# GRUNDFOS HOME & GARDEN PUMP RANGE



**GRUNDFOS** 

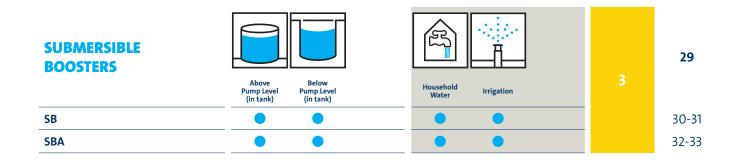
Possibility in every drop

# **INDEX & QUICK SELECTION GUIDE**

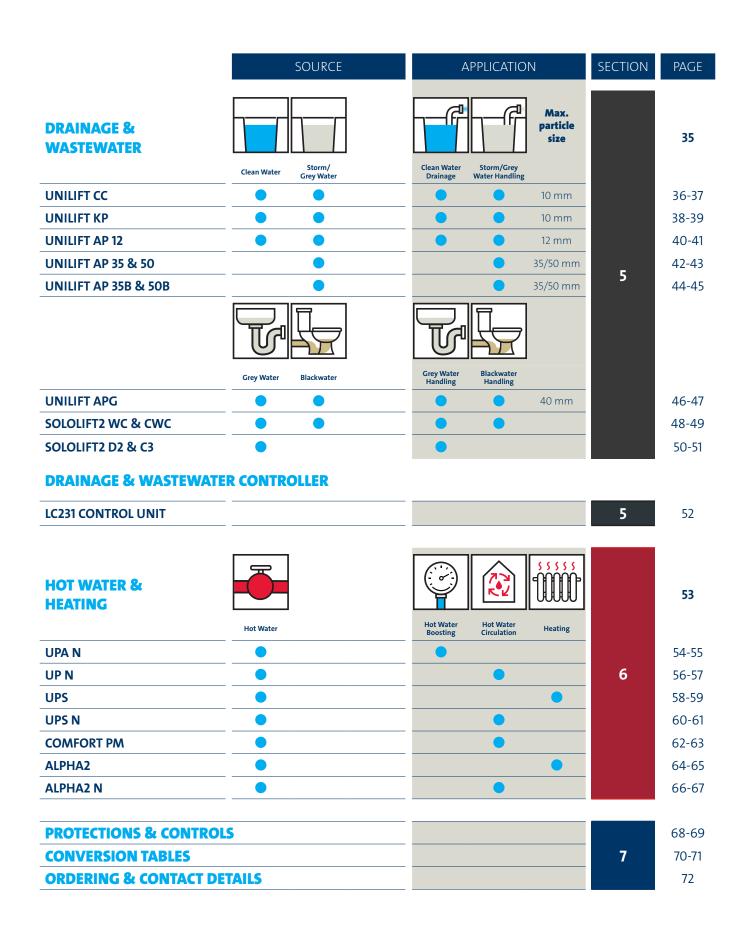
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# HOME PRESSURE SYSTEMS ACCESSORIES

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<sup>\*</sup>Local legislation may prohibit direct Mains Boosting or require the use of a Break Tank. Permits may need to be sought.



# rshow We make enjoying a shower possible again. Bring rainwater into your home with Grundfos and enjoy constant, strong pressure - even in rain-shower heads.

www.product-selection.grundfos.com/au/applications/home-and-garden

for your whole house.

Our range of Boosters includes pumps for installation inside or alongside your rainwater tank, supplying water



Possibility in every drop

# **HOME PRESSURE SYSTEMS**

The Grundfos Home Pressure System range provides a complete selection of pumps for the supply and pressure boosting of rainwater, whether it's for whole of home supply or garden irrigation. Grundfos also have solutions for mains boosting\* if you are experiencing poor mains pressure.





# RANGE AT A GLANCE



Approved for **Drinking Water AS/NZS 4020** 

# **SCALA2**

ALL-IN-ONE, SELF-PRIMING BOOSTER WITH INVERTER TECHNOLOGY

# **WATER SOURCE**











ousehold Water

**APPLICATION** 







PRODUCT CENTER

The Grundfos SCALA2 is an intelligent, self-priming pump with inverter technology that adjusts its performance according to household water demand, eliminating pressure fluctuations and resulting in lower running costs.

- Constant pressure. Like never before Inverter technology (variable speed) adjusts motor speed according to demand to deliver perfect pressure to all taps
- Silent. Like never before with sound levels as quiet as a modern dishwasher, SCALA2 won't disturb your family or neighbours
- Energy efficient. Like never before With inverter technology and permanent magnet motor, SCALA2 will save you up 40% on your energy consumption when compared to a standard fixed speed booster.
- For water sources below pump level Designed with excellent suction lift capabilities, the SCALA2 is able to draw water up to 8 metres vertically below the level of the pump
- Easy installation plug & pump -Simply connect the pump inlet and outlet to the pipework, prime the pump, plug into a power outlet and you're ready to pump
- One-touch pressure adjustment -The intuitive and intelligent control panel allows for simple adjustment of the pressure to the taps



### **PUMP NOISE**

SCALA2	CM Booster Self-Priming	CME Booster	Jet Pump Range
44 dB Max.	55 dB Max.	55 dB Max.	70 dB

# **PUMP SIZING**

High pressure for double storey dwellings and long runs of pipe	SCALA2 3-45		
Adequate pressure for most single storey dwellings			
	Small House 2-3 taps	Medium House 3-4 taps	

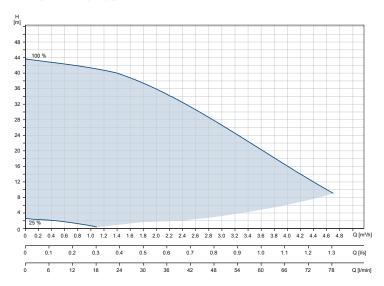
Taps are 15 I/min at 22.5 m head

# PROTECTION & CONTRO

1	SCALA2
Auto Start/Stop	<b>√</b>
Non-Return Valves	✓
Dry Run Protection	<b>√</b>
Anti-Cycling Protection	✓
Alarm Indication LED	✓
Temperature LED	<b>√</b>

\*For full explanation of Protection and Controls see page 68-69

# **PERFORMANCE CURVE**

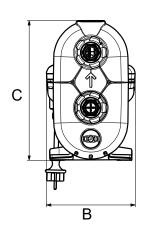


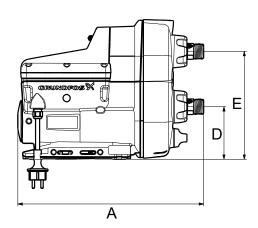
# **OPERATING CONDITIONS**

Ambient Temperature	0°C to +55°C
Liquid Temperature	0°C to +45°C
Operating Pressure	Max. 10 bar
Sound Pressure	Max. 44 dB

# **TECHNICAL DATA**

Power Supply Voltage	200-240 Volt, 50 Hz
Power Supply Cable	1.5 m with plug
Enclosure Class	Suitable for outdoor installation (IPX4D)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance





Model	Power (kW) Connections		ions	Dimensions (mm)				Weight	
Model	P1 / P2	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
SCALA2	0.55 / 0.45	1" Male	1" Male	403	193	302	114	234	10

# **CME BOOSTER**

# INDUSTRIAL QUALITY PRESSURE BOOSTER WITH INVERTER TECHNOLOGY

# Approved for **Drinking Water** AS/NZS 4020



PRODUCT CENTER

### WATER SOURCE









Household

**APPLICATION** 

Mains



The Grundfos CME Booster is an industrial quality, intelligent inverter pump that adjusts its performance constantly according to household water demand, eliminating pressure fluctuations and resulting in lower running costs.

- Perfect pressure to all taps Inverter technology (variable speed) adjusts motor speed according to demand to deliver perfect pressure to all taps
- Low running costs High efficiency motor keeps energy consumption down and running costs low
- Industrial quality Designed and built to suit industrial applications, so easily handles larger domestic water supply or mains boosting applications
- Quiet operation Very quiet operation that won't disturb your family or neighbours
- **Superior materials** Constructed of high quality industrial grade components. All parts in contact with water are made from 304 stainless steel.
- **Reduced pump start/stops** The inbuilt pressure tank (2I) minimises pump start/stop frequency
- One-touch pressure adjustment The intuitive and intelligent control panel allows for simple adjustment of pressure to the taps





# **PUMP NOISE**



44 dB Max



55 dB Max



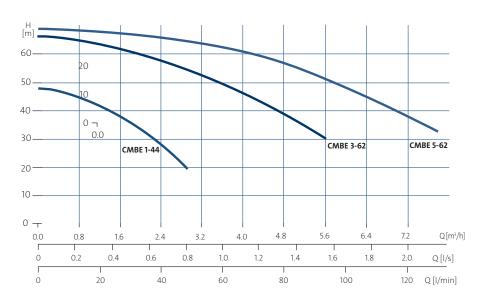


# **PUMP SIZING**

runs of pipe  Adequate pressure for most single storey dwellings	CMBE	CMBE	CMBE	CMBE
	1-44	1-44	3-62	5-62
uwenings	Small	Medium	Large	Large House
	House	House	House	+ Irrigation
	2-3 taps	3-4 taps	4-5 taps	5-7 Taps

PROTECTION & CONTROL*	CME Booster
Auto Start/Stop	<b>√</b>
Non-Return Valve	<b>~</b>
Dry Run Protection	<b>√</b>
Adjustable Start Pressure	<b>√</b>
Alarm Indication LED	<b>√</b>
Pressure Gauge	<b>√</b>

# **PERFORMANCE CURVE**

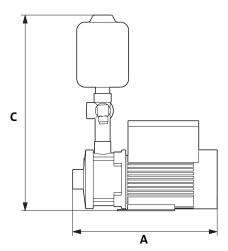


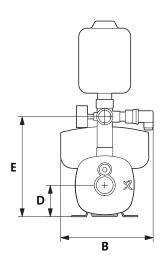
# **OPERATING CONDITIONS**

Ambient Temperature	0°C to +55°C
Liquid Temperature	0°C to +60°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 55 dB

# **TECHNICAL DATA**

Power Supply Voltage	200-240 Volt, 50 Hz
Power Supply Cable	1.5 m with plug
Enclosure Class	Undercover installation recommended (IP55)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020
	C-Tick Compliance





Model	Power (kW) Connections				Weight				
Model	P2	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
CMBE 1-44	0.55	1" Female	1" Female	326	217	440	75	200	16
CMBE 3-62	1.10	1" Female	1" Female	344	217	440	75	200	17
CMBE 5-62	1.50	1¼" Female	1" Female	350	217	455	90	215	17

# **CME TWIN BOOSTER**

Approved for Drinking Water AS/NZS 4020



# INDUSTRIAL QUALITY PRESSURE BOOSTER WITH INVERTER TECHNOLOGY

# **WATER SOURCE**







Mains





Household



on Mains Boostin



TO LINK TO GRUNDFO

The Grundfos CME Twin Booster consists of two CME Booster pumps mounted side-by-side on a common base plate, greatly increasing the performance range over a single CME pump and providing back-up in critical applications.

- **Perfect pressure to all taps** Inverter technology (variable speed) adjusts motor speed according to demand to deliver perfect pressure to all taps
- **Low running costs** Highest efficiency motor keeps energy consumption and running costs low.
- For larger multi-dwelling projects Designed to suit large multi-storey and multi-dwelling projects
- **Quiet operation** Very quiet operation that won't disturb your family or neighbours
- Superior materials Constructed of high quality industrial grade components. All parts in contact with water are made from 304 stainless steel.
- **Reduced pump start/stops** The inbuilt pressure tank (2I) minimises pump start/stop frequency
- One-touch pressure adjustment The intuitive and intelligent control panel allows for simple adjustment of the pressure to the taps





# **PUMP NOISE**



SCALA2

44 dB Max.



CM Booster Self-Priming

55 dB Ma



CME Twin Booster

55 dB Max.



# 70 dB

# **ACCESSORIES**

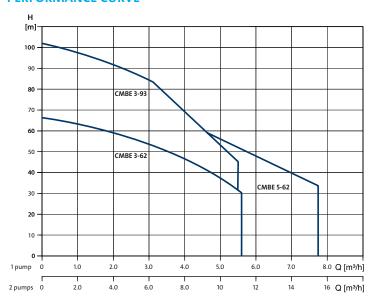
Connection kit includes 40 mm pipework, suction and discharge manifolds and is supplied complete with isolation ball valves, non return valves on suction and barrel unions for quick connection.



### PROTECTION & CONTROL\*

PROTECTION & CONTROL*	CME Twin Booster
Auto Start/Stop	✓
Non-Return Valve	✓
Dry Run Protection	✓
Adjustable Start Pressure	✓
Alarm Indication LED	✓
Pressure Gauge	<b>√</b>

# **PERFORMANCE CURVE**

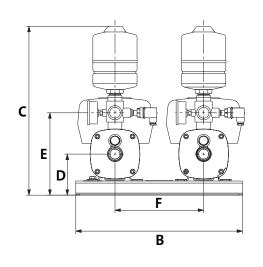


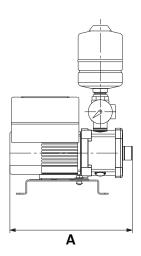
# **OPERATING CONDITIONS**

Ambient Temperature	0°C to +55°C
Liquid Temperature	0°C to +60°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 55dB

# **TECHNICAL DATA**

Power Supply Voltage	200-240 Volt, 50 Hz
Power Supply Cable	2 x 1.5 m with plug
Enclosure Class	Undercover installation recommended (IP55)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance





Model Power (kW)		Connections		Dimensions (mm)						Weight
Model	P2	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	F	(kg)
CMBE TWIN 3-62	1.10	1" Female	1" Female	344	475	485	110	235	344	40
CMBE TWIN 3-93	1.50	1" Female	1" Female	404	475	495	125	250	404	44
CMBE TWIN 5-62	1.50	1¼" Female	1" Female	350	475	495	125	250	350	45

# **CM BOOSTER** SELF-PRIMING





INDUSTRIAL QUALITY, SELF-PRIMING PRESSURE BOOSTER

**APPLICATION** 

### **WATER SOURCE**









Water



Irrigation



Boosting



Pump Level Pump Level

The Grundfos CM Booster Self-Priming is an industrial quality pump designed for delivering rainwater or boosting mains water pressure into the home from above or below ground tanks.

- · For water sources above or below pump level -Designed with good suction lift capabilities, the CM Booster Self-Priming is able to draw water up to 4 metres vertically below the level of the pump (up to 8 metres with the installation of a foot valve)
- Automated control and ongoing protection The robust Pressure Manager controller features the highest level of customisable protection and automated pump control
- Industrial quality Designed and built to suit industrial applications, so easily handles larger domestic water supply or mains boosting tasks
- Quiet operation Very quiet operation that won't disturb your family or neighbours
- **Superior materials** Constructed of high quality industrial grade components. All parts in contact with water are constructed from 304 stainless steel.
- Easy installation plug & pump Simply connect the pump inlet and outlet to the pipework, prime the pump, plug into a power outlet and you're ready to pump



# **PUMP NOISE**







55 dB Max.



