

Active support for construction processes.
With utility from Wacker Neuson.

A good supply of power, heat and dry work surfaces is essential to every construction site, failing which entire construction sections can often be delayed. It therefore makes sense to rely on professionals like Wacker Neuson. High quality combined with innovative machines designed specifically for site conditions speak for themselves and reflect the Wacker Neuson philosophy: reliability, trustworthiness, quality, fast response times, flexibility, and innovation.

1 Wacker Neuson power generators and lighting

Power and light ensure continuous headway on the construction site. You can choose between portable or mobile generators or between light towers and light balloons.

No matter what product you choose, the most important thing is that you choose Wacker Neuson.

2 Wacker Neuson heating systems

From small and medium-sized heaters through space heaters to ground and surface heaters, Wacker Neuson offers a wide range of heating devices. Contact us for more information.

Pumps.

Proven technology for dewatering,
sewage and trash water applications.

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Please note: The product range of the Wacker Neuson Group comprises more than 300 different product groups in the light and compact equipment areas. In the light equipment area the product range comprises various device types – according to different voltage and frequency conditions, local regulations, market specifics and operating conditions. Not all Wacker Neuson products listed or shown here are therefore available or approved in all countries. Modifications reserved in the interest of continuous further development. The Wacker Neuson Group does not accept any liability whatsoever for the correctness and completeness of the data given in this brochure. Reprints permissible only with prior approval in writing by the Wacker Neuson Group, Munich. © Wacker Neuson SE 2010. All rights reserved.



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A dry construction site is essential if interruptions are to be prevented.



DRAINAGE SYSTEMS



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DEWATERING PUMPS



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TRASH PUMPS

- Diaphragm pumps
- Centrifugal pumps
- Pump with flexible shaft



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SUBMERSIBLE PUMPS

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- Trash pumps



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PUMP CALCULATION

- Calculation example
- Pipe friction losses tables



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ACCESSORIES



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MORE EQUIPMENT FROM WACKER NEUSON

- Generators

Dewatering pumps from Wacker Neuson. For fast and reliable drainage on every construction site.

Water often delays work on site and should ideally be pumped away as quickly as possible. Dewatering pumps from Wacker Neuson are ideal if the water does not contain a large amount of solid material. With a high discharge capacity of up to 1,000 liters per minute, sites are dried extremely quickly.



DEWATERING PUMPS

Dewatering pumps

Powerful and fast dewatering: The PG 2 and PG 3.



- PG
- Powerful
 - High discharge capacity
 - Low maintenance
 - Easy to use

PERFORMANCE INFORMATION

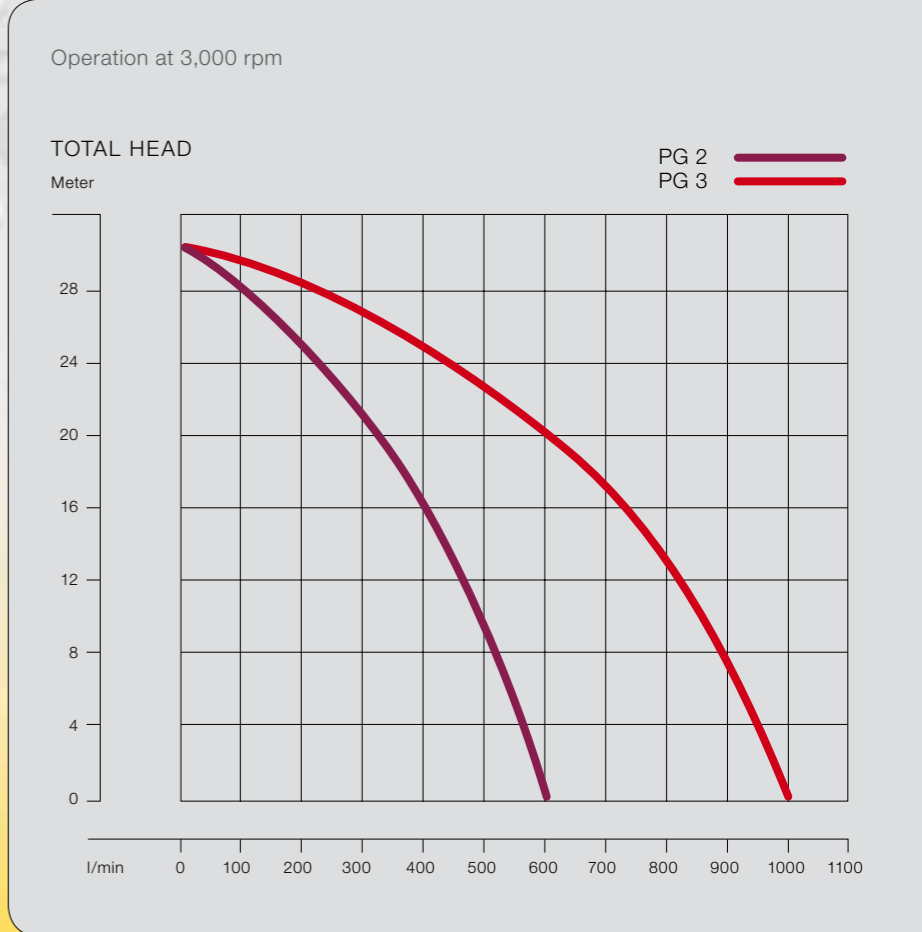
Machine type
Max. head m
Max. discharge capacity l/min

PG 2
30
600

PG 3
30
1,000

FOR SLIGHTLY POLLUTED WATER.

Pump opening with cast iron impeller – transports water quickly and reliably.



The ideal solution for drainage applications: the PG series.

- For transporting clear water that does not contain large amounts of solid material (up to 6.5 mm in diameter).
- Pump vanes on the rear of the impeller minimize the build-up of solids and failure times.
- Carbon-reinforced ceramic seals and a reliable four-cycle engine with an automatic low oil shutoff guarantee longer operating periods.
- Convenient self-priming mechanism.
- Compact and easy to operate.
- Light, die-cast aluminum housing.
- Also ideal for smaller, short-term pumping operations.



Technical Data.

CENTRIFUGAL DEWATERING PUMPS



TECHNICAL DATA

	PG 2	PG 3
Suction and pressure pipe joint diameter mm	50	75
LxWxH mm	480 x 375 x 395	515 x 405 x 460
Operating weight kg	24	31
Total head m	30	30
Max. discharge capacity l/min	600	1,000
Max. suction height m	7.5	7.5
Max. solid diameter mm	6.5	6.5
Drive	Air-cooled single cylinder four-cycle gasoline engine	
Engine manufacturer	Honda	Honda
Type	GX 120	GX 160
Displacement cm ³	118	163
Performance (DIN ISO 3046) kW (HP)	3.0 (4.0)	4.1 (5.5)
At speed 1/min	3,600	3,600
Max. fuel consumption l/h	1.3	1.8
Tank capacity (fuel) l	2.5	3.6

Trash pumps.

