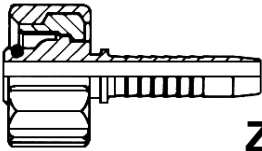
**Internal layer:** Black NBR rubber compound  
**Reinforcement:** Synthetic cord  
**External layer:** Blue Carbryn® rubber protected by Microban® cover  
**Working temp.:** From -30°C up to +93°C

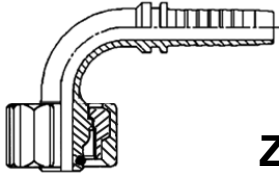
High-quality, flexible, non-staining, kink and torsion resistant hose. Widely used for washdown applications in food, pharmaceutical and cosmetic industry due to Microban® antimicrobial external protection layer that inhibits the growth of bacteria, mold, and fungi. In compliance with ISO 1307. Use with hydraulic fittings (TI-Z...) crimped with appropriate ferrules.

code	I.D. [mm]	O.D. [mm]	working pressure [bar]	bursting pressure [bar]	weight [kg/m]	standard length [m]
GY-FORT3000-06	6.4	13.5	207	828	0.22	152.5
GY-FORT3000-10	9.5	17.5	207	828	0.36	152.5
GY-FORT3000-13	12.7	20.8	207	828	0.48	152.5

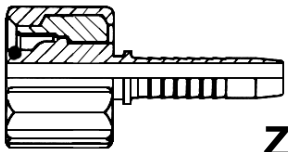
# CLEANING AND WASHING - high pressure

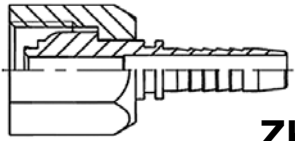
## Fittings for high pressure cleaning hoses

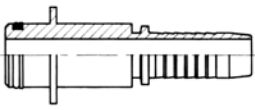
Fitting for cleaning equipment			
			
<b>ZKW110</b>			
code (carbon steel)	code (stainle-SS steel)	thread size [mm]	hose I.D. [inch]
TI-ZKW110-22-04	TI-ZKW110-22-04-SS	M22x1.5	1/4
TI-ZKW110-22-05	TI-ZKW110-22-05-SS	M22x1.5	5/16
TI-ZKW110-22-06	TI-ZKW110-22-06-SS	M22x1.5	3/8
-	TI-ZKW110-22-08-SS	M22x1.5	1/2

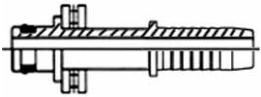
Fitting for cleaning equipment		
		
<b>ZKW210</b>		
code (carbon steel)	thread size [mm]	hose I.D. [inch]
TI-ZKW210-22-05	M22x1.5	5/16
TI-ZKW211-22-05*	M22x1.5	5/16

\* - fitting with long nut.

Fitting for cleaning equipment (long nut)			
			
<b>ZKW111</b>			
code (carbon steel)	code (stainle-SS steel)	thread size [mm]	hose I.D. [inch]
TI-ZKW111-22-04	TI-ZKW111-22-04-SS	M22x1.5	1/4
TI-ZKW111-22-05	TI-ZKW111-22-05-SS	M22x1.5	5/16
TI-ZKW111-22-06	TI-ZKW111-22-06-SS	M22x1.5	3/8

Fitting for cleaning equipment (brass nut)		
		
<b>ZKW150</b>		
code (carbon steel)	thread size [mm]	hose I.D. [inch]
TI-ZKW150-22-04	M22x1.5	1/4
TI-ZKW150-22-05	M22x1.5	5/16
TI-ZKW150-22-06	M22x1.5	3/8


Fitting for cleaning equipment (for spray gun)		
		
<b>ZKR110</b>		
code	pipe diameter [mm]	hose I.D. [inch]
TI-ZKR110-10-04	10	1/4
TI-ZKR110-10-05	10	5/16
TI-ZKR110-10-06	10	3/8


Bearing fitting for cleaning equipment (for spray gun)			
			
<b>ZKR180</b>			
code (carbon steel)	code (stainle-SS steel)	pipe diameter [mm]	hose I.D. [inch]
-	TI-ZKR180-10-04-SS	10	1/4
-	TI-ZKR180-10-05-SS	10	5/16
TI-ZKR180-11-04	TI-ZKR180-11-04-SS	11	1/4
TI-ZKR180-11-05	TI-ZKR180-11-05-SS	11	5/16