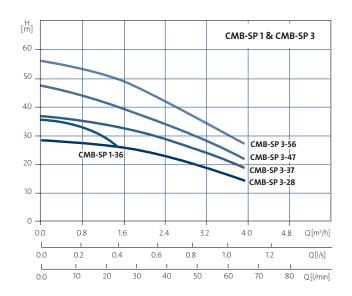
### **PUMP SIZING**

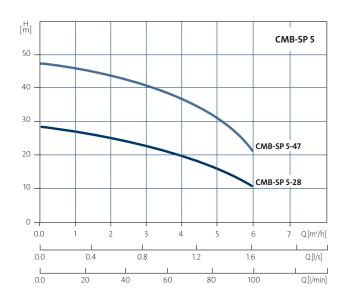
July dwellings	Small House 2-3 taps	Medium House 3-4 taps	Large House 4-5 taps	Large House + Irrigation 5-7 Taps
Adequate pressure for most single storey dwellings	CMB-SP 1-36	CMB-SP 3-28	CMB-SP 5-28	CMB-SP 5-28
High pressure for double storey dwellings and long runs of pipe	CMB-SP 3-47 1-36	CMB-SP 3-47 3-37	CMB-SP 5-47	CMB-SP 5-47
Higher pressure for multi-level dwellings and long runs of pipe	CMB-SP 3-56	CMB-SP 3-56	CMB-SP 5-47	CMB-SP 5-47

# **PROTECTION & CONTROL\***

	CMB-SP with PM1	CMB-SP with PM2
Auto Start/Stop	✓	✓
Non-Return Valve	✓	✓
Dry Run Protection	✓	✓
Anti-Cycling Protection	✓	✓
Alarm Indication LED	<b>√</b>	✓
Max. Continuous Run Time (30 Mins)		✓
Adjustable Start Pressure		✓
Pressure Indicator		✓
Automatic Restart		✓

# **PERFORMANCE CURVE**



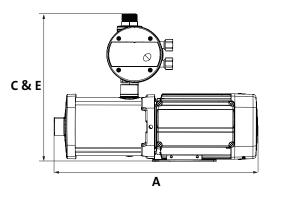


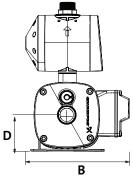
# **OPERATING CONDITIONS**

Ambient Temperature	-20°C to +55°C
Liquid Temperature	0°C to +60°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 55 dB

# **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	1.2 m with plug
Enclosure Class	Undercover installation recommended (IP55)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance





M - J -1	Motor Power	Connec	onnections Dimensions (mm)						Weight
Model	Model P2 (kW)	Inlet	Outlet (PM)	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
CMB-SP 1-36	0.50	1" Female	1" Male	377	158	317	75	317	15
CMB-SP 3-28	0.50	1" Female	1" Male	377	158	317	75	317	15
CMB-SP 3-37	0.50	1" Female	1" Male	377	158	317	75	317	15
CMB-SP 3-47	0.50	1" Female	1" Male	413	158	317	75	317	16
CMB-SP 3-56	0.67	1" Female	1" Male	453	158	317	75	317	17
CMB-SP 5-28	0.50	1" Female	1" Male	377	158	317	75	317	15
CMB-SP 5-47	0.90	1" Female	1" Male	453	158	317	75	317	18









# ALL-IN-ONE, SELF-PRIMING BOOSTER WITH BLUETOOTH® CONNECTIVITY

### WATER SOURCE







Pump Level





Household

APPLICATION



Mains

Irrigation



The Grundfos SCALA1 is an all-in-one, self-priming pump with built-in Bluetooth® connectivity, making it simple to install, customise, control and troubleshoot using the Grundfos GO App.

- For water sources below pump level Designed with good suction lift capabilities, the SCALA1 is able to draw water up to 8 metres vertically below the level of the pump
- Quiet operation Super quiet operation that won't disturb your family or neighbours
- All-in-one construction Tough, weather resistant outer casing houses the pump, motor and the controller
- Easy installation plug & pump Simply connect the pump inlet and outlet to the pipework, prime the pump, plug into a power outlet and you're ready to pump
- Simple to operate and monitor Seamlessly connect to your SCALA1 using the Bluetooth connected Grundfos GO App.
- Twin Booster For higher flow demand SCALA1 can be easliy be setup as a twin booster. Duty assist and duty standby modes available. Base plate, manifolds, communication cable and fixing screws available as an accessory kit.





**SCALA1 Twin Booster** with manifold and base plate

# **PUMP NOISE**

SCALA2	SCALAT	Jet Pump Range
44 dB Max.	55 dB Max.	70 dB Max.

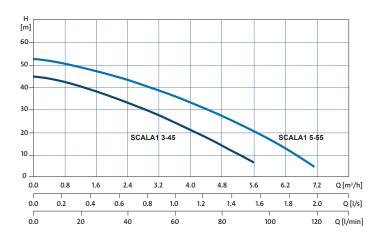
# **PUMP SIZING**

Higher pressure for multi-level dwellings and long runs of pipe			SCALA1 5-55
High pressure for double storey dwellings and long runs of pipe	SCALA1 3-45	SCALA1 3-45	SCALA1 5-55
Adequate pressure for most single storey dwellings	SCALA1 3-45	SCALA1 3-45	SCALA1 5-55
	Small House 2-3 taps	Medium House 3-4 taps	Large House 4-5 taps

# **PROTECTION & CONTROL\***

	SCALA1
Auto Start/Stop	<b>√</b>
Non-Return Valve	<b>√</b>
Dry Run Protection	✓
Anti-Cycling Protection	✓
Alarm Indication LED	✓
Grundfos GO Bluetooth® connectivity	<b>√</b>

# **PERFORMANCE CURVE**

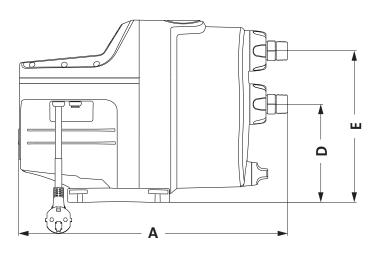


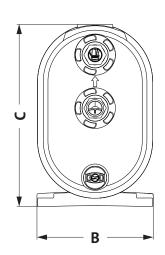
# **OPERATING CONDITIONS**

Ambient Temperature	0°C to +55°C
Liquid Temperature	0°C to +45°C
System Pressure	Max. 8 bar
Sound Pressure	Max. 55 dB

# **TECHNICAL DATA**

Power Supply Voltage	230 Volt, 50 Hz
Power Supply Cable	1.5 m with plug
Enclosure Class	Suitable for outdoor installation (IPX4D)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance





Madal	Power (kW) Connections Dimensions (mm)						Weight		
Model	P1 / P2	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
SCALA1 3-45	0.90 / 0.58	1" Male	1" Male	466	202	316	171	263	12
SCALA1 5-55	1.20 / 0.78	1" Male	1" Male	466	202	316	171	263	14

# **CM BOOSTER**

# DOMESTIC PRESSURE BOOSTER





# **WATER SOURCE**





Mains







Irrigation





PRODUCT CENTER

The Grundfos CM Booster is designed for delivering rainwater or boosting mains water pressure into the home from above ground tanks.

- Automated control and ongoing protection The robust Pressure Manager controller provides a basic level of pump control and protective features
- Industrial quality Designed and built to suit industrial applications, so easily handles larger domestic water supply or mains boosting tasks
- Quiet operation Very quiet operation that won't disturb your family or neighbours
- Easy installation plug & pump Connect the pump inlet and outlet to the pipework, prime the pump, plug into a power outlet and you're ready to pump
- Heavy duty construction Constructed from heavy duty cast iron and stainless steel components



# **PUMP NOISE**





**CME Booster** 





70 dB Max

# **PUMP SIZING**

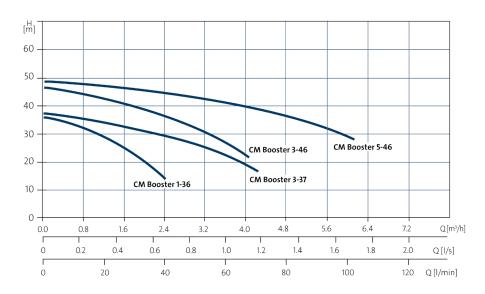
Higher pressure for multi-level dwellings and long runs of pipe		CM Booster 3-46	CM Booster 5-46	CM Booster 5-46
High pressure for double storey dwellings and long runs of pipe	CM Booster 1-36	CM Booster 3-37	CM Booster 5-46	CM Booster 5-46
Adequate pressure for most single storey dwellings	CM Booster 1-36	CM Booster 3-37	CM Booster 5-46	CM Booster 5-46
	Small House 2-3 taps	Medium House 3-4 taps	Large House 4-5 taps	Large House + Irrigation 5-7 Taps

Taps are 15 l/min at 22.5 m head

### PROTECTION & CONTROL

PROTECTION & CONTROL	CM Booster with PM1
Auto Start/Stop	<b>√</b>
Non-Return Valve	✓
Dry Run Protection	<b>√</b>
Anti-Cycling Protection	<b>√</b>
Alarm Indication LED	<b>√</b>

# **PERFORMANCE CURVE**

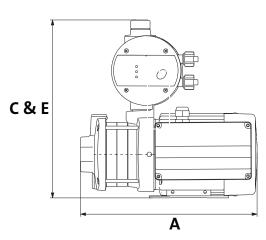


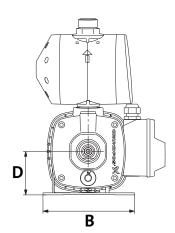
# **OPERATING CONDITIONS**

Ambient Temperature	0°C to +55°C
Liquid Temperature	0°C to +60°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 55dB

# **TECHNICAL DATA**

Power Supply Voltage	CMB 3 Range> 220-230 Volt, 50 Hz CMB 5 Range> 220-240 Volt, 50 Hz
Power Supply Cable	1.5 m with plug
Enclosure Class	Undercover installation recommended (IP55)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance





Model	Motor Power	Connections		Dimensions (mm)				Weight	
Model	P2 (kW)	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
CMB 1-36	0.50	1" Female	1" Male	323	137	301	75	301	13
CMB 3-37	0.50	1" Female	1" Male	323	137	301	75	301	13
CMB 3-46	0.50	1" Female	1" Male	342	137	301	75	301	14
CMB 5-46	0.90	1¼" Female	1" Male	381	137	301	75	301	17

# **CM BOOSTER** PRESSURE SWITCH

**Approved for Drinking Water** 



DOMESTIC AND LIGHT INDUSTRIAL PRESSURE BOOSTER WITH PRESSURE SWITCH

# **WATER SOURCE**





# **APPLICATION**







PRODUCT CENTER

The Grundfos CM Booster Pressure Switch is designed for delivering rainwater or boosting mains water pressure in larger domestic, light industrial or commercial applications.

- Industrial quality Designed and built to suit industrial applications, so easily handles larger domestic water supply or mains boosting tasks
- Quiet operation Very quiet operation that won't disturb your family or your neighbours
- Basic start/stop control built-in Comes with a five way valve, pressure gauge, pressure switch and incorporated non-return valve
- Superior materials Constructed of high quality industrial grade components. All parts in contact with water are made from 304 stainless steel
- Reduced pump start/stops -

The addition of a pressure tank minimises pump start/stop frequency for reduced noise and increased comfort



### **PUMP NOISE**



SCALA2



**CME** Booster



CM Booster **Pressure Switch** 



70 dB Max

# **PROTECTION & CONTROL\***



CM	Booster
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DI	IAAD	CI2	ING

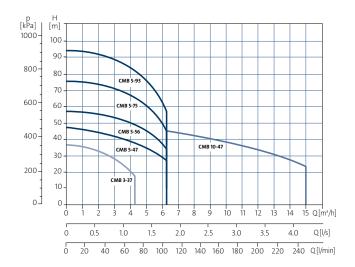
	Small House 2-3 taps	Medium House 3-4 taps	Large House 4-5 taps	Large House + Irrigation 5-7 Taps
Adequate pressure for most single storey dwellings	CM-PS 3-37	CM-PS 3-37	CM-PS 5-47	CM-PS 5-47
High pressure for double storey dwellings and long runs of pipe	CM-PS 3-37	CM-PS 3-37	CM-PS 5-47	CM-PS 5-47
Higher pressure for multi-level dwellings and long runs of pipe		CM-PS 5-47	CM-PS 5-47	CM-PS 5-47

Pressure G	iauge
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Non-Return Valve

**Auto Start/Stop by Pressure Switch** 

# **PERFORMANCE CURVE**

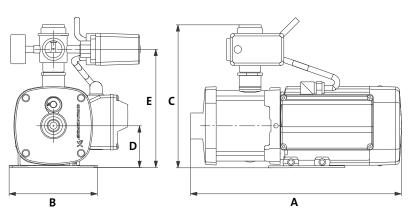


# **OPERATING CONDITIONS**

Ambient Temperature	-20°C to +50°C
Liquid Temperature	0°C to +60°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 55 dB

# **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	1.5 m with plug (1.90 kW version has 15 Amp plug)
Enclosure Class	Requires covered installation (IP44)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020
	C-Tick Compliance



	Motor Power	ver Connections			Dimensions (mm)						
Model	P2 (kW)	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)		
CMB 3-37	0.50	1" Female	1" Female	323	158	255	75	208	14		
CMB 5-47	0.90	1¼" Female	1" Female	381	158	255	75	208	17		
CMB 5-56	1.30	1¼" Female	1" Female	469	178	270	90	223	24		
CMB 5-75	1.30	1¼" Female	1" Female	505	178	270	90	223	24		
CMB 5-93	1.90	1¼" Female	1" Female	539	178	270	90	223	27		
CMB 10-47	1.90	1¼" Female	1½" Female	450	199	323	100	261	30		

# **JET PUMP RANGE**

# DOMESTIC SELF-PRIMING JET PUMP





# **WATER SOURCE**



Pump Level



Pump Level



Water



**APPLICATION** 

Irrigation



Mains

Household Water

Mains Boosting



- For water sources above and below pump level -Designed with good suction lift capabilities, the pump is able to draw water up to 8 metres vertically from below the level of the pump
- Excellent value for money Ideal for small to medium household use
- **Built to last** Constructed of corrosion resistant composite and stainless steel components
- Automated control and ongoing protection The Pressure Manager controller provides a basic level of pump control and protective features.
- Easy installation plug & pump Connect the pump inlet and outlet to the pipework, prime the pump, plug into a power outlet and you're ready to pump



Pump Only



SCAN THE QR CODE TO LINK TO GRUNDFOS PRODUCT CENTER



JP PM
Jet Pump with Pressure Manager controller

# **PUMP NOISE**



# **PUMP SIZING**

High pressure for double storey dwellings and long runs of pipe	JP 3-42	JP 4-54	JP 5-48	
Adequate pressure for most single storey dwellings		JP 4-47		
	Small House 2-3 taps	Medium House 3-4 taps	Large House 4-5 taps	

PROTECTION & CONTROL*	a		<u> </u>
TROTECTION & CONTROL			
	JP	JP PT	JP PM
Auto Start/Stop		✓	✓
Non-Return Valve		✓	✓
Dry Run Protection			✓
Anti-Cycling Protection			<b>√</b>
Alarm Indication LED			✓

