

# THE BOOK FOR PUMP PROFESSIONALS



**BBA Pumps**



Our dedication:  
Building the World's Best Portable Pump Solutions.



Dear Pump Professional,

Thank you for taking the time to read THE BOOK FOR PUMP PROFESSIONALS.

BBA Pumps has embraced the highest values and standards in **innovation, durability** and **sustainability**. With our dedicated innovation team we focus our efforts on the development of the greenest, most sustainable portable pump solutions in the world. Sustainability goes way beyond just an eco-friendly pump – it concerns our entire organization, from the design process all the way through to production, logistics and service.

The BBA Pumps Team.



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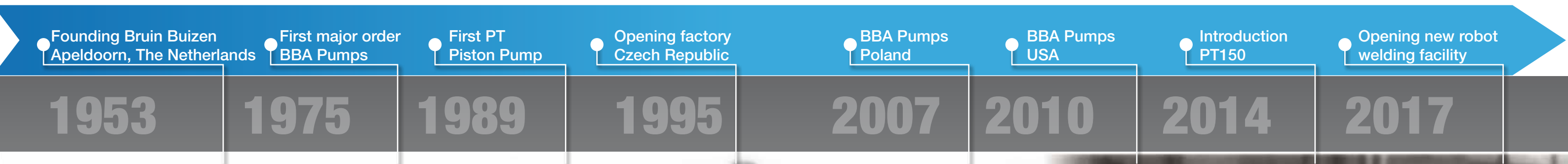
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# Born out of Experience

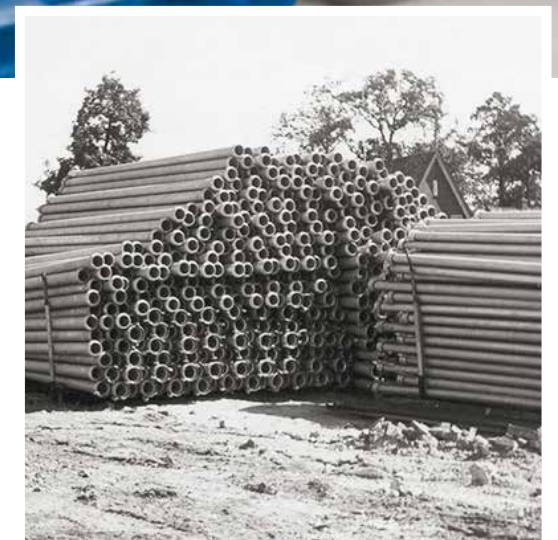


Over 60 years of experience. Since its initial founding as a manufacturer of tubes and pipes the management of the company has been passed down through the family generations. The original business name '**Bruin Buizen Apeldoorn**' has evolved into the prominent international producer known today as BBA Pumps.

**Bruin** = The name of the family, currently the third generation.

**Buizen** = The Dutch word for pipes & couplings.

**Apeldoorn** = The town in which the manufacturing facility is based.





# Innovation



BBA Pumps' research and development department designs innovative and environmentally friendly solutions which are simply generations ahead, providing our users with products which meet and surpass their requirements.

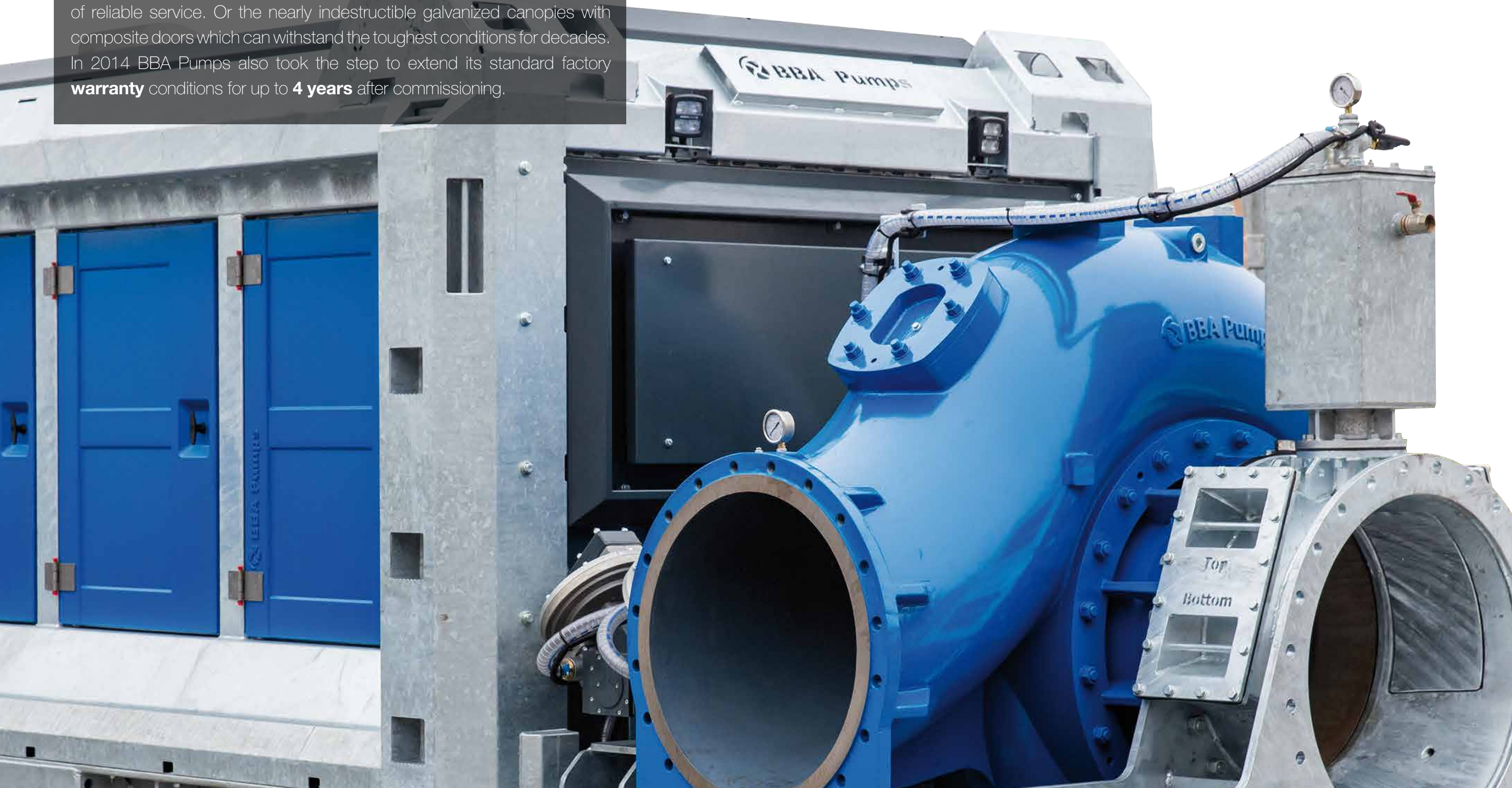
Our state-of-the-art production facilities and intensive supply partnerships result in production standards equal to leading manufacturers in the automotive industry. CNC and laser controlled equipment guarantee speed and consistent component quality. Testing is undertaken throughout the production process in order to guarantee performance and quality.





# Durability

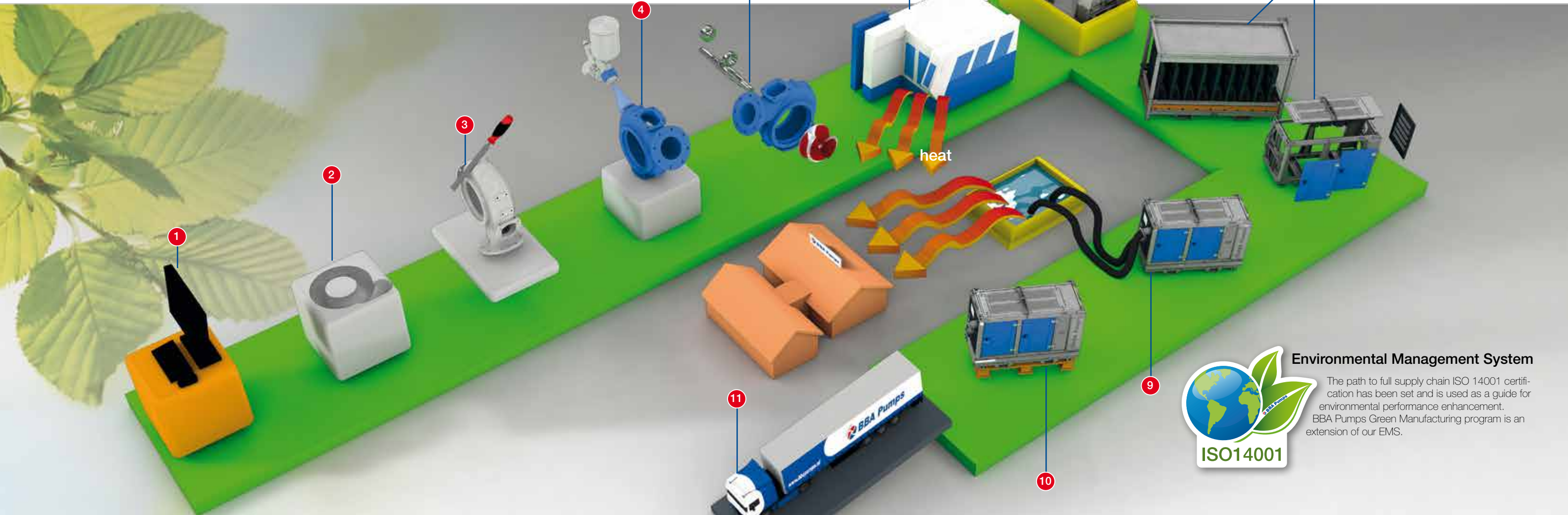
By the term durability, we think according to our philosophy of the “lowest cost of ownership” and in the form of the products economic life span. This includes products that can last a lifetime, such as the unprecedented life of the PT dewatering pumps, which can still be used after 30 years of reliable service. Or the nearly indestructible galvanized canopies with composite doors which can withstand the toughest conditions for decades. In 2014 BBA Pumps also took the step to extend its standard factory **warranty** conditions for up to **4 years** after commissioning.





# Sustainability

Green Manufacturing challenges BBA Pumps to organise its operational processes in order to meet the sustainability expectations of our clients and the environmental concerns which exist in today's business environment. This is a challenge we undertake with full conviction for our responsibility to the planet and the generations to come.



## 1 Design

Not just designing the product to simply perform its task but thoroughly analysing how to manufacture, how to transport, with reduced weight and increased product durability; all with the goal of creating the least impact on the environment.

## 2 Casting

The selection of modern foundries located in our near vicinity reduces logistical considerations and manufacturing takes place in accordance with the latest technologies and environmental standards.

## 3 Machining

We use modern CNC centers and VFD controlled drives either with the latest optimal energy standards, or plans to upgrade them to the latest efficiency standards.

## 4 Powder coating

Components requiring coating are as far as possible, if not all, powder coated rather than liquid finished. Powder coatings contain no solvents and release negligible amounts of, if any, volatile organic compounds (VOCs) into the atmosphere.

## 5 Assembly

Internal logistics and storage systems are designed towards the elimination of packing materials and achieving the maximum ergonomic work environment.

## 6 Sheet metal works

We use the energy generated by machines during sheet metal working operations to heat our buildings.

## 7 Hot-dip galvanizing

Thermal galvanisation is the most sustainable method of protecting steel and results in a maximum score on the sustainability balance. It is a natural resource and fully recyclable.

## 8 Logistic and assembly systems

BBA Pumps has custom designed the component transportation systems used internally and externally. This reduces the amount of waste from packing materials to zero. Suppliers are selected based on criteria such as their close proximity to BBA Pumps.

## 9 Pump test stand

The energy released while testing the pump units is re-used through a heat exchanger to power the floor heating systems of our buildings.

## 10 Ready for shipping

Units are designed to be loaded square on a truck or inside a container for shipping, which reduces logistical handling to a minimum.

## 11 To customer

Carefully chosen transportation routes reduce shipment distances to the minimum, combining both delivery and pick-up. Custom designed delivery trucks are equipped to the latest environmental and fuel standards.



### Environmental Management System

The path to full supply chain ISO 14001 certification has been set and is used as a guide for environmental performance enhancement. BBA Pumps Green Manufacturing program is an extension of our EMS.



# Ready for the Next Generation



BBA Pumps offers technical solutions that go far beyond compliance with current regulations.

In addition to the groundbreaking galvanized canopy, the use of the most modern and cleanest engines, BBA Pumps established itself long ago as the industries pioneer with light-weight composite panels and fully bunded fuel tanks.

## Additional innovations

- Designed for global use when it comes to all different climates and languages.
- E-Lift<sup>®</sup>, thanks to the E-Lift system the pump and diesel engine as a whole can be removed from the canopy effortlessly allowing easy maintenance.
- Bumper bars and recessed doors preventing damage.



### Particulate filter

The exhaust module is completed with a spark arrestor and prepared for installation of **DPF/DOC**.

### Composite fuel tank

Fully bunded, corrosion free and minimal condensation.



### DriveOn<sup>®</sup>

- **1500 hour service interval**
- **65% less scheduled maintenance**
- **25% savings on engine oil**
- **Ideal physical working conditions during maintenance**

### Super silent canopy

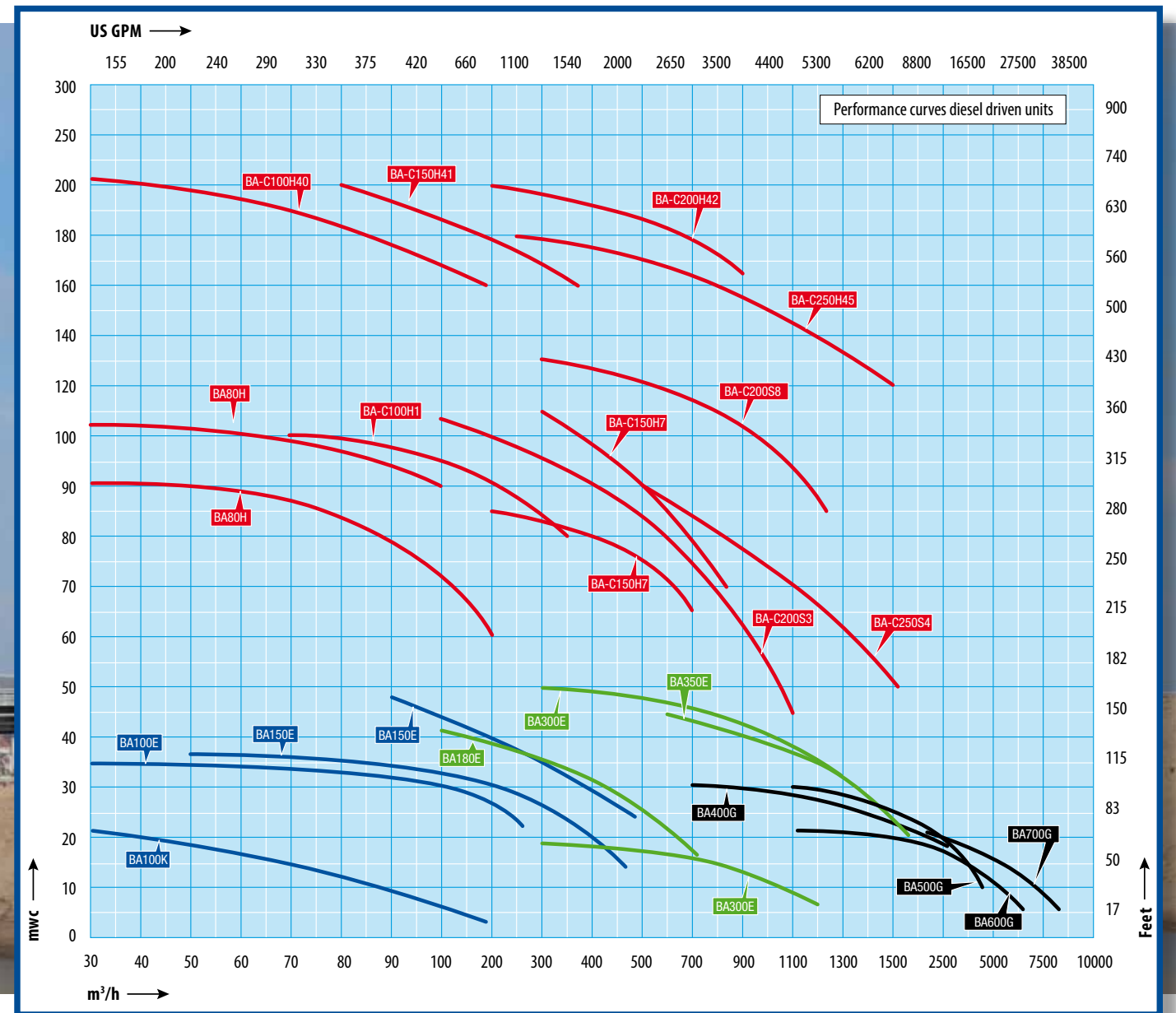
BBA Pumps built the first sound reduced pump units back in the early eighties. Nowadays our silenced canopies are the quietest in the world.





# Auto Prime Pumps

## BA Series



## World-Class Performance

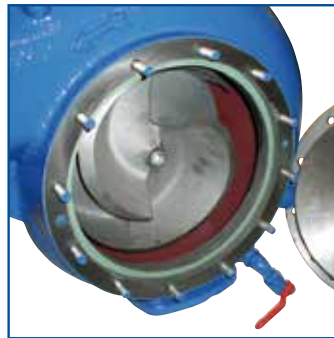
The BA auto prime pumps have been designed with a clear focus on reliability, efficiency and durability. Featuring a 100% mechanical priming system, the BA series pumps quickly prime and re-prime, even from dry conditions. The heavy build style of both pump and canopy make the BA range perfect for use in the strenuous contractor market.



# The Heart of the Matter

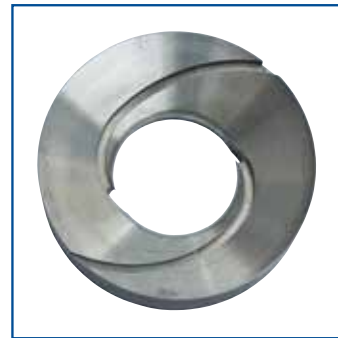
## Impeller

A selection of high efficiency impellers are available for the BA range. By using high grade steel (42CrMo4) the pumps can be used for corrosive or abrasive fluids.



## Wearplate

The wear plate used in conjunction with the E-style impeller is fitted with self-cleaning cutter slots. It is easy to adjust from the outside to ensure maximum pump efficiency at all times.