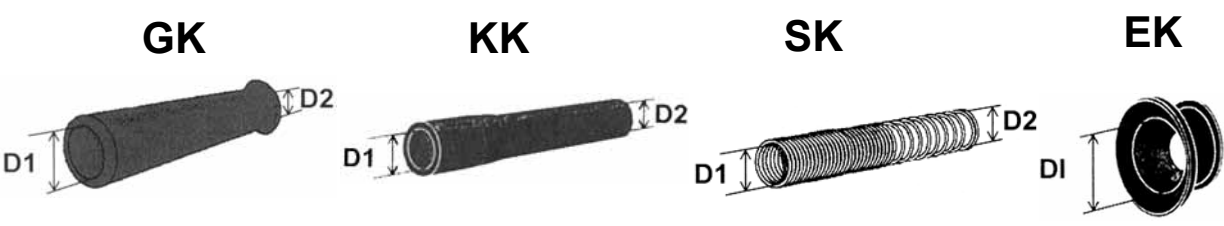
# CLEANING AND WASHING - high pressure

## Fittings for high pressure cleaning hoses

Fitting for cleaning equipment			
			
<b>ZKW160</b>			
code (carbon steel)	code (stainless steel)	thread size [mm]	hose I.D. [inch]
TI-ZKW160-22-04	TI-ZKW160-22-04SS	M22x1.5	1/4
TI-ZKW160-22-05	TI-ZKW160-22-05SS	M22x1.5	5/16
TI-ZKW160-22-06	TI-ZKW160-22-06SS	M22x1.5	3/8

Nut for cleaning equipment			
			
<b>ZKW160</b>			
code (carbon steel)	code (stainless steel)	thread size [mm]	color
TI-ZKW161-22	TI-ZKW161-22SS	M22x1.5	black
TI-ZKW162-22	TI-ZKW162-22SS	M22x1.5	yellow
TI-ZKW163-22	TI-ZKW163-22SS	M22x1.5	blue
TI-ZKW164-22	TI-ZKW164-22SS	M22x1.5	red

## Protectors of hose fittings for cleaning equipment

					
type	colour	DN 6 (D1/D2) code	DN 8 (D1/D2) code	DN 10 (D1/D2) code	DN 12 (D1/D2) code
GK	blue	-	17/17 EM-GKB-08	19.5/19.5 EM-GKB-10	23/22.5 EM-GKB-12
	gray	14.6/14.6 EM-GKG-06	17/17 EM-GKG-08	19.5/19.5 EM-GKG-10	23/22.5 EM-GKG-12
	orange	14.6/14.6 EM-GKO-06	17/17 EM-GKO-08	19.5/19.5 EM-GKO-10	23/22.5 EM-GKO-12
	red	14.6/14.6 EM-GKR-06	17/17 EM-GKR-08	19.5/19.5 EM-GKR-10	23/22.5 EM-GKR-12
	black	-	17/17 EM-GKS-08	19.5/19.5 EM-GKS-10	23/22.5 EM-GKS-12
	yellow	14.6/14.6 EM-GKY-06	17/17 EM-GKY-08	19.5/19.5 EM-GKY-10	23/22.5 EM-GKY-12
KK	black	14.5/15 EM-KKS-06	-	-	-
SK	-	14/13 EM-SK-06	-	-	-
EK	-	17 EM-EKS-68	17 EM-EKS-68	-	-