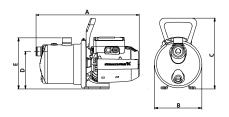
# **PERFORMANCE DATA**

	Pressure - H[m]/psi														
Model	10/15	12.5/18	15/22	17.5/25	20/29	22.5/33	25/36	27.5/40	30/44	32.5/47	35/ <del>5</del> 1	37.5/ <mark>54</mark>	40/58	42.5/62	45/ <mark>65</mark>
	Flow - I/min														
JP 3-42	52	51	51	47	39	31	24	18	13	9					
JP 4-47	69	65	63	60	50	41	33	26	20	14	10				
JP 4-54	68	66	65	63	62	60	52	43	36	29	24	19	14		
JP 5-48	87	87	87	86	86	85	83	71	61	51	42	34	25	16	9

### **OPERATING CONDITIONS**

Ambient Temperature	0°C to +40°C
Liquid Temperature	0°C to +40°C (Intermittent use to 55°C)
System Pressure	Max. 6 bar
Sound Pressure	JP 3-42: Max. 68 dB JP 4-47: Max. 70 dB JP 4-54: Max. 74 dB JP 5-48: Max. 81 dB

# PHYSICAL ATTRIBUTES - JP

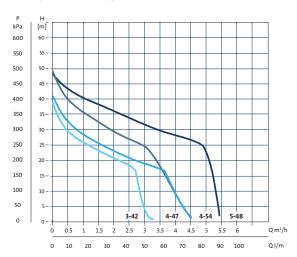


Model	Motor	Connec		Weight					
Model	Power P2 (kW)	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
JP 3-42	0.42	1" Female	1" Male	405	186	278	147	200	8
JP 4-47	0.56	1" Female	1" Male	405	186	278	147	200	9
JP 4-54	0.75	1" Female	1" Male	424	186	278	147	200	11
JP 5-48	1.01	1" Female	1" Male	424	186	278	147	200	13

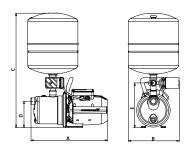
### **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	1.5 m with plug
Enclosure Class	Undercover installation recommended (IP44)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance

# **PERFORMANCE CURVE**

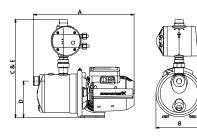


# **PHYSICAL ATTRIBUTES - JP PT**



	Motor	Conne	ections		Weight				
Model	Power P2 (kW)	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
JP 3-42 PT-V	0.42	1" Female	1" Female	423	284	635	147	248	15
JP 4-47 PT-V	0.56	1" Female	1" Female	423	284	635	147	248	16
JP 4-54 PT-V	0.75	1" Female	1" Female	442	284	635	147	248	18
JP 5-48 PT-V	1.01	1" Female	1" Female	442	284	635	147	248	19

# **PHYSICAL ATTRIBUTES - JP PM**



	Motor Connections		tions	Dimensions (mm)					Weight
Model	Power P2 (kW)	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	(kg)
JP 3-42 PM1	0.42	1" Female	1" Male	405	186	390	147	390	11
JP 4-47 PM1	0.56	1" Female	1" Male	405	186	390	147	390	12
JP 4-54 PM1	0.75	1" Female	1" Male	424	186	390	147	390	12
JP 5-48 PM1	1.01	1" Female	1" Male	424	186	390	147	390	15

# PRESSURE MANAGER

# **AUTOMATIC PUMP CONTROLLER**

The Grundfos Pressure Managers PM1 and PM2 are intelligent pump controllers that make an excellent addition to your domestic pressure pump, providing control automation and ongoing protection.

### **PRESSURE MANAGER PM1**

The PM1 will automatically start and stop the pump when outlets are turned on or off. The PM1 offers a basic level of pump protection, preventing dry-running and anti-cycling protection, which helps with detecting system leaks or dripping taps.

# **PRESSURE MANAGER PM2**

The PM2 will automatically start and stop the pump when outlets are turned on or off. It includes the same pump protections as the PM1 but also has the option to prevent the pump from running continuously for more than 30 minutes.

The PM2 also offers a greater level of control, allowing the user to adjust the starting pressure.

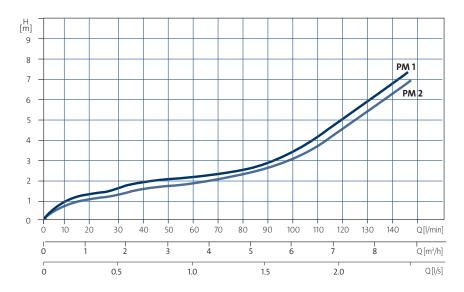






PROTECTION & CONTROL*	-	N. T. Market
	Pressure Manager PM1	Pressure Manager PM2
Power On Indicator LED	✓	✓
Pump On Indicator LED	✓	✓
Alarm LED	✓	✓
Auto Start/Stop	✓	✓
Non-Return Valve	✓	✓
Dry Run Protection	✓	✓
Anti-Cycling Protection	✓	✓
Internal Pressure Tank		✓
Max. Continuous Run Time (30 Min.)		✓
Adjustable Start Pressure		✓
Pressure Indication		✓
Automatic Restart		✓

# **PRESSURE LOSS**

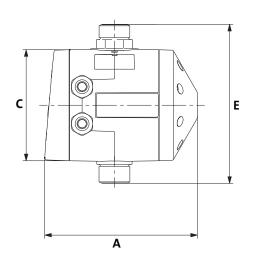


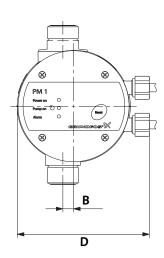
# **OPERATING CONDITIONS**

Ambient Temperature	0°C to +50°C			
Liquid Temperature	0°C to +40°C			
Starting Pressure	PM1-1.5: 1.5 bar PM1-2.2: 2.2 bar PM2 1.5-5: 1.5 — 5 bar adjustable			
System Pressure	Max. 10 bar			

# **TECHNICAL DATA**

Power Supply Voltage	PM1 - 220-240 Volt, 50/60 Hz – 10A Max PM2 - 220-240 Volt, 50/60 Hz – 10A Max				
Enclosure Class	Undercover installation recommended (IP65)				
Approvals and Markings	Approved for Drinking Water AS/NZS 4020				





Model	Connect	Connections		Dimensions (mm)				
Model	Inlet	Outlet	A (I)	B (w)	C (h)	D (inlet)	E (outlet)	
PM 1-1.5	1" Male	1" Male	165	12	120	143	171	
PM 1-2.2	1" Male	1" Male	165	12	120	143	171	
PM 2-1.5-5	1" Male	1" Male	175	12	120	143	171	

# **PRESSURE TANKS**

# PIPE MOUNTED AND FREE STANDING 140 WaterMan PRESSURE TANKS







The Grundfos range of pressure tanks are perfect for all types of domestic and industrial applications in conjunction with a wide range of pressure boosting pumps.

The addition of a pressure tank minimises energy costs and extends pump life by greatly reducing the start/stop cycling frequency and protects pipework against water hammer.



TO LINK TO GRUNDFOS







# GT-H / GT-D

- Industrial grade Steel tank with UV resistant epoxy outer coating. Superior polypropylene liner and rubber diaphragm.
- **Trusted performance** Every tank is individually factory tested guaranteeing perform from day one
- Long life All pipework connections are high grade stainless steel
- Easy installation All free standing tanks come with a tanks stand for stability and ease of pump connection
- Easy to maintain Air valve is located at the top of the tank for easy maintenance

### GT-C

- Corrosion Proof Composite, corrosion proof materials inside and out. The strong fibre-wound outer shell is engineered to withstand harsh environmental conditions.
- Longer life The reinforced diaphragm material provides longer service life
- Trusted performance Every tank is individually factory tested guaranteeing perform from day one

# GT-U+

- Industrial grade All the industrial grade features of the GTH tanks with the added benefit of a replaceable tank diaphragm
- Long life With appropriate maintenance the GT-U+ will provide many years of trouble-free service

# TECHNICAL DATA

# **SIZE RANGE 8.6 BAR**

Model	Compaidu Libras	Nominal	Connections	Dimensio	ons (mm)	AAating Tuna
Model	Capacity Litres	Draw-off Litres	Connections	Height	Diameter	Mounting Type
GT-C-60 PN8.6 G1 V	60	24	1" Male	660	430	Free Standing
GT-C-80 PN8.6 G1 V	80	32	1" Male	860	430	Free Standing
GT-C-130 PN8.6 G1 V	130	51	1" Male	1240	430	Free Standing
GT-C-250 PN8.6 G1 V	250	99	1¼" Male	1310	560	Free Standing

# **SIZE RANGE 10 BAR**

Model	Compositor Liture	Nominal	Connections	Dimensions (mm)		
	Capacity Litres	Draw-off Litres	Connections	Height	Diameter	Mounting Type
GT-H-2 PN10 G1 V	2	0.8	1" Male	183	127	Pipe
GT-H-8 PN10 G1 V	8	3	1" Male	311	203	Pipe
GT-H-18 PN10 G1 V	18	7	1" Male	366	279	Pipe
GT-H-35 PN10 G1 V	35	14	1" Male	497	321	Pipe
GT-H-60 PN10 G1 V	60	24	1" Female	528	388	Free Standing
GT-H-80 PN10 G1 V	80	32	1" Female	626	388	Free Standing
GT-H-100 PN10 G1 V	100	40	1" Female	804	430	Free Standing
GT-D-130 PN10 G1 V	130	51	1" Female	1101	406	Free Standing
GT-D-200 PN10 G1¼ V	200	79	1¼" Female	1042	534	Free Standing
GT-D-240 PN10 G1¼ V	240	95	1¼" Female	967	634	Free Standing
GT-D-300 PN10 G1¼ V	300	118	1¼" Female	1575	533	Free Standing
GT-D-450 PN10 G1¼ V	450	178	1¼" Female	1505	660	Free Standing

# **SIZE RANGE 16 BAR**

Model	Capacity Litres	Nominal	Connections	Dimensio	ons (mm)	Manusting Tune
Model	Capacity Littes	Draw-off Litres	Connections	Height	Diameter	Mounting Type
GT-H-18 PN16 G1 V	18	7	1" Male	366	279	Pipe
GT-H-80 PN16 G1 V	80	32	1" Female	787	388	Free Standing
GT-U+-200 PN16 G1¼ V	200	79	1¼" Male	1120	590	Free Standing

# **OPERATING CONDITIONS**

# GT-C: 0°C to +50°C GT-U: 0°C to +70°C GT-H: 0°C to +90°C GT-D: 0°C to +90°C

# **TECHNICAL DATA**

Approvals and Markings	Approved for Drinking Water AS/NZS 4020 WorkSafe certified (80 - 450 Litre Tanks)
	WaterMark Approved (2 - 60 Litre Tanks)
Enclosure Class	Undercover installation recommended
Fixed Speed Pump	Pre-charge should be set at 10% less than cut-in setting
Variable Speed Pump	Pre-charge should be set at 30% less than set point



# **ACQUASAVER**

# RAINWATER / MAINS WATER CHANGEOVER DEVICE

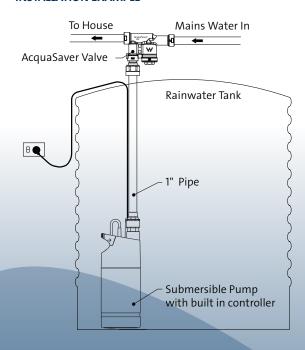




ACQUASAVER is a fully automatic rainwater / mains water changeover device, designed for pressure pump supply systems, harvesting rainwater for toilet, laundry and other household applications and requiring mains water backup.

- Simple and reliable hydraulic operation makes ACQUASAVER maintenance free
- No electronic components, so no running costs
- Robust solid brass construction
- Built-in dual back-flow prevention valves
- Space saving and simple to install

### **INSTALLATION EXAMPLE**





ACQUASAVER 1"/25 mm

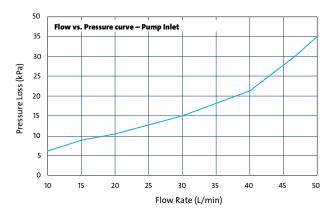


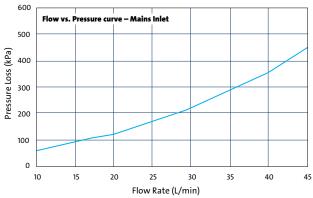
ACQUASAVER ¾"/20 mm

	ACQUASAVER ¾"/20 mm	ACQUASAVER 1"/25 mm
Max. flow rate from outlet	50 l/min	100 l/min

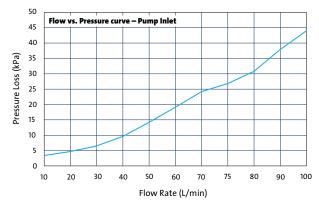
# **PRESSURE LOSS**

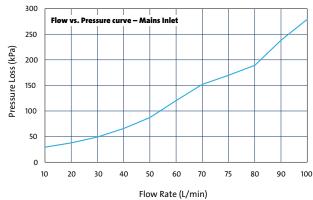
# ¾" / 20 mm





# 1" / 25 mm





# **OPERATING CONDITIONS**

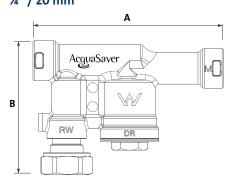
Liquid Temperature	Acquasaver 20 mm: 0°C to +40°C Acquasaver 25 mm: 0°C to +50°C
Max. Mains Pressure	Acquasaver 20 mm: Max. 5 bar Acquasaver 25 mm: Max. 10 bar
Max. Pump Pressure	Acquasaver 20 mm: Max. 6 bar Acquasaver 25 mm: Max. 6 bar
Max. Flow Rate	Acquasaver 20 mm: 50 l/min Acquasaver 25 mm: 100 l/min

# **TECHNICAL DATA**

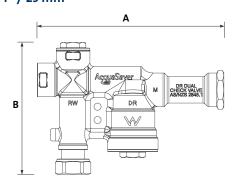


# **PHYSICAL ATTRIBUTES**

# ¾" / 20 mm



# 1" / 25 mm



		Connections	Dimensions (mm)		
Model	Inlet Mains Water	Inlet Rainwater	Outlet		B (h)
ACQUASAVER 20 mm	¾" Female	1" Female	¾" Female	150	105
ACQUASAVER 25 mm	1" Female	1" Female	1" Female	210	148



www.product-selection.grundfos.com/au/applications/home-and-garden



Possibility in every drop

# **SUBMERSIBLE BOOSTERS**

The Grundfos Submersible Booster Pump range provides options to supply harvested rainwater into the home from both above and below ground water sources.





# **RANGE AT A GLANCE**



# SB

# SUBMERSIBLE BOOSTER

# Approved for Drinking Water AS/NZS 4020



# **WATER SOURCE**



Pump Level





Household



**APPLICATION** 

Irrigation



SCAN THE QR CODE TO LINK TO GRUNDFOS PRODUCT CENTER

The Grundfos SB is a compact, submersible booster pump designed for the delivery of clean rainwater for domestic use.