Ideal for use with sludge masses and in drainage areas.

Sludge masses and trash water in drainage areas often contain sand, gravel and other solids which are also sucked in by pumps. Specially developed trash pumps capable of handling solids with a diameter of up to 45 mm ensure that the mass to be pumped away is removed without blocking the pump.

Wacker Neuson offers three different types of trash pump:

- Diaphragm pumps
- Centrifugal pumps
- Pump with flexible shaft



DIAPHRAGM PUMPS



CENTRIFUGAL PUMPS



PUMP WITH FLEXIBLE SHAFT



Trash pumps

Diaphragm trash pumps: PDI 2 and PDI 3.



PDI

A reinforced diaphragm is ideally suited to the transport of trash water containing large amounts of sand or very abrasive solid material. The reinforced diaphragm is available as a spare part, contact us for more information.

VERY HIGH SOLIDS CONTENT OF UP TO 45 mm.

PG 2:

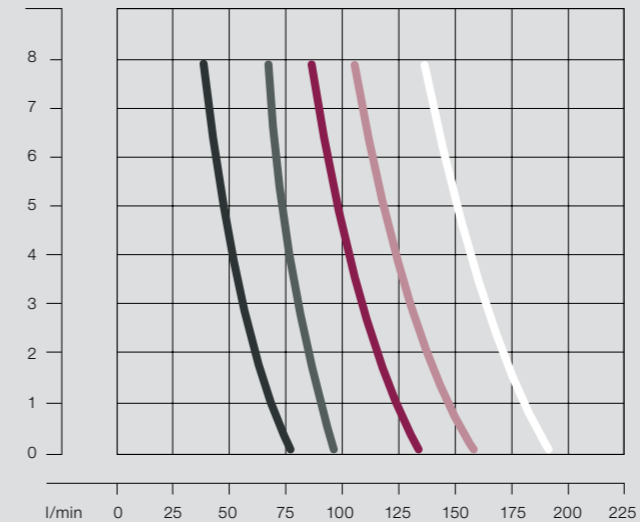
Operation at 3,000 rpm

Performance at various suction heights:

1.5 m
3.1 m
4.6 m
6.1 m
8.0 m

TOTAL HEAD

Meter



PG 3:

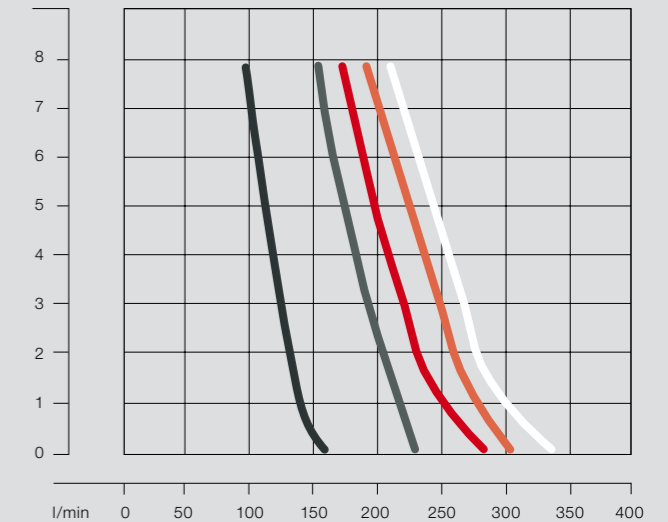
Operation at 3,000 rpm

Performance at various suction heights:

1.5 m
3.1 m
4.6 m
6.1 m
8.0 m

TOTAL HEAD

Meter



PERFORMANCE INFORMATION

Machine type

Max. head m

Max. discharge capacity l/min

PDI 2

7.5

183

PDI 3

7.5

333

The PDI series copes with tasks which no other pump can handle.

- Capable of pumping anything that flows.
- Solids up to \varnothing 45 mm are no problem at all.
- Ideal for draining sludge masses and drainage areas.
- Intermittent operation due to lack of water is also no problem for the PDI series.
- High quality, long-life components.
- Aluminum alloy housing.
- Safe to run dry: no damage, even under continuous, unsupervised operation.

- The direct water throughput construction guarantees high pump capacity and minimizes failures caused by blockages.
- The pressure compensating chamber on the inlet side absorbs pressure spikes and ensures even operation. This minimizes abrasion.
- Oil bath lubrication ensures that all parts of the transmission system are constantly lubricated, automatically reducing maintenance costs and downtimes.
- Efficient power transmission from engine to pump.



TRASH PUMPS
Diaphragm pumps

High performance centrifugal pumps for a dry construction site: PT 2 and PT 3.

2 ENGINE TYPES AVAILABLE: DIESEL OR PETROL.



PT

Excellent pump performance:

- High discharge capacity of up to 1,515 l/min.
- High head of up to 32 m.
- High solids content

**PT 2A
PT 2H:**

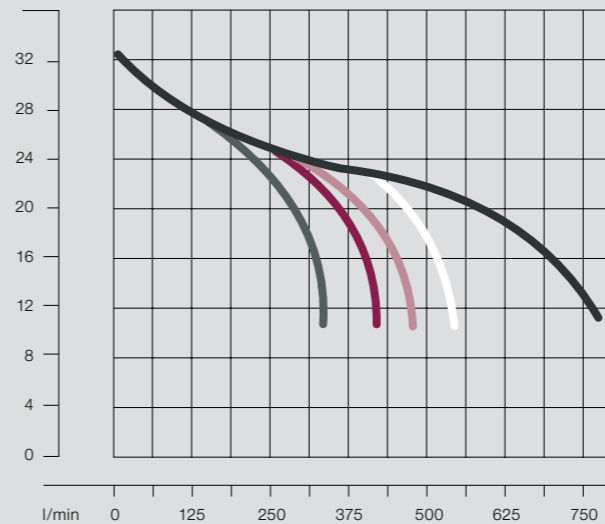
Operation at 3,500 rpm

Performance at various suction heights:

- 1.5 m
- 3.1 m
- 4.6 m
- 6.1 m
- 8.0 m

TOTAL HEAD

Meter



**PT 3A
PT 3H:**

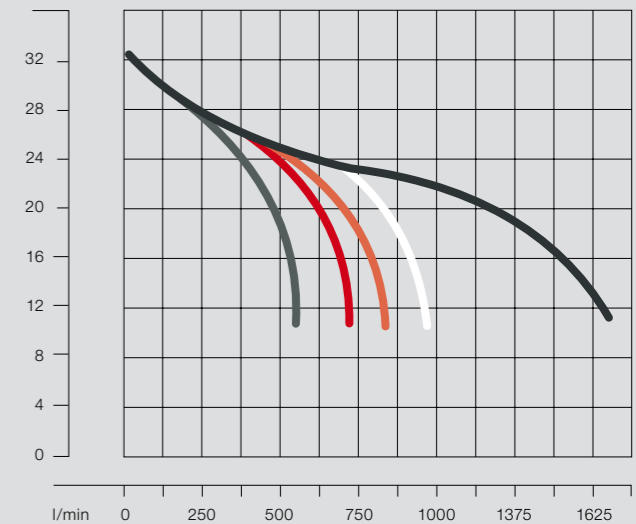
Operation at 3,500 rpm

Performance at various suction heights:

- 1.5 m
- 3.1 m
- 4.6 m
- 6.1 m
- 8.0 m

TOTAL HEAD

Meter



PERFORMANCE INFORMATION

- Machine type**
- Max. head m**
- Max. discharge capacity l/min**

PT 2
32
795

PT 3
29
1,515

The PT series is well proven on construction sites – thanks to its radial design and ease of operation.