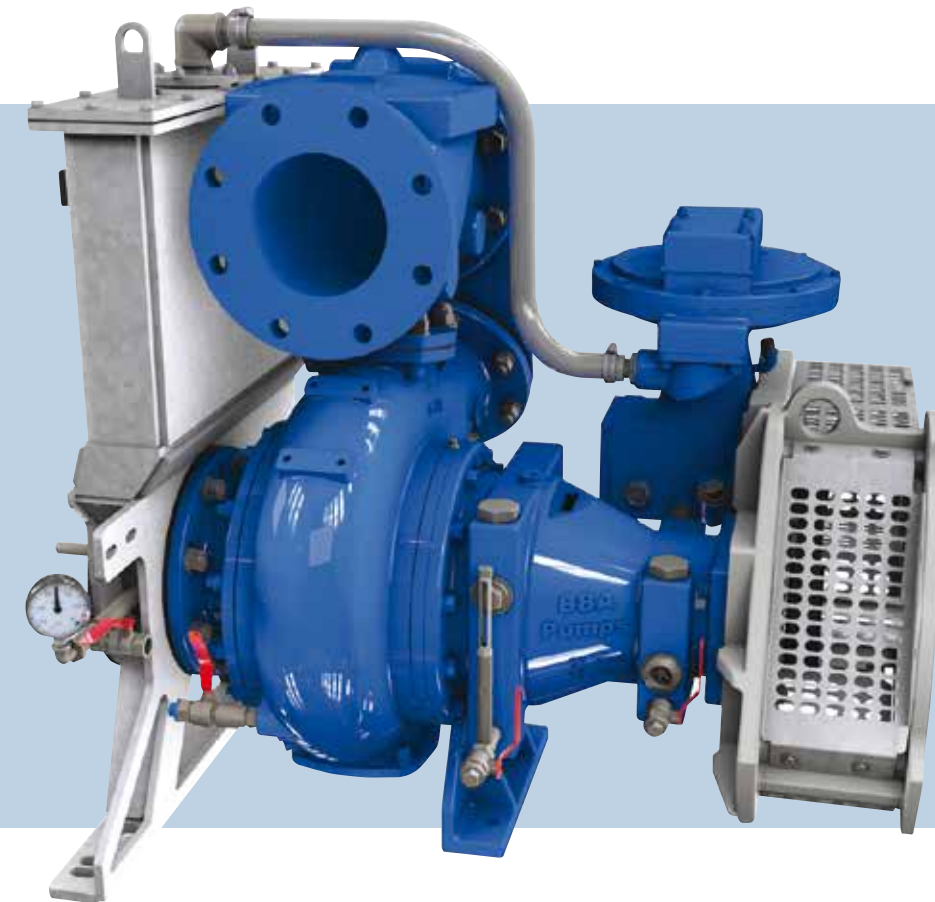
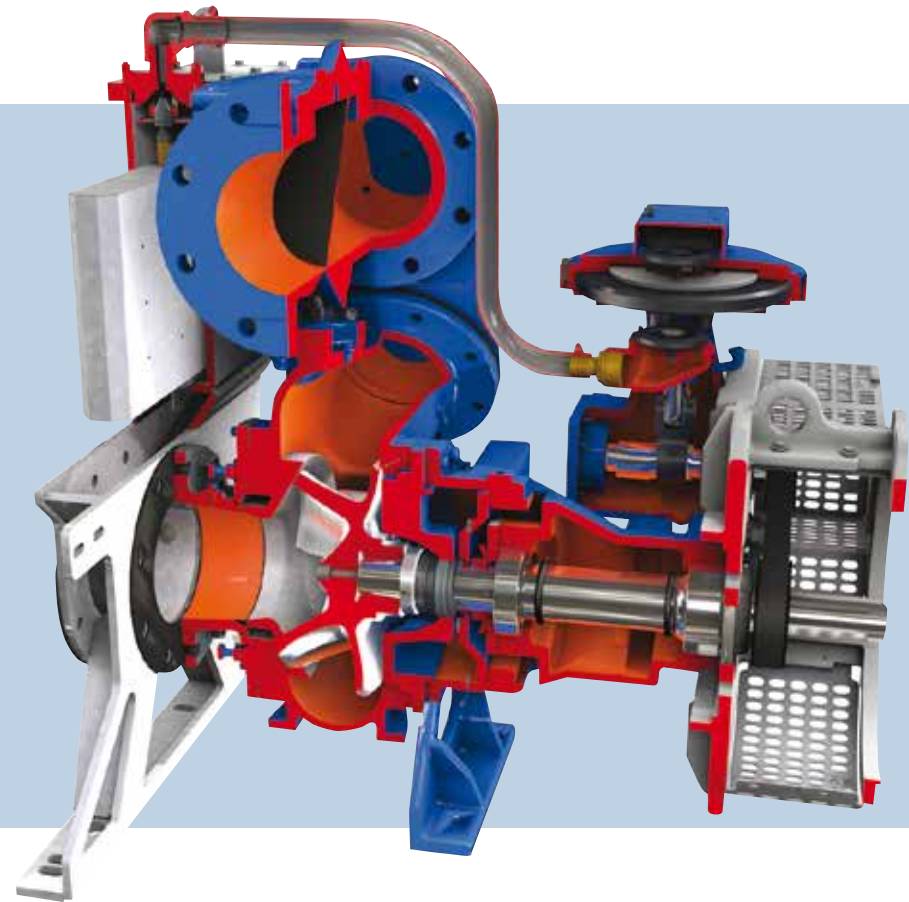
## Reliable vacuum pump

MP series diaphragm pump. Air-cooled, water resistant and 100% oil-spill free offering air handling capacities of 50 m<sup>3</sup>/h or 100 m<sup>3</sup>/h.



## Discharge check valve

The worry-free BBA Pumps check valve creates perfect sealing during the priming process. The integrated large inspection cover ensures easy access to all main areas.

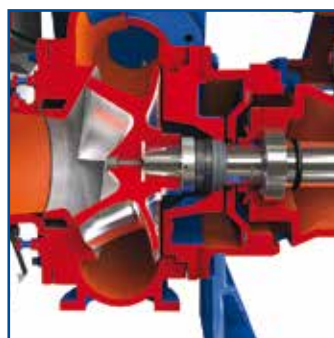


After starting the unit, the vacuum pump starts priming air out of the suction line. A non-return valve shuts off the discharge side. As soon as the pump is primed, the float closes the vacuum pump connection and the centrifugal pump starts pumping liquid.

## Oil chamber and pressure relief chamber

The large oil chamber offers optimal seal cooling allowing dry running or snoring.

The pressure relief chamber prevents fluids from entering the bearing block at all times.



## Easy inspection

All inspection points, draining points and filler plugs are easily accessible and situated on one side of the pump as much as possible.



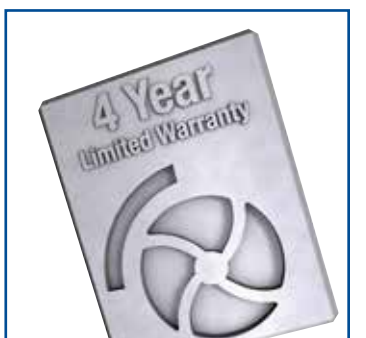
## Interchangeable parts

The modular design of the BA series minimises parts requirement thereby lowering stock keeping costs and facilitating easy maintenance.



## 4 Year limited warranty

The BBA Pumps limited warranty covers years or operating hours whichever occurs first. For more details please consult the BBA Pumps warranty book.





# BA Series

## Diesel Driven Dewatering and Sewage Pump 190 m<sup>3</sup>/h



With its maximum capacity of 190 m<sup>3</sup>/h, and 82 mm free solids passage, the BA100K D193 has been one of the most popular models in the BA series since its introduction. With its compact, super silent canopy, it can be deployed practically anywhere. The economical single-cylinder diesel engine with DriveOn<sup>®</sup> technology ensures **maintenance intervals of up to 1500 running hours**.

Model	Pump			Drive			Unit		Stock model
	Flow m <sup>3</sup> /h	Head m	ø mm	Brand	Power kW	Speed rpm	Sound attenuated	Open diesel	
BA100K D193	190	22	82	Hatz	6,5	1700	M10-18	-	<input checked="" type="checkbox"/>



DriveOn<sup>®</sup> Technology



Optional DPF/DOC



# BA Series

## Diesel Driven Dewatering and Sewage Pumps 265 m<sup>3</sup>/h - 490 m<sup>3</sup>/h

The BA range is built to be deployed on the most demanding dewatering and sewage bypassing applications. Using high efficiency pumps and state-of-the-art diesel engines, the pumps offer maximum performance at minimal cost, fully in-sync with the company philosophy of “Lowest cost of ownership”.



Model	Pump			Drive			Unit		Stock model
	Flow m <sup>3</sup> /h	Head m	ø mm	Brand	Power kW	Speed rpm	Sound attenuated	Open diesel	
BA100E D265	265	35	80	Perkins	25	1800	M10-23	BF10-23	
BA150E D285	475	35	80	Perkins	35	1750	M10-23	BF10-23	<input checked="" type="checkbox"/>
BA150E D285	490	48	80	Perkins	55	2100	M10-25	-	



# BA Series

Diesel Driven Dewatering and Sewage Pumps 570 m<sup>3</sup>/h - 1750 m<sup>3</sup>/h



These 8" and 12" solids handling units are mainly used as temporary sewer bypass pumps and in flood prevention. The pumps have a high capacity in proportion to their compact size and any noise disturbance for local residents is kept to a minimum due to the super silent canopy.

Model	Pump			Drive			Unit		Stock model
	Flow m <sup>3</sup> /h	Head m	ø mm	Brand	Power kW	Speed rpm	Sound attenuated	Open diesel	
BA180E D270	570	27	80	Hatz	50	1900	M10-25	BS12-23	<input checked="" type="checkbox"/>
BA180E D315	720	41	80	Perkins	60	1900	M10-25	BS12-23	<input checked="" type="checkbox"/>
BA300E D328	1250	19	105	Perkins	63	1500	M10-30	on request	<input checked="" type="checkbox"/>
BA300E D388	1450	48	105	Volvo Penta	180	1800	M14-40	on request	
BA350E D388	1750	46	105	Volvo Penta	190	1800	M14-40	on request	



BA180E D315 open diesel



BA300E D328 sound attenuated



# BA Series

## Diesel Driven High Flow Pumps 2700 m<sup>3</sup>/h - 7800 m<sup>3</sup>/h

Within the BA series we carry a range of pumps specifically designed for high flow applications. These pumps commonly find their use in the field of flood protection or for providing additional capacity for pumping stations.



Model	Pump			Drive			Unit	
	Flow m <sup>3</sup> /h	Head m	ø mm	Brand	Power kW	Speed rpm	Sound attenuated	Open diesel
BA400G D540	2700	31	100	Volvo Penta	190	1800	EL17-45	on request
BA500G D675	4500	26	115	Volvo Penta	250	1800	EL23-58	on request
BA600G D743	6500	22	135	Volvo Penta	260	1800	EL23-58	on request
BA700G D810	7800	23	145	Volvo Penta	350	1800	EL23-58	on request





# BA Series

## Diesel Driven High Head Pumps 85 mwc - 135 mwc

These multifunctional high head pumping systems – with discharge pressures of up to 13 bar - find their use in general construction markets. Typical applications are underwater excavation, fire fighting, tank cleaning and various other clean water jetting jobs.



Model	Pump			Brand	Drive		Unit	
	Flow m <sup>3</sup> /h	Head m	ø mm		Power kW	Speed rpm	Sound attenuated	Open diesel
BA80H D290	100	105	25	Hatz	50	2800	M10-25	–
BA80H D315	200	90	25	Perkins	70	2200	M10-25	–
BA-C100H1 D418	345	100	16	Perkins	116	1850	EL17-40	On request
BA-C150H7 D406	700	85	31	Volvo Penta	146	1800	EL17-45	On request
BA-C150H7 D418	850	110	31	Volvo Penta	240	2000	EL17-50	On request
BA-C200H42 D483	800	130	51	Volvo Penta	300	1800	EL23-58	On request
BA-C200S3 D444	1100	107	86	Volvo Penta	210	1800	EL17-45	On request
BA-C200S8 D495	1250	135	62	Volvo Penta	398	1850	EL23-58	On request
BA-C250S4 D444	1600	100	86	Volvo Penta	305	1800	EL23-58	On request





# BA Series

## Diesel Driven Mining Pumps 150 mwc – 210 mwc

BBA Pumps has developed a bolt-on pump package to cater the mining market niches where there is no need for a complete skid and/or canopy. These units feature the BA pump of your choice coupled to a diesel engine, including the control panel, and mounted on a high quality, galvanized sub-frame. The frames can be customised with lifting bales, protection bars etc. should these be required.



Model	Pump			Brand	Drive		Unit	
	Flow m <sup>3</sup> /h	Head m	ø mm		Power kW	Speed rpm	Sound attenuated	Open diesel
BA-C100H40 D498	180	210	19	Caterpillar	180	2200	On request	Bolt-on
BA-C150H41 D557	370	200	25	Caterpillar	280	1900	On request	Bolt-on
BA-C200H42 D557	900	200	51	Caterpillar	600	1900	-	Bolt-on
BA-C250H45 D610	1500	180	60	Caterpillar	700	1770	-	Bolt-on



Bolt-on pump package



# BA Series

## Electrically Driven Pumps 110 m<sup>3</sup>/h - 6500 m<sup>3</sup>/h



The electrically driven BA pumps are available in many different versions. The table shows a selection of the most common models used primarily for pumping wastewater and sewage. There is an appropriate solution for almost all operating conditions, including high working pressures or where special ATEX certification is required.

Model	Pump			Motor 400V 50Hz			Frame	Canopy
	Flow m <sup>3</sup> /h	Head m	ø mm	Power kW	Speed rpm	Start-up		
BA80H D275	110	115	25	55	2975	soft starter	BF10-18	L10-23
BA100K D193	130	15	82	5.5	1450	soft starter	BF10-18	L10-23
BA100E D265	260	21	80	15	1470	soft starter	BF10-18	L10-23
BA150E D285	430	24	80	22	1470	soft starter	BF10-18	L10-23
BA180E D328	650	31	80	45	1480	soft starter	BF10-18	L10-23
BA300E D355	1325	22	105	75	1480	DOL	F12-27	M10-30
BA-C400S8 D559	3200	45	114	250	990	DOL	F17-34	-
BA-C500S11 D711	5500	37	127	400	750	DOL	F18-44	-
BA-C600S12 D711	6500	24	133	250	600	DOL	F20-40	-



316 stainless steel



ATEX units EX II 2G IIB T4



# BA Series

## Dewatering and Sewage Pumps

The table shows a selection of the most common dewatering and sewage pumps.

											
	<b>BA100K D193 4"</b>	<b>BA150E D285 6"</b>	<b>BA180E D315 8"</b>	<b>BA300E D328 12"</b>	<b>BA300E D388 12"</b>	<b>BA350E D388 14"</b>	<b>BA400G D540 16"</b>	<b>BA500G D675 20"</b>	<b>BA600G D743 24"</b>	<b>BA700G D810 28"</b>	
<b>Max. flow</b>	190 m <sup>3</sup> /h	475 m <sup>3</sup> /h	720 m <sup>3</sup> /h	1250 m <sup>3</sup> /h	1450 m <sup>3</sup> /h	1750 m <sup>3</sup> /h	2700 m <sup>3</sup> /h	4500 m <sup>3</sup> /h	6500 m <sup>3</sup> /h	7800 m <sup>3</sup> /h	<b>Max. flow</b>
<b>Max. head</b>	22 mwc	35 mwc	41 mwc	19 mwc	48 mwc	46 mwc	31 mwc	26 mwc	22 mwc	23 mwc	<b>Max. head</b>
<b>Free passage</b>	82 mm	80 mm	80 mm	120 x 105 mm	120 x 105 mm	120 x 105 mm	100 mm	115 mm	135 mm	145 mm	<b>Free passage</b>
<b>Max. pump speed</b>	1700 rpm	1750 rpm	1900 rpm	1500 rpm	1800 rpm	1800 rpm	970 rpm	740 rpm	620 rpm	590 rpm	<b>Max. pump speed</b>
<b>Operating point (BEP)</b>	120 m <sup>3</sup> /h @ 11 mwc	300 m <sup>3</sup> /h @ 25 mwc	450 m <sup>3</sup> /h @ 30 mwc	800 m <sup>3</sup> /h @ 15 mwc	1100 m <sup>3</sup> /h @ 39 mwc	1300 m <sup>3</sup> /h @ 35 mwc	2400 m <sup>3</sup> /h @ 24 mwc	3250 m <sup>3</sup> /h @ 23 mwc	4500 m <sup>3</sup> /h @ 18 mwc	6000 m <sup>3</sup> /h @ 17 mwc	<b>Operating point (BEP)</b>
<b>Priming system</b>	50 m <sup>3</sup> /h	50 m <sup>3</sup> /h	50 m <sup>3</sup> /h	100 m <sup>3</sup> /h	100 m <sup>3</sup> /h	100 m <sup>3</sup> /h	100 m <sup>3</sup> /h	100 m <sup>3</sup> /h	100 m <sup>3</sup> /h	100 m <sup>3</sup> /h	<b>Priming system</b>
<b>Engine</b>	Hatz DriveOn®	Perkins	Perkins	Perkins	Volvo Penta	Volvo Penta	Volvo Penta	Volvo Penta	Volvo Penta	Volvo Penta	<b>Engine</b>
<b>Cylinders</b>	1 cylinder	4 cylinders	4 cylinders	4 cylinders	6 cylinders	6 cylinders	6 cylinders	6 cylinders	6 cylinders	6 cylinders	<b>Cylinders</b>
<b>Max. absorbed power</b>	6,8 kW	35 kW	60 kW	60 kW	180 kW	190 kW	190 kW	250 kW	260 kW	350 kW	<b>Max. absorbed power</b>
<b>Max. fuel consumption</b>	1,8 l/h	9 l/h	15 l/h	17 l/h	50 l/h	53 l/h	53 l/h	65 l/h	70 l/h	90 l/h	<b>Max. fuel consumption</b>
<b>Canopy</b>	M10-18	M10-23	M10-25	M10-30	M14-40	M14-40	EL17-45	EL23-58	EL23-58	EL23-58	<b>Canopy</b>
<b>Sound level LwA at 10 m</b>	53 dB(A)	61 dB(A)	approx. 67 dB(A)	approx. 64 dB(A)	approx. 80 dB(A)	approx. 80 dB(A)	approx. 75 dB(A)	approx. 75 dB(A)	approx. 75 dB(A)	approx. 75 dB(A)	<b>Sound level LwA at 10 m</b>
<b>Dimensions LxWxH (mm)</b>	1800x1050x1596	2270x1050x1533	2500x1050x1680	3600x1050x2160	3950x1450x2417	3950x1450x2417	4500x1700x2080	5830x2306x2300	5830x2306x2300	5830x2306x2300	<b>Dimensions LxWxH (mm)</b>
<b>Fuel tank</b>	220 l	300 l	300 l	300 l	300 l	300 l	300 l	300 l	300 l	300 l	<b>Fuel tank</b>
<b>Net weight without fuel</b>	1450 kg	1600 kg	2090 kg	3420 kg	5250 kg	approx. 5500 kg	approx. 8000 kg	10900 kg	approx. 11000 kg	approx. 12000 kg	<b>Net weight without fuel</b>



# BA Series

## High Head Pumps

The table shows a selection of the most common high head pumps.

											
	BA80H D290 3"	BA80H D315 3"	BA-C100H1 D418 4"	BA-C150H7 D406 6"	BA-C150H7 D418 6"	BA-C200H42 D483 6"	BA-C200S3 D444 8"	BA-C200S8 D495 8"	BA-C250S4 D444 10"	BA-C250H45 D610 10"	
<b>Max. flow</b>	100 m³/h	200 m³/h	345 m³/h	700 m³/h	850 m³/h	800 m³/h	1100 m³/h	1250 m³/h	1600 m³/h	1500 m³/h	<b>Max. flow</b>
<b>Max. head</b>	105 mwc	90 mwc	100 mwc	85 mwc	110 mwc	130 mwc	107 mwc	135 mwc	100 mwc	180 mwc	<b>Max. head</b>
<b>Free passage</b>	25 mm	25 mm	16 mm	31 mm	31 mm	51 mm	86 mm	62 mm	86 mm	60 mm	<b>Free passage</b>
<b>Max. pump speed</b>	2800 rpm	2200 rpm	1850 rpm	1800 rpm	2000 rpm	1800 rpm	1800 rpm	1850 rpm	1800 rpm	1770 rpm	<b>Max. pump speed</b>
<b>Operating point (BEP)</b>	100 m³/h @ 100 mwc	140 m³/h @ 75 mwc	290 m³/h @ 85 mwc	600 m³/h @ 70 mwc	750 m³/h @ 90 mwc	600 m³/h @ 110 mwc	800 m³/h @ 70 mwc	1000 m³/h @ 100 mwc	1400 m³/h @ 60 mwc	1250 m³/h @ 140 mwc	<b>Operating point (BEP)</b>
<b>Priming system</b>	50 m³/h	50 m³/h	50 m³/h	50 m³/h	50 m³/h	100 m³/h	100 m³/h	100 m³/h	100 m³/h	100 m³/h	<b>Priming system</b>
<b>Engine</b>	Hatz	Perkins	Perkins	Volvo Penta	Volvo Penta	Volvo Penta	Volvo Penta	Volvo Penta	Volvo Penta	Volvo Penta	<b>Engine</b>
<b>Cylinders</b>	4 cylinders	4 cylinders	4 cylinders	6 cylinders	6 cylinders	6 cylinders	6 cylinders	6 cylinders	6 cylinders	6 cylinders	<b>Cylinders</b>
<b>Max. absorbed power</b>	45 kW	60 kW	100 kW	145 kW	240 kW	290 kW	200 kW	370 kW	300 kW	700 kW	<b>Max. absorbed power</b>
<b>Max. fuel consumption</b>	13 l/h	17 l/h	25 l/h	35 l/h	63 l/h	72 l/h	50 l/h	90 l/h	75 l/h	160 l/h	<b>Max. fuel consumption</b>
<b>Canopy</b>	M10-25	M10-25	EL17-40	EL17-45	EL17-50	EL23-58	EL17-45	EL23-58	EL23-58	BF20-45	<b>Canopy</b>
<b>Sound level LwA at 10 m</b>	69 dB(A)	approx. 70 dB(A)	approx. 70 dB(A)	approx. 75 dB(A)	approx. 80 dB(A)	approx. 82 dB(A)	approx. 78 dB(A)	approx. 82 dB(A)	approx. 82 dB(A)	-	<b>Sound level LwA at 10 m</b>
<b>Dimensions LxWxH (mm)</b>	2500x1050x1680	2500x1050x1680	4000x1700x2080	4500x1700x2259	5000x1700x2259	5830x2306x2300	4500x1700x2259	5830x2306x2300	5830x2306x2300	4500x2000x2200	<b>Dimensions LxWxH (mm)</b>
<b>Fuel tank</b>	300 l	300 l	300 l	300 l	300 l	300 l	300 l	300 l	300 l	-	<b>Fuel tank</b>
<b>Net weight without fuel</b>	1900 kg	2000 kg	5000 kg	approx. 6500 kg	approx. 7000 kg	approx. 9500 kg	approx. 6500 kg	approx. 9500 kg	approx. 9500 kg	approx. 6500 kg	<b>Net weight without fuel</b>



# Wellpoint Dewatering Pumps

## PT Series

### The PT piston pump offers you:

- Lowest cost of ownership
- Excellent suction capabilities
- Vacuum of up to 9.6 mwc
- Worry free run-dry (indefinitely)
- Longest lifetime

### An investment that pays for itself

The PT wellpoint pump has been designed for vertical and horizontal dewatering applications. These positive displacement pumps are fully self-priming and are capable of handling air, water or any mixture of both without requiring a separate priming system. Furthermore, these pumps are capable of running dry indefinitely without causing damage or excessive wear to any part of the unit.