- **Start/stop float switch control** The included float switch will stop the pump if the water source runs dry and re-start when sufficient water is added
- Virtually silent submerged operation Won't disturb your family or neighbours
- Easy submerged installation plug & pump Connect the pump outlet to the pipework, plug into
  a power outlet and you're ready to pump
- For water sources above or below ground Designed to be submerged in either above ground water tanks or below ground water sources



SB-A with float switch

# **PUMP NOISE**









# **PUMP SIZING**

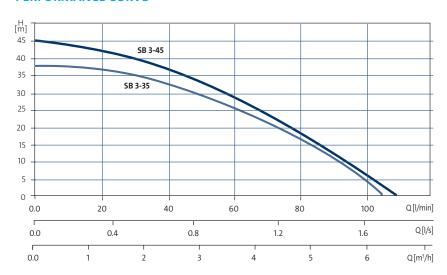
double storey dwellings and long runs of pipe		
High pressure for	High pressure for double storey dwellings SB 3-45 SB 3-45	

Taps are 15 I/min at 22.5 m head

PROTECTION & CONTROL*		
	SB	SBA
Auto Start/Stop via Pressure Switch		<b>√</b>
Non-Return Valve		✓
Dry Run Protection via Float Switch	<b>√</b>	<b>✓</b>

<sup>\*</sup>For full explanation of Protection and Controls see page 68-69

# **PERFORMANCE CURVE**



# **OPERATING CONDITIONS**

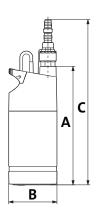
Liquid Temperature	0°C to +40°C
Max. Installation Depth	10 m
pH value of pumped liquid	4-9
Sound Pressure	Max. 25 dB

# **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	15 m with plug
Enclosure Class	Suitable for submerged installation (IP68)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance

# **PHYSICAL ATTRIBUTES**

SB



Power (kW)		Conne	Dimensions (mm)			Weight	
Model	P1 / P2	Inlet Outlet		A (h)	B (w)	C (outlet)	(kg)
SB 3-35 A	0.75 / 0.47	Stainless Steel Strainer	¾" or 1" Female	451	160	617	12
SB 3-45 A	0.90 / 0.55	Stainless Steel Strainer	¾" or 1" Female	451	160	617	12



# SUBMERSIBLE BOOSTER WITH INTEGRATED PRESSURE SWITCH





# **WATER SOURCE**







# **APPLICATION**





Household Water

Irrigation

The Grundfos SBA is a compact, submersible booster pump with integrated pressure switch designed for the delivery of clean rainwater into the home.

- Easy submerged installation plug & pump Connect the pump outlet to the pipework, plug into a power outlet and you're ready to pump
- Automated control and ongoing protection An integrated pressure switch and float switch provide pump control and protective features.
- Virtually silent submerged operation Won't disturb your family or neighbours
- For water sources above or below ground Designed to be submerged in either above ground water tanks or below ground water sources





TO LINK TO GRUNDFOS PRODUCT CENTER

# **PUMP NOISE**





44 dB Max.





# **PUMP SIZING**

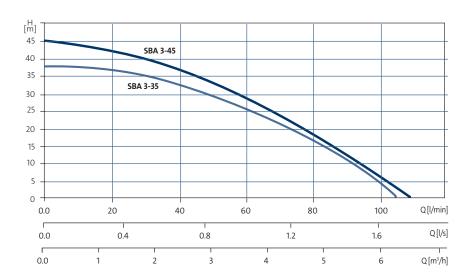
Adequate pressure for most single storey dwellings	SBA 3-35	SBA 3-35	SBA 3-45
	Small	Medium	Large
	House	House	House
	2-3 taps	3-4 taps	4-5 taps

Taps are 15 l/min at 22.5 m head

PROTECTION & CONTROL*		
	•	
	SB	SBA
Auto Start/Stop via Pressure Switch		<b>~</b>
Non-Return Valve		<b>√</b>
Dry Run Protection via Float Switch	<b>√</b>	✓

\*For full explanation of Protection and Controls see page 68-69

# **PERFORMANCE CURVE**

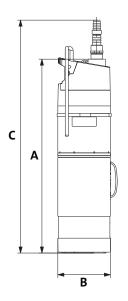


# **OPERATING CONDITIONS**

Liquid Temperature	0°C to +40°C
Max. Installation Depth	10 m
pH value of pumped liquid	4-9
Sound Pressure	Max. 25 dB

# **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	15 m with plug
Enclosure Class	Suitable for submerged installation (IP68)
Approvals and Markings	Approved for Drinking Water AS/NZS 4020 C-Tick Compliance



Model	Power (kW)	Conne	[	Weight			
Model	P1 / P2	Inlet Outlet		A (h)	B (w)	C (outlet)	(kg)
SBA 3-35 A	0.75 / 0.47	Stainless Steel Strainer	¾" or 1" Female	571	160	664	13
SBA 3-45 A	0.90 / 0.55	Stainless Steel Strainer	¾" or 1" Female	571	160	664	13

# Handle what nature delivers without the stress



with debris into wastewater pits.

What you need is a wastewater grinder pump that can handle anything that's thrown at it.

The Grundfos UNILFT APG wastewater grinder pump comes with an industrial grinder mechanism that's capable of chopping up and pumping the nastiest material, like leaf litter and fibrous wet wipes.

www.product-selection.grundfos.com/au/ applications/home-and-garden



Possibility in every drop

# **DRAINAGE & WASTEWATER**

The Grundfos range of submersible drainage pumps can help you move water from where it's not wanted, such as emptying tanks, ponds and pools, and can also handle domestic grey water and storm water.



The Grundfos range of lifting stations and grinders allow you to install bathroom and other wet area facilities in locations that are remote from the main sewer. There are a range of options available to handle any combination of plumbing fixtures and appliances.

# **RANGE AT A GLANCE**

					A				
			THE THE PARTY OF T			3	EB		•
	UNILIFT CC	UNILIFT KP	UNILIFT AP12	UNILIFT AP35	UNILIFT AP50	UNILIFT AP35B	UNILIFT AP50B	UNILIFT APG	SOLOLIFT2 Range
	Page 36	Page 38	Page 40	Page 42	Page 42	Page 44	Page 44	Page 46	Page 48-51
Water Source		Clean Water	Storm/ Grey Water		Sto	orm/ Water		Blackwater	Grey Water
Application		Clean Water Stor	m/Grey Water Handling		Storm/C Hai	Grey Water		Blackwater Handling	Grey Water Handling
Max. Particle Size	10 mm	10 mm	12 mm	35 mm	50 mm	35 mm	50 mm	40 mm	-
Max. Height	6 m	5 m	10 m	7 m	7 m	7 m	11 m	22 m	6 m
Max. Horizontal	30 m	35 m	445 m	327 m	384 m	226 m	163 m	940 m	90 m
Min. Water Level Suction	55 mm/ 3 mm	100 mm	100 mm	100 mm	100 mm	270 mm	270 mm		-
Pump Materials	Composite	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless/ Cast Iron	Composite
Float Switch Options	Float	Float Vert. Float No Float	Float No Float	Float	Float	Float	Float No Float	Float No FLoat	

# UNILIFT CC

# SUBMERSIBLE DRAINAGE PUMP



# **WATER SOURCE**



Clean Water





**APPLICATION** 





Clean Water Drainage

Storm/Grey Water Handling



SCAN THE QR CODE
TO LINK TO GRUNDFOS
PRODUCT CENTER

The Grundfos UNILIFT CC is a submersible drainage pump ideal for all types of storm water and grey water handling around the home.

- Able to pump down to just 3 mm of water Can pump down to a water level of just 3 mm after removing the strainer, making it perfect for draining pools, ponds or tanks for maintenance
- Suitable for fully or partially submerged use Comes with an integrated motor cooling jacket, allowing the pump to operate for extended periods whilst only partially submerged
- **High quality** Constructed of corrosion resistant composite and stainless steel components inside and out
- **Light weight** At a weight of no more than 7 kg, the UNILIFT CC can be used in either a permanent installation or as a portable drainage pump
- Easy submerged installation plug & pump Connect the pump outlet to the pipework, plug into a power outlet and you're ready to pump



# **PUMP SIZING**

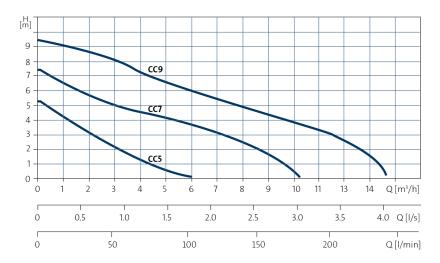
	UNILIFT CC 5	UNILIFT CC 7	UNILIFT CC 9
	32 mm pipework 0.8 l/sec flow rate	32 mm pipework 0.8 l/sec flow rate	32 mm pipework 0.8 l/sec flow rate
Vertical Height	Maximur	n Horizontal Pip	oe Length
6 m			3 m
5 m			8 m
4 m			14 m
3 m		8 m	19 m
2 m	6 m	16 m	24 m
1 m	30 m	25 m	29 m

### MAXIMUM PARTICLE SIZE

UNILIFT CC	UNILIFT AP 12	UNILIFT AP 35 & AP 35B	UNILIFT AP50 & AP50B
•			
10 mm	12 mm	35 mm	50 mm

PROTECTION & CONTROL*	UNILIFT CC
Auto Start/Stop by Float Switch	<b>√</b>
Non-Return Valve	✓
Motor Cooling Jacket	✓
Automatic Restart	✓

#### **PERFORMANCE CURVE**



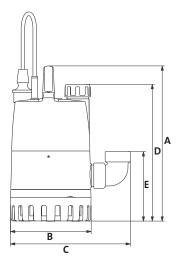
#### **OPERATING CONDITIONS**

Liquid Temperature	0°C to +40°C
Max. Particle Size	10 mm
Max. Installation Depth	10 m
Minimum Pumping Level	Down to 3 mm (after removal of strainer)
pH value of pumped liquid	4 to 9

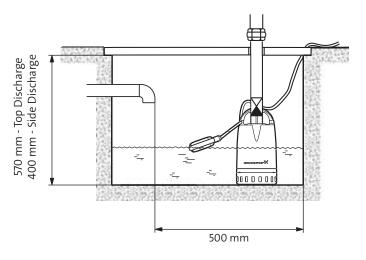
#### **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	5 m/10 m with plug
Enclosure Class	Suitable for submerged installation (IP68)
Approvals and Markings	C-Tick Compliance
Impeller Type	Semi-open

#### **PHYSICAL ATTRIBUTES**



#### MINIMUM PIT DIMENSIONS UNILIFT CC



Model Power (kW) Connections		Dimensions (mm)				Weight			
Model	P1 / P2	Outlet (Top)	Outlet (Side)	A (h)	B (w1)	C (w2)	D (outlet 1)	E (outlet 2)	(kg)
UNILIFT CC 5	0.25 / 0.10	¾", 1" or 1 ¼" Male	1¼" Female	306	160	238	270	90	5
UNILIFT CC 7	0.38 / 0.17	¾", 1" or 1 ¼" Male	1¼" Female	306	160	238	270	90	5
UNILIFT CC 9	0.78 / 0.47	¾", 1" or 1 ¼" Male	1¼" Female	342	160	238	308	90	7

# **UNILIFT KP**

#### SUBMERSIBLE STAINLESS STEEL DRAINAGE PUMP



#### **WATER SOURCE**





Clean Water Storm/ Grev Wat

APPLICATION





Clean Water

Storm/Grey Water Handlin



SCAN THE QR CODE
TO LINK TO GRUNDFOS
PRODUCT CENTER

The Grundfos UNILIFT KP is a highly durable submersible pump constructed from stainless steel, making it ideal for all types of grey water and storm water handling around the home and in light industrial applications.

- **High corrosion resistance** Constructed of high quality industrial grade components. All parts in contact with water are made from 304 stainless steel.
- Options for confined areas A vertical Niro Float Switch option is available for installation into confined pits where a regular float may not operate properly
- Suitable for fully or partially submerged use Comes with an integrated motor cooling jacket, allowing the pump to operate for extended periods whilst only partly submerged
- **Light weight and portable** At a weight of no more than 7 kg the UNILIFT KP can be used in either a permanent installation or as a portable drainage pump
- Easy submerged installation plug & pump Connect the pump outlet to the pipework, plug into a power outlet and you're ready to pump



#### PUMP SIZING

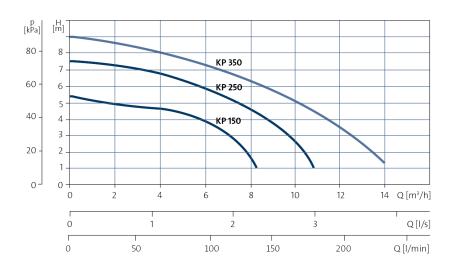
	UNILIFT KP 150	UNILIFT KP 250	UNILIFT KP 350		
	32 mm pipework 1.4 l/sec flow rate	32 mm pipework 1.4 l/sec flow rate	32 mm pipework 2.0 l/sec flow rate		
Vertical Height	Maximum Horizontal Pipe Length				
5 m		1 m	5 m		
4 m		10 m	9 m		
3 m		18 m	13 m		
2 m	9 m	26 m	17 m		
1 m	17 m	35 m	22 m		

#### **MAXIMUM PARTICLE SIZE**

UNILIFT KP	UNILIFT AP 12	UNILIFT AP 35 & AP 35B	UNILIFT AP50 & AP50B
•			
10 mm	12 mm	35 mm	50 mm

PRC	TECTION & CONTROL*	UNILIFT KP (No Float)	UNILIFT KP (Float)
Aut	o Start/Stop by Float Switch		✓
Nor	n-Return Valve		✓ Vertical float version only
Moi	or Cooling Jacket	✓	✓
Aut	omatic Restart	✓	<b>√</b>

#### **PERFORMANCE CURVE**



#### **OPERATING CONDITIONS**

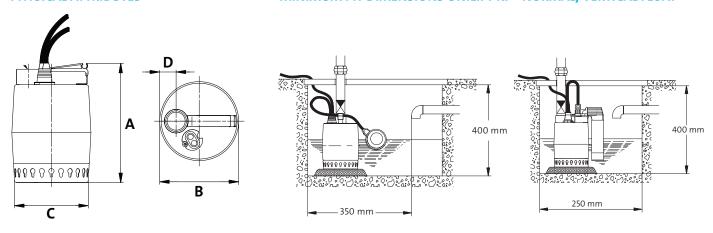
Liquid Temperature	0°C to +50°C
Max. Particle Size	10 mm
Max. Installation Depth	10 m
Minimum Pumping Level	Down to 100 mm
pH value of pumped liquid	4 to 9

#### **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	5 m with plug
Enclosure Class	Suitable for submerged installation (IP68)
Approvals and Markings	C-Tick Compliance
Impeller Type	Semi-open

#### **PHYSICAL ATTRIBUTES**

#### MINIMUM PIT DIMENSIONS UNILIFT KP - NORMAL/VERTICAL FLOAT



Model	Motor Power P2	Connection	Dimensions (mm)				Weight
Model	(kW)	Outlet	A (h)	B (w1)	C (w2)	D (outlet)	(kg)
UNILIFT KP 150	0.30	1¼" Female	225	140	149	31	7
UNILIFT KP 250	0.48	1¼" Female	225	140	149	31	7
UNILIFT KP 350	0.70	1¼" Female	235	140	149	31	7

# **UNILIFT AP 12**

## HEAVY DUTY, SUBMERSIBLE STAINLESS STEEL GREY WATER PUMP



#### **WATER SOURCE**





Clean Water Grey

**APPLICATION** 





Clean Water

Storm/Grey Water Handlin



SCAN THE QR CODE
TO LINK TO GRUNDFO
PRODUCT CENTER

The Grundfos UNILIFT AP 12 is a heavy duty, submersible pump constructed from stainless steel, making it ideal for all types of grey and storm water handling around the home and in light industrial applications.