- The self-suctioning pumps can handle solids measuring up to 38 mm.
- Discharge capacity of over 1,500 l/min: ideal for construction sites which have to be drained quickly.
- Durable machine concept thanks to pump impeller made of hardened cast iron, volute with patented insert and carbon-ceramic seals.
- Compact, light and easy to operate.



The pump with flexible shaft.
Three individual components
for excellent pumping results:
PF 3.



PF 3

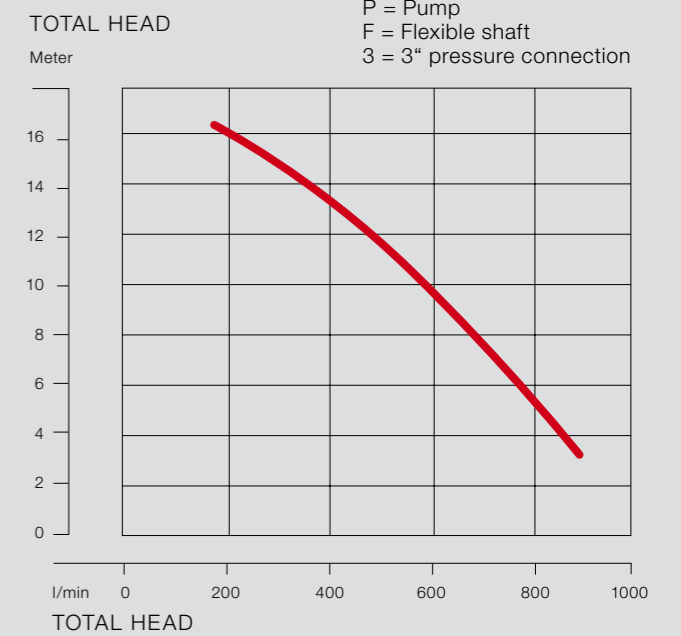
The trash pump is made of three separate parts and is therefore particularly easy to transport and maintain:

- Combustion engine
- Flexible shaft
- Submersible pump head



PF 3:

Operation at 3,500 rpm



PERFORMANCE INFORMATION

Machine type
Max. head m
Max. discharge capacity l/min

PF 3
17
900

Strong currentless performance: PF 3.

- Trash pump with combustion engine, submersible pump head and flexible shaft.
- Ideal if no electric power supply is available.
- The long, flexible shaft allows the pump head to be placed at a depth of up to six meters.
- The shaft is on ball bearings with three shaft reinforcements.
- Their construction and function make them ideal for use in narrow shafts.
- High performance Wacker Neuson engine.



TRASH PUMPS

Pumps with flexible shaft

Technical Data.



CENTRIFUGAL TRASH PUMPS

TECHNICAL DATA	PT 2A	PT 2H	PT 3A
Suction and pressure pipe joint diameter mm	50	50	75
LxWxH mm	550 x 465 x 500	590 x 495 x 510	675 x 505 x 570
Operating weight kg	43	59	64
Total head m	32	32	29
Max. discharge capacity l/min	795	795	1,515
Max. suction height m	7.6	7.6	7.6
Max. solid diameter mm	25	25	38
Drive	Air-cooled single cylinder four-cycle gasoline engine	Air-cooled single cylinder four-cycle diesel engine	Air-cooled single cylinder four-cycle gasoline engine
Engine manufacturer	Honda	Hatz	Honda
Type	GX 160	1 B 20	GX 240
Displacement cm ³	163	232	242
Performance (DIN ISO 3046) kW (HP)	4.0 (5.5)	3.4 (4.6)	6.0 (8.0)
At speed 1/min	3,500	3,500	3,500
Max. fuel consumption l/h	3.6	3.0	2.7
Tank capacity (fuel) l	1.7	1.1	6

TECHNICAL DATA	PT 3H	PDI 2A	PDI 3A
Suction and pressure pipe joint diameter mm	75	50	75
LxWxH mm	675 x 505 x 570	1,015 x 455 x 585	1,015 x 455 x 610
Operating weight kg	73	52	63
Total head m	29	7.5	7.5
Max. discharge capacity l/min	1,515	183	333
Max. suction height m	7.6	7.5	7.5
Max. solid diameter mm	38	32	45
Drive	Air-cooled single cylinder four-cycle diesel engine	Air-cooled single cylinder four-cycle gasoline engine	Air-cooled single cylinder four-cycle gasoline engine
Engine manufacturer	Hatz	Honda	Honda
Type	1 B 30	GX 120	GX 120
Displacement cm ³	347	118	118
Performance (DIN ISO 3046) kW (HP)	5.0 (6.8)	3.0 (4.0)	3.0 (4.0)
At speed 1/min	3,500	3,000	3,000
Max. fuel consumption l/h	1.7	1.1	1.1
Tank capacity (fuel) l	5.0	2.5	2.5

TECHNICAL DATA	COMBUSTION ENGINE PF 3 E	FLEXIBLE SHAFT PF 3 S6	SUBMERSIBLE PUMP HEAD PF 3 P
LxWxH mm	460 x 375 x 450	-	282 x 206 x 260
Length m	-	6	-
Pressure pipe joint diameter mm	-	-	75
Net weight kg	27	19.3	5.9
Total head m	-	-	17
Max. discharge capacity l/min	-	-	900
Max. pressure bar	-	-	1.65
Max. solid diameter mm	-	-	12
Drive	Air-cooled single cylinder four-cycle gasoline engine	-	-
Engine manufacturer	Wacker Neuson	-	-
Type	WM 210	-	-
Max. operating performance (DIN ISO 3046) kW (HP)	5.1 (7.0)	-	-
At speed 1/min	3,500	-	-
Max. fuel consumption l/h	2.5	-	-
Tank capacity (fuel) l	3.6	-	-

Submersible pumps from Wacker Neuson are durable and provide high discharge capacities. Exactly as you would expect.