## CLEANING AND WASHING - high pressure

### High pressure MTM water spray guns

picture	code	connection	description
	MH-100345	3/8" female	„SG40" spray gun with 1/4" BSP female thread outlet. Working press.: up to 350 bar. Flow rate: 30 l/min. Working temp.: up to +160°C.
	MH-100408	3/8" male	
	MH-100060	3/8" male	„ASTRA" spray gun with 1/4" BSP female thread outlet. Working press.: up to 350 bar Flow rate: 45 l/min. Working temp.: up to +150°C.
	MH-100007	3/8" female	
	MH-100077	3/8" female - swivel	
	MH-100080	M22x1.5 male - swivel	
	MH-100085	3/8" male	„IRIDE" spray gun with 1/4" BSP female thread outlet. Working press.: up to 310 bar. Flow rate: 30 l/min. Working temp.: up to +150°C.
	MH-100011	3/8" female	
	MH-100096	3/8" female- swivel	
	MH-100097	M22x1.5 - swivel	
	MH-100551	3/8" male	„SG28" spray gun with 1/4" BSP female thread outlet. Working press.: up to 250 bar. Flow rate: 30 l/min. Working temp.: up to +150°C.
	MH-100550	3/8" female	
	MH-100552	M22x1.5 male	
	MH-100553	3/8" female- swivel	
	MH-100554	M22x1.5 male - swivel	
	MH-100503	3/8" male	„SG25" spray gun with 1/4" BSP female thread outlet. Working press.: up to 220 bar. Flow rate: 30 l/min. Working temp.: up to +160°C.
	MH-100502	3/8" female	
	MH-100504	M22x1.5 male	
	MH-100505	3/8" female - swivel	
	MH-100017	3/8" female	„AURA" spray gun with 1/4" BSP female thread outlet. Working press.: up to 180 bar. Flow rate: 25 l/min. Working temp.: up to +150°C.
	MH-100119	3/8" female - swivel	




## CLEANING AND WASHING - high pressure

### High pressure MTM water spray guns

picture	code	connection	description
	MH-100370	3/8" female	Non-freezing spray gun for water „SG35” with 1/4” female thread outlet. Working press.: up to 310 bar. Flow rate: 45 l/min. Working temp.: up to +160°C. Leakage: 1.1 l/min at 3 bar press. * - leakage 1.8 l/min.
	MH-100371*	3/8" female	
	MH-100376	3/8" female - swivel	
	MH-100377*	3/8" female - swivel	
	MH-100506	3/8" female	Non-freezing spray gun for water „SG25” with 1/4” female thread outlet. Working press.: up to 220 bar. Flow rate: 30 l/min. Working temp.: up to +160°C. Leakage: 0.6 l/min at 3 bar press. * - 1.1 l/min. ** - 1.8 l/min.
	MH-100507*	3/8" female	
	MH-100508**	3/8" female	
	MH-100509	3/8" female- swivel	
	MH-100510*	3/8" female- swivel	
	MH-100199	3/8" female	Non-freezing spray gun for water „AURA” with 1/4” female thread outlet. Working press.: up to 180 bar. Flow rate: 25 l/min. Working temp.: up to +150°C. Leakage: 0.6 l/min at 3 bar press. * - 1.1 l/min. ** - 1.8 l/min.
	MH-100316*	3/8" female	
	MH-100028**	3/8" female	
	MH-100205	3/8" female - swivel	
	MH-100304*	3/8" female - swivel	
	MH-100204**	3/8" female - swivel	
	MH-100378	3/8" female	Non-freezing spray gun for water „SG35” with 1/4” female thread outlet. Working press.: up to 310 bar. Flow rate: 45 l/min. Working temp.: up to +160°C. Leakage: only below 10 bar press.
	MH-100379	3/8" female - swivel	
	MH-100512	3/8" female	Non-freezing spray gun for water „SG25” with 1/4” female thread outlet. Working press.: up to 220 bar. Flow rate: 30 l/min. Working temp.: up to +160°C. Leakage: only below 10 bar press.
	MH-100513	3/8" female - swivel	
	MH-100031	3/8" female	Non-freezing spray gun for water „AURA” with 1/4” female thread outlet. Working press.: up to 180 bar. Flow rate: 30 l/min. Working temp.: up to +160°C. Leakage: only below 10 bar press.
	MH-100221	3/8" female - swivel	

## CLEANING AND WASHING - high pressure

### High pressure MTM water spray guns

picture	code	connection	description
	MH-100465	3/8" female	„SG35" spray gun with KC35 type quick release coupling socket. Working press.: up to 310 bar. Flow rate: 45 l/min. Working temp.: up to +160°C.
	MH-100466	3/8" female - swivel	
	MH-100469	3/8" female	„SG35" spray gun with BC35 type quick release coupling socket. Working press.: up to 310 bar. Flow rate: 45 l/min. Working temp.: up to +160°C.
	MH-100470	3/8" female - swivel	
	MH-100398	M22x1.5 male	„SG35" spray gun with M22x1.5 male outlet. Working press.: up to 310 bar. Flow rate: 45 l/min. Working temp.: up to +160°C.
	MH-100399	M22x1.5 male - swivel	
	MH-100400	3/8" female	„SG35" spray gun with MT8 lance with M22x1.5 female outlet. Lance made of acid-resistant steel. Working press.: up to 310 bar. Flow rate: 45 l/min. Working temp.: up to +160°C. * - lance of zinc-plated steel.
	MH-100401	3/8" male	
	MH-100402	M22x1.5	
	MH-100403*	3/8" female	
	MH-100404*	3/8" female	
	MH-100405*	M22x1.5 male	
	MH-100406	3/8" female - swivel	
MH-100407*	3/8" female - swivel		
	MH-100024	3/8" female	„AURA" spray gun with MT5 lance with M22x1.5 outlet. Lance made of acid-resistant steel. Working press.: up to 180 bar. Flow rate: 30 l/min. Working temp.: up to +160°C. * - lance of zinc-plated steel.
	MH-100168	3/8" male	
	MH-100169	M22x1.5 male	
	MH-100025*	3/8" female	
	MH-100171*	3/8" male	