# An Investment for the Future



## Features:

- Excellent suction capabilities
- Can run dry indefinitely
- High pump efficiency
- Low fuel consumption
- **1500 hour** service interval



### DriveOn®

- 1500 hour service interval
- 65% less scheduled maintenance
- 25% savings on engine oil
- Ideal physical working conditions during maintenance

### Ergonomic design

PT150 with DriveOn® technology offers ideal working conditions during maintenance.



### Super silent canopy

The PT diesel driven units are designed for operating in residential areas even throughout the night.

### Particulate filter

It is possible to supply the PT150 with an exhaust module fitted with a spark arrestor which is prepared for the installation of a DPF/DOC.

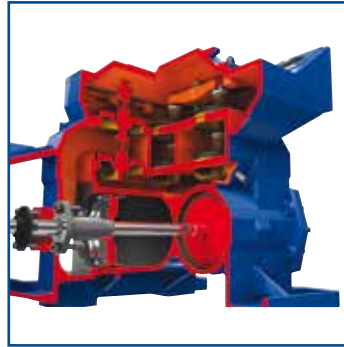




# The Heart of the Matter

## Excellent pump hydraulics

A patented suction valve seat and improved hydraulics guarantee the best pump efficiency and unbeatable vacuum build up.



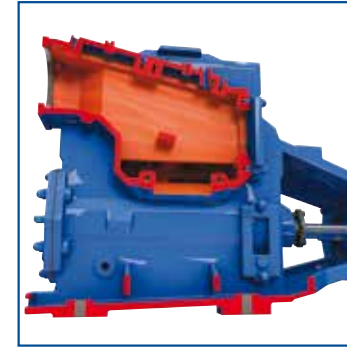
## Close to maximum vacuum

The PT wellpoint pump is designed for vertical and horizontal dewatering applications and performs best under high vacuum.



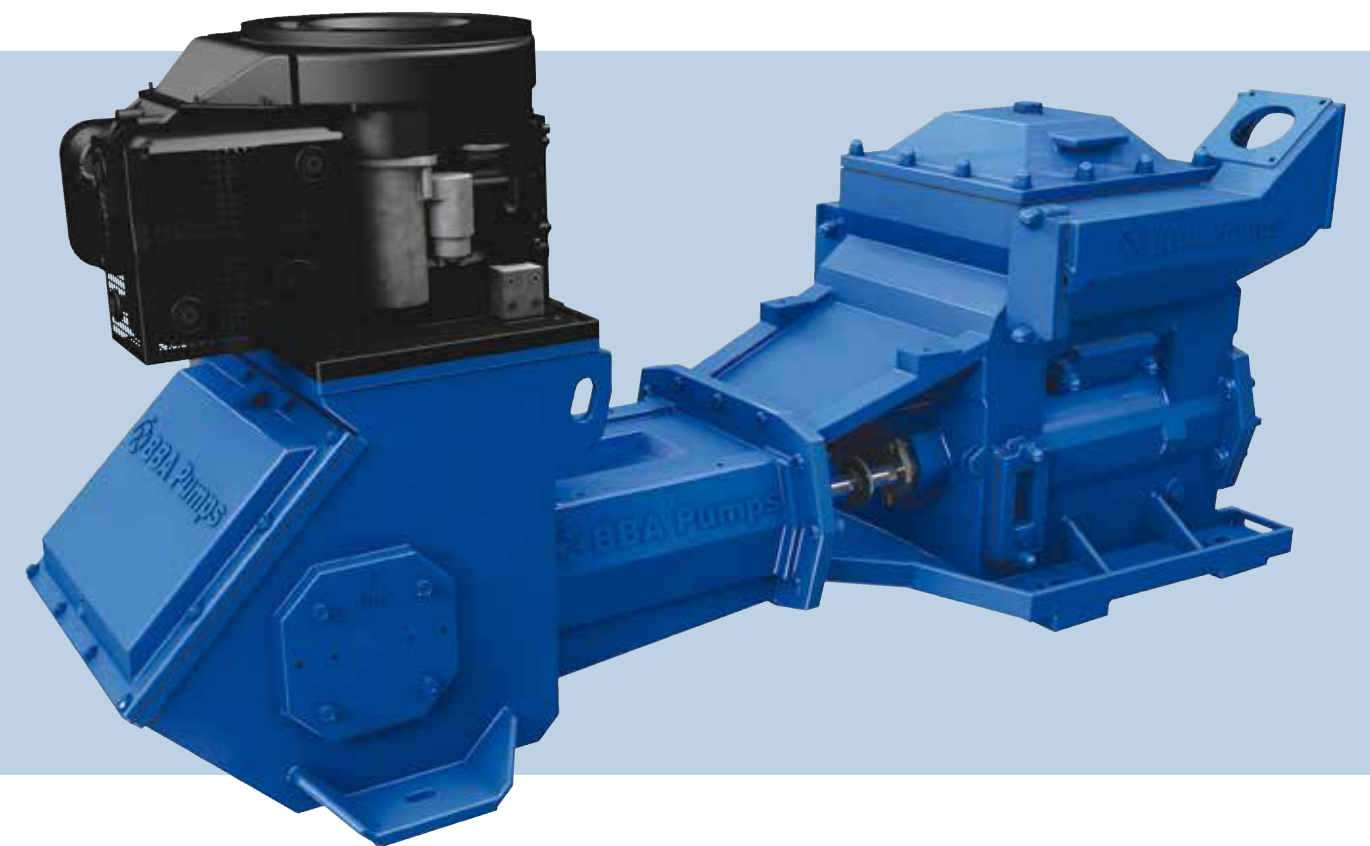
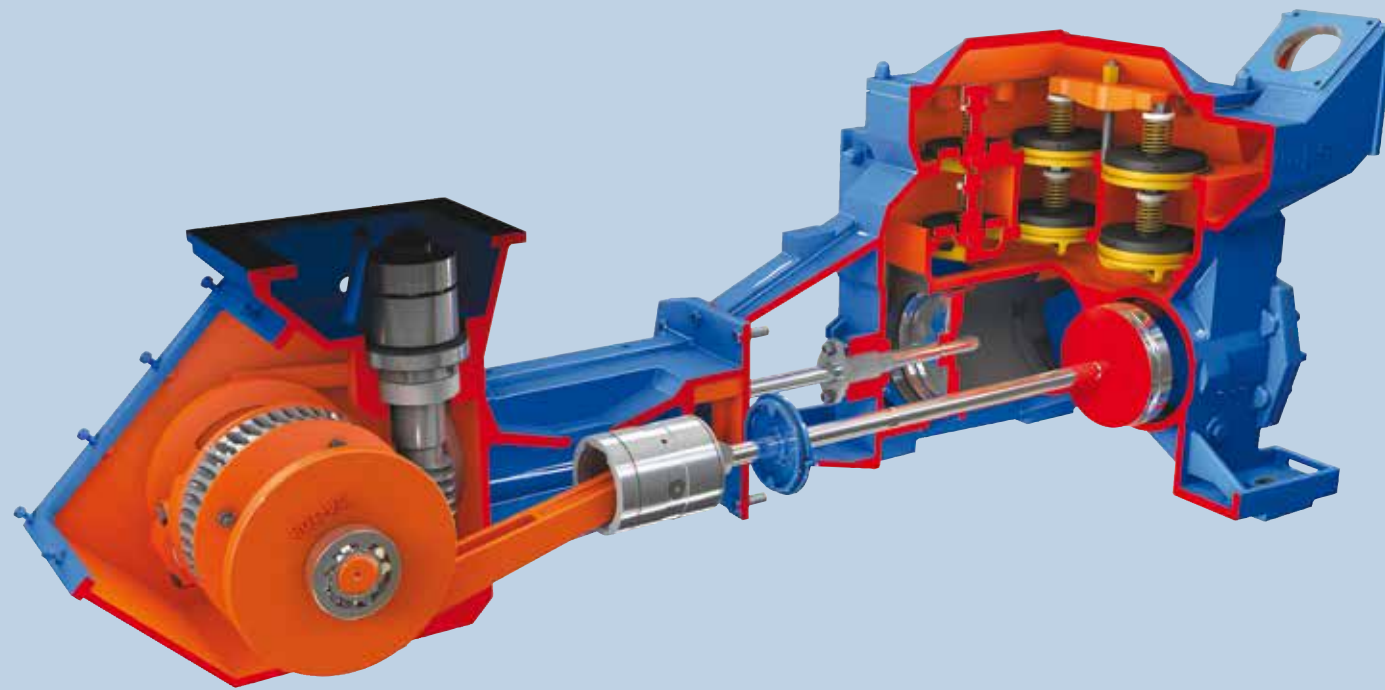
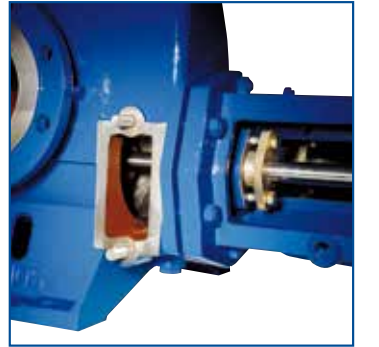
## Integrated stone catcher

To protect the pump internals from any suspended solids. The stone catcher has 4 inspection covers and comes with dual vacuum gauges to monitor pump performance.



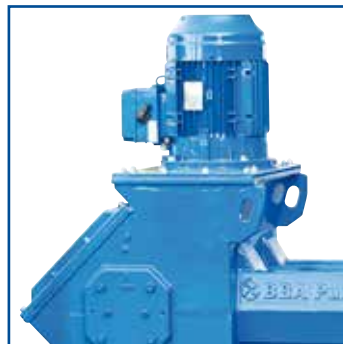
## Robust piston rods

The stainless steel piston rods have been carefully grinded to guarantee maximum service life.



## Direct Drive Design®

Precisely machined drive gears and an automatic lubrication system provide excellent efficiency and minimal sound emissions.



## Easy access points

Allows access to the cylinders, valves, stuffing boxes and other critical areas for easy cleaning, draining and maintenance.



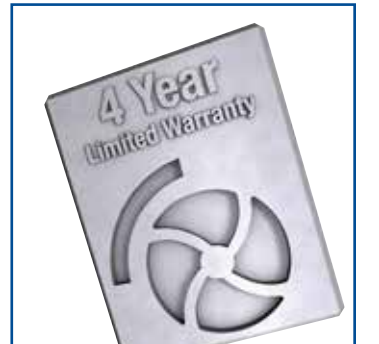
## Handy covers

The lightweight aluminium and composite covers are easy to grip, lift and move.



## 4 Year limited warranty

The BBA Pumps limited warranty covers years or operating hours whichever occurs first. For more details please consult the BBA Pumps warranty book.





# PT Series

## Unique Engine Concept

### DriveOn® Technology:

Human engineering was a key consideration with the development of the DriveOn® concept. The PT150 with DriveOn® technology offers ideal working conditions during maintenance.

On top of that, the engine service interval is extended up to 1500 running hours (instead of 500 for the standard engines).



**DriveOn®**

### Key features for DriveOn® technology

- **1500 hour** service interval
- **65%** less scheduled maintenance
- **25%** savings on engine oil
- Ideal physical working conditions during maintenance





# PT Series

## Diesel Driven Super Silent

This diesel driven super silent pump has proven itself as the most reliable and cost saving wellpoint dewatering pump around the world. The remarkable details of this simple pump concept are what make the pump so successful. 25 years of experience in the Dutch dewatering market have enabled us to develop a light, compact and super silent pump set with a number of outstanding technical features.

## PT150 D180

- Maximum suction lift up to **9.6 mwc**
- Noise level **48 dB(A)** at 10 meters
- Fuel consumption max. **1.4 liter/hour**
- Fully bunded composite fuel tank
- **1500 hour** service interval



Model	Pump		Diesel engine				Assembly	Stock model
	Flow m³/h	Head m	Brand	Model	Power kW	Speed rpm		
PT130 D130	35	20	Hatz	1D41Z	2,8	1500	L9-15	<input checked="" type="checkbox"/>
PT150 D150	58	20	Hatz DriveOn®	1D90V	5,8	1500	L10-23	
PT150 D180	90	20	Hatz DriveOn®	1D90V	5,8	1500	L10-23	<input checked="" type="checkbox"/>
PT200 D265	190	20	Hatz	3H50TIC	15	1500	M14-23	



PT150 D180

PT130 D130



# PT Series

Open Diesel



Model	Pump		Diesel engine			Assembly	
	Flow m <sup>3</sup> /h	Head m	Brand	Model	Power kW		Speed rpm
PT150 D180	90	20	Hatz DriveOn	1D90V	5,8	1500	Open diesel
PT200 D265	190	20	Hatz	3H50TIC	15	1500	Open diesel





# PT Series

## Electrically Driven

For the electrically driven PT150 series BBA Pumps has used the same technologies as in the diesel sets, such as the Direct Drive Design®.

By replacing the V-belt drive with the Direct Drive Design®, as well as improving the hydraulics in the pump casing, the pumping output is significantly improved. Even at a low occupancy rate, savings on energy costs during the lifetime of the pump are significant.

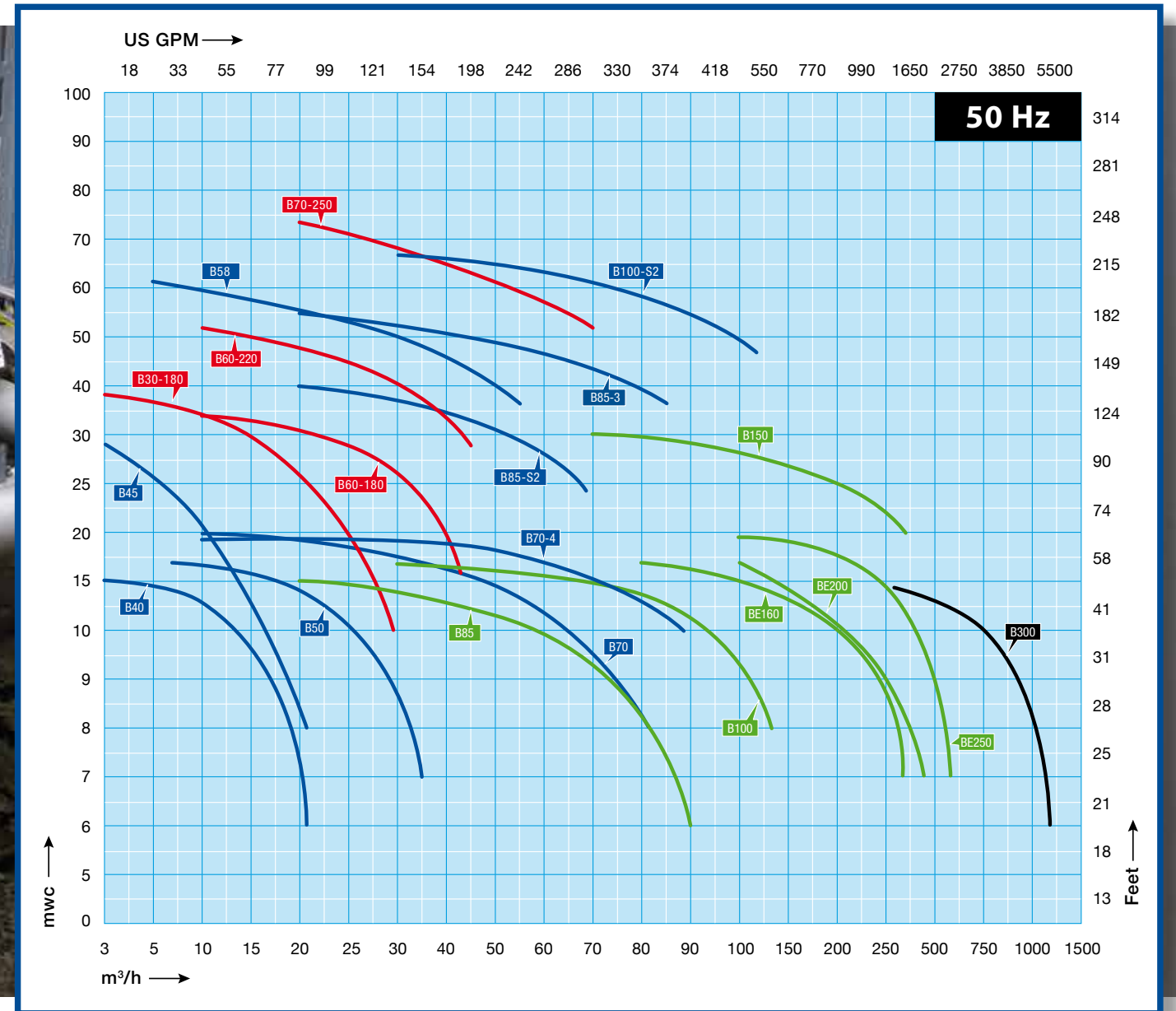


PT150 in sound attenuated canopy

Model	Pump		Motor				Canopy	Frame
	Flow m³/h	Head m	Voltage	Power kW	Current I norm (A)	Speed rpm		
PT130 D130	26	20	230V	2,2	13,4	1450	L9-15	base frame
PT130 D130	35	20	230/400V	3	6,1	1480	L9-15	base frame
PT150 D150	57	20	400/690V	4	7,9	1450	L10-23	SF10-21
PT150 D180	90	20	400/690V	7,5	15	1460	L10-23	SF10-21
PT200 D265	190	20	400/690V	15	28	1470	-	base frame



# Self-Priming Pumps



## Basic and Reliable Technology

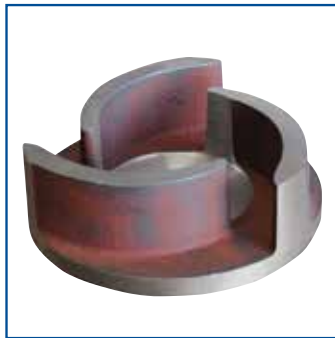
The BBA self-priming pumps are ideal for pumping slightly contaminated liquids with or without solid parts. The pumps from the B Series are used in systems where priming can sometimes be difficult and where a regular centrifugal pump doesn't work. Once the pump casing is filled with liquid, pumping air from the suction pipe is extremely simple.



# The Heart of the Matter

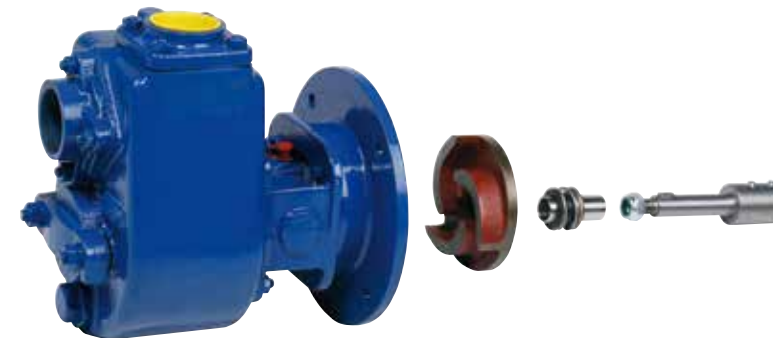
## Semi open impeller

The pumps are constructed with a semi open impeller which is running against a changeable wearplate. Available in cast iron, bronze and stainless steel.

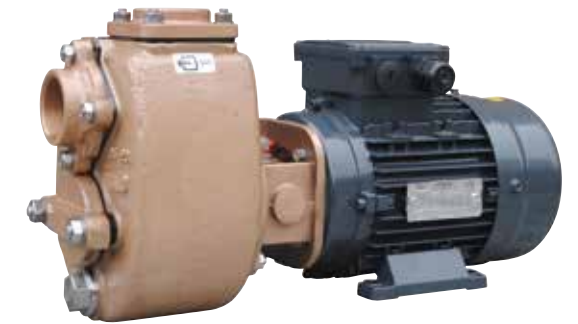


## Cutter blade

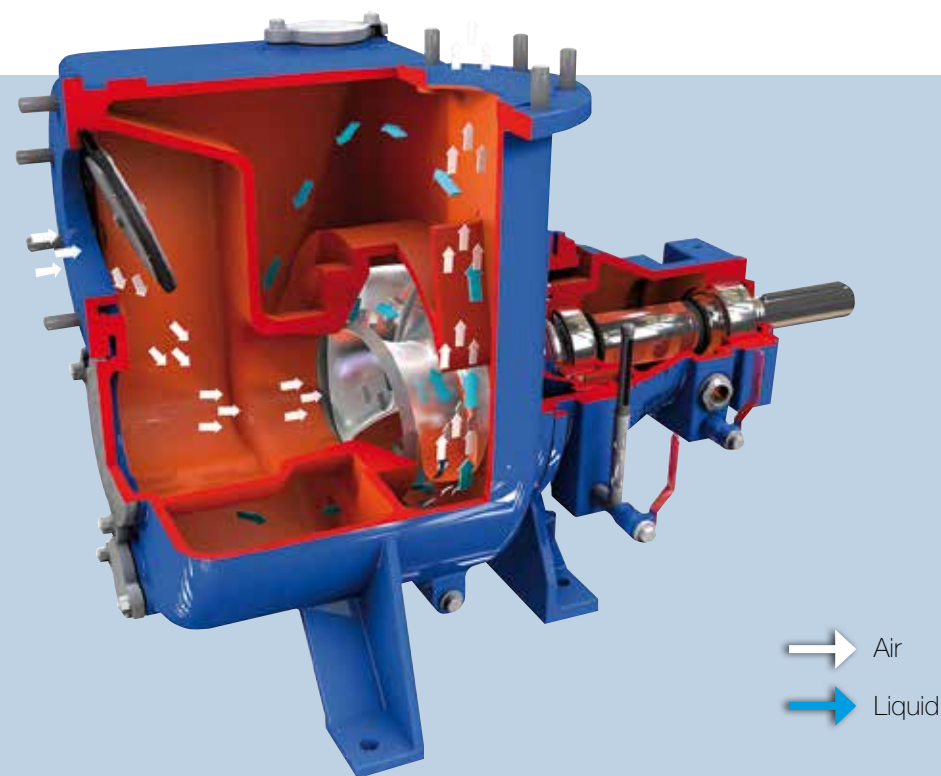
Several types can be fitted with a stainless steel cutter blade in the impeller for liquids containing fibrous materials.