Wacker Neuson submersible pumps are incredibly compact, highly robust and extremely easy to service. Their durable motors suited to site conditions transport water with solids measuring up to 20 mm in diameter and are ready for use very quickly. Just the right thing for your construction site. We have two types of submersible pumps:

- Sewage pumps
- Trash pumps



SEWAGE PUMPS



TRASH PUMPS



Submersible pumps

Sewage pumps with innovative cutter: The PSC series.

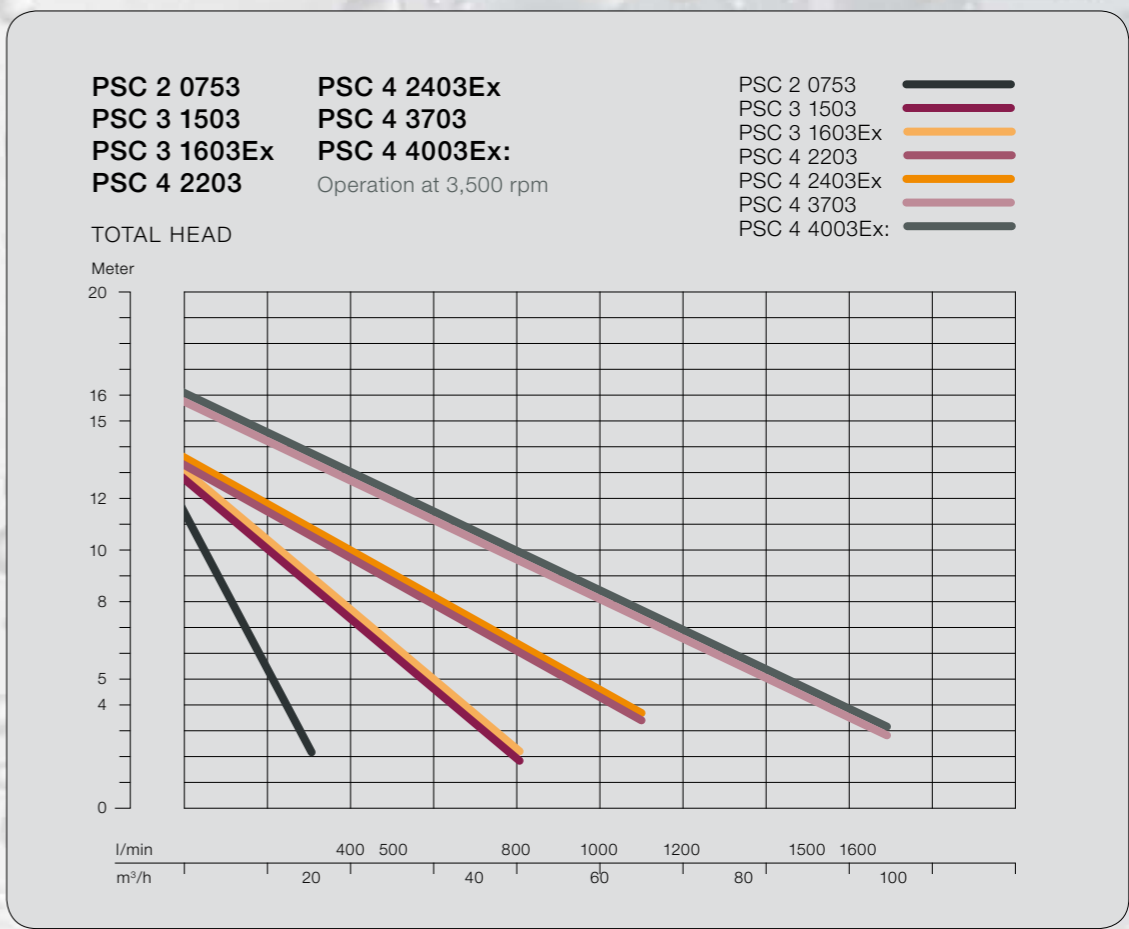


PERFORMANCE INFORMATION

Machine type
Max. head m
Max. discharge capacity l/min



The Storz-type coupling and a 90° exhaust elbow are available as accessories.



PSC 3 1603Ex
13.2
810

PSC 4 2403Ex
13.5
1,100

PSC 4 4003Ex
16
1,700

PSC 2 0753
11.5
320

PSC 3 1503
13
820

PSC 4 2203
13.5
1,100

PSC 4 3703
16
1,700

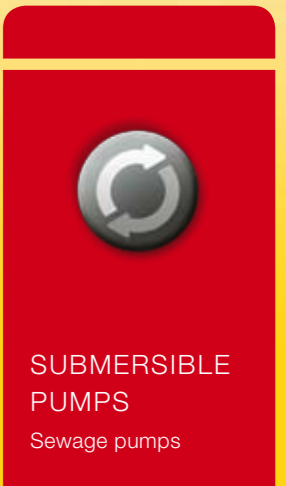
Pumping away sewage without the risk of blockages: the PSC series.

- A wolfram carbide blade integrated into the impeller and the saw tooth-style inner edge of the suction plate form a cutting mechanism. In combination with the non-clog impeller, this makes it possible to pump without blockages. Fibrous solids are easy to cut and transport.
- The cable entry point is completely waterproof. It is plugged with artificial resin or rubber to ensure that no water reaches the motor through the wires.
- Sophisticated equipment concept.
- Extremely durable components.
- Simple to operate and transport.

ATEX explosion-protected

Naturally, we also offer explosion-protected sewage pumps with ATEX Ex II 2G Ex d IIB certification. The models are identified by an "Ex" at the end:

- PSC 3 1603Ex
- PSC 4 2403Ex
- PSC 4 4003Ex



AC (1~) trash pumps: PS, PST, PSA.



PS 500

The PS series is available with a shock-proof plug or a shock-proof motor protection plug.

PST2 400:
one pump –
two functions.

Standard suction strainer

Bottom suction plate



The PST2 400 bottom suction plate allows you to pump water away in locations where you would otherwise need an additional pump with level suctioning.