# CLEANING AND WASHING - high pressure

## Accessories for high pressure water spray guns

picture	code	description	connection inlet / outlet	material	pic.			
1	MH-140068	Chassis cleaning lance, 1000 mm Working press.: 280 bar	1/4" BSP male		1			
	MH-140085		1/4" NPT female					
2	MH-140154	MT2 lance 395 mm	1/4" BSP male 1/4" BSP male	stainless steel	2			
	MH-140155	MT2 lance 395 mm		galv. steel				
	MH-140157	IMT3 lance 290 mm		stainless steel	3			
	MH-140158	MT3 lance 290 mm		galv. steel				
	MH-140152	MT5 lance 280 mm		stainless steel	4			
	MH-140249	MT8 lance 380 mm		stainless steel				
	MH-140250	MT8 lance 380 mm		galv. steel				
	3	MH-120173		MT2 lance 700 mm	1/4" BSP male 1/4" NPT female	galv. steel	5	
		MH-120176		MT2 lance 900 mm				
		MH-120183		MT2 lance 1200 mm				
MH-120188		MT2 lance 1500 mm						
MH-120191		MT2 lance 1700 mm						
MH-120195		MT2 lance 2000 mm						
MH-120225		MT2 lance 700 mm						
MH-120227		MT2 lance 900 mm						
MH-120237		MT2 lance 1200 mm						
MH-120240		MT2 lance 1500 mm						
4	MH-120243	MT2 lance 1700 mm	1/4" BSP male 1/4" NPT female	galv. steel	6			
	MH-120247	MT2 lance 2000 mm						
	MH-120008	MT2 lance 700 mm						
	MH-120010	MT2 lance 900 mm						
	MH-120012	MT2 lance 1200 mm						
	MH-120023	MT2 lance 700 mm						
	MH-120025	MT2 lance 900 mm						
	MH-120027	MT2 lance 1200 mm						
	MH-140010	MT1 lance 250 mm				M22x1.5 male 1/4" NPT female	stainless steel	7
	MH-140012	MT1 lance 500 mm						
MH-140014	MT1 lance 700 mm							
MH-140016	MT1 lance 900 mm							
MH-140018	MT1 lance 1200 mm							
MH-140011	MT1 lance 250 mm							
MH-140013	MT1 lance 500 mm							
MH-140015	MT1 lance 700 mm							
MH-140017	MT1 lance 900 mm							
MH-140019	MT1 lance 1200 mm							