Stub shaft



Bronze pump casing (BVBMC)



The rotation of the impeller draws the air present in the suction pipe into the pump casing. The air mixes with the liquid present in the pump casing. Liquid and air are transported to the discharge outlet. When all the air has been removed from the suction pipe, the pump draws in liquid.

## Optional Features

Mechanical seals		Extras	
T3W seal	HM / HM / Viton	+F	DIN flanges
MG1 seal	Sic / Sic / EPDM	+FK	DIN flanges, stainless steel 316
		+B	Bronze impeller; stainless steel 316 shaft
		+BII	Bronze impeller/wear plate, stainless steel 316 shaft
		+KI	Stainless steel 316 impeller and shaft
		+KII	Stainless steel impeller, wear plate and shaft
Gaskets		+M	Cutting blade
N	NBR: Perbunan	+P	Perma grease cartridge
V	FPM: Viton	+VP	Grease glass for seal lubrication
E	EPDM	+KF	Wheelbarrow frame
T	PTFE: Teflon	60Hz	Motor 440V – 60Hz
K	FFKM, Kalrez		

Contact us for more optional features.



Stackable frame (+BF)



Wheelbarrow frame (+KF)



# B Series

## Electrically Driven Pumps, 2-pole

Models from DN40 (1,5") to DN100 (4"). The pumps have been designed for speeds of 1500 to 3600 rpm and are driven by a two-pole electric motor. The specific feature of these models is their small size in combination with a large free passage.



Model	Pump					Motor 400V 50Hz		Assembly
	Flow m³/h	Head mwc	ø mm	Connection		Power kW	Speed rpm	
				mm	inch			
B40	21	15	18	40	1,5"	1,5	2850	BVGMC
B45	22	29	14	40	1,5"	2,2	2850	BVGMC
B50	35	18	25	50	2"	2,2	2850	BVGMC
B58	52	62	25	80	3"	11	2950	BVGMC
B70	82	20	22	80	3"	4	2900	BVGMC
B70-4	90	19	30	80	3"	5,5	2880	BVGMC
B85-S2	76	44	15	80	3"	11	2930	BVGMC
B85-S3	86	57	18	80	3"	18,5	2930	BVGSMC
B100-S2	120	62	29	100	4"	30	2950	BVGSMC

Contact us for the technical data of the 60 Hz models.



## Electrically Driven High Head Pumps, 2-pole

Models from DN40 (1,5") to DN80 (3"). The pumps differ from the other models in the B series in higher pressure ratings. These models find applications in jetting, pressure boosting and wash plants. The pump inlet is located at the drive end side, this results in a reduced load on the drive end.



Model	Pump					Motor 400V 50Hz		Assembly
	Flow m³/h	Head mwc	ø mm	Connection		Power kW	Speed rpm	
				mm	inch			
B30-180	32	39	12	50 - 40	2" - 1,5"	4	2900	BVGMC
B60-180	45	35	18,5	50	2"	5,5	2880	BVGMC
B60-220	45	53	14	50	2"	11	2930	BVGMC
B70-250	70	74	12	80	3"	22	2940	BVGSMC

Contact us for the technical data of the 60 Hz models.





# B Series

## Electrically Driven Solids Handling Pumps, 4-pole

Models from DN80 (3") to DN250 (10"). The pumps are designed for speeds from 1000 to 2000 rpm. The pump casings are thick-walled, especially in those areas that are subject to wear during pumping of abrasive liquids. Their rugged construction makes them suitable for use under difficult conditions, for continuous operation, for abrasive and aggressive fluids.

Model	Pump				Motor 400V 50Hz		Assembly
	Flow m³/h	Head m	ø mm	Connection mm    inch	Power kW	Speed rpm	
B85	90	16	40	80    3"	5,5	1450	BVGMC
B100	140	18	46	100    4"	7,5	1460	BVGMC
B150	300	32	40	150    6"	30	1470	NMC
BE160	300	17	80	150    6"	15	1460	NMC
BE200	480	24	80	200    8"	30	1475	NMC
BE250	600	21	80	250    10"	37	1475	NMC



## Diesel Driven Pumps on Wheelbarrow

B series pumps fixed to wheeled frames extends further the ease of use of the mobile pumping sets. The single-cylinder driven jetting and dewatering pumps are the most popular. They are used around the world in the most diverse range of applications.



B60 - 220 Hatz 1D90

Model	Pump			Diesel engine				Assembly	Stock model
	Flow m³/h	Head m	ø mm	Brand	Model	Power kW	Speed rpm		
B30-180	32	37	12	Hatz	1B40 h.s.	7	3000	Wheelbarrow	<input checked="" type="checkbox"/>
B60-220	45	53	14	Hatz	1D90Z e.s.	11	3000	Wheelbarrow	<input checked="" type="checkbox"/>
B70-250	70	74	12	Hatz	2M41	24	3000	Wheelbarrow	<input checked="" type="checkbox"/>
B85	90	16	40	Hatz	1D81Z h.s.	5,5	1500	Wheelbarrow	<input checked="" type="checkbox"/>

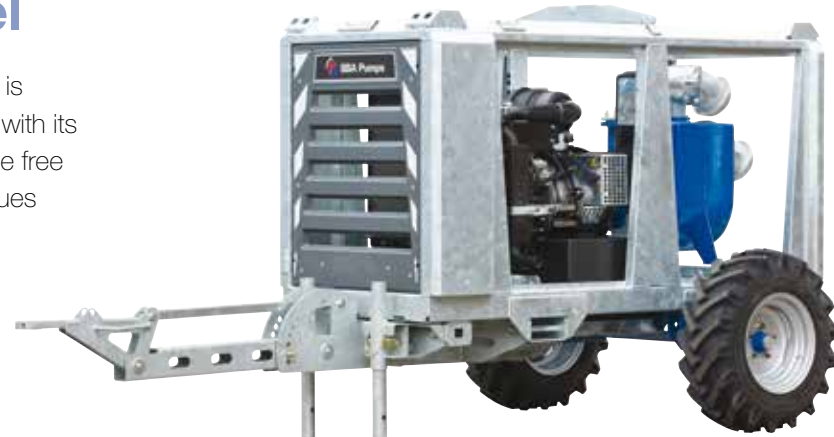




# B Series

## BE Series Open Diesel

The wet self-priming pump casing of the B series is combined with the back pull-out of the BA series with its unique E-style impeller. This combination of a large free passage, high efficiency and excellent NPSH values results in an outstanding pump set.



BE160 site trailer

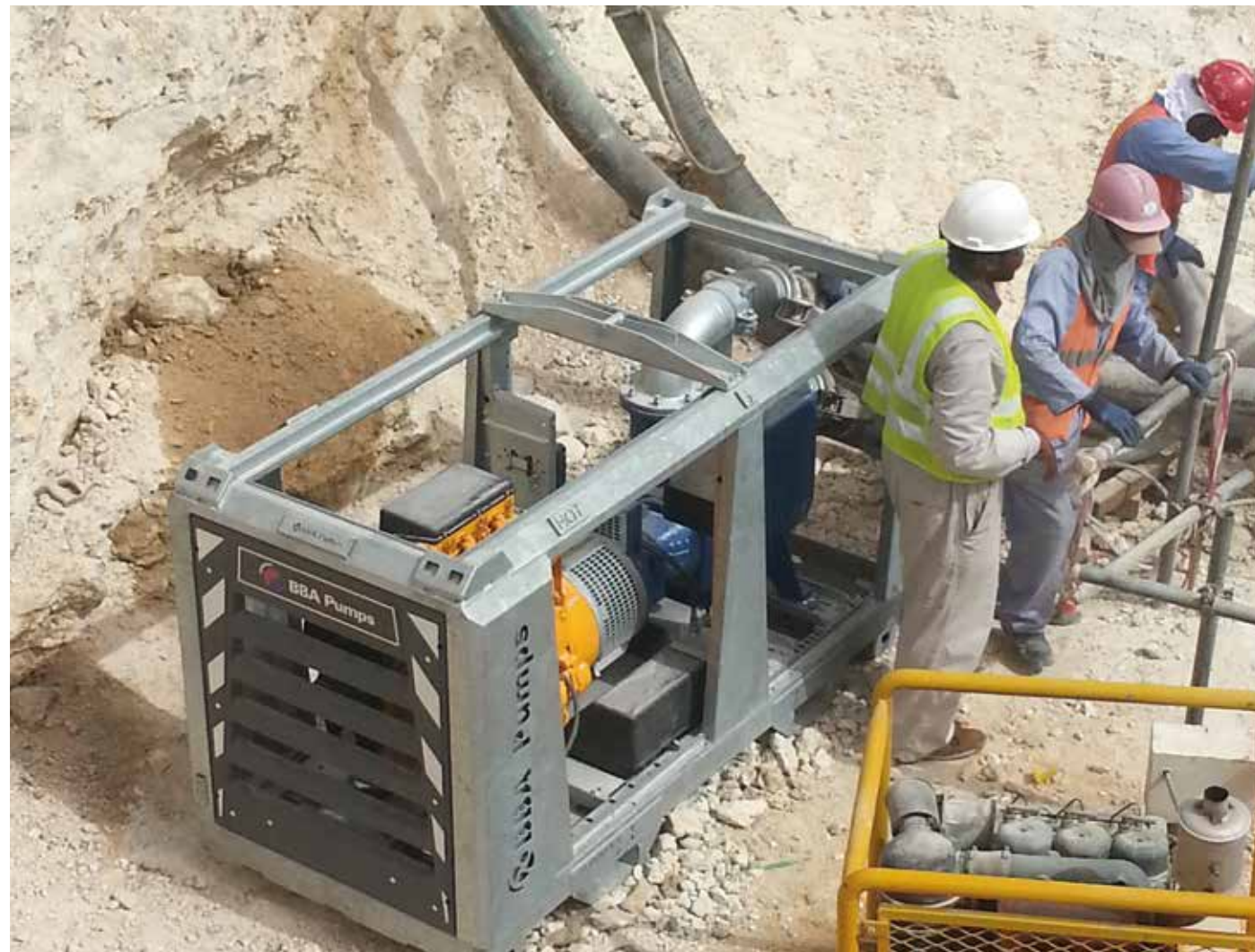
Model	Pump			Diesel engine				Assembly	Stock model
	Flow m <sup>3</sup> /h	Head m	ø mm	Brand	Model	Power kW	Speed rpm		
BE160 D254	345	27	80	Perkins	404D-22	26	1800	BF10-23	<input checked="" type="checkbox"/>

## Tractor Driven Flood Control Pump: B300

The B300 T3WGT is an application designed flood control pump concept. The design allows a direct PTO tractor drive without any additional transmission. Self-priming, simple and reliable. With a maximum flow capacity of 1200 m<sup>3</sup>/h and solids handling of 70 mm. Ready for any emergency job! A must have pump for municipalities and governmental agencies.



Model	Pump					Motor 400V 50Hz		Assembly
	Connection		Flow m <sup>3</sup> /h	Head m	ø mm	Power kW	Speed rpm	
	mm	inch						
B300	300	12"	1200	14	70	55	960	T3WGT





# Sludge Pumps

## Bentonite & Drilling Sludge

With the BV auto prime sludge pump range, BBA Pumps offers a series of vacuum assisted centrifugal pumps for abrasive liquids. Designed for pumping drilling sludge and bentonite in order to meet the toughest pump jobs.



## Diesel Driven Sludge Pumps

Model	Pump			Drive			Unit	
	Flow m <sup>3</sup> /h	Head m	ø mm	Brand	Power kW	Speed rpm	Sound attenuated	Open diesel
BA150 D265	250	22	80	Hatz	22	1500	M10-23	BF10-23
BA300 D328	1250	25	80	Hatz	30	1500	M10-23	BF10-23

## Electrically Driven Sludge Pumps

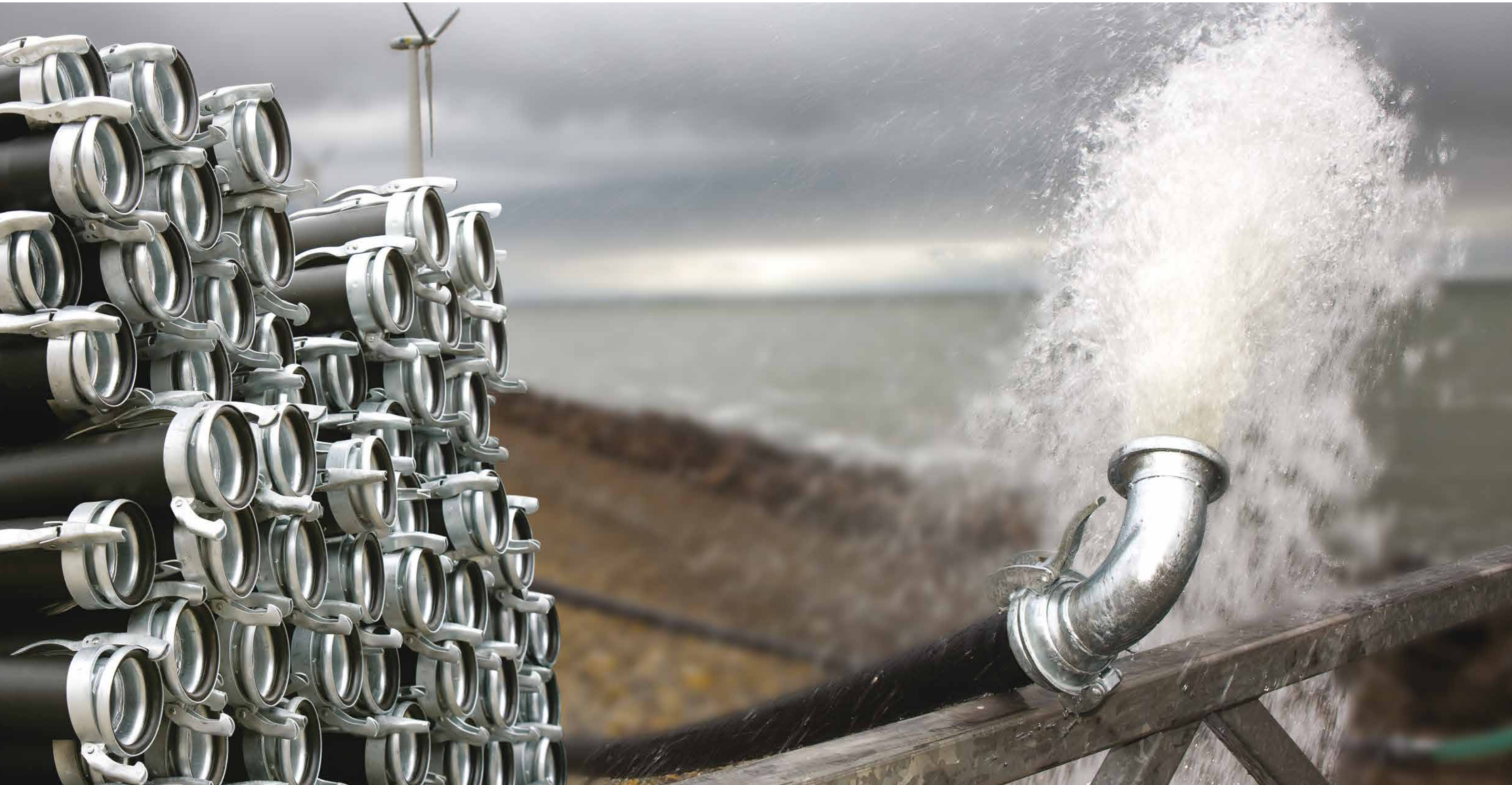
Model	Pump			Drive			Unit	
	Flow m <sup>3</sup> /h	Head m	ø mm	Power kW	Speed rpm	Voltage	Frame	Canopy
BA150 D265	250	22	80	22	1470	400/690	BF10-18	M10-23
BA300 D328	1250	25	80	30	1480	400/690	BF10-18	M10-23



# Connecting Your Pump

During the past 60 years BBA Pumps extended the range of coupling and piping systems to a full range of quick couplings, pipes, filters for the portable pump and dewatering and wellpoint markets. With modern production technologies we can ensure the highest quality products for the most demanding applications.

We know how important timing is. We have our products in stock on several locations in the world and are set to anticipate rapid fluctuations in demand. BBA Pumps offers first class products and world class support, while remaining flexible to meet your needs.







### SYSTEM B

Available in the sizes 2-8 inch.  
Compatible with the bauer system.



### SYSTEM IT

Available in the sizes 8, 10 and 12 inch.  
Compatible with the Italian system.



### SYSTEM C

Available in the sizes 2-6 inch.  
Compatible with the perrot system.



Products with this symbol are application designed by BBA Pumps.

### 1 SYSTEM B

68 - 93

Compatible with system bauer		sizes Ø 2" - 8"
1.1	Discharge pipes	71
1.2	Hoses	72
1.3	Strainers	74
1.4	Quick couplings	75
1.5	Sand collector	84
1.6	Flow measurement and de-aeration	84
1.7	Wellpoint systems	88



### 2 SYSTEM IT

94 - 105

		sizes Ø 2" - 6"
2.1	Discharge pipes	95
2.2	Hoses	96
2.3	Strainers	97
2.4	Quick couplings	98



### 3 SYSTEM C

106 - 129

Compatible with system perrot		sizes Ø 2" - 6"
3.1	Discharge pipes	109
3.2	Hoses	110
3.3	Strainers	112
3.4	Quick couplings	113
3.5	Sand collector	123
3.6	Flow measurement and de-aeration	123
3.7	Wellpoint systems	127



### 4 FLANGE PIPES

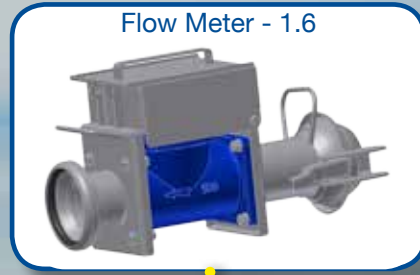
130 - 131

4	HDPE 100 pipe with flanges	131
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# BBA Pumps Wellpoint System B





# SYSTEM B

## 1 SYSTEM B

1.1	Discharge pipes	71
1.2	Hoses	72
1.3	Strainers	74
1.4	Quick couplings	75
1.5	Sand collector	84
1.6	Flow measurement and de-aeration	84
1.7	Wellpoint systems	88



### SYSTEM B

Is available in the sizes 2-8 inch.

Is compatible with the bauer system.



# SYSTEM B

## 1.1 Discharge pipes

### Discharge pipes HDPE with quick couplings



art.nr.	∅ pipes	∅ coupling	length	max. pressure	bundle
	mm	inch	m	bar	# pipes
01050905	110 x 5,3	4	5	3	20
01050906	110 x 5,3	4	5,8	3	20
01221405	160 x 4,9	6	5	3	10
01221406	160 x 4,9	6	5,8	3	10

### Discharge pipes HDPE with quick couplings with clamp



art.nr.	∅ pipes	∅ coupling	length	clamps	max. pressure	bundle
	mm	inch	m		bar	# pipes
01050915	110 x 5,3	4	5	2 x medium duty	6	20
01050916	110 x 5,3	4	5,8	2 x medium duty	6	20
01223386	160 x 4,9	6	5	2 x medium duty	5	10
01223387	160 x 4,9	6	5,8	2 x medium duty	5	10
01051063	216 x 7,7	8	5,8	2 x medium duty	5	11

BBA Pumps was originally established as a manufacturer of pipes and couplings. Today - over sixty years and thousands of kilometers of piping later - we are the worldwide market leader in this product group.

HDPE pipework supplied by BBA Pumps is provided with galvanized quick couplings, giving the best solution possible for temporary pumping installations.

### Advantages

- Lightweight pipes simplify logistics at the construction site and in the field.
- Quick couplings are designed in-house and provide maximum user-friendliness.
- Only the highest quality HDPE is used, guaranteeing a long product life and excellent protection against the elements.
- HDPE has a minimal friction resistance which results in reduced energy requirements for the pump.