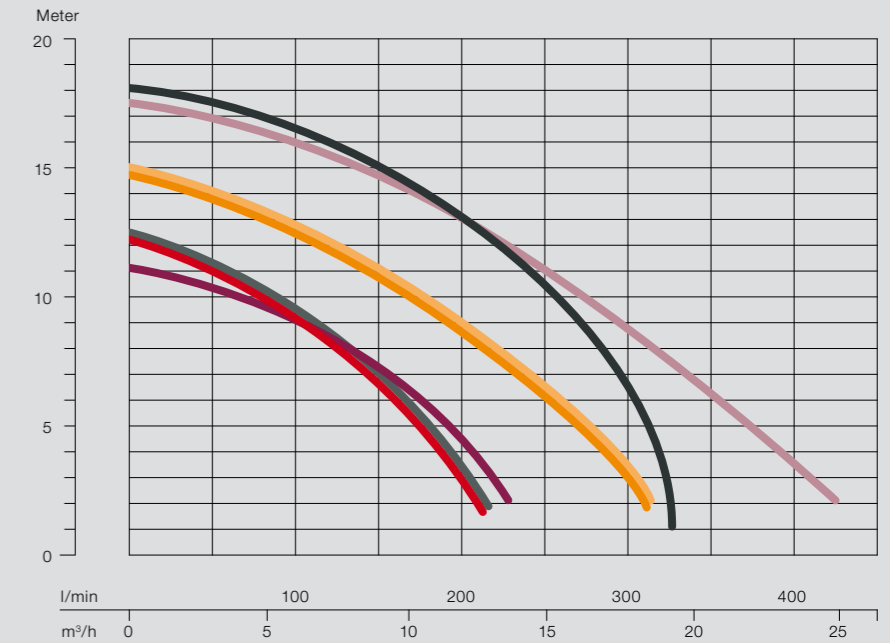


PST2 400
PS2 500
PSA2 500
PST3 750

PS2 800
PSA2 800
PS2 1500:
Operation at 3,500 rpm

PST2 400
PS2 500
PSA2 500
PST3 750
PS2 800
PSA2 800
PS2 1500

TOTAL HEAD



PERFORMANCE INFORMATION

Machine type
Max. head m
Max. discharge capacity l/min

PST2 400
12
207

PS2 500
11
220

PSA2 500
11
220

PST3 750
18
310

PS2 800
15
310

PSA2 800
15
310

PS2 1500
17.5
420

AC (1~) trash pumps are ideal for simple drainage tasks:

- Transport up to 420 l/min water with solids.
- Carry solids of up to 9.5 mm in diameter.
- Quick and reliable drainage.
- Versatile and extremely durable.
- Light, compact design.
- Safe to run dry: no burn-out, even when operated continuously without supervision.

- Intermittent operation due to lack of water is also no problem.
- An integrated thermal overload protection prevents damage to the motor caused by blockage of the impeller.
- Internal silicon-carbide bearing ring seals in the oil bath ensure a long life.
- Also available with float-type switch.



SUBMERSIBLE
PUMPS
Trash pumps

AC (3~) trash pumps (1.5 - 3.7 kW): The PS and PSA series.

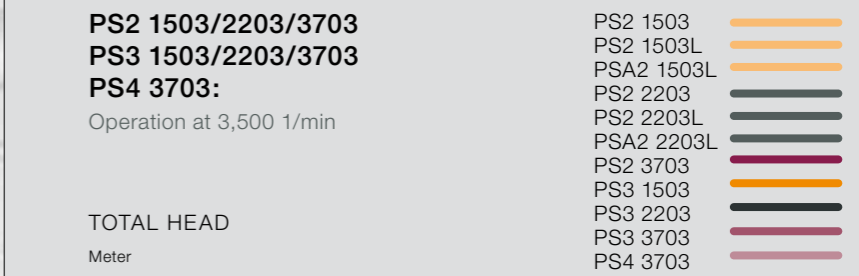
QUICK AND RELIABLE DRAINAGE.



ALUMINUM FOR EXTREME LIGHTNESS.

PS2 1503L
PSA2 1503L
20
420

PS2 2203L
PSA2 2203L
24
530



PERFORMANCE INFORMATION

Machine type
Max. head m
Max. discharge capacity l/min

PS2 1503
21.5
430

PS3 1503
14.4
670

PS2 2203
26
500

PS3 2203
20.4
800

PS2 3703
36.5
450

PS3 3703
29
900

PS4 3703
18
1,440

AC (3~) trash pumps (1.5 - 3.7 kW) are ideal for keeping construction sites dry:

- Carry solids of up to 8.5 mm in diameter.
- Transport up to 1,440 l/min water with solids.
- Slimline design with top-mounted pressure pipe joints. This allows long-term operation at low water levels.
- Both series are safe to run dry, meaning they will not burn out even under continuous operation without supervision.
- Intermittent operation due to lack of water possible.
- Wear-resistant impeller made from high-chrome cast iron with cast wear plate and additional lip seals reduces pump wear caused by abrasive materials.

- A patented oil lifter supplies the internal silicon carbide bearing ring seals with lubricating oil and cools the seals even if the oil level is low.
- Power cable suitable for site conditions with cord grip and wicking protection prevents damage to the motor.
- The PS series is available with a phase inverter and motor protection or phase inverter, motor protection and float.
- The smaller pumps are also available in aluminum, meaning lower weight.

SUBMERSIBLE PUMPS
Trash pumps

AC (3~) trash pumps (5.5 - 11 kW): The PS series.



PS3 5503

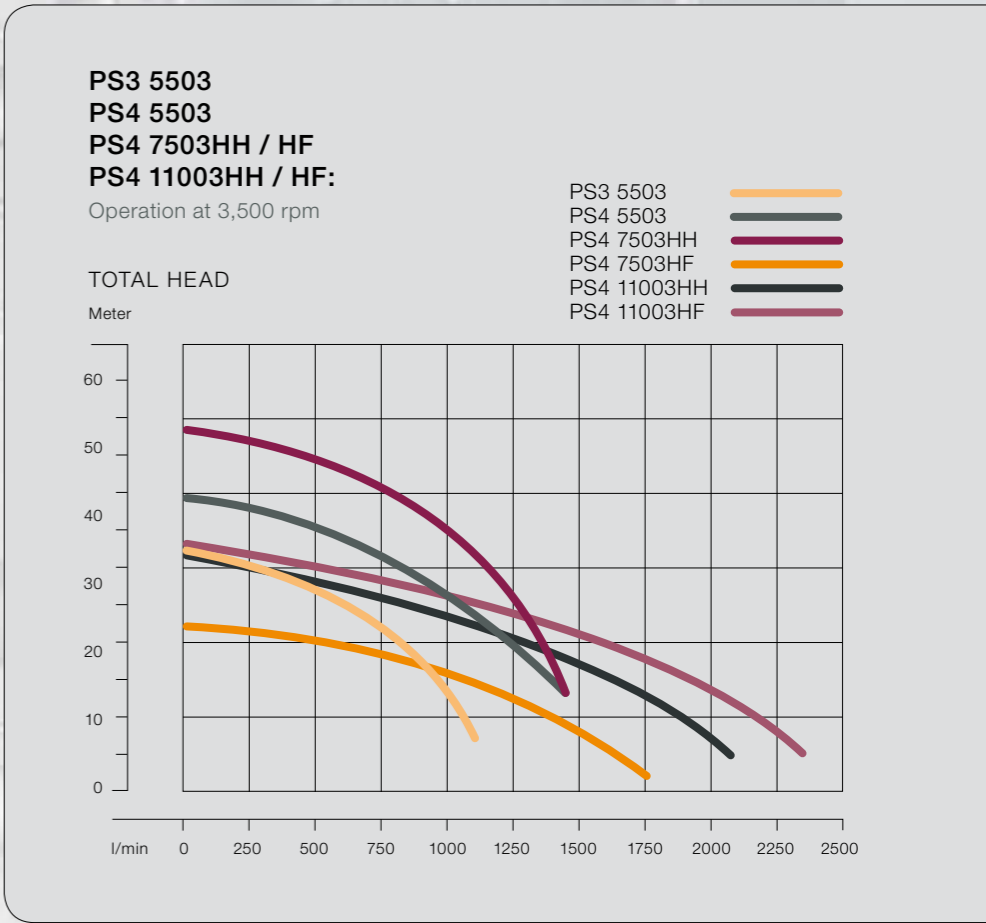
PS4 11003

PERFORMANCE INFORMATION

Machine type
Max. head m
Max. discharge capacity l/min

PS3 5503	PS4 5503	PS4 7503HH	PS4 7503HF	PS4 11003HH	PS4 11003HF
32	22.5	40	31	48.5	32.5
1,100	1,750	1,400	2,040	1,440	2,440