# CLEANING AND WASHING - high pressure

## Accessories for high pressure water spray guns

picture	code	description	connection inlet / outlet	material	pic.			
1	MH-140133	MT1 lance 250 mm	1/4" BSP male 1/4" NPT female	stainless steel	1			
	MH-140134	MT1 lance 500 mm						
	MH-140136	MT1 lance 700 mm						
	MH-140138	MT1 lance 900 mm						
	MH-140140	MT1 lance 1200 mm						
	MH-140141	MT1 lance 250 mm						
2	MH-140142	MT1 lance 500 mm	1/4" BSP male 1/4" NPT female	galv. steel	1			
	MH-140145	MT1 lance 700 mm						
	MH-140146	MT1 lance 900 mm						
	MH-140147	MT1 lance 1200 mm						
3	MH-140020	MT6 lance 500 mm	M22x1.5 male 1/4" NPT female	stainless steel	2			
	MH-140022	MT6 lance 700 mm						
	MH-140024	MT6 lance 900 mm						
	MH-140026	MT6 lance 1200 mm						
	MH-140021	MT6 lance 500 mm						
	MH-140023	MT6 lance 700 mm						
4	MH-140025	MT6 lance 900 mm	M22x1.5 male 1/4" NPT female	galv. steel	2			
	MH-140027	MT6 lance 1200 mm						
	MH-120316	MT3 lance 700 mm						
	MH-120049	MT3 lance 900 mm						
5	MH-120332	MT3 lance 1200 mm	1/4" BSP male 1/4" NPT female	stainless steel	3			
	MH-120339	MT3 lance 1500 mm						
	MH-120366	MT3 lance 700 mm						
	MH-120371	MT3 lance 900 mm						
	MH-120380	MT3 lance 1200 mm						
	MH-120386	MT3 lance 1500 mm						
6	MH-120024	MT2 lance 700 mm	M22x1.5 female / M18x1.5 male	stainless steel	4			
	MH-120026	MT2 lance 700 mm						
	MH-120028	MT2 lance 700 mm						
	MH-120030	MT2 lance 700 mm						
	MH-120009	MT2 lance 700 mm						
	MH-120011	MT2 lance 700 mm						
6	MH-120013	MT2 lance 700 mm	M22x1.5 female / M18x1.5 male	galv. steel	4			
	MH-120015	MT2 lance 700 mm						
	MH-140034	Double lance 1/8", 600 mm				M22x1.5 male 1/4" NPT female	stainless steel	5
	MH-140038	Double lance 1/4", 600 mm						
	MH-140039	Double lance 1/4", 600 mm						
	6	MH-140036				Double lance 1/8", 600 mm	M22x1.5 male 1/4" NPT female	stainless steel
MH-140040		Double lance 1/4", 600 mm						
MH-140041		Double lance 1/4", 600 mm						

# CLEANING AND WASHING - high pressure

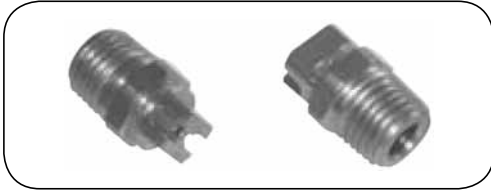
## Accessories for high pressure water spray guns

picture	code	connection inlet / outlet	length [mm]	material	description
	RM-200085220	M22x1.5 male 1/4" NPT female	600	galv. steel	ST-85 adjustable lance. Bending angle: from 20° to 140° Work. press.: 210 bar. Work. temp.: +150°C.
	RM-200085270		600	st. steel	
	RM-200085710	1/4" BSP female 1/4" NPT female	850	galv. steel	
	RM-200085700		1000	galv. steel	
	RM-200085750		1500	galv. steel	
	RM-200085810		850	st. steel	
	RM-200085800		1000	st. steel	
	RM-200085850		1500	st. steel	

picture	code	calibration	connection	description
	RM-200357530	03	1/4" BSP female	Rotary head for MT1, MT2, MT6 lances. Working press.: 100 + 250 bar. Working temp.: +100°C.
	RM-200357535	035		
	RM-200357540	04		
	RM-200357545	045		
	RM-200357550	05		
	RM-200357555	055		
	RM-200357560	06		
	RM-200357565	065		
	RM-200357570	07		
	RM-200357580	08		
RM-200357510	10			
	RM-200458635	035	1/4" BSP female	Rotary head for MT1, MT2, MT6 lances. Working press.: 200 + 400 bar. Working temp.: +100°C.
	RM-200458640	04		
	RM-200458645	045		
	RM-200458650	05		
	RM-200458655	055		
	RM-200458660	06		
	RM-200458665	065		
	RM-200458670	07		
	RM-200458680	08		
	RM-200458690	09		
RM-200458610	10			
	MH-160152	030	1/4" BSP female	Rotary head for MT1, MT2, MT3, MT6 lances. Working press.: 200 + 400 bar. Working temp.: +100°C.
	MH-160153	035		
	MH-160192	040		
	MH-160154	045		
	MH-160155	050		
	MH-160156	055		
	MH-160193	060		
	MH-160194	065		
	MH-160195	070		
	MH-160196	075		
	MH-160197	080		
	MH-160198	090		
MH-160157	10			
	MH-160018	**	1/4" BSP female	DUALJET adjustable head for MT1, MT2, MT6 lances. Adjustable spray angle and pressure (low or high). Working press.: 220 bar. Working temp.: +150°C. ** - head without nozzle
	MH-160009	03		
	MH-160010	035		
	MH-160011	045		
	MH-160012	05		
	MH-160013	055		
	MH-160014	065		
	MH-160015	075		
MH-160016	08			