# SYSTEM B

## 1.2 Hoses

### Suction / delivery hose Heduflex with quick couplings



art.nr.	∅		length	clamps	max. pressure	bundle
	mm	inch				
07048186	102	4	3	2 x medium duty	3	8
07048176	102	4	3	2 x BBA heavy duty	6	8
07048174	102	4	4	2 x medium duty	3	8
07048175	102	4	4	2 x BBA heavy duty	6	8
07048196	152	6	3	2 x BBA heavy duty	4	4
07048197	152	6	4	2 x BBA heavy duty	4	4
07055203	216	8	3	2 x BBA heavy duty	2	1
07055204	216	8	4	2 x BBA heavy duty	2	1

### Suction / delivery hose Vacupress with quick couplings



art.nr.	∅		length	clamp	max. pressure	bundle
	mm	inch				
07050110	100	4	3	medium duty	3	8
07050113	100	4	4	medium duty	3	8
07050171	150	6	3	medium duty	3	4
07050172	150	6	4	medium duty	3	4

### Fire hose white with quick couplings storz



art.nr.	∅		length	coupling type	max. pressure
	mm	inch			
07064209	50	2	20	NA66	17
07064211	50	2	20	NA81	17
07064213	75	3	20	NA81	17
07064217	75	3	20	NA89	17

### Flat hose vinyl with quick couplings



art.nr.	∅		length	clamps	max. pressure
	mm	inch			
07025328	100	4	25	medium duty	6
07026327	150	6	25	medium duty	6
07025324	200	8	25	heavy duty	3

# SYSTEM B

## 1.2 Hoses

### Heduflex suction hoses for dewatering and sewage pumps with quick coupling and strainer



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size		length	M or V*	hose clamp	free passage
	mm	inch				
07047001	102	4	4	Ball / lever	Mikalor	30 x 160
07047002	102	4	5	Ball / lever	Mikalor	30 x 160
07047003	102	4	6	Ball / lever	Mikalor	30 x 160
07047006	152	6	4	Ball / lever	BBA	40 x 190
07047007	152	6	5	Ball / lever	BBA	40 x 190
07047008	152	6	6	Ball / lever	BBA	40 x 190
07047012	203	8	5	Ball / lever	BBA	60 x 180
07047013	203	8	6	Ball / lever	BBA	60 x 180

\*) Ball/lever (M) Cup (V)

### Heduflex suction hoses for dewatering and sewage pumps with flange and strainer



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size		length	flange type	hose clamp	free passage
	mm	inch				
07047110	102	4	4	K180/8 holes	Mikalor	30 x 160
07047111	102	4	5	K180/8 holes	Mikalor	30 x 160
07047112	102	4	6	K180/8 holes	Mikalor	30 x 160
07047115	152	6	4	K240/8 holes	BBA	40 x 190
07047054	152	6	5	K240/8 holes	BBA	40 x 190
07047055	152	6	6	K240/8 holes	BBA	40 x 190
07047057	203	8	5	K295/8 holes	BBA	60 x 180
07047058	203	8	6	K295/8 holes	BBA	60 x 180

### Heduflex suction hoses for high head pumps with quick couplings and strainer



art.nr.	rubber hose			coupling		strainer
	∅ inner size		length	M or V*	hose clamp	free passage
	mm	inch				
07047017	102	4	4	Ball / lever	Mikalor	15
07047018	102	4	5	Ball / lever	Mikalor	15
07047019	102	6	4	Ball / lever	Mikalor	15
07047022	152	6	4	Ball / lever	BBA	20
07047023	152	6	5	Ball / lever	BBA	20
07047024	152	6	6	Ball / lever	BBA	20
07047028	203	8	5	Ball / lever	BBA	20
07047029	203	8	6	Ball / lever	BBA	20

\*) Ball/lever (M) Cup (V)

### Heduflex suction hoses for high head pumps with flange and strainer



art.nr.	rubber hose			coupling		strainer
	∅ inner size		length	flange type	hose clamp	free passage
	mm	inch				
07047120	102	4	4	K180/8 holes	Mikalor	15
07047121	102	4	5	K180/8 holes	Mikalor	15
07047122	102	4	6	K180/8 holes	Mikalor	15
07047071	152	6	4	K240/8 holes	BBA	20
07047072	152	6	5	K240/8 holes	BBA	20
07047073	152	6	6	K240/8 holes	BBA	20
07047087	203	8	5	K295/8 holes	BBA	20
07047088	203	8	6	K295/8 holes	BBA	20



**1.3 Strainers**

**Strainer with coupling male (ball / lever), galvanized**



art.nr.	∅ coupling		free passage
	mm	inch	mm
03141744	108	4	15
03141746	159	6	20
03141748	216	8	20

**Strainer with hose connection, galvanized**



art.nr.	∅ spigot		free passage
	mm	inch	mm
03141241	50	2	15
03141243	75	3	15
03141244	100	4	15
03141246	150	6	20
03141248	200	8	20

**Sewage strainer with coupling male (ball / lever), galvanized**



art.nr.	∅ coupling		free passage
	mm	inch	mm
03841864	108	4	30 x 160
03841866	159	6	40 x 190
03841868	216	8	60 x 180

**Sewage strainer hose connection, galvanized**



art.nr.	∅ coupling		free passage
	mm	inch	mm
03842004	100	4	30 x 160
03842006	150	6	40 x 190
03141175	200	8	60 x 180

**Strainer bin with coupling male (ball / lever), galvanized**



art.nr.	∅ coupling		free passage
	mm	inch	mm
03842104	108	4	50 x 50
03842106	159	6	50 x 50
03842108	216	8	50 x 50

**1.4 Quick couplings**

**Hose clamp heavy duty, galvanized**



art.nr.	∅	
	mm	inch
07214327	112 - 121	4
07214330	162 - 175	6
07214332	215 - 228	8

**Hose clamp medium duty, galvanized**



art.nr.	∅	
	mm	inch
07204269	97 - 104	4
07204271	112 - 121	4
07204275	150 - 160	6
07204276	162 - 174	6

**Bend 90°, galvanized**



art.nr.	∅	
	mm	inch
03571413	108	4
03571415	159	6
03571416	216	8

**Bend 45°, galvanized**



art.nr.	∅	
	mm	inch
03571423	108	4
03571425	159	6
03571426	216	8

**T-piece male (ball / lever) outlet, galvanized**



art.nr.	∅	
	mm	inch
03591467	108	4
03591469	159	6
03591470	216	8

**T-piece female (cup) outlet, galvanized**



art.nr.	∅	
	mm	inch
03591873	108	4
03591875	159	6
03591876	216	8



# SYSTEM B

## 1.4 Quick couplings

### T-piece male (ball / lever) outlet 45°, galvanized



art.nr.	∅		branch
	mm	inch	
03591904	108	4	4
03591906	159	6	6

### Y-piece 2 x male (ball / lever) 1 x female (cup), galvanized



art.nr.	∅	
	mm	inch
03221383	108	4
03221386	159	6
03221388	216	8

### Y-piece 2 x female (cup) 1 x male (ball / lever) 45°, galvanized



art.nr.	∅	
	mm	inch
03221394	108	4
03221396	159	6
03221398	216	8

### End plug male (ball / lever), galvanized



art.nr.	∅	
	mm	inch
03561425	108	4
03561427	159	6
03561429	216	8

### End plug female (cup), galvanized



art.nr.	∅	
	mm	inch
03561419	108	4
03561421	159	6
03561431	216	8

# SYSTEM B

## 1.4 Quick couplings

### Reversing piece male (ball / lever), galvanized



art.nr.	∅	
	mm	inch
03651484	108	4
03651486	159	6
03651488	216	8

### Reversing piece female (cup), galvanized



art.nr.	∅	
	mm	inch
03651494	108	4
03651496	159	6
03651498	216	8

### Reducer, galvanized



art.nr.	∅ (female (cup) x male (ball / lever))	
	mm	inch
03661514	159 x 108	6 x 4
03661515	216 x 159	8 x 6

### Increaser, galvanized



art.nr.	∅ (female (cup) x male (ball / lever))	
	mm	inch
03661506	108 x 159	4 x 6
03661508	159 x 216	6 x 8

### Gate valve with couplings, galvanized

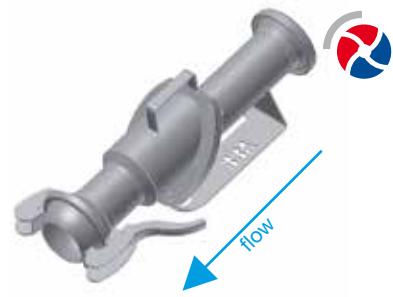


art.nr.	∅	
	mm	inch
09021854	108	4
09021856	159	6



**1.4 BBA non-return-valve “Handy”**

**“Handy” non-return-valve female (cup) x male (ball / lever), galvanized**



art.nr.	∅		max. pressure
	mm	inch	
09051334	108	4	4
09051336	159	6	4
09051356	108	4	Rubber valve for BBA non-return-valve
09051358	159	6	Rubber valve for BBA non-return-valve

Please check flow direction.

**BBA “Handy” non-return-valve**

Our BBA “Handy” non-return valve is made of a robust steel casing and a low-maintenance rubber discs valve.

The complete assembly is light weight, portable, stackable and has a sturdy base plate.

The non-return valve can be used when several pumps are connected to one discharge line like pipe-line dewatering.



**1.4 Quick couplings**

**Hose connection male (ball / lever), galvanized**



art.nr.	∅ coupling		∅ spigot
	mm	inch	mm
03581447	108	4	100
03581449	159	6	150
03581450	216	8	200

**Hose connection female (cup), galvanized**



art.nr.	∅ coupling		∅ spigot
	mm	inch	mm
03581457	108	4	100
03581459	159	6	150
03581468	216	8	200

**Hose connection special male (ball / lever), galvanized**



art.nr.	∅ coupling		∅ spigot
	mm	inch	mm
03581432	108	4	75
03581482	159	6	75
03581483	159	6	100

**Hose connection special male (ball / lever), galvanized**



art.nr.	∅ coupling		∅ spigot
	mm	inch	mm
03581476	108	4	75
03581466	159	6	75
03581467	159	6	100

**Hose clamp medium duty, galvanized**



art.nr.	∅	
	mm	inch
07204269	97 - 104	4
07204271	112 - 121	4
07204275	150 - 160	6
07204276	162 - 174	6



# SYSTEM B

## 1.4 Quick couplings

### Lever ring, black



aArt.nr.	∅	
	mm	inch
03551386	50	2
03551388	89	3
03551389	108	4
03551391	159	6
03551405	216	8

### Ball without lever, black



art.nr.	∅	
	mm	inch
03551392	50	2
03551394	89	3
03551395	108	4
03551397	159	6
03551404	216	8

### Female (cup), black



art.nr.	∅	
	mm	inch
03551398	50	2
03551400	89	3
03551401	108	4
03551403	159	6
03551406	216	8

### Set with 5 short hooks incl. rivet, galvanized



art.nr.	∅ coupling	
	mm	inch
03052140SP	50	2
03052142SP	89	3
03052144SP	108	4
03052146SP	159	6
03052148SP	216	8

### Set with 5 long hooks incl. rivet, galvanized



art.nr.	∅ coupling	
	mm	inch
03052130SP	50	2
03052132SP	89	3
03052134SP	108	4
03052136SP	159	6
03052138SP	216	8

# SYSTEM B

## 1.4 Quick couplings

### Set with 5 levers incl. rivet, galvanized



art.nr.	∅ coupling	
	mm	inch
03052120SP	50	2
03052122SP	89	3
03052124SP	108	4
03052126SP	159	6
03052128SP	216	8

### 10 Sets with 3 rivets, galvanized



art.nr.	∅ coupling	
	mm	inch
03052150SP	50	2
03052152SP	89	3
03052154SP	108	4
03052156SP	159	6
03052158SP	216	8

### Set with hook short, hook long, lever and rivet



art.nr.	∅ coupling		hook long #	hook short #	lever #	rivet #
	mm	inch				
03051624SP	108	4	5	5	5	15
03051626SP	159	6	5	5	5	15
03051628SP	216	8	1	1	1	3

### O-ring rubber (set, 10 pieces)



art.nr.	∅ coupling	
	mm	inch
03691404SP	50	2
03691406SP	89	3
03691407SP	108	4
03691409SP	159	6
03691410SP	216	8

### Welding coupling female (cup), incl. tube, black



art.nr.	∅		thickness mm	length mm
	mm	inch		
03041720	50	2	2	70
03041722	89	3	2	70
03041724	108	4	2	70
03041726	159	6	2	70
03041728	216	8	2	70



**1.4 Quick couplings**

**Welding coupling male (ball / lever), incl. tube, black**



art.nr.	∅		thickness	length
	mm	inch		
03041700	50	2	2	188
03041702	89	3	2	275
03041704	108	4	2	275
03041706	159	6	2	275
03041708	216	8	2	245

**Threaded bend female (cup) 90° - outer thread, galvanized**



art.nr.	∅ couplings		∅ outer thread
	mm	inch	
03131404	108	4	4
03131406	159	6	6

**Thread piece male (ball / lever) - outer thread, galvanized**



art.nr.	∅ couplings		∅ outer thread
	mm	inch	
03601443	108	4	4
03601444	108	4	3
03601445	159	6	6

**Thread piece female (cup) - outer thread, galvanized**



art.nr.	∅ couplings		∅ outer thread
	mm	inch	
03601449	108	4	4
03601450	108	4	3
03601451	159	6	6

**Thread piece male (ball / lever) - inner thread, galvanized**



art.nr.	∅ couplings		∅ inner thread
	mm	inch	
03601457	108	4	4
03601459	159	6	6

**Thread piece female (cup) - inner thread, galvanized**



art.nr.	∅ couplings		∅ inner thread
	mm	inch	
03601464	108	4	4
03601466	159	6	6

**1.4 Quick couplings**

**Flange bend female (cup) 90°, galvanized**



art.nr.	∅ coupling		flange (holes)
	mm	inch	
03215704	108	4	K180 (8)
03215706	159	6	K240 (8)
03215708	216	8	K295 (8)

**Flange bend female (cup) 135°, galvanized**



art.nr.	∅ coupling		flange (holes)
	mm	inch	
03621460	108	4	K180 (8)
03215736	159	6	K240 (8)
03215738	216	8	K295 (8)

**Flange piece male (ball / lever), galvanized**



art.nr.	∅ coupling		flange (holes)
	mm	inch	
03611455	108	4	K180 (8)
03611457	159	6	K240 (8)
03611458	216	8	K295 (8)

**Flange piece female (cup), galvanized**



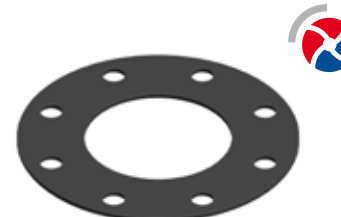
art.nr.	∅ coupling		flange (holes)
	mm	inch	
03611461	108	4	K180 (8)
03611463	159	6	K240 (8)
03611466	216	8	K295 (8)

**Ring gasket**



art.nr.	∅ coupling		flange without holes
	mm	inch	
03401911	50	2	K 125
03401914	89	3	K 160
03401915	108	4	K 180
03401917	159	6	K 240
03401918	216	8	K 295

**Flange gasket DIN**



art.nr.	∅ coupling		flange (holes)
	mm	inch	
03401921	50	2	K 125 (4)
03401924	89	3	K 160 (4)
03401925	108	4	K 180 (8)
03401927	159	6	K 240 (8)
03401928	216	8	K 295 (8)



**1.5 Sand collector**

Sand collector 10-23, galvanized



∅ coupling	max. flow	L x W x H
inch	m <sup>3</sup> /h	mm
4 or 6	120	2270 x 1050 x 1533

**1.6 Flow measurement and de-aeration**

Flow measurement is a routine and daily task for many dewatering companies. In some countries it is even mandatory to measure how much water is pumped from A to B, or how much groundwater is extracted from a particular area.

The handy mechanical flow meters from BBA Pumps are specially designed for use in pumping applications. The low weight, combined with maximum protection through the galvanized casing and carrying handle, makes this flow meter ideal for use in the field.

“Handy” flow meter, portable in casing with quick couplings



art.nr.	∅ coupling		max. flow	type
	mm	inch	m <sup>3</sup> /h	
13018107V	108	4	250	Turbine outside waterstream DWI
13018153V	152	6	500	Turbine outside waterstream DWI

Siemens “Handy” flow meter, MAG 8000 battery powered, portable in casing with quick couplings



art.nr.	∅ coupling		max. flow	type
	mm	inch	m <sup>3</sup> /h	
14511905V	108	4	80	MAG 8000 DN50
14511912V	108	4	250	MAG 8000 DN100
14511913V	152	6	500	MAG 8000 DN150

**1.6 Flow measurement and de-aeration**

Working closely with Siemens, BBA Pumps has designed the “Smart Handy”. The battery-powered MAG8000 electromagnetic flow meter features a GSM module that allows data to be received by sms or e-mail.

Siemens “Smart Handy” flow meter, MAG 8000



art.nr.	∅ coupling		max. flow	type
	mm	inch	m <sup>3</sup> /h	
14352	108	4	250	MAG8000 DN100
11405	152	6	600	MAG8000 DN150

**Remote monitoring**





1.6 Flow measurement and de-aeration

De-aeration unit



art.nr.	∅ coupling	
	mm	inch
13313024	108	4
13313026	159	6

Sock flow control unit



art.nr.	∅ coupling		∅ branch
	mm	inch	mm
13407218	108	4	1 x 58

Suitable for 80 and 100 mm drain.



BBA sock flow control unit

The BBA sock flow control unit keeps your sock system going. If limited water is available, the BBA sock flow control unit temporarily shuts off the sock drain connected to it.

This prevents excessive air intake which unbalances the sock system and allows you to connect several sock drains to one pump!





## 1.7 Wellpoint system BBA Pumps

### Header pipes HDPE with quick couplings



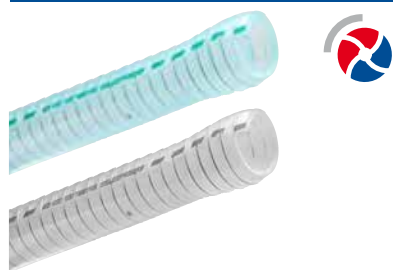
art.nr.	∅ pipe mm	∅ coupling inch	length m	∅ branch mm	bundle # pipes
01221037	110 x 6,2	4	5,8	2 x 51	20
01221038	110 x 6,2	4	5,8	3 x 51	20
01221037	110 x 6,2	4	5,8	4 x 51	20
01221065	160 x 4,9	6	5,8	3 x 51	10
01221071	160 x 4,9	6	5,8	4 x 51	10
01221077	160 x 4,9	6	5,8	5 x 51	10

### Wellpoint hose (rubber, UV resistant)



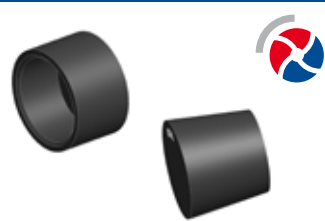
art.nr.	∅ (inner) mm	length m
07054135	50 / 50	1

### Armorvin wellpoint hose (PVC reinforced, transparent)



art.nr.	∅ (inner) mm	length m	
07054130	50 / 50	1	HNP
07054128	50 / 50	1,5	HNA

### Branch cover / plug (set, 100 pieces)



art.nr.	type	∅ branch mm
11421939SP	cover	51
11421341SP	conical plug	51/57

### Hose clamp

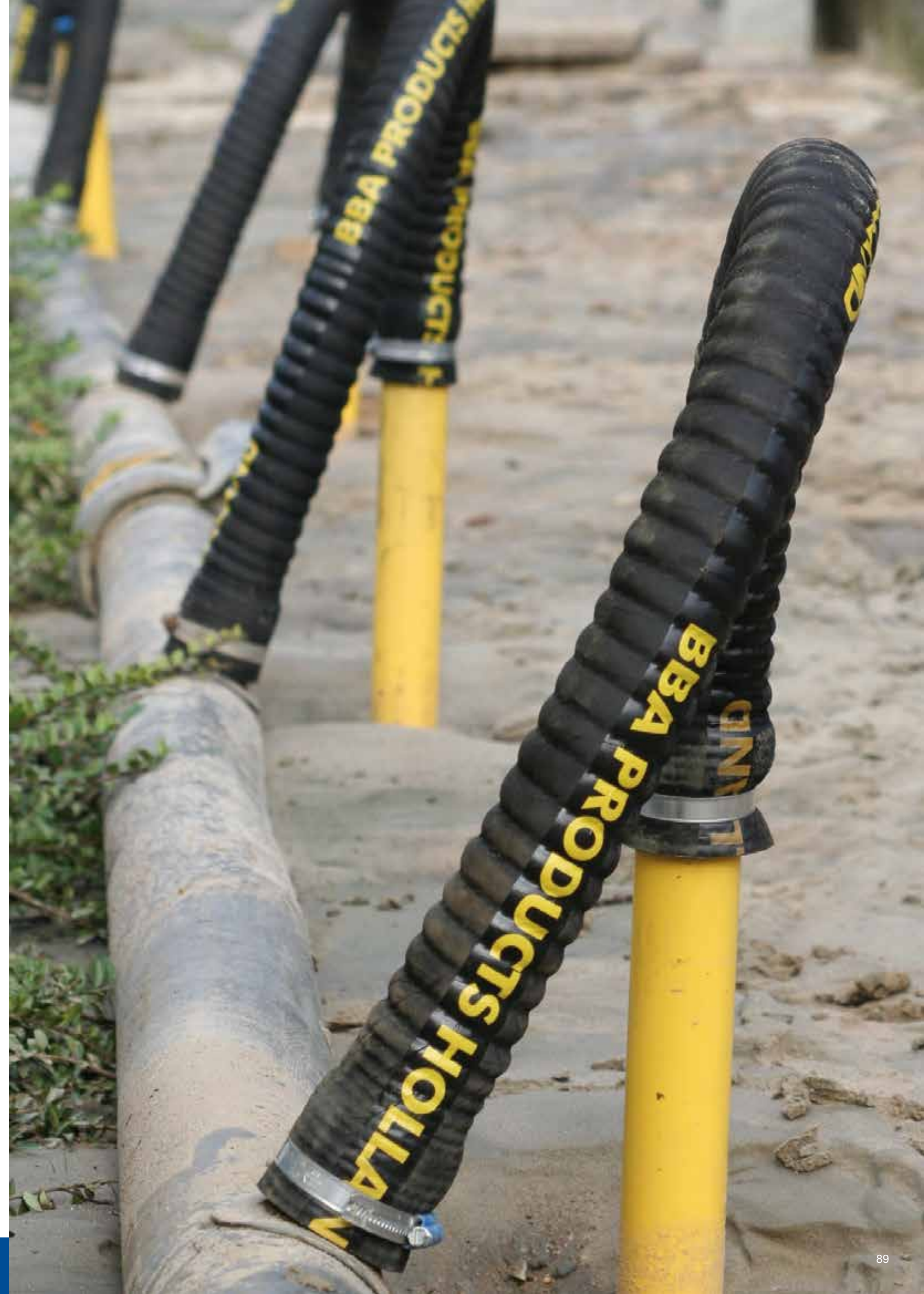


art.nr.	inch	mm
1866170140	2	50-65
07204262	2	60-63

### Hose clamp light duty



art.nr.	∅ mm	inch	wellpoint hose mm
1866170140	50-65	2	50





## 1.7 Wellpoint system "TUNE"

### Header pipes HDPE system "TUNE"



art.nr.	∅ pipe mm	∅ coupling inch	length m	∅ branch mm	bundle # pipes
01221050	160 x 4,9	6	5,8	5 x 57 / SA	10
01221053	160 x 4,9	6	1	1 x 57 / SA	10

### Swingarm (bundle, 70 pieces)



art.nr.	length cm
07054160 Wellpoint swingarm tune incl. ball valve	117

### Grommet (set, 100 pieces)



art.nr.	
11421322	Grommet for BBA Wellpoint Swingarm





## 1.7 Wellpoint filters shock proof

### Vacuum wellpoint filter PVC (shock proof) with point bottom and drop tube



art.nr.	∅ (outer)	length	perforation length	perforation	bundle
	mm	m	m	mm	# filters
11117129	50	1	1	0,3	76
11117137	50	6	1	0,3	76
11117136	50	9	1	0,3	76

Platform packaging per 600 pieces.