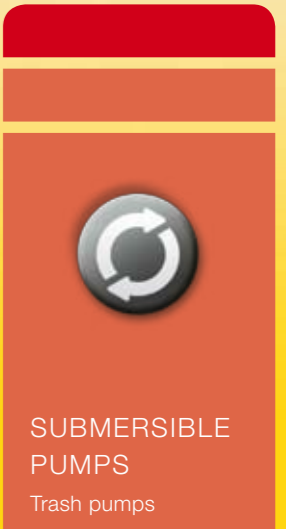
PS
The PS series is available with a phase inverter and motor protection or phase inverter, motor protection and float.



AC (3~) high performance trash pumps for small and large pumping tasks:

- Transport up to 2,440 l/min water with solids.
- Reliable, high performance pumps which can carry solids of up to 20 mm in diameter.
- Safe to run dry: no burn-out, even in the event of continuous, unsupervised operation.
- Intermittent operation due to lack of water possible without damage to pump.
- A wear resistant impeller made from high-chrome cast iron with cast wear plate and additional lip seals reduces the pump wear caused by abrasive materials.

- A patented oil lifter supplies the internal silicon carbide bearing ring seals with lubricating oil and cools the seals even if the oil level is low.
- A power cable suitable for the construction site with cord grip and wicking protection prevents damage to the motor.



Technical Data.



SEWAGE PUMPS

TECHNICAL DATA	PSC2 0753	PSC3 1503	PSC4 2203	PSC4 3703
Pressure pipe joint diameter mm	50	80	100	100
LxWxH mm	405x250x415	44x250x536	594x324x616	599x333x690
Operating weight kg	24	40	68	84
Total head m	11.5	13	13.5	16
Max. discharge capacity l/min	320	820	1,100	1,700
Max. solid diameter mm	21	37	44	60
Drive	50 Hz 3~	50 Hz 3~	50 Hz 3~	50 Hz 3~
Voltage V	400/415	400/415	400/415	400/415
Power (full load/start at 400 V) A	8.5	26	31	49.5
Power kW (HP)	0.75 (1)	1.5 (1.4)	2.2 (2.7)	3.7 (4)
At speed 1/min	2,810	2,840	1,420	1,410
Cable length m	10	10	10	10
Cable cross-section mm ²	5	5	5	5

TECHNICAL DATA

	PSC3 1603 EX	PSC4 2403 EX	PSC4 4003 EX
Pressure pipe joint diameter mm	80	100	100
LxWxH mm	446x250x695	597x324x761	602x373x838
Operating weight kg	52	78	94
Total head m	7	8	11
Max. discharge capacity l/min	450	650	700
Max. solid diameter mm	37	44	60
Drive	50 Hz 3~	50 Hz 3~	50 Hz 3~
Voltage V	400/415	400/415	400/415
Power (full load/start at 400 V) A	22.6	33.1	53.7
Power kW (HP)	1.6 (1.4)	2.3 (2.7)	3.8 (4)
At speed 1/min	2,840	1,420	1,390
Cable length m	10	10	10
Cable cross-section mm ²	5	5	5

TRASH PUMPS, AC (1~)

TECHNICAL DATA	PST2 400	PST3 750	PS2 500	PSA2 500	PS2 800
Pressure pipe joint diameter mm	50	80	50	50	50
LxWxH mm	265x185x330	285x184x389	185x185x355	220x185x355	187x187x341
Operating weight kg	11.3	19	9.5	10	13.2
Total head m	12	18	11	11	15
Max. discharge capacity l/min	200	310	220	220	310
Max. solid diameter mm	9.5	7	6.0	6.0	6
Drive	50 Hz 1~	50 Hz 1~	50 Hz 1~	50 Hz 1~	50 Hz 1~
Voltage V	230	230	230	230	230
Power (full load/start at 400 V) A	2.6	14	2.9	2.9	12.3
Power kW (HP)	0.4 (0.5)	0.75 (1)	0.5 (0.67)	0.5 (0.67)	0.75 (1)
At speed 1/min	3,000	2,820	3,000	3,000	2,730
Cable length m	10	10	10	10	10
Cable cross-section mm ²	1	1	1	1	1

TECHNICAL DATA	PSA2 800	PS2 1500
Pressure pipe joint diameter mm	50	50
LxWxH mm	223 x 187 x 341	187 x 187 x 600
Operating weight kg	13.8	32.5
Total head m	15	17.5
Max. discharge capacity l/min	310	420
Max. solid diameter mm	6	6
Drive	50 Hz 1~	50 Hz 1~
Voltage V	230	230
Power (full load/start at 400 V) A	12.3	65
Power kW (HP)	0.75 (1)	1.2 (1.4)
At speed 1/min	2,730	2,900
Cable length m	10	10
Cable cross-section mm ²	1	4

THREE-PHASE TRASH PUMPS (3~)

TECHNICAL DATA	PS2 1503	PS3 1503	PS2 1503L	PSA2 1503L
Pressure pipe joint diameter mm	50	75	50	50
LxWxH mm	235 x 215 x 550	235 x 215 x 550	240 x 240 x 392	240 x 240 x 482
Operating weight kg	29	29	19.5	20
Total head m	21.5	14.4	20	20
Max. discharge capacity l/min	430	670	420	420
Max. solid diameter mm	8.5	8.5	8.5	8.5
Drive	50 Hz 3~	50 Hz 3~	50 Hz 3~	50 Hz 3~
Voltage V	400	400	400/415	400/415
Power (full load/start at 400 V) A	3.4	3.4	19	19
Power kW (HP)	1.5 (1.4)	1.5 (1.4)	1.5 (1.4)	1.5 (1.4)
At speed 1/min	2,850	2,850	2,870	2,870
Cable length m	20	20	20	20
Cable cross-section mm ²	1.5	1.5	5	5