# CLEANING AND WASHING - high pressure

## Accessories for high pressure water spray guns



### Lance nozzle

**Material:** Stainless steel  
**Thread:** 1/4" NPT male

code	calibration	flow rate / pressure [l/min / bar]	flow angle	code	calibration	flow rate / pressure [l/min / bar]	flow angle
MH-170289	03	11/210	0°	MH-170334	03	11/210	25°
MH-170291	04	11/140, 13/210		MH-170336	04	11/140, 13/210	
MH-170293	05	11/100, 13/140		MH-170337	045	15/210	
MH-170294	055	11/80		MH-170338	05	11/100, 13/140	
MH-170295	06	13/100, 15/140		MH-170339	055	11/80	
MH-170296	065	13/80, 21/210		MH-170340	06	13/100, 15/140	
MH-170297	07	15/100		MH-170341	065	13/80, 21/210	
MH-170299	08	21/140		MH-170342	07	15/100	
MH-170301	10	21/80-100		MH-170344	08	21/140	
MH-170308	03	11/210		MH-170346	10	21/80-100	
MH-170310	04	11/140, 13/210	15°	MH-170352	03	11/210	40°
MH-170311	045	15/210		MH-170354	04	11/140, 13/210	
MH-170312	05	11/100, 13/140		MH-170355	045	15/210	
MH-170313	055	11/80		MH-170356	05	11/100, 13/140	
MH-170314	06	13/100, 15/140		MH-170357	055	11/80	
MH-170315	065	13/80, 21/210		MH-170358	06	13/100, 15/140	
MH-170317	07	15/100		MH-170359	065	13/80, 21/210	
MH-170318	075	15/80		MH-170360	07	15/100	
MH-170319	08	21/140		MH-170361	075	15/80	
MH-170321	10	21/80-100		MH-170362	08	21/140	
-	-	-	-	MH-170364	10	21/80-100	



### HYDROJET lance nozzle

**Material:** Stainless steel  
**Thread:** 1/4" NPT male

code	calibration	flow rate / pressure [l/min / bar]	flow angle	code	calibration	flow rate / pressure [l/min / bar]	flow angle
MH-170216	03	11/210	0°	MH-170218	03	11/210	25°
MH-170224	04	11/140, 13/210		MH-170226	04	11/140, 13/210	
MH-170228	045	15/210		MH-170230	045	15/210	
MH-170232	05	11/100, 13/140		MH-170234	05	11/100, 13/140	
MH-170236	055	11/80		MH-170238	055	11/80	
MH-170240	06	13/100, 15/140		MH-170242	06	13/100, 15/140	
MH-170244	065	13/80, 21/210		MH-170246	065	13/80, 21/210	
MH-170602	07	15/100		MH-170604	07	15/100	
MH-170606	075	15/80		MH-170608	075	15/80	
MH-170610	08	21/140		MH-170612	08	21/140	
MH-170626	10	21/80-100	MH-170628	10	21/80-100		
MH-170217	03	11/210	15°	MH-170219	03	11/210	40°
MH-170225	04	11/140, 13/210		MH-170227	04	11/140, 13/210	
MH-170229	045	15/210		MH-170231	045	15/210	
MH-170233	05	11/100, 13/140		MH-170235	05	11/100, 13/140	
MH-170237	055	11/80		MH-170239	055	11/80	
MH-170241	06	13/100, 15/140		MH-170243	06	13/100, 15/140	
MH-170245	065	13/80, 21/210		MH-170247	065	13/80, 21/210	
MH-170603	07	15/100		MH-170605	07	15/100	
MH-170607	075	15/80		MH-170609	075	15/80	
MH-170611	08	21/140		MH-170613	08	21/140	
MH-170627	10	21/80-100	MH-170629	10	21/80-100		