- **Highly corrosion resistant** Constructed of high quality industrial grade components. All parts in contact with the pumped liquid are made from 304 stainless steel
- Suitable for fully or partially submerged use Comes with an integrated motor cooling jacket, allowing the pump to operate for extended periods whilst only partially submerged
- **Permanent or portable use** Can be used in either a permanent installation or as a portable drainage pump
- **Float switch options** Available with or without float switch to suit different installation configurations
- Easy submerged installation plug & pump Connect the pump outlet to the pipework, plug into a power outlet and you're ready to pump



#### **PUMP SIZING**

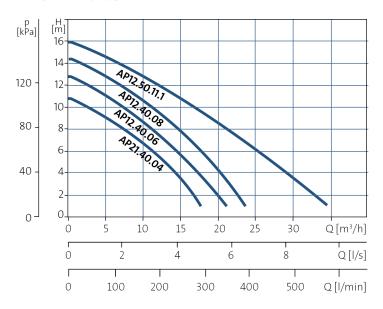
	UNILIFT AP 12 40.04	UNILIFT AP 12 40.06	UNILIFT AP 12 40.08	UNILIFT AP 12 50.11
	50 mm pipework 2.5 l/sec flow rate	50 mm pipework 3.0 l/sec flow rate	50 mm pipework 3.5 l/sec flow rate	65 mm pipework 4.5 l/sec flow rate
Vertical Height	Ma	aximum Horizo	ntal Pipe Leng	th
10 m				15 m
9 m			7 m	63 m
8 m		10 m	33 m	111 m
7 m	4 m	44 m	59 m	158 m
6 m	51 m	78 m	85 m	206 m
5 m	99 m	112 m	111 m	254 m
4 m	146 m	146 m	137 m	302 m
3 m	193 m	180 m	163 m	350 m
2 m	240 m	215 m	189 m	398 m
1 m	287 m	249 m	215 m	445 m

#### **MAXIMUM PARTICLE SIZE**

UNILIFT CC/KP	UNILIFT AP 12	UNILIFT AP 35 & AP 35B	UNILIFT AP50 & AP50B
•	•		
10 mm	12 mm	35 mm	50 mm

PROTECTION & CONTROL*	UNILIFT AP 12 (No Float)	UNILIFT AP 12 (Float)
Auto Start/Stop by Float Switch		✓
Motor Cooling Jacket	<b>√</b>	✓
Automatic Restart	<b>✓</b>	✓

#### **PERFORMANCE CURVE**



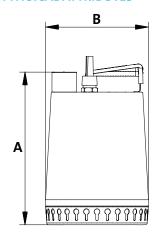
#### **OPERATING CONDITIONS**

Liquid Temperature	0°C to +55°C (70°C for 2 mins)
Max. Particle Size	12 mm
Max. Installation Depth	7 m
Minimum Pumping Level	Down to 100 mm
pH value of pumped liquid	4 to 10

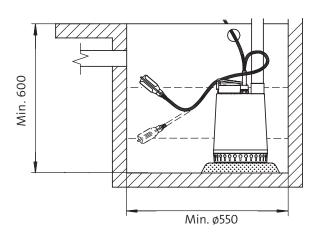
#### **TECHNICAL DATA**

Power Supply Voltage	Single phase: 220-240 Volt, 50 Hz Three phase: 380-400 Volt, 50 Hz
Power Supply Cable	10 m with plug (Single Phase) No plug (Three Phase)
Enclosure Class	Suitable for submerged installation (IP68)
Approvals and Markings	C-Tick Compliance
Impeller Type	Semi-open

#### **PHYSICAL ATTRIBUTES**



#### **MINIMUM PIT DIMENSIONS UNILIFT AP 12**



Model	Power (kW) Connection		Dimensions (mm)		Weight
Model	P1 / P2	Outlet	A (h)	B (w)	(kg)
UNILIFT AP 12.40.04	0.70 / 0.40	1½" Female	321	216	11
UNILIFT AP 12.40.06	0.90 / 0.60	1½" Female	321	216	11
UNILIFT AP 12.40.08	1.30 / 0.80	1½" Female	346	216	13
UNILIFT AP 12.50.11	1.70 / 1.10	2" Female	357	241	15

# **UNILIFT AP 35 & 50**



#### HEAVY DUTY, SUBMERSIBLE STAINLESS STEEL GREY WATER PUMP

#### **WATER SOURCE**



Storm/ Grey Water

#### **APPLICATION**



Storm/Grey



UNILIFT AP 35 SCAN THE QR CODE TO LINK TO GRUNDFOS PRODUCT CENTER



UNILIFT AP 50 SCAN THE QR CODE TO LINK TO GRUNDFO PRODUCT CENTER

The Grundfos UNILIFT AP 35 and AP 50 are heavy duty, submersible pumps constructed from stainless steel, making them ideal for handling dirty stormwater runoff, domestic wastewater from bathroom basins or showers and fibrous laundry wastewater.

- Highly corrosion resistant Constructed of high quality industrial grade components. All parts in contact with the pumped liquid are made from 304 stainless steel
- Handles very dirty water with ease Can both easily pump large particles in storm water run off or material fibres in laundry grey water
- Suitable for fully or partially submerged use Come with an integrated motor cooling jacket, allowing the pump to operate for extended periods whilst only partly submerged
- Float switch options Available with or without float switch to suit different installation configurations
- **Permanent or portable use** The UNILIFT AP35 and 50 can be used in either a permanent installation or as a portable drainage pump
- Easy submerged installation plug & pump Connect the pump outlet to the pipework, plug into a power outlet and you're ready to pump.



#### **PUMP SIZING**

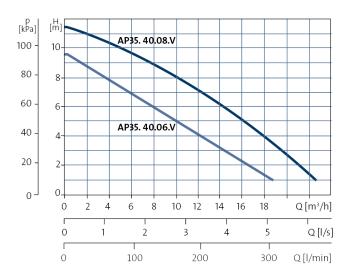
#### **UNILIFT AP UNILIFT AP** UNILIFT AP **UNILIFT AP** 35 40.06 35 40.08 50 50.08 50 50.11 40 mm pipework 2.0 l/sec 50 mm pipework 2.5 l/sec 50 mm pipework 65 mm pipework 4.0 l/sec flow rate flow rate flow rate Vertic<u>al</u> Maximum Horizontal Pipe Length Height 7 m 6 m 5 m 4 m 3 m 2 m 1 m

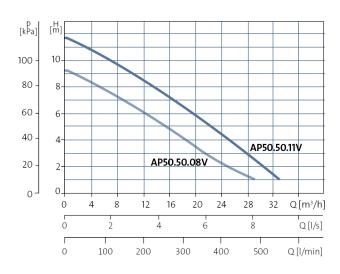
#### **MAXIMUM PARTICLE SIZE**

UNILIFT CC / KP	UNILIFT AP 12	UNILIFT AP 35 & AP 35B	UNILIFT AP50 & AP50B
•			
10 mm	12 mm	35 mm	50 mm

PROTECTION & CONTROL*	UNILIFT AP 35	UNILIFT AP 50
Auto Start/Stop by Float Switch	✓	✓
Motor Cooling Jacket	✓	✓
Automatic Restart	<b>√</b>	<b>√</b>

#### **PERFORMANCE CURVE**





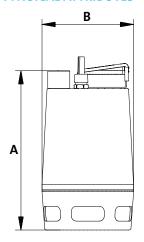
#### **OPERATING CONDITIONS**

Liquid Temperature	0°C to +55°C
Max. Particle Size	AP 35 (35 mm) AP 50 (50 mm)
Max. Installation Depth	7 m
Minimum Pumping Level	Down to 100 mm
pH value of pumped liquid	4 to 10

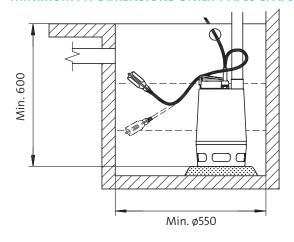
#### **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	10 m with plug
Enclosure Class	Suitable for submerged installation (IP68)
Approvals and Markings	C-Tick Compliance
Impeller Type	Vortex

#### **PHYSICAL ATTRIBUTES**



#### **MINIMUM PIT DIMENSIONS UNILIFT AP35 & AP50**



Madal	Power (kW) Connection		Dimensions (mm)		Weight
Model	P1 / P2	Outlet	A (h)	B (w)	(kg)
UNILIFT AP 35.40.06	0.90 / 0.60	1½" Female	376	216	11
UNILIFT AP 35.40.08	1.20 / 0.70	1½" Female	410	216	13
UNILIFT AP 50.50.08	1.30 / 0.80	2" Female	436	241	15
UNILIFT AP 50.50.11	1.60 / 1.10	2" Female	436	241	15

# **UNILIFT AP 35B & 50B**

HEAVY DUTY, SUBMERSIBLE STAINLESS STEEL GREY WATER PUMP



#### **WATER SOURCE**



Storm/ Grey Water

#### **APPLICATION**



Storm/Grey Water Handling



UNILIFT AP 35B
SCAN THE QR CODE
TO LINK TO GRUNDFOS
PRODUCT CENTER



UNILIFT AP 50B SCAN THE QR CODE TO LINK TO GRUNDFOS PRODUCT CENTER

The Grundfos UNILIFT AP 35B and AP 50B are heavy duty, submersible pumps of stainless steel and composite construction, which are ideal for handling dirty stormwater runoff, domestic wastewater from bathroom basins or showers and fibrous laundry wastewater.

- **Highly corrosion resistant** Constructed of high quality industrial grade components. All internal parts are manufactured from 304 stainless steel
- Handle very dirty water with ease Can both easily pump large particles in stormwater run off or material fibres in laundry grey water
- Easy installation plug & pump Connect the pump outlet to the pipework, plug into a power outlet and you're ready to pump
- Simple cleaning and maintenance Features quick release clips allowing easy dismantling of the pump body for cleaning or unblocking. AP35B & 50B can be permanently installed on an auto-coupling device for trouble free maintenance.







UNILIFT AP 35B

#### **PUMP SIZING**

6 m
5 m
4 m
3 m
2 m
1 m

	AP 35B 50.06	AP 35B 50.08	AP 50B 50.08	AP 50B 50.11	AP 50B 50.15
	50 mm pipework 2.5 l/sec flow rate	50 mm pipework 3.0 l/sec flow rate	50 mm pipework 3.0 l/sec flow rate	50 mm pipework 4.0 l/sec flow rate	50 mm pipework 4.5 l/sec flow rate
Vertical Height	Maximum Horizontal Pipe Length				
10 m					30 m
9 m				11 m	44 m
8 m				29 m	59 m
7 m		30 m		47 m	73 m

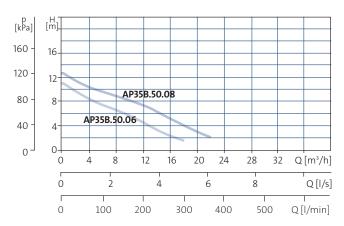
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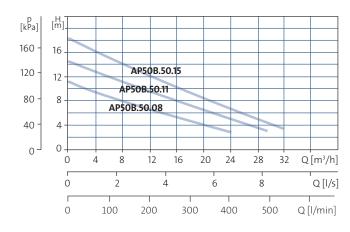
#### **MAXIMUM PARTICLE SIZE**

UNILIFT CC / KP	UNILIFT AP 12	UNILIFT AP 35 & AP 35B	UNILIFT AP50 & AP50B
•	•		
10 mm	12 mm	35 mm	50 mm

PROTECTION & CONTROL*	UNILIFT AP 35B	UNILIFT AP 50B
Auto Start/Stop by Float Switch	✓	✓
Overheating Protection with Automatic Restart	<b>√</b>	✓
Auto Coupling Option	<b>√</b>	<b>√</b>

#### **PERFORMANCE CURVE**





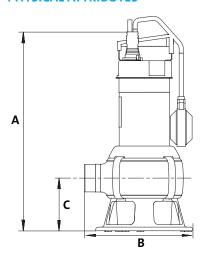
#### **OPERATING CONDITIONS**

Liquid Temperature	0°C to +40°C
Max. Particle Size	AP 35B (35 mm) AP 50B (50 mm)
Max. Installation Depth	7 m
Minimum Pumping Level	Down to 270 mm
pH value of pumped liquid	4 to 10

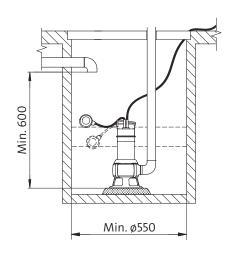
#### **TECHNICAL DATA**

Power Supply Voltage	Single Phase: 220-240 Volt, 50 Hz Three Phase: 380-400 Volt, 50 Hz
Power Supply Cable	Single Phase: 10 m with plug Three Phase: 10 m hard wired
Enclosure Class	Suitable for submerged installation (IP68)
Approvals and Markings	C-Tick Compliance.
Impeller Type	Vortex

#### **PHYSICAL ATTRIBUTES**



#### **MINIMUM PIT DIMENSIONS UNILIFT AP35B & AP50B**



Model :	Power (kW)	Connection	Dimensions (mm)			Weight	
	P1 / P2	Outlet	A (h)	B (w)	C (Outlet)	(kg)	
UNILIFT AP 35B.50.06.A1 V	1.00 / 0.66	2" Female	443	234	116	10	
UNILIFT AP 35B.50.08.A1 V	1.47 / 1.02	2" Female	468	234	116	12	
UNILIFT AP 50B.50.08.A1 V	1.20 / 0.74	2" Female	468	234	116	10	
UNILIFT AP 50B.50.11.A1 V	1.80 / 1.20	2" Female	468	234	116	10	
UNILIFT AP 50B.50.11.3 V	1.75 / 1.31	2" Female	468	234	116	12	
UNILIFT AP 50B.50.15.3 V	2.15 / 1.50	2" Female	468	234	116	12	

# **UNILIFT APG**

#### DOMESTIC WASTEWATER GRINDER PUMP

## 2 YEAR WARRANTY

#### **WATER SOURCE**













Blackwater

Storm/Grey Water Handlin

Designed to grind and move domestic wastewater or stormwater over long distances, the new UNILIFT APG is a versatile and reliable pumping solution.