TECHNICAL DATA	PS2 2203	PS3 2203	PS2 2203L	PSA2 2203L
Pressure pipe joint diameter mm	50	75	50	50
LxWxH mm	235 x 215 x 570	235 x 215 x 570	240 x 240 x 412	240 x 240 x 482
Operating weight kg	32	32	23	23.5
Total head m	26	20.4	24	24
Max. discharge capacity l/min	500	800	530	530
Max. solid diameter mm	8.5	8.5	8.5	8.5
Drive	50 Hz 3~	50 Hz 3~	50 Hz 3~	50 Hz 3~
Voltage V	400	400	400/415	400/415
Power (full load/start at 400 V) A	5.5	5.5	30	30
Power kW (HP)	2.2 (2.7)	2.2 (2.7)	2.2 (2.7)	2.2 (2.7)
At speed 1/min	2,860	2,860	2,870	2,870
Cable length m	20	20	20	20
Cable cross-section mm ²	1.5	1.5	5	5

TECHNICAL DATA	PS2 3703	PS3 3703	PS4 3703
Pressure pipe joint diameter mm	50	75	75
LxWxH mm	285 x 250 x 655	285 x 250 x 655	285 x 250 x 675
Operating weight kg	55	55	55
Total head m	36.5	29	18
Max. discharge capacity l/min	450	900	1,440
Max. solid diameter mm	8.5	8.5	8.5
Drive	50 Hz 3~	50 Hz 3~	50 Hz 3~
Voltage V	400	400	400
Power (full load/start at 400 V) A	7.5	7.5	7.5
Power kW (HP)	3.7 (4)	3.7 (4)	3.7 (4)
At speed 1/min	2,850	2,850	2,850
Cable length m	20	20	20
Cable cross-section mm ²	1.5	1.5	1.5

TECHNICAL DATA	PS3 5503	PS4 5503	PS4 7503HF	PS4 7503HH
Pressure pipe joint diameter mm	75	100	100	100
LxWxH mm	305 x 260 x 695	305 x 260 x 705	330 x 315 x 785	330 x 315 x 785
Operating weight kg	66	66	93	93
Total head m	32	22.5	31	40
Max. discharge capacity l/min	1,100	1,750	2,040	1,400
Max. solid diameter mm	8.5	8.5	20	8.5
Drive	50 Hz 3~	50 Hz 3~	50 Hz 3~	50 Hz 3~
Voltage V	400	400	400	400
Power (full load/start at 400 V) A	10.8	10.8	14.3	14.3
Power kW (HP)	5.5 (6.8)	5.5 (6.8)	7.5 (9.5)	7.5 (4.5)
At speed 1/min	2,860	2,860	2,880	2,880
Cable length m	20	20	20	20
Cable cross-section mm ²	2.5	2.5	4.0	4.0

TECHNICAL DATA	PS4 11003HH	PS4 11003HF
Pressure pipe joint diameter mm	100	100
LxWxH mm	375 x 350 x 805	375 x 350 x 805
Operating weight kg	130	130
Total head m	48.5	32.5
Max. discharge capacity l/min	1,440	2,440
Max. solid diameter mm	8.5	20
Drive	50 Hz 3~	50 Hz 3~
Voltage V	400	400
Power (full load/start at 400 V) A	21	21
Power kW (HP)	11 (15)	11 (15)
At speed 1/min	2,910	2,910
Cable length m	20	20
Cable cross-section mm ²	4.0	4.0

Choosing the right pump is essential.

Preliminary calculations help you choose correctly.

Correct pump selection demands more than checking the price tag. Maximum pump efficiency depends on certain data which must be established in advance. This includes the approximate discharge capacity, pump speed, and information about the pressure line and the solids in the water. Only once this information is known can the right pump be selected. Contact us - we will be happy to help you choose the right pump.



PUMP CALCULATION

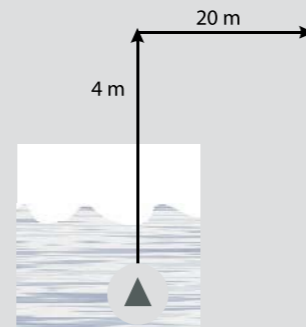
Pump calculation

How to choose the right pump. A calculation example.

REQUIREMENT

The following variables are given:

- 1 Discharge capacity $Q = 5 \text{ l/s}$
- 2 Transported medium is trash water containing sand
- 3 Geodetic height (= height to which the transported medium must be pumped) $H_{\text{geo}} = 4 \text{ meters}$
- 4 Pressure line length $l = 20 \text{ meters}$
- 5 The pressure line material is steel
- 6 Pressure line inside diameter DN50
- 7 No attachments such as fittings, elbows, shut-off devices



SOLUTION

Which pump must be selected?

- 1 A flow velocity of at least 2.5 m/s must be maintained for trash water containing sand.
- 2 According to the pressure losses table and pressure loss diagrams, there is a friction loss per 100 meters of pipeline at a height of 21.66 meters and at a flow velocity of 2.55 m/s. This value is obtained by reading off in the table the intersection point between the values 5 l/s discharge capacity and clear pipe width DN50.
- 3 The value determined at a height of 21.66 meters must now be converted to the actual pressure line length (= 20 meters) by means of the rule of three. To do this, we divide the 21.66 meters by a factor of 5 to obtain the actual friction loss of the pressure line at a height of 4,332 meters.
- 4 In order to determine the manometric head of the pump (= the head that the pump must effectively overcome so that the transported medium can be pumped away), the values for the geodetic height and for the friction loss in the pressure line must be added. This gives us a manometric head $H_{\text{mano}} = 8,332 \text{ meters}$.
- 5 Armed with the determined values for the manometric head and the given head, it is now possible to select a suitable pump. For this, we use the load curves of our pumps. The performance curves are structured as follows: the x axis is the discharge in the unit l/min. The y axis is the manometric head that the pump can overcome.
- 6 A suitable pump is selected by entering the two values manometric head $H_{\text{mano}} = 8,332 \text{ meters}$ and the discharge capacity $Q = 5 \text{ l/s}$ in the performance diagram of the pumps.
- 7 The pump nearest the intersection point is the right pump for this particular application. If two pumps are ideally at the intersection point, both pumps can be used. The choice of the "right" pump depends on other factors (e.g. reserve in the head or reserve in the discharge capacity or the diameter of the pumps' connection nozzle).
- 8 In this calculation example, the PS2 1503 and the PS3 1503 are the ideal pumps for this application. The pump's pressure pipe joint is not important for selecting the suitable pump.