# CLEANING AND WASHING - high pressure




## Accessories for high pressure water spray guns




### Lance nozzle

Material: Stainless steel

code	calibration	flow rate / pressure [l/min / bar]	flow angle	code	calibration	flow rate / pressure [l/min / bar]	flow angle
MH-170894	03	11/210	0°	MH-170930	03	11/210	25°
MH-170895	04	11/140, 13/210		MH-170931	04	11/140, 13/210	
MH-170896	05	11/100, 13/140		MH-170932	045	15/210	
MH-170897	055	11/80		MH-170933	05	11/100, 13/140	
MH-170898	06	13/100, 15/140		MH-170934	055	11/80	
MH-170899	065	13/80, 21/210		MH-170935	06	13/100, 15/140	
MH-170900	07	15/100		MH-170936	065	13/80, 21/210	
MH-170901	08	21/140		MH-170937	07	15/100	
MH-170903	10	21/80-100		MH-170938	08	21/140	
MH-170910	03	11/210		MH-170941	10	21/80-100	
MH-170911	04	11/140, 13/210	15°	MH-170949	03	11/210	40°
MH-170912	045	15/210		MH-170950	04	11/140, 13/210	
MH-170913	05	11/100, 13/140		MH-170951	045	15/210	
MH-170914	055	11/80		MH-170952	05	11/100, 13/140	
MH-170915	06	13/100, 15/140		MH-170953	055	11/80	
MH-170916	065	13/80, 21/210		MH-170954	06	13/100, 15/140	
MH-170917	07	15/100		MH-170955	065	13/80, 21/210	
MH-170918	075	15/80		MH-170956	07	15/100	
MH-170919	08	21/140		MH-170957	075	15/80	
MH-170922	10	21/80-100		MH-170958	08	21/140	
-	-	-	-	MH-170961	10	21/80-100	

1	2	3	code	thread	description	pic.
			MH-240039	M18x1.5 female	Housing adapter	1
			MH-350228	1/4" BSP female M18x1.5 male	Lance adapter	2
			MH-390181	-	O-ring sealing	3

	code	colour	description
	MH-170001	white	Nozzles for DUALJET adjustable head.
	MH-170002	yellow	
	MH-170003	orange	
	MH-170004	red	
	MH-170005	blue	
	MH-170006	black	
	MH-170007	brown	
	MH-170008	green	

# CLEANING AND WASHING - high pressure

## Accessories for high pressure water spray guns



### Foam injector / generator

code	connection	description
MH-140269	1/4" BSP male	1 l container with a brass foam injector. Working press.: 160 bar. Working temp.: +60°C. Max. flow rate: 20 l/min. * - type of a quick release coupling, see the next page.
MH-140286	M22x1.5 male	
MH-140275	BP type plug of quick release coupling*	
MH-140282	BPS type plug of quick release coupling*	
MH-140288	KPS type plug of quick release coupling*	

### Nozzle calibration table

D	Ø [mm]	working pressure												
		100	110	120	130	140	150	160	175	200	225	250	300	400
02	1.00	4.5	4.7	4.8	5.0	5.3	5.4	5.6	5.9	6.3	6.7	7.0	7.7	8.9
025	1.10	5.6	5.9	6.1	6.4	6.6	6.9	7.1	7.5	8.0	8.5	9.0	9.9	11.4
03	1.18	6.8	7.1	7.4	7.7	8.0	8.3	8.6	9.0	9.6	10.2	10.7	11.8	13.5
035	1.30	7.8	8.2	8.6	8.9	9.2	9.5	9.8	10.3	11.0	11.7	12.3	13.8	15.5
04	1.35	9.4	9.8	10.3	10.7	11.1	11.5	11.9	12.4	13.3	14.1	14.8	16.3	18.7
045	1.40	10.2	10.5	10.9	11.4	11.8	12.2	12.6	13.2	14.1	15.0	15.8	17.4	19.9
05	1.55	11.3	11.8	12.4	12.9	13.4	13.8	14.3	14.9	16.0	16.9	17.9	19.7	22.6
055	1.60	12.4	13.0	13.6	14.1	14.7	15.2	15.7	16.4	17.5	18.6	19.6	21.7	25.0
06	1.72	13.6	14.3	14.9	15.5	16.0	16.7	17.2	18.0	19.2	20.4	21.5	23.7	27.1
065	1.75	14.7	15.4	16.1	16.8	17.4	18.0	18.6	19.4	20.8	22.0	23.2	25.6	29.3
07	1.80	15.8	16.6	17.3	18.0	18.7	19.3	20.0	20.9	22.3	23.7	25.0	27.1	31.3
075	1.90	16.9	17.7	18.5	19.3	20.0	20.7	21.4	22.4	23.9	25.3	26.7	29.4	33.7
08	2.05	18.0	18.9	19.7	20.5	21.3	22.0	22.8	23.8	25.5	27.0	28.5	31.4	35.9
085	2.08	19.1	20.0	20.9	21.8	22.6	23.4	24.1	25.3	27.0	28.6	30.2	34.5	39.8
09	2.10	20.2	21.2	22.1	23.0	23.9	24.7	25.5	26.7	28.6	30.3	21.9	35.1	40.2
10	2.30	22.5	23.6	24.6	25.6	26.6	27.6	28.5	29.8	31.8	33.7	35.6	39.2	44.9

How to select the proper nozzle calibration?