- Industrial Grinder based on Grundfos' industrial SEG wastewater pump range, the UNILIFT APG is capable of grinding the most challenging wastewater debris into small pieces
- Flexible Installation Options APG comes with a combi-flange making it easy to install into in existing pits or match with existing pipework. Use the DN32/40 flange or the 48 mm internal threaded connection
- Suits a variety of applications from single family homes to low-rise residential buildings, the UNILIFT APG can be used inside a building in a lifting station, or outside in a pumping station or pit





UNILIFT APG with float switch



SCAN THE QR CODE TO LINK TO GRUNDFO PRODUCT CENTER



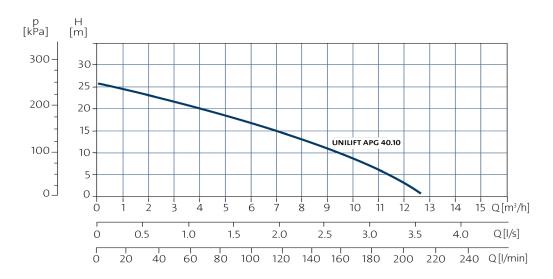
UNILIFT APG no float switch

#### PUMPING DISTANCE

Head\ <sup>Distance</sup>	DN32/40 Outlet Pipe Length	DN32/40 Outlet Pipe Length
22 m	Max. 25/35 m	
20 m	Max. 90/120 m	
18 m	Max. 160/215 m	Max. 19/25 m
16 m	Max. 225/305 m	Max. 40/55 m
14 m	Max. 295/395 m	Max. 65/90 m
12 m	Max. 360/485 m	Max. 90/120 m
10 m	Max. 430/575 m	Max. 115/150 m
8 m	Max. 495/665 m	Max. 135/185 m
6 m	Max. 565/755 m	Max. 160/215 m
4 m	Max. 630/850 m	Max. 185/250 m
2 m	Max 700/940 m	Max. 210/280 m
Flow	Q=35/53 l/min (v=0.7 m/s)	Q= 60/90 l/min (v=1.2 m/s)

## TECHNICAL DATA

#### **PERFORMANCE CURVE**



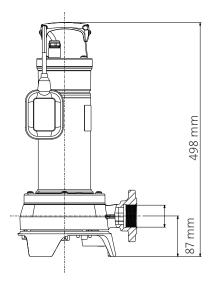
#### **OPERATING CONDITIONS**

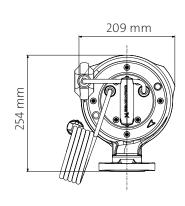
Liquid Temperature	0°C to +40°C (70°C for 3 minues)
Max. Particle Size	40 mm
Max. Installation Depth	7 m

#### **TECHNICAL DATA**

Power Supply Voltage	Single Phase: 220-240V, 50 Hz Three Phase: 400V, 50 Hz
Power Supply Cable	Single Phase: 10 m with plug Three Phase: 10 m with no Plug
Enclosure Class	Submerged installation (IP68)
Approvals and Markings	C-Tick Compliance

#### **PHYSICAL ATTRIBUTES**





Model	Power (kW) P1 / P2	In (A)	Outlet	Weight (kg)
UNILIFT APG.40.10.A1 (with Float)	1.3 / 1.0	5.7		23
UNILIFT APG.40.10.1 (no Float)	1.3 / 1.0	5.7	Flange: DN32 / DN40 Thread: 1½" Female	23
UNILIFT APG.40.10.3 (no Float)	1.1 / 1.0	2.8		23

# SOLOLIFT2 WC-1, WC-3 & CWC-3





#### COMPACT GREY WATER AND BLACKWATER HANDLING STATION

#### **WATER SOURCE**





r Grey Wate



Blackwate



rater Grey Wate ing Handling

**APPLICATION** 



SCAN THE QR CODE TO LINK TO GRUNDFO PRODUCT CENTER

The Grundfos SOLOLIFT2 WC-1, WC-3 and CWC-3 lifting stations are all-in-one grinding and pumping units designed for the effective handling of a combination of bathroom grey water and toilet wastewater. Designed to be installed below street level or away from existing sewerage pipework.

- **Very low maintenance** Thanks to the powerful built-in grinder, blockages are greatly minimised
- Space saving design fits small spaces Compact units making them suitable for installation in to small bathrooms
- Low installation costs Plumbing connections are adjustable up to 10 mm, making installation to existing or new pipework simple and inexpensive

**SOLOLIFT2 WC-1** - Suitable for connection to one floor mounted toilet and one additional appliance, such as a handbasin.

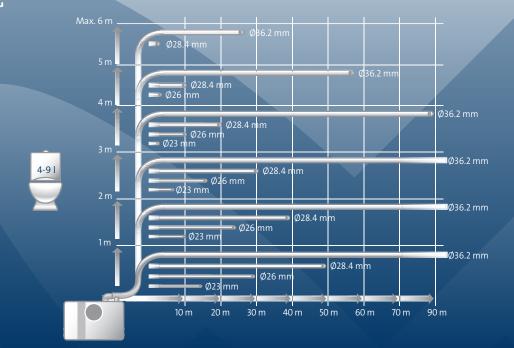
**SOLOLIFT2 WC-3** - Suitable for connection to one floor mounted toilet and a maximum of three additional appliances, such as hand basins or a shower.

**SOLOLIFT2 CWC-3** - Compact unit suitable for connection to one wall mounted toilet and a maximum of three additional appliances, such as hand basins or shower.



**SOLOLIFT2 CWC-3** 

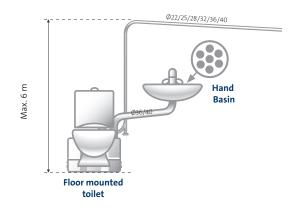
#### **PUMP SIZING**



## TECHNICAL DATA

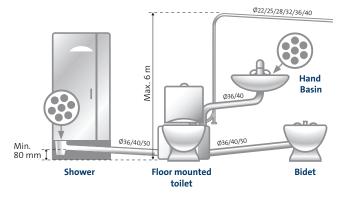
#### **INSTALLATION SCHEMATIC\***

#### **SOLOLIFT2 WC-1**



\*Illustrative purposes only

#### **SOLOLIFT2 WC-3**



#### **SOLOLIFT2 CWC-3**



#### **OPERATING CONDITIONS**

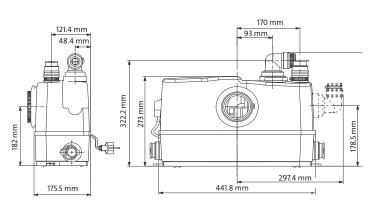
Liquid Temperature	0°C to +50°C
pH value of pumped liquid	4-10
Tank Volume	9.0 litres
Sound Pressure	Max. 70 dB

#### **TECHNICAL DATA**

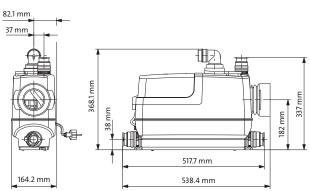
Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	1.2 m with plug
Enclosure Class	Requires indoor installation (IP44)
Approvals and Markings	WaterMark Approved C-Tick Compliance

#### **PHYSICAL ATTRIBUTES**

#### **SOLOLIFT2 WC-1 & WC-3**



#### **SOLOLIFT2 CWC-3**



Model	Power (kW)	Connections				Weight		
Model	P1 / P2	Inlet (Toilet)	Inlet (Top)	Inlet (Right)	Inlet (Left)	Outlet (Top)	Outlet (Side)	(kg)
SOLOLIFT2 WC-1	0.62 / 0.42	100 mm	32/36/40 mm	-	-	22-40 mm	22-40 mm	7
SOLOLIFT2 WC-3	0.62 / 0.42	100 mm	32/36/40 mm	36/40/50 mm	36/40/50 mm	22-40 mm	22-40 mm	7
SOLOLIFT2 CWC-3	0.62 / 0.42	100 mm	36/40 mm	36/40/50 mm	-	22-40 mm	-	7



# SOLOLIFT2 C-3 & D-2





#### COMPACT GREY WATER HANDLING STATION

#### **WATER SOURCE**



**Grey Wate** 

#### **APPLICATION**



Grey Water Handling



TO LINK TO GRUNDFOS
PRODUCT CENTER

The Grundfos SOLOLIFT2 C-3 & D-2 lifting stations are compact, all-in-one pumping units designed for the effective handling of grey water from bathrooms, kitchens or laundries. Designed to be installed below street level or away from existing sewerage pipework.

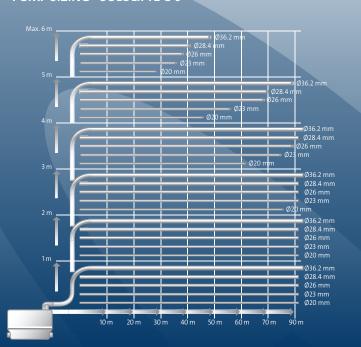
- Space saving design fits small spaces Compact units making them suitable for installation in to small areas
- Low installation costs Plumbing connections are adjustable up to 10 mm, making installation to existing or new pipework simple and inexpensive
- **Very low maintenance** Thanks to separated motor, pump and tank the D-2 and C-3 are very easy to maintain. Most blockages can be cleared without the need to open the units.

**SOLOLIFT2 C-3** - Suitable for connection to a maximum of three appliances, including hand basins, showers, bathtubs or kitchen sinks, as well as to washing machines and dishwashers, where high temperature water may enter the system

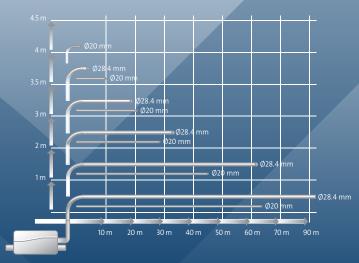
**SOLOLIFT2 D-2** - Suitable for connection to a maximum of two appliances such as hand basins and showers



#### PUMP SIZING - SOLOLIFT2 C-3



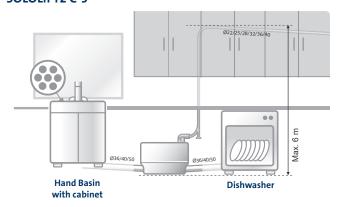
#### PUMP SIZING - SOLOLIFT2 D-2



## TECHNICAL DATA

#### **INSTALLATION SCHEMATIC\***

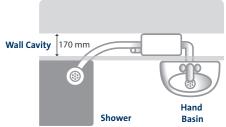
#### **SOLOLIFT2 C-3**



#### \*Illustrative purposes only

#### **SOLOLIFT2 D-2**





#### **OPERATING CONDITIONS**

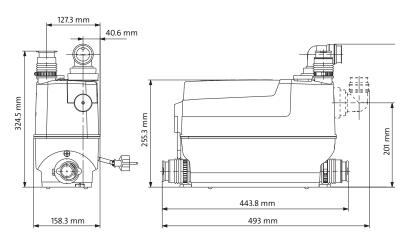
Liquid Temperature	SOLOLIFT2 C-3: 0°C to +75°C (90°C 30 mins) SOLOLIFT2 D-2: 0°C to +50°C
pH value of pumped liquid	4-10
Tank Volume	SOLOLIFT2 C-3: 5.7 litres SOLOLIFT2 D-2: 2.0 litres
Sound Pressure	Max. 70 dB

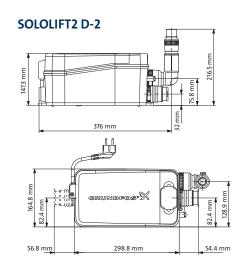
#### **TECHNICAL DATA**

Power Supply Voltage	220-240 Volt, 50 Hz
Power Supply Cable	1.2 m with plug
Enclosure Class	Requires indoor installation (IP44)
Approvals and Markings	WaterMark Approved C-Tick Compliance

#### **PHYSICAL ATTRIBUTES**

#### **SOLOLIFT2 C-3**





Model	Power (kW)	(kW)		Connections					
Model	P1 / P2	Inlet (Top)	Inlet (Right)	Inlet (Left)	Outlet (Top)	Outlet (Side)	(kg)		
SOLOLIFT2 C-3	0.64 / 0.42	32/36/40 mm	36/40/50 mm	36/40/50 mm	22/25/28/ 32/36/40 mm	22/25/28/ 32/36/40 mm	7		
SOLOLIFT2 D-2	0.28 / 0.16	-	36/40 mm	36/40 mm	-	22/32 mm	5		

# LC231

#### 2 YEAR WARRANTY

## LEVEL CONTROL UNIT WITH BLUETOOTH® CONNECTIVITY

The LC231 automatically turns your pump/s on and off according to the liquid level measured by float switches or a level transmitter.

- Flexible control Control one or two pumps for pit emptying or tank filling purposes.
   Suits single or three phase power.
- Added Protection Built-in certified motor protection warns in the event of current overload, overheating, too many restarts, missing phase, sensor failure and more.
- Bluetooth® connectivity For easy commissioning and monitoring use the Grundfos GO App on your mobile device or tablet to connect via Bluetooth® to the control unit.

Use the Go App to:

- monitor fluid level;
- monitor and reset alarms:
- add and select floats/transmitter;
- set stop/start levels;
- other advanced settings
- Configurable inputs/outputs A number of available inputs and outputs allow for extra sensors and alarms to be added
- **Easy to read control panel -** Use the control unit front panel to visually monitor general operation, set fluid levels and re-set alarms
- Remote management connectivity Add BMS
   CIM Card for intergration with SCADA and other cloud services.





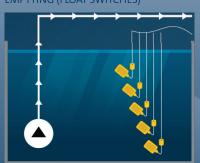


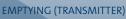


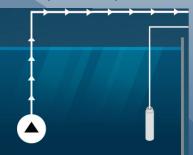


#### **APPLICATIONS**

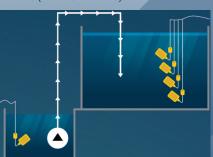
#### EMPTYING (FLOAT SWITCHES)







FILLING (FLOAT SWITCHES)



#### **OPERATING CONDITIONS**

Ambient Temperature

-25°C to +45°C

#### **TECHNICAL DATA**

**Power Supply Voltage** 

Single Phase: 110-240 Volt, 50 Hz Three Phase: 200-415 Volt, 50 Hz

**Enclosure Class** 

Undercover installation recommended (IP54)

# **HOT WATER & HEATING**

The Grundfos Circulator range provides solutions for hot water pressure boosting, hot water circulation to provide instant hot water and for heating applications.



#### **RANGE AT A GLANCE**

				4			
	UPA N	UP N	UPS N	COMFORT PM	ALPHA2 N	UPS	ALPHA2
	Page 54	Page 56	Page 60	Page 62	Page 66	Page 58	Page 64
Water Source	Hot Water		Hot	Water		H	ot Water
Application	Mains Boosting			: Water ulation			\$\$\$\$\$ deating
Approved for Drinking Water AS/NZS 4020	•	•	•	•	•		
Pump Material	Stainless Steel	Stainless Steel	Stainless Steel	Brass	Stainless Steel	Cast Iron	Cast Iron
Max. Head	9 m	4 m	7.5 m	1.2 m	6 m	6 m	9 m
Max. Flow	26 l/min	48 l/min	68 I/min	8 l/min	53 l/min	53 l/min	180 l/min
Max. Liquid Temp	95°C	110°C	110°C	95°C	110°C	110°C	110°C
Operation Modes	Auto/ Manual/Off	Fixed Speed	3 Speed	Fixed Speed/ AUTOA <i>DAPT</i>	AUTO <i>ADAPT</i> 3 Speed	Variable/ 3 Speed	AUTO <i>ADAPT</i> 3 Speed



# **UPA N**

#### HOT WATER PRESSURE BOOSTER





#### **WATER SOURCE**



Hot Water

#### **APPLICATION**



Hot Water



SCAN THE QR CODE
TO LINK TO GRUNDED
PRODUCT CENTER

The Grundfos UPA N is an ultra quiet, compact domestic pressure booster pump designed to increase existing pressure to a single hot water outlet in the home.