### Gravity filter (shock proof) with bottom



art.nr.	∅ (outer)	length	perforation length	perforation	bundle
	mm	m	m	mm	# filters
11117027	90	8	6	0,3	20
11117038	90	9	7	0,3	20

### Glue coupling



art.nr.	∅ (inner)
11276050SP	50 - 50
11106030SP	50 - 48 (US pvc)
11279000SP	90 - 90

### Jetting tube



art.nr.	
14600104	Jetting tube 2" length 5 meters with 15 meters hose incl. storz coupling 81 x 65





2 SYSTEM IT

2.1	Discharge pipes	95
2.2	Hoses	96
2.3	Strainers	97
2.4	Quick couplings	98



SYSTEM IT

Is available in the sizes 8, 10 and 12 inch.  
Is compatible with the Italian system.



2.1 Discharge pipes

Discharge pipes HDPE with quick coupling



art.nr.	∅		length m	clamps	max. pressure bar	bundle # pipes
	mm	inch				
01301954	200	8	5,8	BBA heavy duty	6	11
01301961	250	10	5,8	BBA heavy duty	5	8
01301956	300	12	5,8	BBA heavy duty	4	6

BBA Pumps was originally established as a manufacturer of pipes and couplings. Today - over sixty years and thousands of kilometers of piping later - we are the worldwide market leader in this product group.

HDPE pipework supplied by BBA Pumps is provided with galvanized quick couplings, giving the best solution possible for temporary pumping installations.

Advantages

- Lightweight pipes simplify logistics at the construction site and in the field.
- Quick couplings are designed in-house and provide maximum user-friendliness.
- Only the highest quality HDPE is used, guaranteeing a long product life and excellent protection against the elements.
- HDPE has a minimal friction resistance which results in reduced energy requirements for the pump.





2.2 Hoses

Heduflex suction/delivery hoses with quick couplings



art.nr.	∅ coupling		length m	clamps	max. pressure bar
	mm	inch			
07045187	200	8	3	2x BBA heavy duty	2
07045192	200	8	4	2x BBA heavy duty	2
07045189	200	8	5	2x BBA heavy duty	2
07048203	250	10	3	2x BBA heavy duty	2
07048204	250	10	4	2x BBA heavy duty	2
07048205	250	10	5	2x BBA heavy duty	2
07048212	300	12	3	2x BBA heavy duty	2
07048213	300	12	4	2x BBA heavy duty	2
07048214	300	12	5	2x BBA heavy duty	2

Also available with double clamp (max. pressure 5 bar)

Heduflex suction hoses for dewatering and sewage pumps with flange and strainer



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size mm	inch	length m	flange type	hose clamp	free passage mm
07047058	203	8	6	K295 / 8 holes	BBA	60 x 180
07047063	254	10	6	K350 / 12 holes	BBA	70 x 180
07047068	305	12	6	K400 / 12 holes	BBA	70 x 230

Heduflex suction hoses for dewatering and sewage pumps with quick coupling and strainer



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size mm	inch	length m	hose clamp	free passage mm	
07047043	203	8	6	BBA	60 x 180	
07047048	254	10	6	BBA	70 x 180	
07047053	305	12	6	BBA	70 x 230	

Heduflex suction hoses for high head pumps with flange and strainer



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size mm	inch	length m	flange type	hose clamp	free passage mm
07047088	203	8	6	K295 / 8 holes	BBA	20
07047098	254	10	6	K350 / 12 holes	BBA	20
07047108	305	12	6	K400 / 12 holes	BBA	20

Flat hose vinyl with quick couplings



art.nr.	rubber hose			clamps
	∅ inner size mm	inch	length m	
07094181	200	8	10	BBA
07094197	300	12	10	BBA

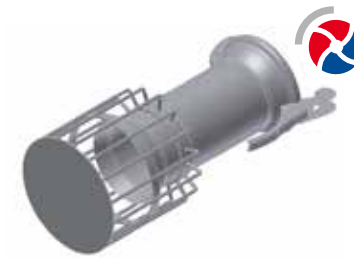
2.3 Strainers

Strainer with hose connection, galvanized



art.nr.	∅		free passage
	mm	inch	mm
03141248	200	8	20
03141249	250	10	20
03141250	300	12	20

Sewage strainer with coupling female (cup / lever), galvanized



art.nr.	∅		free passage
	mm	inch	mm
03841855	200	8	60 x 180
03841856	250	10	70 x 180
03841857	300	12	70 x 230

Sewage strainer with hose connection, galvanized



art.nr.	∅		free passage
	mm	inch	mm
03141175	200	8	60 x 180
03141176	250	10	70 x 180
03141177	300	12	70 x 230

Sewage strainer bin with coupling female (cup / lever), galvanized



art.nr.	∅		free passage
	mm	inch	mm
03842508	200	8	50 x 50
03842510	250	10	50 x 50
03842512	300	12	50 x 50

Hose clamp heavy duty, galvanized



art.nr.	∅	
	mm	inch
07214332	215-228	8
07214334	267-282	10
07214336	318-336	12



2.4 Quick couplings

Bend 90°, galvanized



art.nr.	∅	
	mm	inch
03781861	200	8
03781862	250	10
03781863	300	12

Bend 45°, galvanized



art.nr.	∅	
	mm	inch
03781865	200	8
03781866	250	10
03781867	300	12

T-piece, 2 x female (cup / lever), galvanized



art.nr.	∅	
	mm	inch
03792100	200	8
03792101	250	10
03792102	300	12

T-piece, 2 x male (ball / ring), galvanized



art.nr.	∅	
	mm	inch
03792105	200	8
03792106	250	10
03792107	300	12

T-piece male - female x 1 x female 45° SYSTEM C, galvanized



art.nr.	∅	
	mm	inch
03091170	200 x 108	8 x 4
03091171	200 x 159	8 x 6
03091183	250 x 108	10 x 4
03091184	250 x 159	10 x 6
03091185	300 x 108	12 x 4
03091186	300 x 159	12 x 6

2.4 Quick couplings

Y-piece male SYSTEM IT x 2 x female SYSTEM IT, galvanized



art.nr.	∅	
	mm	inch
03221380	200	8
03221367	250	10
03221381	300	12

Y-piece female SYSTEM IT x 2 x male SYSTEM IT, galvanized



art.nr.	∅	
	mm	inch
03221377	200	8
03221378	250	10
03221379	300	12

Y-piece female SYSTEM IT x 2 x female SYSTEM B, galvanized



art.nr.	∅	
	mm	inch
03221132	300 x 159	12 x 6

Y-piece male SYSTEM IT x 2 x female SYSTEM B, galvanized



art.nr.	∅	
	mm	inch
03221137	300 x 159	12 x 6

Y-piece female SYSTEM IT x 2 x male SYSTEM C, galvanized



art.nr.	∅	
	mm	inch
03221120	200 x 159	8 x 6
03221121	250 x 159	10 x 6
03221122	300 x 159	12 x 6



2.4 Quick couplings

Y-piece male SYSTEM IT x 2 x male SYSTEM C, galvanized



art.nr.	∅	
	mm	inch
03221125	200 x 159	8 x 6
03221126	250 x 159	10 x 6
03221127	300 x 159	12 x 6

Y-piece female with reduction, galvanized



art.nr.	∅	
	mm	inch
03221008	250 x 200	10 x 8
03221010	300 x 200	12 x 8
03221012	300 x 250	12 x 10

Y-piece male with reduction, galvanized



art.nr.	∅	
	mm	inch
03221108	250 x 200	10 x 8
03221110	300 x 200	12 x 8
03221112	300 x 250	12 x 10

End plug female (cup / lever), galvanized



art.nr.	∅	
	mm	inch
03762000	200	8
03762001	250	10
03762002	300	12

End plug male (ball / ring), galvanized



art.nr.	∅	
	mm	inch
03762005	200	8
03762006	250	10
03762007	300	12

2.4 Quick couplings

Reversing piece female, galvanized



art.nr.	∅	
	mm	inch
03851605	200	8
03851606	250	10
03851607	300	12

Reversing piece male, galvanized



art.nr.	∅	
	mm	inch
03851600	200	8
03851601	250	10
03851602	300	12

Transition piece male (ball / ring) SYSTEM IT x female (cup / lever) SYSTEM C, galvanized



art.nr.	∅	
	mm	inch
03862206	200 x 159	8 x 6
03862209	250 x 159	10 x 6

Transition piece female (cup / lever) SYSTEM IT x female (cup) SYSTEM B, galvanized



art.nr.	∅	
	mm	inch
03862200	200 x 159	8 x 6
03862203	250 x 159	10 x 6

Transition piece male (ball / ring) SYSTEM IT x male (ball / lever) SYSTEM B, galvanized



art.nr.	∅	
	mm	inch
03862255	200 x 159	8 x 6
03862256	250 x 159	10 x 6

Transition piece female (cup / lever) system IT x female (cup) system B, galvanized



art.nr.	∅	
	mm	inch
03862249	200 x 159	8 x 6
03862250	250 x 159	10 x 6



2.4 Quick couplings

“Handy” non-return-valve, galvanized



art.nr.	∅		max. pressure
	mm	inch	
09051330	200	8	3
09051331	250	10	3
09051332	300	12	3

Hose connection male (ball / ring), galvanized



art.nr.	∅	
	mm	inch
03771479	200	8
03771480	250	10
03771481	300	12

Hose connection female (cup / lever), galvanized



art.nr.	∅	
	mm	inch
03771491	200	8
03771492	250	10
03771493	300	12

Hose clamp heavy duty, galvanized



art.nr.	∅	
	mm	inch
07214332	215-228	8
07214334	267-282	10
07214336	318-336	12

2.4 Quick couplings

Flange piece male, galvanized



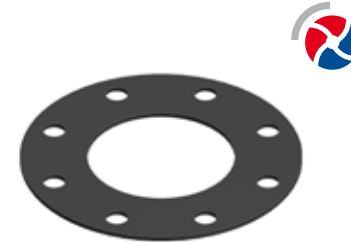
art.nr.	∅		flange (holes)
	mm	inch	
03811500	200	8	K295 (8)
03811501	200	8	K295 (12)
03811504	250	10	K350 (8)
03811502	250	10	K350 (12)
03811503	300	12	K400 (12)

Flange piece female, galvanized



art.nr.	∅		flange (holes)
	mm	inch	
03811510	200	8	K295 (8)
03811511	200	8	K295 (12)
03811514	250	10	K350 (8)
03811512	250	10	K350 (12)
03811513	300	12	K400 (12)

Flange gasket DIN



art.nr.	∅ coupling		flange (holes)
	mm	inch	
03401928	200	8	K 295 (8)
03401930	250	10	K 350 (12)
03401931	300	12	K 400 (12)



2.4 Quick couplings

Coupling female (cup / lever) complete, black



art.nr.	∅	
	mm	inch
03751471	200	8
03751472	250	10
03751473	300	12

Coupling male (ball / ring), black



art.nr.	∅	
	mm	inch
03751475	200	8
03751476	250	10
03751477	300	12

Ring, black



art.nr.	∅	
	mm	inch
03751483	200	8
03751484	250	10
03751485	300	12

Set with 5 short hooks incl. rivet, galvanized



art.nr.	∅	
	mm	inch
03052000SP	250	8 / 10
03051999SP	300	12

Set with 5 long hooks incl. rivet, galvanized



art.nr.	∅	
	mm	inch
03051990SP	200 / 250	8 / 10
03051989SP	300	12

2.4 Quick couplings

Set with 5 levers incl. rivet, galvanized



art.nr.	∅	
	mm	inch
03051980SP	200 / 250	8 / 10
03051979SP	300	12

5 Sets with 3 rivets, galvanized



art.nr.	∅	
	mm	inch
03052010SP	200 / 250	8 / 10
03052009SP	300	12

Set with short hook (1 piece), long hook (1 piece), lever (1 piece) and rivet (9 pieces)



art.nr.	∅	
	mm	inch
03051680SP	200 / 250	8 / 10
03051679SP	300	12

O-ring rubber (set, 10 pieces)



art.nr.	∅	
	mm	inch
03891487SP	200	8
03891488SP	250	10
03891489SP	300	12

Welding coupling male (ball / ring), black



art.nr.	∅		thickness	length
	mm	inch	mm	mm
03751608	200	8	2	188
03751610	250	10	2	188
03751612	300	12	2	188

Welding coupling female (cup / lever), black

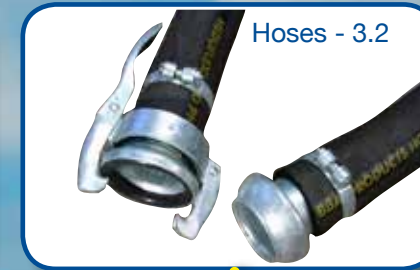


art.nr.	∅		thickness	length
	mm	inch	mm	mm
03751618	200	8	2	245
03751619	250	10	2	245
03751620	300	12	2	245

1098118080 Lever for 12" welding coupling.



# BBA Pumps Wellpoint System C





**3 SYSTEM C**

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**SYSTEM C**

Is available in the sizes 2-6 inch.

Is compatible with the perrot system.



**3.1 Discharge pipes**

**Discharge pipe HDPE with quick couplings**



art.nr.	∅ pipe	∅ coupling	length	max. pressure	bundle
	mm	inch	m	bar	# pipes
01050805	110 x 5,3	4	5	3	20
01050806	110 x 5,3	4	5,8	3	20
01050845	160 x 4,9	6	5	3	10
01050846	160 x 4,9	6	5,8	3	10

**Discharge pipe HDPE with quick couplings and clamps**



art.nr.	∅ pipe	∅ coupling	length	clamps	max. pressure	bundle
	mm	inch	m		bar	# pipes
01050815	110 x 5,3	4	5	medium duty	6	20
01050816	110 x 5,3	4	5,8	2 x medium duty	6	20
01050855	160 x 4,9	6	5	2 x medium duty	5	10
01050856	160 x 4,9	6	5,8	2 x medium duty	5	10

BBA Pumps was originally established as a manufacturer of pipes and couplings. Today - over sixty years and thousands of kilometers of piping later - we are the worldwide market leader in this product group.

HDPE pipework supplied by BBA Pumps is provided with galvanized quick couplings, giving the best solution possible for temporary pumping installations.

**Advantages**

- Lightweight pipes simplify logistics at the construction site and in the field.
- Quick couplings are designed in-house and provide maximum user-friendliness.
- Only the highest quality HDPE is used, guaranteeing a long product life and excellent protection against the elements.
- HDPE has a minimal friction resistance which results in reduced energy requirements for the pump.





**3.2 Hoses**

**Suction / delivery hose Heduflex with quick couplings**



art.nr.	∅		length	clamps	max. pressure	bundle
	mm	inch				
07048185	102	4	3	2 x medium duty	3	8
07048183	102	4	3	2 x BBA heavy duty	6	8
07048184	102	4	4	2 x medium duty	3	8
07048182	102	4	4	2 x BBA heavy duty	6	8
07048187	152	6	3	2 x BBA heavy duty	4	4
07048188	152	6	4	2 x BBA heavy duty	4	4

**Suction / delivery hose Vacupress with quick couplings**



art.nr.	∅ hose		length	clamps	max. pressure	bundle
	mm	inch				
07050109	100	4	3	medium duty	3	8
07050112	100	4	4	medium duty	3	8
07050114	150	6	3	medium duty	3	4
07050162	150	6	4	medium duty	3	4

**Fire hose white with quick couplings storz**



art.nr.	∅ hose		length	type coupling	max. pressure
	mm	inch			
07064209	50	2	20	NA66	17
07064211	50	2	20	NA81	17
07064213	75	3	20	NA81	17
07064217	75	3	20	NA89	17

**Flat hose vinyl with quick couplings**



art.nr.	∅		length	clamps	max. pressure
	mm	inch			
07025329	100	4	25	medium duty	6
07026325	150	6	25	medium duty	6

**3.2 Hoses**

**Heduflex suction hoses for dewatering and sewage pumps with quick coupling and strainer**



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size		length	M or V*	hose clamp	free passage
	mm	inch				mm
07047169	102	4	3	Cup / lever	Mikalor	30 x 160
07048170	102	4	4	Cup / lever	Mikalor	30 x 160
07047032	102	4	5	Cup / lever	Mikalor	30 x 160
07047033	102	6	6	Cup / lever	Mikalor	30 x 160
07047036	152	6	4	Cup / lever	BBA	40 x 190
07047037	152	6	5	Cup / lever	BBA	40 x 190
07047038	152	6	6	Cup / lever	BBA	40 x 190

\*) Ball/lever (M) Cup (V)

**Heduflex suction hoses for dewatering and sewage pumps with flange and strainer**



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size		length	flange type	hose clamp	free passage
	mm	inch				mm
07047110	102	4	4	K180/8 holes	Mikalor	30 x 160
07047111	102	4	5	K180/8 holes	Mikalor	30 x 160
07047112	102	4	6	K180/8 holes	Mikalor	30 x 160
07047115	152	6	4	K240/8 holes	BBA	40 x 190
07047054	152	6	5	K240/8 holes	BBA	40 x 190
07047055	152	6	6	K240/8 holes	BBA	40 x 190
07047057	203	8	5	K295/8 holes	BBA	60 x 180
07047058	203	8	6	K295/8 holes	BBA	60 x 180

**Heduflex suction hoses for high head pumps with quick coupling and strainer**



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size		length	M or V*	hose clamp	free passage
	mm	inch				mm
07046993	102	4	3	Cup / lever	Mikalor	15
07046994	102	4	4	Cup / lever	Mikalor	15
07046995	102	4	5	Cup / lever	Mikalor	15
07046996	102	6	6	Cup / lever	Mikalor	15
07047076	152	6	4	Cup / lever	BBA	20
07047077	152	6	5	Cup / lever	BBA	20
07047078	152	6	6	Cup / lever	BBA	20

\*) Ball/lever (M) Cup (V)

**Heduflex suction hoses for high head pumps with flange and strainer**



art.nr.	rubber hose			coupling		sewage strainer
	∅ inner size		length	flange type	hose clamp	free passage
	mm	inch				mm
07047120	102	4	4	K180/8 holes	Mikalor	30 x 160
07047121	102	4	5	K180/8 holes	Mikalor	30 x 160
07047122	102	4	6	K180/8 holes	Mikalor	30 x 160
07047071	152	6	4	K240/8 holes	BBA	40 x 190
07047072	152	6	5	K240/8 holes	BBA	40 x 190
07047073	152	6	6	K240/8 holes	BBA	40 x 190
07047087	203	8	5	K295/8 holes	BBA	60 x 180
07047088	203	8	6	K295/8 holes	BBA	60 x 180