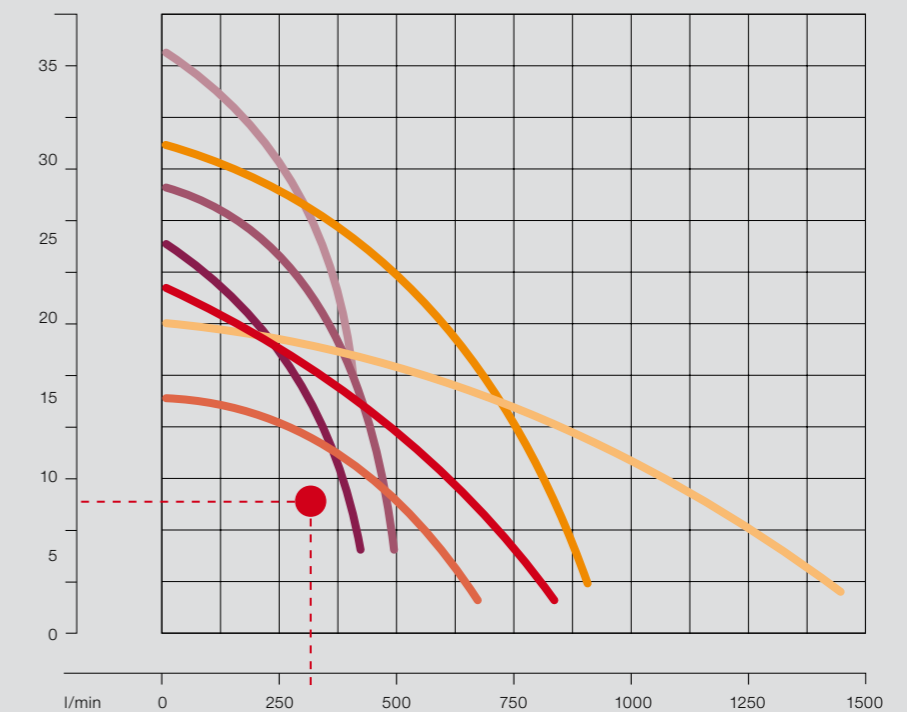
CALCULATION AIDS

Transported media containing solids must display at least the following flow velocities in order to avoid deposits!

Water with normal dirt	1.0 m/s
Water with sand (sand particles < 0.1 mm)	1.5 m/s
Water with sand (sand particles < 0.6 mm)	2.5 m/s
Water with gravel	3.5 m/s
Water with coarse gravel	4.0 m/s

PS2 1503	
PS2 2203	
PS2 3703	
PS3 1503	
PS3 2203	
PS3 3703	
PS4 3703	

TOTAL HEAD
Meter





Technical Data.

First-class accessories for the best possible deployment on site.

A large number of pump accessories mean that Wacker Neuson pumps can be used in a variety of ways. From discharge hoses through to suction hoses, suction strainers, couplings and external level controls, we have a lot to offer. Take a look for yourself.



ACCESSORIES

Accessories

Accessories for Wacker Neuson pumps.



ACCESSORIES – FOR ALL PUMPS

	Ø	m
Discharge hoses in accordance with DIN 14811 – product sold by the meter (without couplings) (premium fire department quality, burst pressure) mm	2" 3"	Product sold by the meter Product sold by the meter
Discharge hoses with Storz-type couplings in accordance with DIN 14811 (premium fire department quality, burst pressure 40 bar) mm	2" 3" 4"	10, 20 or 30 10, 20 or 30 10, 20 or 30
Quick-disconnect coupling for discharge hoses (pump side)	2" 3"	– –
Quick-disconnect coupling for discharge hoses (hose side)	2" 3"	– –
Coupling wrench	2" 3" 4"	800
Hose clamp	2" 3"	– –
GEKA coupling adapter Storz C – GEKA 1-1/2"	2"	–



ACCESSORIES – FOR ENGINE-DRIVEN PUMPS

	Ø	m
Suction hoses without couplings	2" 3"	6 6
Suction hoses with 2 Storz-type couplings	2" 3"	7 7
Coupling (pump side)	2" 3"	– –
Coupling (strainer side)	2" 3"	– –
Metal suction strainer for the PG model	2" 3"	– –
Plastic suction strainer for the PG model	2" 3"	– –
Metal suction strainer for the PDI and PT models	2" 3"	– –
Connecting piece with thread on both sides for solid coupling	2" 3"	– –
Transport device for PT 2 and PT 3	–	–



ACCESSORIES – FOR ELECTRIC PUMPS

	kW (A)	Adjustable range	Plug type	Drain connection (inches)
Bottom suction plate for PST2 400	–	–	–	–
External level controls for AC submersible pumps without level control	4.0 (32) 7.5 (32) 11.0 (32) 4.0 (16) 7.5 (16)	– – – – –	– – – – –	– – – – –
Motor protection plug for submersible pumps	– – – – – –	2.5-4.0 4.0-6.3 6.3-10.0 10.0-16.0 6.0-10.0 10.0-16.0 16.0-23.0	16 A, 400 V 16 A, 400 V 16 A, 400 V 16 A, 400 V 32 A, 400 V 32 A, 400 V 32 A, 400 V	– – – – – – –
90° exhaust elbow for PSC series	– – –	– – –	– – –	2" 3" 4"
Storz-type coupling for PSC series	– – –	– – –	– – –	2" 3" 4"

Generators from Wacker Neuson. For smooth operations on site.

Pumps, hammers and other tools are often operated with generators on construction sites. Wacker Neuson offers a wide range of generators for smooth running of your Wacker Neuson pumps. We will be happy to help you select the portable or mobile generator that is right for you.



MORE MACHINES

More machines

Electricity consumers overview.



Voltage V	Item	Power VA	GV 2500A	GV 5000A	GV 7000A	GV 5003A	GV 7003A	G 7AI	GS 12AI	GH 3500	G 22	G 32	G 43	G 66	G 78
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SINGLE-PHASE PUMPS 1~

400 W	230	Inductive	600 Full load / start	●	●	●	●	●	●	○	●	●	●	●	●
500 W	230	Inductive	670 Full load / start	●	●	●	●	●	●	○	●	●	●	●	●
750 W	230	Inductive	1,450 Full load / start	●	●	●	●	●	●	○	●	●	●	●	●
1,500 W	230	Inductive	3,400 Full load / start	○	●	●	●	●	●	○	●	●	●	●	●

THREE-PHASE PUMPS 3~

1,500 W	400	Inductive	2,350 Full load / start	○	○	○	●	●	●	○	●	●	●	●	●
2,200 W	400	Inductive	3,800 Full load / start	○	○	○	●	●	●	○	●	●	●	●	●
3,700 W	400	Inductive	5,190 Full load / start	○	○	○	○	●	●	○	●	●	●	●	●
5,500 W	400	Inductive	7,470 Full load / start	○	○	○	○	○	●	○	●	●	●	●	●
7,500 W	400	Inductive	9,900 Full load / start	○	○	○	○	○	○	○	○	●	●	●	●
11,000 W	400	Inductive	14,500 Full load / start	○	○	○	○	○	○	○	○	○	●	●	●

● Available ○ Not available

More machines from
Wacker Neuson