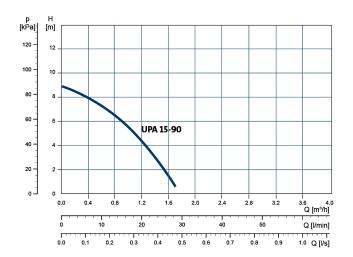
- Increase hot water pressure for a single tap -Ultra quiet, compact domestic pressure booster pump designed to increase existing pressure to a single hot water outlet
- Hygienic, stainless steel construction throughout
- Built-in controller, so no extra wiring required
- **Ultra quiet operation** Very quiet operation that won't disturb your family
- **Simple to use** In AUTO mode the pump is operated via a built-in flow switch, which starts and stops the pump only when the tap is turned on or off. In MANUAL mode the pump will operate continuously.



#### **UPA 15-90 N**

Adds 50 kPa pressure for one tap

#### **PERFORMANCE CURVE**



#### **INSTALLATION NOTES**



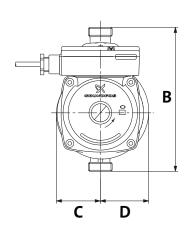
#### **OPERATING CONDITIONS**

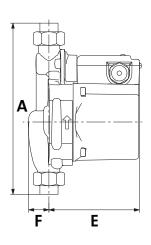
Ambient Temperature	0°C to +40°C
Liquid Temperature	+2°C to +95°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 43 dB

#### **TECHNICAL DATA**

Power Supply Voltage	230 Volt, 50 Hz
Power Supply Cable	1.2 m with plug
Enclosure Class	Undercover installation recommended (IPX2D)

#### **PHYSICAL ATTRIBUTES**





	Power Input	Pipe	Dimensions (mm)						Weight
Model	P1 (kW)		A (Port to Port)	B (h)	C (w1)	D (w2)	E (d1)	F (d2)	(kg)
UPA N 15-90	0.12	3/4"	214	160	50	54	103	23	3



#### STAINLESS STEEL HOT WATER CIRCULATOR





#### **WATER SOURCE**



Hot Water

#### **APPLICATION**



Hot Water Circulation



SCAN THE QR CODE
TO LINK TO GRUNDFOS
PRODUCT CENTER

The Grundfos UP N is an ultra quiet, compact domestic hot water circulation pump designed to pump hot water around the home, making it instantly available for taps in the bathroom, kitchen or anywhere hot water is required.

- Instant hot water at the tap As circulators provide instant hot water at the tap (with return line), they can save hundreds of litres per year from going down the drain while you wait for hot water to arrive from your hot water system
- Hygienic, stainless steel construction throughout
- **Ultra quiet operation** Very quiet operation that won't disturb your family

UP N 20 mm Union Set available separately





**UP N** 

#### **PUMP SIZING**

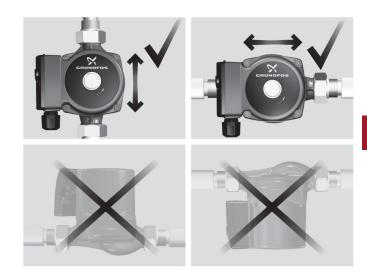
	20-30 150	20-45 150			
Sizing assumptions:	20 mm Pipework				
<ul><li>Uninsulated pipework</li><li>Tempering valve installed</li></ul>	Maximum System Pipework Length				
<ul> <li>20 elbows and 10 tees</li> <li>5°C temperature drop</li> <li>Electric storage hot water system</li> </ul>	25 m	75 m			

**UPN** 

#### **PERFORMANCE CURVE**

# 

#### **INSTALLATION NOTES**



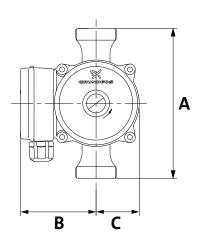
#### **OPERATING CONDITIONS**

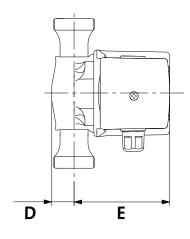
Ambient Temperature	0°C to +40°C
Liquid Temperature	+2°C to +110°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 43 dB

#### **TECHNICAL DATA**

Power Supply Voltage	240 Volt, 50 Hz
Power Connection	Installation by qualified electrician
Enclosure Class	Undercover installation recommended (IP44)

#### **PHYSICAL ATTRIBUTES**





	Dower Innut	Dino		Weight				
Model	Model Power Input P1 (kW) Co	Pipe Connections	A (Port to Port)	B (w1)	C (w2)	D (d1)	E (d2)	(kg)
UP N 20-30 150	0.09	1 1/4"	150	75	43	28	100	2
UP N 20-45 150	0.12	1 1/4"	150	85	54	25	126	4

# **UPS**

## THREE SPEED, CAST IRON HOT WATER CIRCULATOR



#### **WATER SOURCE**







Hot Water

Heating

The Grundfos UPS is an ultra quiet, compact hot water circulation pump designed for operation in a closed loop heating system.

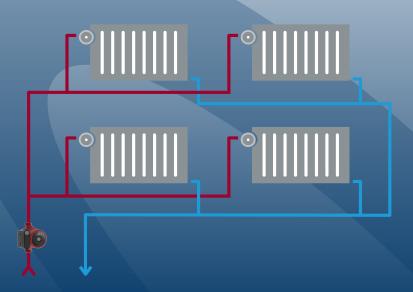
- **Ideal for heating systems -** Perfect for large home, hot water radiator heating systems
- Ultimate heating system control Comes with a built-in 3 speed controller which provides the ultimate in heating system flexibility and control
- **Ultra quiet operation –** Very quiet operation that won't disturb your family



UPS 25 mm & 32 mm Union Sets available separately

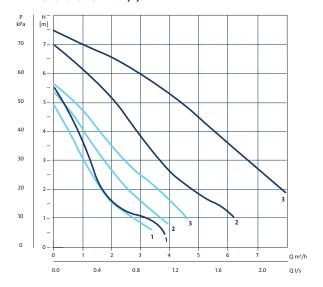


TYPICAL HEATING SYSTEM INSTALLATION

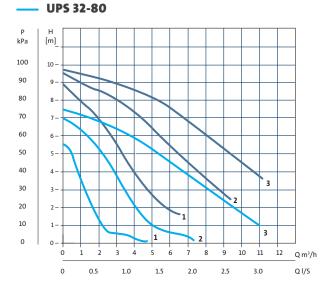


#### **PERFORMANCE CURVE**

UPS 25-60 SPEED 1,2,3UPS 25-80 SPEED 1,2,3



— UPS 25-100, UPS 32-100



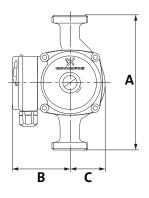
#### **OPERATING CONDITIONS**

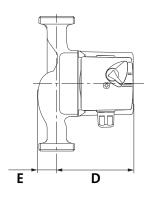
Ambient Temperature	+0°C to +40°C
Liquid Temperature	-10°C to +110°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 43 dB

#### **TECHNICAL DATA**

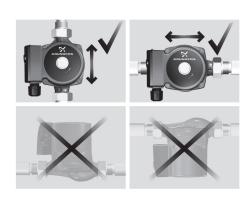
Power Supply Voltage	230 Volt, 50 Hz
Power Connection	Installation by qualified electrician
Enclosure Class	Undercover installation recommended (IP44)

#### **PHYSICAL ATTRIBUTES**





#### **INSTALLATION NOTES**



	Davies Innest			Weight				
Model	Power Input P1 (kW)		A (Port to Port)	B (w1)	C (w2)	D (d1)	E (d2)	(kg)
UPS 25-60 130	0.07	1½"	130	75	47	102	32	2
UPS 25-60 180	0.06	1½"	180	75	50	96	38	3
UPS 25-80 180	0.17	1½"	180	82	62	121	46	4
UPS 32-80 180	0.22	2"	180	82	62	121	48	5
UPS 25-100 180	0.35	1½"	180	90	68	150	47	6
UPS 32-100 180	0.35	2"	180	90	68	150	47	6
UPS 25-120 180	0.23	1½"	180	82	69	130	32	5

# **UPS N**

### **Approved for Drinking Water** AS/NZS 4020



## THREE SPEED, STAINLESS STEEL HOT WATER CIRCULATOR

#### **WATER SOURCE**

#### **APPLICATION**





Hot Water

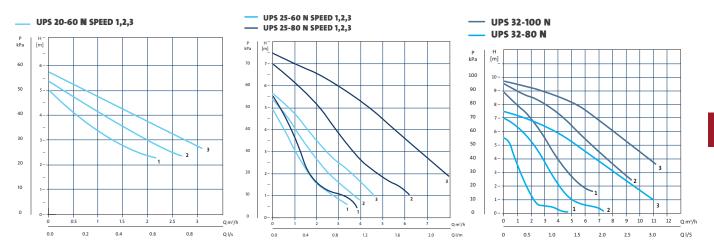
circulation pump, designed to pump hot water around the home, making it instantly available for taps in the bathroom, kitchen or anywhere hot water is required.

UPS N 20 mm, 25 mm & 32 mm Union Sets available separately

TO LINK TO GRUNDFOS PRODUCT CENTER The Grundfos UPS N is an ultra quiet, compact domestic • Instant hot water at the tap - As circulators provide instant hot water at the tap (with return line), they can save hundreds of litres per year from going down the drain while you wait for hot water to arrive from your hot water system • Adjustable pressure modes - Comes with a built-in 3 speed controller which allows you adjust the pressure to showers or tap as required · Hygienic, stainless steel construction throughout • Quiet operation – Very quiet operation that won't disturb your family

PUMP SIZING		UPS 20-60 N 150	UPS 25-60 N 180	UPS 25-80 N 180	UPS 32-80 N 180	UPS 32-100 N 180		
		20 mm Pipework	25 mm Pipework		32 mm Pipework			
		Maximum System Pipework Length						
Sizing assumptions:  Uninsulated pipework  Tempering valve installed  20 elbows and 10 tees  5°C temperature drop  Electric storage  hot water system	Speed 1		70 m	80 m	75 m	175 m		
	Speed 2	55 m	95 m	120 m	150 m	190 m		
	Speed 3	75 m	95 m	130 m	170 m	200 m		

#### **PERFORMANCE CURVE**



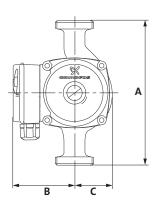
#### **OPERATING CONDITIONS**

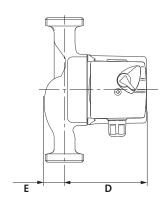
Liquid Temperature	+2°C to +110°C
Ambient Temperature	0°C to +40°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 43 dB

#### **TECHNICAL DATA**

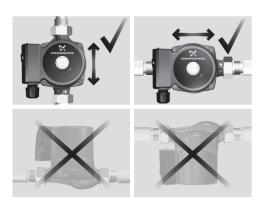
Power Supply Voltage	240 Volt, 50 Hz
Power Connection	Installation by qualified electrician
Enclosure Class	Undercover installation recommended (IP44)

#### **PHYSICAL ATTRIBUTES**





#### **INSTALLATION NOTES**



	Dower Innut	Dina	Dimensions (mm)					
Model	Power Input P1 (kW)	Pipe Connections	A (Port to Port)	B (w1)	C (w2)	D (d1)	E (d2)	Weight (kg)
UPS 20-60 N 150	0.09	1¼"	150	75	51	102	28	3
UPS 25-60 N 180	0.06	1½"	180	75	51	96	39	3
UPS 25-80 N 180	0.17	1½"	180	85	62	121	46	5
UPS 32-80 N 180	0.22	2"	180	82	62	121	48	5
UPS 32-100 N 180	0.35	2"	180	90	68	150	47	7







#### HIGH EFFICIENCY, DOMESTIC HOT WATER CIRCULATOR

#### **WATER SOURCE**



Hot Water

#### **APPLICATION**



Hot Water



SCAN THE QR CODE
TO LINK TO GRUNDFO
PRODUCT CENTER

The Grundfos COMFORT PM is an ultra quiet, ultra energy efficient, domestic hot water circulation pump designed to circulate hot water around the home, making it instantly available for taps in the bathroom, kitchen and anywhere hot water is required.

- Instant hot water at the tap As circulators provide instant hot water at the tap (with return line), they can save hundreds of litres per year from going down the drain while you wait for hot water to arrive from your hot water system
- **Energy efficient** The AUTOADAPT feature "learns" the hot water consumption pattern of the home and then varies pump use accordingly in the future, providing high levels of energy efficiency compared to other circulators that run continuously
- Low running costs Comes with a highly efficient permanent magnet motor that helps to save power and lower running costs
- **Ultra quiet operation** Very quiet operation that won't disturb your family

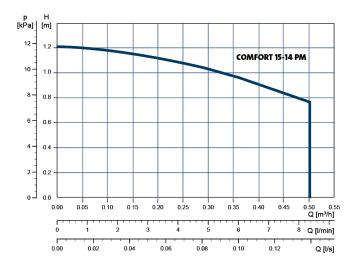
water system



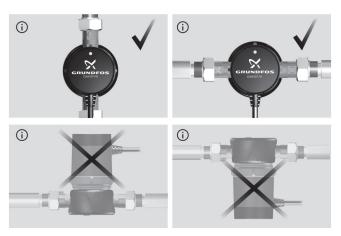
PUMP SIZING	COMFORT PM 15-14
Sizing assumptions:	15 mm Pipework
<ul><li>Uninsulated pipework</li><li>20 elbows and 10 tees</li></ul>	Maximum System Pipework Length
<ul><li>5°C temperature drop</li><li>Electric storage hot</li></ul>	30 m

Comfort PM is not suitable for installation with tempering valve

#### **PERFORMANCE CURVE**



#### **INSTALLATION NOTES**



#### **OPERATING CONDITIONS**

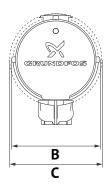
Ambient Temperature	0°C to +40°C
Liquid Temperature	+2°C to +95°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 43 dB

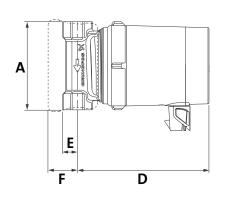
#### **TECHNICAL DATA**

Power Supply Voltage	230 Volt, 50 Hz
Power Connection	Comes with Alpha plug Initial installation by qualified electrician
Enclosure Class	Undercover installation recommended (IP44)

#### **PHYSICAL ATTRIBUTES**

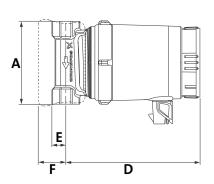
#### **COMFORT PM B**





#### **COMFORT PM BA (AUTOADAPT)**





	Davisar		Dimensions (mm)						
Model	Power Input P1 (kW)	Pipe Connections	A (Port to Port)	B (w1)	C (w2)	D (d1)	E (d2)	F (d3)	Weight (kg)
COMFORT 15-14 B PM GB	0.07	1/2"	80	79.5	84	119	13.5	25	1
COMFORT 15-14 BA PM GB	0.07	1/2"	80	79.5	84	129	13.5	25	1

# **ALPHA2**

## MULTI-SPEED, CAST IRON HOT WATER CIRCULATOR



#### **WATER SOURCE**



Hot Water

#### **APPLICATION**



Heating



SCAN THE QR CODE TO LINK TO GRUNDFOS PRODUCT CENTER

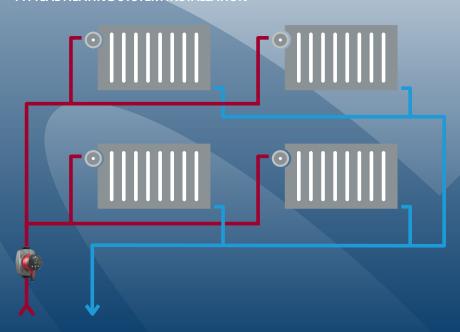
The Grundfos ALPHA2 is an ultra quiet, compact hot water circulation pump designed for operation in a closed loop heating system.