**3.3 Strainers**

**Strainer with coupling female (cup / lever), galvanized**



art.nr.	∅ coupling		free passage
	mm	inch	mm
03141844	108	4	15
03141846	159	6	20

**Strainer with hose connection, galvanized**



art.nr.	∅ spigot		free passage
	mm	inch	mm
03141241	50	2	15
03141243	89	3	15
03141244	108	4	15
03141246	159	6	20

**Sewage strainer female (cup / lever), galvanized**



art.nr.	∅ coupling		free passage
	mm	inch	mm
03842001	108	4	30 x 160
03842002	159	6	40 x 190

**Sewage strainer with hose connection, galvanized**



art.nr.	∅ spigot		free passage
	mm	inch	mm
03842004	108	4	30 x 160
03842006	159	6	40 x 190

**Strainer bin female (cup / lever), galvanized**



art.nr.	∅ coupling		free passage
	mm	inch	mm
03842504	108	4	50 x 50
03842506	159	6	50 x 50

**3.4 Quick couplings**

**Hose clamp heavy duty, galvanized**



art.nr.	∅	
	mm	inch
07214327	112 - 121	4
07214330	162 - 175	6

**Hose clamp medium duty, galvanized**



art.nr.	∅	
	mm	inch
07204269	97 - 104	4
07204271	112 - 121	4
07204275	150 - 160	6
07204276	162 - 174	6

**Bend 90°, galvanized**



art.nr.	∅	
	mm	inch
03071924	108	4
03071926	159	6

**Bend 45°, galvanized**



art.nr.	∅	
	mm	inch
03071124	108	4
03071126	159	6

**T-piece x female (cup / lever), galvanized**



art.nr.	∅	
	mm	inch
03091134	108	4
03091136	159	6

**T-piece x male (ball), galvanized**



art.nr.	∅	
	mm	inch
03091144	108	4
03091146	159	6



**3.4 Quick couplings**

**T-piece female 45° (cup / lever), galvanized**



art.nr.	∅		branch
	mm	inch	
03091153	108	4	4
03091151	159	6	6
03091139	159	6	4

**Y-piece female (cup / lever) x male (ball), galvanized**



art.nr.	∅	
	mm	inch
03221363	108	4
03221365	159	6

**Y-piece male (ball) x female (cup / lever), galvanized**



art.nr.	∅	
	mm	inch
03221373	108	4
03221375	159	6

**End plug female (cup / lever), galvanized**



art.nr.	∅	
	mm	inch
03061151	50	2
03061153	89	3
03061154	108	4
03061156	159	6

**End plug male (ball), galvanized**



art.nr.	∅	
	mm	inch
03061161	50	2
03061163	89	3
03061164	108	4
03061166	159	6

**3.4 Quick couplings**

**End plug female (cup / lever) with vacuummeter, galvanized**



	∅	
	mm	inch
	108	4
	159	6

**End plug male (ball) with vacuummeter, galvanized**



	∅	
	mm	inch
	108	4
	159	6

**Reduction piece, galvanized**



art.nr.	∅ female (cup / lever) x male (ball)	
	mm	inch
03161183	108 x 89	4 x 3
03161185	159 x 108	6 x 4

**Reduction piece, galvanized**



art.nr.	∅ male x female (cup / lever)	
	mm	inch
03161173	108 x 89	4 x 3
03161175	159 x 108	6 x 4

**Reversing piece female (cup / lever), galvanized**



art.nr.	∅	
	mm	inch
03151191	50	2
03151193	89	3
03151194	108	4
03151196	159	6

**Reversing piece male (ball), galvanized**



art.nr.	∅	
	mm	inch
03151201	50	2
03151203	89	3
03151204	108	4
03151206	159	6



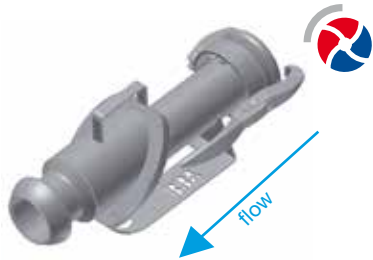
3.4 Quick couplings

Gate valve with couplings, galvanized



art.nr.	∅	
	mm	inch
09011854	108	4
09011856	159	6

“Handy” non-return valve male (ball) x female (cup / lever), galvanized



art.nr.	∅		max. pressure
	mm	inch	
09051325	108	4	4
09051328	159	6	4
09051356	108	4	Rubber valve for BBA non-return-valve
09051358	159	6	Rubber valve for BBA non-return-valve



BBA “Handy” non-return-valve

Our BBA “Handy” non-return valve is made of a robust steel casing and a low-maintenance rubber discs valve.

The complete assembly is light weight, portable, stackable and has a sturdy base plate.

The non-return valve can be used when several pumps are connected to one discharge line like pipe-line dewatering.

3.4 Quick couplings

Hose connection female (cup / lever), galvanized



art.nr.	∅ spigot	
	mm	inch
03082105	50	2
03082107	100	4
03082109	150	6

Hose connection male (ball), galvanized



art.nr.	∅ spigot	
	mm	inch
03082115	50	2
03082117	100	4
03082119	150	6

Hose connection with ridge female (cup / lever), galvanized



art.nr.	∅ spigot	
	mm	inch
03081114	100	4
03081116	150	6

Hose connection with ridge male (ball), galvanized



art.nr.	∅ spigot	
	mm	inch
03081104	100	4
03081106	150	6

Hose connection “special” female (cup / lever), galvanized



art.nr.	∅	∅ spigot	
		mm	inch
03082186	108	4	75
03082187	108	4	89
03082191	108	4	125
03081309	159	6	100
03081311	159	6	125

Hose connection male (ball), galvanized



art.nr.	∅	∅ spigot	
		mm	inch
03082155	108	4	75
03082156	108	4	89
03082158	108	4	125
03082170	159	6	100
03082172	159	6	125



**3.4 Quick couplings**

**Hose clamp light duty**



art.nr.	∅		wellpoint hose mm
	mm	inch	
1866170140	50-65	2	50
1866171180	57-70	2	57

**Hose clamp medium duty, galvanized**



art.nr.	∅	
	mm	inch
07204269	4	97-104
07204271	4	112-121
07204275	6	150-160
07204276	6	162-174

**Coupling female (cup / lever) complete, incl. rivet, black**



art.nr.	∅	
	mm	inch
03051061	50	2
03051063	89	3
03051064	108	4
03051066	159	6

**Coupling male (ball), incl. rivet, black**



art.nr.	∅	
	mm	inch
03051051	50	2
03051053	89	3
03051054	108	4
03051056	159	6

**Set with 10 short hooks incl. rivet, galvanized**



art.nr.	∅	
	mm	inch
03051991SP	50	2
03051993SP	89	3
03051994SP	108	4
03051996SP	159	6

**Set with 10 long hooks incl. rivet, galvanized**



art.nr.	∅	
	mm	inch
03051981SP	50	2
03051983SP	89	3
03051984SP	108	4
03051986SP	159	6

**3.4 Quick couplings**

**Set with 10 levers incl. rivet, galvanized**



art.nr.	∅	
	mm	inch
03051971SP	50	2
03051973SP	89	3
03051974SP	108	4
03051976SP	159	6

**10 Sets with 3 rivets, galvanized**



art.nr.	∅	
	mm	inch
03052001SP	50	2
03052004SP	108	3/4
03052006SP	159	6

**Set with short hooks (5 pieces), long hooks (5 pieces), levers (5 pieces) and rivets (5 x 3 pieces)**



art.nr.	∅ coupling	
	mm	inch
3051964SP	108	4
3051966SP	159	6

**O-ring rubber (set, 10 pieces)**



art.nr.	∅	
	mm	inch
03391092SP	50	2
03391094SP	89	3
03391095SP	108	4
03391097SP	159	6

**Welding coupling male (ball), black**



art.nr.	∅		thickness mm	length mm
	mm	inch		
03041881	50	2	2	190
03041883	89	3	2	190
03041884	108	4	2	190
03041886	159	6	2	190



**3.4 Quick couplings**

**Welding coupling female (cup / lever) black - lever and hooks, black**



art.nr.	∅		thickness	length
	mm	inch		
03041971	50	2	2	190
03041973	89	3	2	345
03041974	108	4	2	345
03041976	159	6	2	345

**Threaded bend male (ball) 90° - outer thread, galvanized**



art.nr.	∅	
	mm	inch
1866156010	50	2
1866156030	89	3
03131334	108	4
03131336	159	6

**Thread piece female (cup / lever) - outer thread, galvanized**



art.nr.	∅ coupling		∅ outer thread
	mm	inch	
03101208	50	2	1,5
03101210	50	2	2
03101213	89	3	3
03101121	89	3	2,5
03101214	108	4	4
03101217	108	4	3
03101218	108	4	2
03101216	159	6	6

**Thread piece male (ball) - outer thread, galvanized**



art.nr.	∅ coupling		∅ outer thread
	mm	inch	
1866171410	50	2	1,5
03101220	50	2	2
1866155270	89	3	3
03101224	108	4	4
03101229	108	4	2
03101227	108	4	3
03101226	159	6	6
03101230	159	6	4

**Thread piece female (cup / lever) - inner thread, galvanized**



art.nr.	∅		∅ inner thread
	mm	inch	
03101207	50	2	2
03101247	108	4	4
03101248	159	6	6

**3.4 Quick couplings**

**Thread piece male (ball) - inner thread, galvanized**



art.nr.	∅		∅ inner thread
	mm	inch	
03101236	50	2	2
03101244	108	4	4
03101249	159	6	6

**Flange bend male (ball) 90°, galvanized**



art.nr.	∅		flange (holes)	PN
	mm	inch		
03121311	50	2	K125 (4)	16
03121314	108	4	K180 (8)	16
03121316	159	6	K240 (8)	16

**Flange bend male (ball) 135°, galvanized**



art.nr.	∅		flange (holes)	PN
	mm	inch		
03121321	50	2	K125 (4)	16
03121324	108	4	K180 (8)	16
03121326	159	6	K240 (8)	16

**Flange piece female (cup / lever), galvanized**



art.nr.	∅		flange (holes)	PN
	mm	inch		
03111901	50	2	K125 (4)	16
03111224	108	4	K180 (8)	16
03111226	159	6	K240 (8)	16

**Flange piece male (ball), galvanized**



art.nr.	∅		flange (holes)	PN
	mm	inch		
03111301	50	2	K125 (4)	16
03111204	108	4	K180 (8)	16
03111206	159	6	K240 (8)	16



**3.4 Quick couplings**

**Ring gasket**



art.nr.	∅		flange without holes
	mm	inch	
03401911	50	2	K 125
03401914	89	3	K 160
03401915	108	4	K 180
03401917	159	6	K 240

**Flange gasket - DIN**



art.nr.	∅		flange with holes
	mm	inch	
03401921	50	2	K 125 (4)
03401924	89	3	K 160 (4)
03401925	108	4	K 180 (8)
03401927	159	6	K 240 (8)

**3.5 Sand collector**

**Sand collector 10-23, galvanized**



∅ coupling	max. flow	L x W x H
inch	m³/h	mm
4 or 6	120	2270 x 1050 x 1533

**3.6 Flow measurement and de-aeration**

Flow measurement is a routine and daily task for many dewatering companies. In some countries it is even mandatory to measure how much water is pumped from A to B, or how much groundwater is extracted from a particular area.

The handy mechanical flow meters from BBA Pumps are specially designed for use in pumping applications. The low weight, combined with maximum protection through the galvanized casing and carrying handle, makes this flow meter ideal for use in the field.

**“Handy” flow meter (portable, in casing) with quick couplings**



art.nr.	∅		max. flow	type
	mm	inch		
13018305V	108	4	180	turbine inside waterstream DWM
13018352V	152	6	350	turbine inside waterstream DWM

**“Handy” flow meter (portable, in casing) with quick couplings**

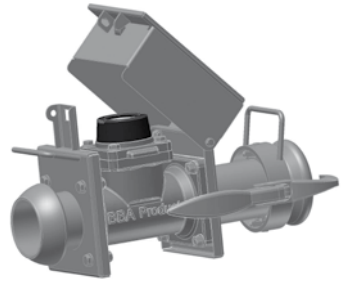


art.nr.	∅		max. flow	type
	mm	inch		
13018102V	108	4	250	turbine outside waterstream DWI
13018152V	152	6	500	turbine outside waterstream DWI



3.6 Flow measurement and de-aeration

Siemens "Handy" flow meter, MAG 8000 battery powered, in portable casing



art.nr.	∅ coupling		max. flow m <sup>3</sup> /h	type
	mm	inch		
14511825V	108	4	80	MAG8000 DN50
14511909V	108	4	250	MAG8000 DN100
14511915V	152	6	500	MAG8000 DN150

Working closely with Siemens, BBA Pumps has designed the "Smart Handy". The battery-powered MAG8000 electromagnetic flow meter features a GSM module that allows data to be received by sms or e-mail.

Siemens "Smart Handy" flow meter, MAG 8000



art.nr.	∅ coupling		max. flow m <sup>3</sup> /h	type
	mm	inch		
14511816V	108	4	80	MAG 8000 DN100
11981	152	6	600	MAG 8000 DN150

Remote monitoring



3.6 Flow measurement and de-aeration

De-aeration unit



art.nr.	∅	
	mm	inch
13313014	108	4
13313016	159	6

Sock flow control unit



art.nr.	∅ coupling		∅ branch
	mm	inch	mm
13407218	108	4	1 x 58
Suitable for 80 and 100 mm drain			

BBA sock flow control unit

The BBA sock flow control unit keeps your sock system going. If limited water is available, the BBA sock flow control unit temporarily shuts off the sock drain connected to it. This prevents excessive air intake which unbalances the sock system and allows you to connect several sock drains to one pump!

BBA de-aeration unit

The BBA de-aeration unit separates the air from the water. This prevents extreme pressure fluctuation in your discharge pipe system.







## SYSTEM C

### 3.7 Wellpoint system BBA Pumps

#### Header pipes HDPE - with quick couplings



art.nr.	Ø pipe		Ø coupling		length	bundle
	mm	inch	mm	mm	m	# pipes
01061033	110 x 6,2	4	2 x 51 mm		5,8	10
01061034	110 x 6,2	4	3 x 51 mm		5,8	10
01061048	110 x 6,2	4	4 x 51 mm		5,8	10
01061037	110 x 6,2	4	2 x 57 mm		5,8	10
01061040	110 x 6,2	4	3 x 57 mm		5,8	10
01061029	110 x 6,2	4	4 x 57 mm		5,8	10

#### Wellpoint hose (rubber, UV resistant)



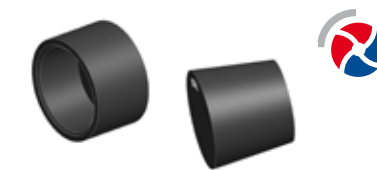
art.nr.	Ø (inner)		length
	mm	mm	m
07054135	50 / 50		1

#### Armorvin wellpoint hose (PVC reinforced, transparent)



art.nr.	Ø (inner)		length	
	mm	mm	m	
07054130	50 / 50		1	HNP
07054128	50 / 50		1,5	HNA

#### Branch cover / plug (set, 100 pieces)



art.nr.	type	Ø branch	
		mm	mm
11421939SP	cover	51	
11421341SP	conical plug	51 / 57	

#### Hose clamp light duty



art.nr.	Ø		wellpoint hose
	mm	inch	mm
1866170140	50-65	2	50
1866171180	57-70	2	57

#### Hose clamp medium duty



art.nr.	Ø	
	inch	mm
07204262	2	60-63



**3.7 Wellpoint system "COUPLING"**

**Hose connection male (ball) galvanized**



art.nr.	∅	
	mm	inch
03082115	50	2

**Hose connection female (cup / lever) galvanized**



art.nr.	∅	
	mm	inch
03082105	50	2

**Thread piece female (cup / lever) inner thread**



art.nr.	∅	
	mm	inch
03101207	50	2

**Thread piece male (ball) inner thread**



art.nr.	∅	
	mm	inch
03101235	50	2

**Hose clamp light duty**



art.nr.	∅		wellpoint hose
	mm	inch	mm
1866170140	50-65	2	50
1866171180	57-70	2	57

**Hose clamp medium duty**



art.nr.	inch	mm
07204262	2	60-63

**3.7 Wellpoint filters BBA Pumps shock proof**

**Vacuum wellpoint filter PVC (shock proof) with flat bottom**



art.nr.	∅ (outer)	length	perforation length	perforation	bundle
	mm	m	m	mm	# filters
11116920	50	1	1	0,3	76
11117000	50	3	1	0,3	76
11117001	50	4	1	0,3	76
11117002	50	5	1	0,3	76
11117003	50	6	1	0,3	76
11117004	50	7	1	0,3	76
11117074	50	9	1	0,3	76

Platform packaging per 600 pieces.

**Vacuum wellpoint filter PVC (shock proof) with point bottom and drop tube**



art.nr.	∅ (outer)	length	perforation length	perforation	bundle
	mm	m	m	mm	# filters
11117129	50	1	1	0,3	76
11117137	50	6	1	0,3	76
11117136	50	9	1	0,3	76

Platform packaging per 600 pieces.

**Gravity filter (shock proof) with bottom**



art.nr.	∅ (outer)	length	perforation length	perforation	bundle
	mm	m	m	mm	# filters
11117027	90	8	6	0,3	20
11117038	90	9	7	0,3	20

**Glue coupling**



art.nr.	∅ (inner)
11276050SP	50 - 50
11106030SP	50 - 48 (US pvc)
11279000SP	90 - 90

**Jetting tube**



art.nr.	
14600104	Jetting tube 2" length 5 meters with 15 meters hose incl. storz coupling 81 x 65





## FLANGE PIPES

### 4 Flange pipes

#### HDPE 100 pipe with flanges - SDR 26 Flange steel, galvanized



art. nr.	∅	thickness	length
	mm	mm	m
01801801	160	6,2	6
10801805	200	7,7	6
01801809	225	8,6	6
00180181	280	9,6	6
01801817	315	12,1	6

#### HDPE 100 pipe with flanges - SDR 17 Flange steel, galvanized



art. nr.	∅	thickness	length
	mm	mm	m
01801850	160	9,5	6
10801854	200	11,9	6
01801858	225	13,4	6
00180186	280	14,8	6
01801866	315	18,7	6



## Most common pump terminology and abbreviations

Q	Capacity, actual pump delivery in m <sup>3</sup> /h or in gallons per minute
H	Head, vertical height of a static column of liquid in mwc or feet
n	Pump speed in revolutions per minute (rpm)
η	Efficiency in percentage
P	Power required in kW or Hp
kW	Kilowatt (1 kW = 1.36 Hp Horsepower)
NPSHr	Net Positive Suction Head Required in mwc of ft
NPSHa	Net Positive Suction Head Available in mwc of ft
BEP	Best Efficiency Point
BSFC	Brake Specific Fuel Consumption in g/kWh or lb/Hph
dB(A)	Sound level in decibels (A) stands for the A-scale
V	Velocity in m/s or ft/s
ρ	Density in kg/m <sup>3</sup> is the mass per unit volume of a substance

## Affinity laws

The affinity laws for pumps express the relationship between the several variables involved in pump performance. They apply to all types of centrifugal and axial flow pumps.