1. knowing the working pressure and flow rate of your device (e.g. 18 l/min - 200 bar).
2. in the first line of the table find the pressure 200 bar, then in the column „200“ find the flow rate 17.5 (the closest to 18).
3. from the spot „17.5“ move leftwards to the column „D“ to read the proper calibration value - 055.

**The incorrect nozzle selection may cause the device to malfunction**

# CLEANING AND WASHING - high pressure

## Accessories for high pressure water spray guns

picture	code	connection	description	pic.
	MH-240620	1/4" BSP male	KCS quick release coupling socket. Material: brass, stainless steel. Working press.: 350 bar.	1
	MH-240635	1/4" BSP female	KPS quick release coupling plug. Material: brass, stainless steel. Working press.: 350 bar.	2
	MH-240633	3/8" BSP female	BCS quick release coupling socket. Material: stainless steel. Working press.: 400 bar.	3
	MH-240641	3/8" BSP female	BC quick release coupling socket. Material: nickel-plated brass. Working press.: 310 bar.	
	MH-240634	3/8" BSP female	BPS quick release coupling plug. Material: stainless steel. Working press.: 400 bar.	4
	MH-240642	3/8" BSP female	BP quick release coupling plug. Material: galvanized steel. Working press.: 310 bar.	

code	outlet	description	pic.
MH-160062	1/4" NPT female	HYPERJET head. Inlet: 1/4" BSP female thread. Working press.: up to 250 bar. Working temp.: up to +150°C.	1
MH-160139	1/8" NPT female		
MH-160061	1/4" NPT female	HYPERJET PLUS head. Inlet: 1/4" BSP female thread. Working press.: up to 250 bar. Working temp.: up to +150°C.	2
MH-160137	1/8" NPT female		
MH-220278	1/4" NPT female	Nozzle protector. Inlet: 1/4" BSP female thread. Colour: black (blue version *).	3.
MH-220130*	1/4" NPT female		
MH-220132	1/8" NPT female + 3/8" male		
MH-220133*	1/8" NPT female + 3/8" male		
MH-220134	1/8" NPT female		
MH-220135*	1/8" NPT female		

code	connection	description	pic.
MH-240019	M22x1.5 male / 1/2" BSP male	Adapter.	1
MH-240020	M22x1.5 male / 3/8" BSP male		
MH-240021	M22x1.5 male / 3/8" BSP fem.		
MH-350001	M22x1.5 male / 1/4" BSP male	3-piece adapter.	2
MH-240026	M22x1.5 fem. / 1/2" BSP male		
MH-240027	M22x1.5 fem. / 3/8" BSP male		
MH-240028	M22x1.5 fem. / 3/8" BSP fem.		
MH-240029	M22x1.5 fem. / 1/4" BSP male		
MH-240030	M22x1.5 fem. / 1/4" BSP fem.	2-piece adapter.	3
MH-240031	M22x1.5 fem. / 1/8" BSP fem.		
MH-240033	M22x1.5 fem. / 1/4" BSP fem.	2-piece adapter.	4
MH-240034	M22x1.5 fem. / 1/4" BSP male		
MH-240032	M22x1.5 fem. / M22x1.5 fem.	Adapter.	5
MH-240024	M22x1.5 male / M22x1.5 male		
MH-240035	M22x1.5 fem. / 1/4" BSP fem.	2-piece adapter (2 x O-ring).	7
MH-240036	M22x1.5 fem. / 1/4" BSP male		
MH-240037	M22x1.5 fem. / 3/8" BSP male	3-piece, long adapter.	8
MH-240038	M22x1.5 fem. / M22x1.5 male		
MH-240023	M22x1.5 male / 1/4" BSP fem.	Long adapter.	9
MH-350001	M22x1.5 male / 1/4" BSP male		