With impeller diameter held constant:

Capacity is proportional to the pump speed

$$\frac{Q_1}{Q_2} = \frac{n_1}{n_2}$$

Head is proportional to the square of the pump speed

$$\frac{H_1}{H_2} = \left(\frac{n_1}{n_2}\right)^2$$

Power is proportional to the cube of the pump speed

$$\frac{P_1}{P_2} = \left(\frac{n_1}{n_2}\right)^3$$

### Affinity laws example

BBA model: BA150E D285

Reference speed: 1800 rpm

Proposed operational speed: 1500 rpm

Speed ratio:  $\frac{1500}{1800} = 0.83$

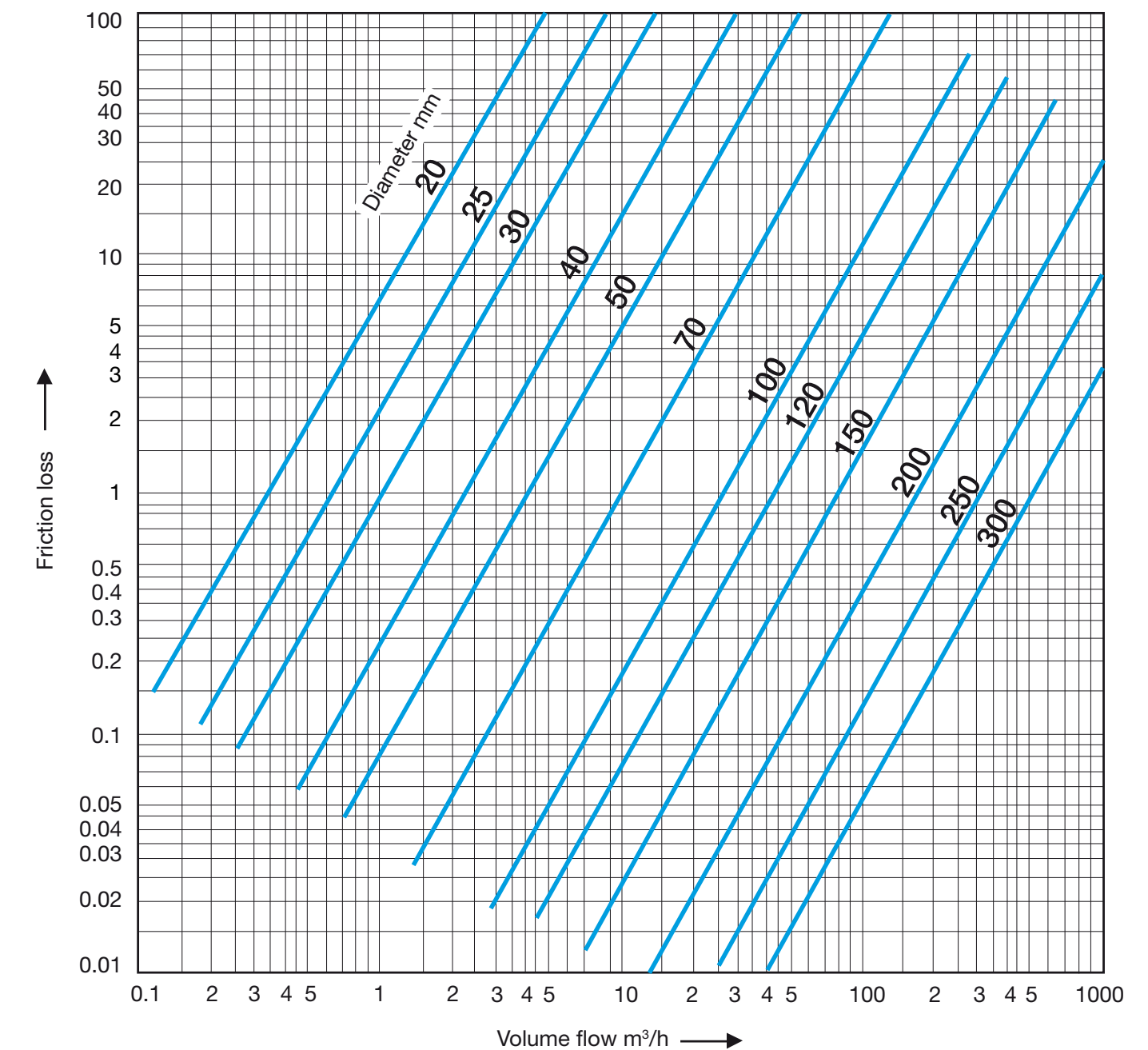
Affinity laws:

Q <sub>1</sub> × 0.83	= Q <sub>2</sub>	= 300 m <sup>3</sup> /h × 0.83	= 249 m <sup>3</sup> /h
H <sub>1</sub> × (0.83) <sup>2</sup>	= H <sub>2</sub>	= 26 mwc × 0.69	= 17.9 mwc
P <sub>1</sub> × (0.83) <sup>3</sup>	= P <sub>2</sub>	= 33 kW × 0.57	= 18.8 kW

## Friction Loss Nomogram

Nomogram for the calculation of the friction loss, valid for liquids with a viscosity of 1 cSt (e.g. water)

mwc per  
100 m piping





## Recommended suction Pipe ID vs Flow Rates by Pipe dimension

Recommendation based on maximum velocity = 4 m/s

US gallons	m³/h	(L/sec)	2" 50	3" 75	4" 100	5" 125	6" 150	8" 200	10" 250	12" 300	14" 350	16" 400	18" 450	20" 500
31.7	7.2	2	1.02	0.45	0.25	0.16	0.11	0.06	0.04	0.03	0.02	0.02	0.01	0.01
63.4	14.4	4	2.04	0.91	0.51	0.33	0.23	0.13	0.08	0.06	0.04	0.03	0.03	0.02
95.1	21.6	6	3.06	1.36	0.76	0.49	0.34	0.19	0.12	0.08	0.06	0.05	0.04	0.03
126.8	28.8	8	4.07	1.81	1.02	0.65	0.45	0.25	0.16	0.11	0.08	0.06	0.05	0.04
158.5	36	10	5.09	2.26	1.27	0.81	0.57	0.32	0.20	0.14	0.10	0.08	0.06	0.05
190.2	43.2	12	6.11	2.72	1.53	0.98	0.68	0.38	0.24	0.17	0.12	0.10	0.08	0.06
221.9	50.4	14	7.13	3.17	1.78	1.14	0.79	0.45	0.29	0.20	0.15	0.11	0.09	0.07
253.6	57.6	16	8.15	3.62	2.04	1.30	0.91	0.51	0.33	0.23	0.17	0.13	0.10	0.08
285.3	64.8	18	9.17	4.07	2.29	1.47	1.02	0.57	0.37	0.25	0.19	0.14	0.11	0.09
317	72	20	10.19	4.53	2.55	1.63	1.13	0.64	0.41	0.28	0.21	0.16	0.13	0.10
396.3	90	25	12.73	5.66	3.18	2.04	1.41	0.80	0.51	0.35	0.26	0.20	0.16	0.13
475.5	108	30	15.28	6.79	3.82	2.44	1.70	0.95	0.61	0.42	0.31	0.24	0.19	0.15
634	144	40	20.37	9.05	5.09	3.26	2.26	1.27	0.81	0.57	0.42	0.32	0.25	0.20
792.5	180	50	25.46	11.32	6.37	4.07	2.83	1.59	1.02	0.71	0.52	0.40	0.31	0.25
951	216	60	30.56	13.58	7.64	4.89	3.40	1.91	1.22	0.85	0.62	0.48	0.38	0.31
1109.5	252	70	35.65	15.84	8.91	5.70	3.96	2.23	1.43	0.99	0.73	0.56	0.44	0.36
1268	288	80	40.74	18.11	10.19	6.52	4.53	2.55	1.63	1.13	0.83	0.64	0.50	0.41
1426.5	324	90	45.84	20.37	11.46	7.33	5.09	2.86	1.83	1.27	0.94	0.72	0.57	0.46
1585	360	100	50.93	22.64	12.73	8.15	5.66	3.18	2.04	1.41	1.04	0.80	0.63	0.51
1775.2	403.2	112	57.04	25.35	14.26	9.13	6.34	3.57	2.28	1.58	1.16	0.89	0.70	0.57
1902	432	120	61.12	27.16	15.28	9.78	6.79	3.82	2.44	1.70	1.25	0.95	0.75	0.61
2060.5	468	130	66.21	29.34	16.55	10.59	7.36	4.14	2.65	1.84	1.35	1.03	0.82	0.66
2219	504	140	71.30	31.69	17.83	11.41	7.92	4.46	2.85	1.98	1.46	1.11	0.88	0.71
2337.6	540	150	76.39	33.95	19.10	12.22	8.49	4.77	3.06	2.12	1.56	1.19	0.94	0.76
2536	576	160	81.49	36.22	20.37	13.04	9.05	5.09	3.26	2.26	1.66	1.27	1.01	0.81
2694.6	612	170	86.58	38.48	21.65	13.85	9.62	5.41	3.46	2.41	1.77	1.35	1.07	0.87
2853.1	648	180	91.67	40.74	22.92	14.67	10.19	5.73	3.67	2.55	1.87	1.43	1.13	0.92
3011.6	684	190	96.77	43.01	24.19	15.48	10.75	6.05	3.87	2.69	1.97	1.51	1.19	0.97
3170.1	720	200	101.86	45.27	25.46	16.30	11.32	6.37	4.07	2.83	2.08	1.59	1.26	1.02
3328.6	756	210	106.95	47.53	26.74	17.11	11.88	6.68	4.28	2.97	2.18	1.67	1.32	1.07
3487.1	792	220	112.05	49.80	28.01	17.93	12.45	7.00	4.48	3.11	2.29	1.75	1.38	1.12
3645.6	828	230	117.14	52.06	29.28	18.47	13.02	7.32	4.69	3.25	2.39	1.83	1.45	1.17
3804.1	864	240	122.23	54.32	30.56	19.56	13.58	7.64	4.89	3.40	2.49	1.91	1.51	1.22
3962.6	900	250	127.32	56.59	31.83	20.37	14.15	7.96	5.09	3.54	2.60	1.99	1.57	1.27
4121.1	936	260	132.42	58.85	33.10	21.19	14.71	8.28	5.30	3.68	2.70	2.07	1.63	1.32
4279.6	972	270	137.51	61.12	34.38	22.00	15.28	8.59	5.50	3.82	2.81	2.15	1.70	1.38
4438.1	1008	280	142.60	63.38	35.65	22.82	15.84	8.91	5.70	3.96	2.91	2.23	1.76	1.43
4596.6	1044	290	147.70	65.64	36.92	23.63	16.41	9.23	5.91	4.10	3.01	2.31	1.82	1.48
4755.1	1080	300	152.79	67.91	38.20	24.45	16.98	9.55	6.11	4.24	3.12	2.39	1.89	1.53
4913.6	1116	310	157.88	70.17	39.47	25.26	17.54	9.87	6.32	4.39	3.22	2.47	1.95	1.58
5072.1	1152	320	162.97	72.43	40.74	26.08	18.11	10.19	6.52	4.53	3.33	2.55	2.01	1.63
5230.6	1188	330	168.07	74.70	42.02	26.89	18.67	10.50	6.72	4.67	3.43	2.63	2.07	1.68
5389.1	1224	340	173.16	76.96	43.29	27.71	19.24	10.82	6.93	4.81	3.53	2.71	2.14	1.73
5547.6	1260	350	178.25	79.22	44.56	28.52	19.81	11.14	7.13	4.95	3.64	2.79	2.20	1.78
5706.1	1296	360	183.35	81.49	45.84	29.34	20.37	11.46	7.33	5.09	3.74	2.86	2.26	1.83
5864.6	1332	370	188.44	83.75	47.11	30.15	20.94	11.78	7.54	5.23	3.85	2.94	2.33	1.88
6023.1	1368	380	193.53	86.01	48.38	30.97	21.50	12.10	7.74	5.38	3.95	3.02	2.39	1.94
6181.6	1404	390	198.63	88.28	49.66	31.78	22.07	12.41	7.95	5.52	4.05	3.10	2.45	1.99
6340.1	1440	400	203.72	90.54	50.93	32.59	22.64	12.73	8.15	5.66	4.16	3.18	2.52	2.04
6498.6	1476	410	208.81	92.81	52.20	33.41	23.20	13.05	8.35	5.80	4.26	3.26	2.58	2.09
6657.1	1512	420	213.90	95.07	53.48	34.22	23.77	13.37	8.56	5.94	4.37	3.34	2.64	2.14

## Correction in dB(A) in relation to distance from the sound source

Distance to heart sound source	Correction (c)
m	dB(A)
2	14,0
3	17,5
4	20,0
5	22,0
6	23,5
7	24,9
8	26,0
9	27,1
10	28,0
15	31,5
20	34,0
25	35,9
30	37,5
35	38,9
40	40,0
45	41,0
50	42,0
55	42,8
60	43,5
70	44,9
80	46,0
90	47,1
100	48,0
110	48,8
120	49,6
130	50,3
140	50,9
150	51,5
160	52,1
170	52,6

Table shows the correction in dB(A) to determine the sound level for different distances.

LWA Value -/- Correction = dB(A)

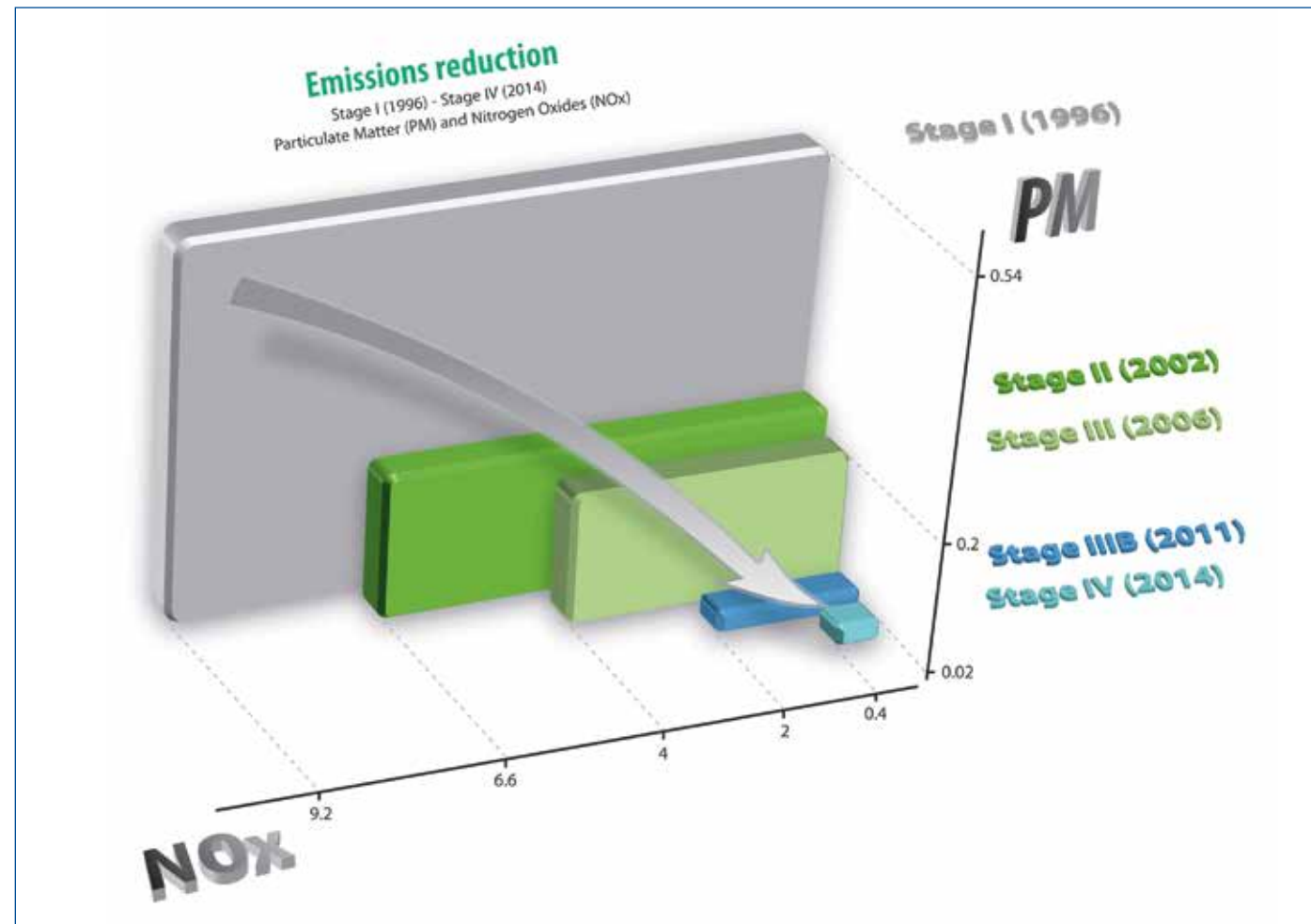
Example:  
 LWA Value Dieselunit 90  
 Distance 7 m  
 Correction - 24,9 dB(A)

Sound level at 7 mtr 65,1 dB(A)



# European emission standards for diesel driven pump units

The European emission standards\* for new diesel driven pump units have been structured as gradually more stringent tiers known as Stage I...IV standards. The regulations are specified by Directive 97/68/EC with numerous later amendment.



## Stage IV power categories and final implementation dates

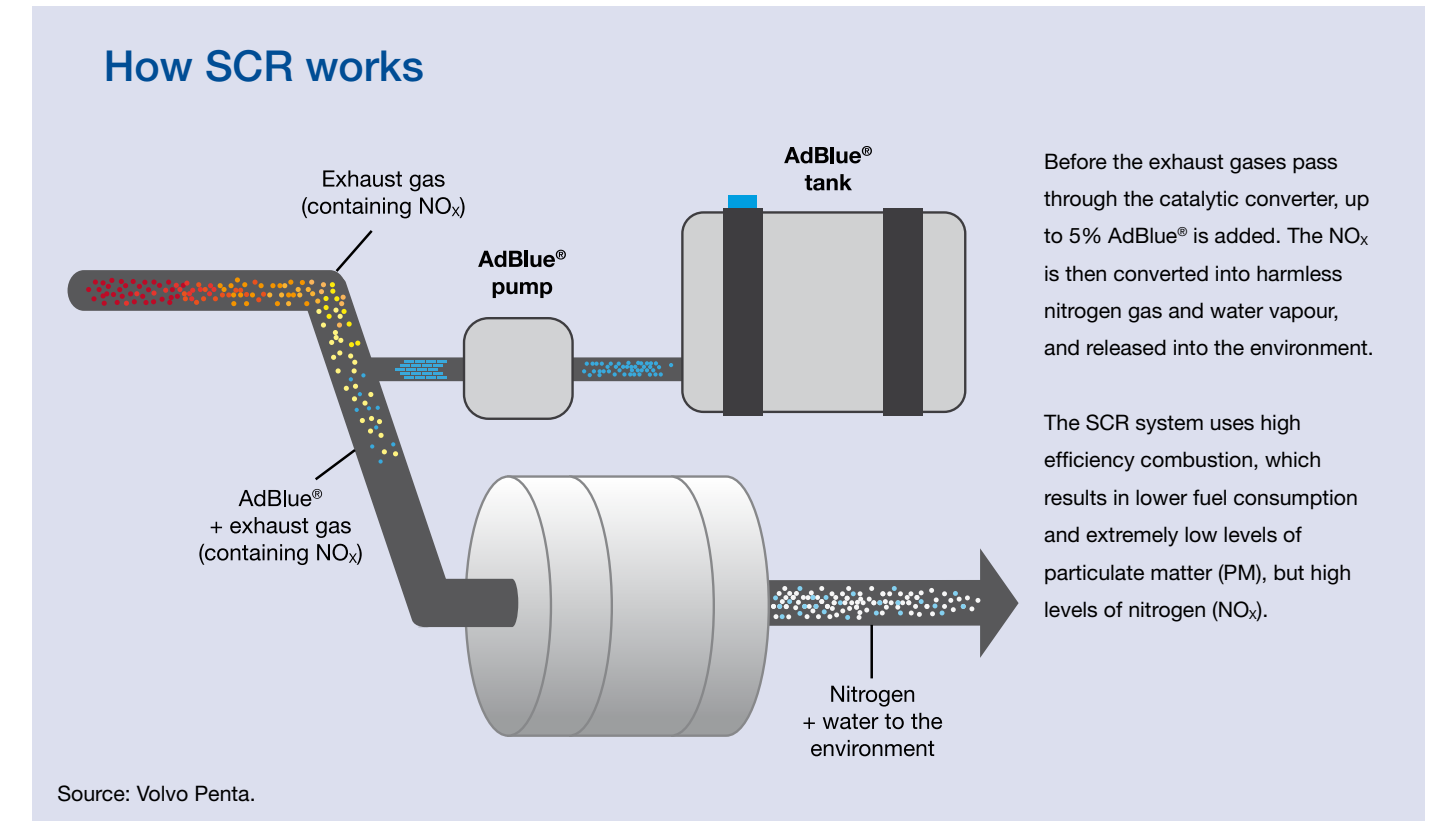
130 – 560 bkW 2014  
56 – 130 bkW 2015

## Stage V is coming

Recently, the European Parliament has announced it will adopt Stage V emission standards for non-road mobile machinery engines. From 2019, all new diesel-powered non-road machines in Europe must comply with the Stage V emission requirements. This will apply to engines in the power range of 19-560 kW.



Several engine manufacturers use different techniques to comply with the stage IV emission standards. Consult the technical specifications for information on the emission standard of the pump unit.



## Aftertreatment methods

- **EGR – Exhaust Gas Recirculation** cools and mixes measured amounts of cooled exhaust gas with incoming fresh air to lower peak combustion temperatures and reduce nitrogen oxides (NO<sub>x</sub>).
- **DOC – Diesel Oxidation Catalyst** is a flow-through device and reacts with exhaust gases to reduce carbon monoxide, hydrocarbons and some particulate matter.
- **DPF – Diesel Particulate Filter** forces exhaust gases to flow through channel walls, trapping and holding the remaining particulate matter. Trapped matter is later oxidized within the DPF through a self-activating cleaning process, called passive regeneration, that uses exhaust heat produced during normal operating conditions.
- **SCR – Selective Catalytic Reduction** is an advanced active emissions control technology system that injects a liquid-reductant agent through a special catalyst into the exhaust stream of a diesel engine. SCR one of the most cost-effective and fuel-efficient technologies available to help reduce diesel engine emissions.

## \* The European emission standards apply to:

- |                        |           |                |                  |
|------------------------|-----------|----------------|------------------|
| • Albania              | • Finland | • Lichtenstein | • Romania        |
| • Austria              | • France  | • Lithuania    | • Serbia         |
| • Belgium              | • Germany | • Luxembourg   | • Slovakia       |
| • Bosnia & Herzegovina | • Greece  | • Macedonia    | • Slovenia       |
| • Bulgaria             | • Hungary | • Malta        | • Spain          |
| • Croatia              | • Iceland | • Montenegro   | • Switzerland    |
| • Cyprus               | • Ireland | • Netherlands  | • Sweden         |
| • Czech Republic       | • Italy   | • Norway       | • United Kingdom |
| • Denmark              | • Kosovo  | • Poland       |                  |
| • Estonia              | • Latvia  | • Portugal     |                  |

All information is substantially correct at the time of printing but maybe altered subsequently.







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