- **Ideal for heating systems** Perfect for large home, hot water radiator heating systems
- **Energy efficient** The AUTOADAPT feature "learns" the hot water circulation patterns of the home heating system and then varies pump use accordingly in the future
- **Ultra quiet operation** Very quiet operation that won't disturb your family

ion Set

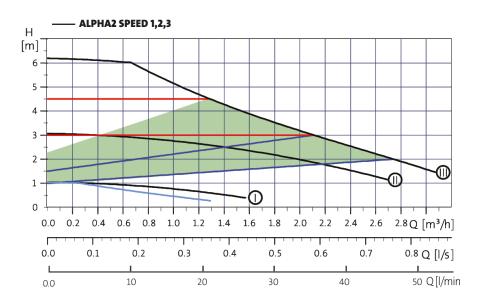
ALPHA2 25 mm Union Set available separately







#### **PERFORMANCE CURVE**



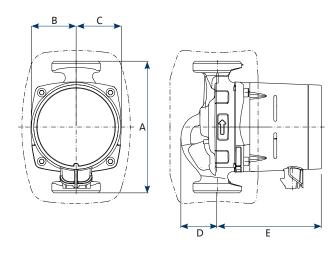
#### **OPERATING CONDITIONS**

Ambient Temperature	0°C to +40°C
Liquid Temperature	+2°C to +110°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 43 dB

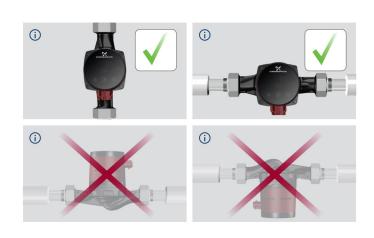
#### **TECHNICAL DATA**

Power Supply Voltage	230 Volt, 50/60 Hz
Power Connection  Comes with Alpha plug Initial installation by qualified elec	
Enclosure Class	Undercover installation recommended (IPX4D)

#### **PHYSICAL ATTRIBUTES**



#### **INSTALLATION NOTES**



			Dimensions (mm)					
Model	Power Input P1 (kW)	Pipe Connections	A (Port to Port)	B (w1)	C (w2)	D (d1)	E (d2)	Weight (kg)
ALPHA2 25-60 130	0.03	1½"	130	54	54	37	104	2
ALPHA2 25-60 180	0.03	1½"	180	54	54	37	104	2



# **ALPHA2 N**

MULTI-SPEED, STAINLESS STEEL HOT WATER CIRCULATOR

#### **WATER SOURCE**

#### **APPLICATION**





Hot Water

Hot Water

The Grundfos ALPHA2 N is an intelligently controlled, ultra quiet, hot water circulation pump designed to circulate hot water around the home, making it instantly available for taps in the bathroom, kitchen or anywhere hot water is required.

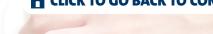
- Instant hot water at the tap As circulators provide instant hot water at the tap (with return line), they can save hundreds of litres per year from going down the drain while you wait for hot water to arrive from your hot water system
- Energy efficient the AUTOADAPT feature "learns" the hot water consumption pattern of the home and then varies pump use accordingly in the future, providing superior levels of energy efficiency compared to other circulators that run continuously
- · Hygienic, stainless steel construction throughout
- Ultra quiet operation Very quiet operation that won't disturb your family



ALPHA2 N 25 mm Union Set available separately



# PUMP SIZING Sizing assumptions: Uninsulated pipework Tempering valve installed 20 elbows and 10 tees Soc temperature drop Electric storage hot water system



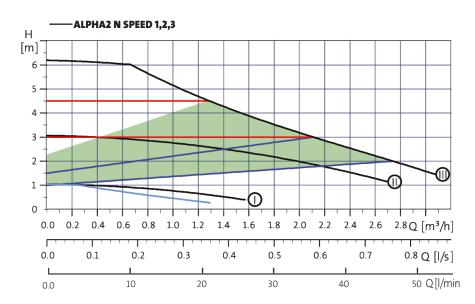






TO LINK TO GRUNDED
PRODUCT CENTER

#### **PERFORMANCE CURVE**



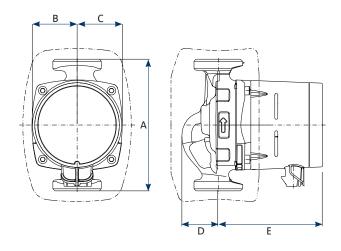
#### **OPERATING CONDITIONS**

Ambient Temperature	0°C to +40°C
Liquid Temperature	+2°C to +110°C
System Pressure	Max. 10 bar
Sound Pressure	Max. 43 dB

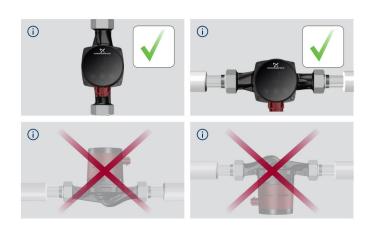
#### **TECHNICAL DATA**

Power Supply Voltage	230 Volt, 50/60 Hz
Power Connection	Comes with Alpha plug Initial installation by qualified electrician
Enclosure Class	Undercover installation recommended (IPX4D)

#### **PHYSICAL ATTRIBUTES**



#### **INSTALLATION NOTES**



Model	Matau		Dimensions (mm)						
	Motor Power P1 (kW)	Pipe Connections	A (Port to Port)	B (w1)	C (w2)	D (d1)	E (d2)	Weight (kg)	
ALPHA2 25-60 N 130	0.03	1½"	130	54	54	37	104	2	
ALPHA2 25-60 N 180	0.03	1½"	180	54	54	37	104	2	

# **PROTECTIONS**

Grundfos pumps feature a range of protection functions which are defined below. See individual product pages for a list of relevant pump protections.



#### **MAX CONTINUOUS RUN TIME**

If the pump runs continuously for more than 30 minutes the motor will be stopped and alarm activated. Could indicate a pipe fracture or outlet left unattended.



#### **ANTI-CYCLING PROTECTION**

The pump will be stopped and alarm activated if it repeatedly turns on and off over a short period of time (called 'cycling'), which could indicate a leaking pipe or dripping tap.



#### **DRY-RUN PROTECTION**

The pump will be stopped if no water is detected at the inlet, preventing internal damage and protecting your motor from damage.



# CURRENT OVERLOAD PROTECTION

The single phase motor will stop automatically if a current overload event occurs and will restart once normal current is restored - protecting your motor from damage.



# THERMAL OVERLOAD PROTECTION

The single phase motor will stop automatically if it overheats and will restart once it cools down - protecting your motor from damage.



#### **POWER FAILURE LED**

Indicates the incoming voltage supply is outside the acceptable range 150 V - 400 V (SCALA2 only).



#### **PUMP BLOCKED LED**

Indicates that there is debris or impurities blocking the pump. (SCALA2 only)



#### **TEMPERATURE LED**

Indicates that the water temperature is over the acceptable range (45°C) and the pump has been stopped. If the water temperature nears freezing point the pump will cycle to prevent the water freezing inside the body (SCALA2 only).



#### MAX PRESSURE EXCEEDED LED

Maximum pressure accepted by the pump has been exceeded at the inlet (SCALA2 only).

# **CONTROLS**

Grundfos pumps feature a range of control functions which are defined below. See individual product pages for a list of relevant pump controls



#### **ADJUSTABLE START PRESSURE**

The pump controller allows for the starting pressure to be adjusted up or down as required. SCALA2 and CME Booster have a simple up/down press button control.



#### **AUTOMATIC RESTART**

The pump will automatically restart after a protection feature has stopped the pump, such as anti-cycling or dry-run alarms.



#### **AUTO START/STOP**

The pump will automatically start and stop when outlets (eg: taps) are turned on or off.



#### **FLOAT SWITCH**

External float that either turns your pump on or off based on the water level - this prevents either overflowing (UNILIFT) or dry-running (SB/SBA).



#### **GRUNDFOS EYE**

Provides dynamic pump status operator feedback such as: power on, pump running and any alarms or faults.



#### **LED STATUS INDICATORS**

Either shown via LED lights or 'Grundfos Eye' indicator that shows whether the pump has power to it, is currently running or whether a protection feature has been activated (alarm)



#### **OUTLET NON-RETURN VALVE**

Prevents water from flowing back through the pump to the water source under gravity, retaining it in the pipework.



#### PRESSURE INDICATOR LED

Indicates the adjustable starting pressure currently set for the pump in bar.



#### **BLUETOOTH® CONNECTIVITY**

Using the Grundfos Go App, wirelessly connect to your Grundfos product via Bluetooth\* to simplify installation, customisation, control and troubleshooting.

# **CONVERSION TABLES**

#### **UNITS OF PRESSURE**

CONVERT TO	Kilopascal	Metrehead	Bar	bs per sq. inch	Feet of Water	Atmosphere			
CONVERT FROM	Multiply By								
Kilopascal kPa	1	0.102	0.01	0.145	0.335	-			
Metrehead m	9.804	1	0.098	1.42	3.28	0.098			
<b>Bar</b> bar	100	10.20	1	14.5	33.15	1			
<b>lbs/sq inch</b> psi	6.895	0.704	0.069	1	2.307	0.069			
Feet of Water ft	2.98	0.3048	0.03	0.4335	1	0.03			
Atmosphere At	100	10.33	1.0	14.7	33.9	1			

#### **UNITS OF FLOW RATE**

CONVERT TO	Imperial Gallons per min	US Gallons per min	Cubic metres per hour	Litres per second	Litres per minute
CONVERT FROM V			Multiply By		
Imperial Gallons per min	1	1.2	0.273	0.076	4.546
US Gallons per min	0.833	1	0.227	0.063	3.787
Cubic Metres per hour	3.666	4.4	1	0.278	16.66
Litres per second	13.19	15.85	3.6	1	60
Litres per minute	0.219	0.264	0.06	0.016	1

#### **UNITS OF VOLUME**

CONVERT TO CONVERT	Litre	Kilolitre	Cubic metres	Imperial Gallon	US Gallon
FROM V			Multiply By		
Litre	1	0.001	0.001	0.220	0.264
Kilolitre klt	1000	1	1	220	264
Cubic metre m <sup>3</sup>	1000	1	1	220	264
Imperial Gallon gal	4.546	0.00454	0.00454	1	1.201
<b>US Gallon (US)</b> gal	3.785	0.0038	0.0038	0.833	1

**Note:** The information provided on these pages is for guidance only. Grundfos Pumps Aust Ltd accepts no responsibility for the misuse or misapplication of this information.

#### **NOZZLE FLOW RATES (litres/sec)**

Pres	511F0			Diar	meter of	Nozzle (	inches*)	mm		
Pies	riessure		5/32"	1/4"	5/16"	25/64"	15/32	5/8"	25/32"	1"
kPa	psi	2	4	6	8	10	12	16	20	25
200	29	0.06	0.25	0.56	1.01	1.57	2.26	4.02	6.29	9.82
300	43	0.08	0.31	0.69	1.23	1.93	2.77	4.93	7.70	12.03
400	58	0.09	0.36	0.80	1.42	2.22	3.20	5.69	8.89	13.89
500	73	0.10	0.40	0.89	1.59	2.48	3.58	6.36	9.94	15.53
600	87	0.11	0.43	0.98	1.74	2.72	3.92	6.97	10.89	17.02
700	102	0.12	0.47	1.06	1.88	2.94	4.23	7.53	11.76	18.38
800	116	0.12	0.50	1.13	2.01	3.14	4.53	8.05	12.58	19.65
900	131	0.13	0.53	1.20	2.13	3.33	4.80	8.54	13.34	20.84
1000	145	0.14	0.56	1.26	2.25	3.52	5.06	9.00	14.06	21.97

#### **UNITS OF LENGTH**

CONVERT TO	Millimetre	Centimetre	Metre	Kilometre	Inch	Foot	Mile			
CONVERT FROM		Multiply By								
Millimetre mm	1	0.1	0.001	-	0.0394	0.0033	-			
Centimetre cm	10	1	0.01	-	0.394	0.0328	-			
Metre m	1000	100	1	0.001	39.37	3.281	0.000621			
Kilometre km	-	-	1000	1	-	3281	0.621			
<b>Inch</b> in	25.4	2.54	0.0254	-	1	0.083	-			
Feet ft	304.8	30.48	0.305	-	12	1	-			
<b>Mile</b> mile	-	-	1610	1.61	-	5280	1			

# POLYETHYLENE PIPE FRICTION LOSS METRIC (AS/NZS 4130)

#### POLYETHYLENE PIPE FRICTION LOSS RURAL CLASS B

			Fr	iction Los	s (metres	/100 me	tres of pip	oe)	
Flow	rate	OD 32MM 5/32"			OD 40mm 5/16"		0mm /32		3mm '32"
l/s	l/min	PN6.3	PN12.5	PN6.3	PN12.5	PN6.3	PN12.5	PN6.3	PN12.5
0.4	24	2.08	3.99	0.73	1.39	0.25	0.48	0.09	0.16
0.5	30	3.07	5.9	1.08	2.05	0.37	0.7	1.13	0.24
0.6	36	4.24	8.14	1.49	2.82	0.51	0.97	0.17	0.32
0.7	42	5.56	10.7	1.95	3.7	0.67	1.27	0.22	0.43
0.8	48	7.05	13.56	2.47	4.69	0.85	1.61	0.28	0.54
0.9	54	8.68	16.72	3.04	5.78	1.04	1.98	0.35	0.66
1	60	10.47	20.17	3.66	6.96	1.26	2.38	0.42	0.8
1.2	72	14.48	27.93	5.06	9.63	1.73	3.29	0.58	1.1
1.4	84	19.07	36.80	6.66	12.67	2.28	4.33	0.75	1.44
1.6	96	24.21	46.76	8.45	16.09	2.89	5.49	0.96	1.83
1.8	108	29.91	57.79	10.42	19.86	3.56	6.77	1.18	2.25
2	120	36.13	69.86	12.58	23.99	4.3	8.17	1.42	2.71
2.5	150	54.00	104.53	18.77	35.82	6.4	12.18	2.11	4.04
3	180	75.05	-	26.05	49.75	8.87	16.89	2.92	5.6
3.5	210	-	-	34.39	65.74	11.69	22.29	3.85	7.38
4	240	-	-	43.77	83.73	14.86	28.35	4.89	9.37
4.5	270	-	-	54.17	-	18.38	35.07	6.04	11.59
5	300	-	-	65.57	-	22.22	42.44	7.3	14.01
5.5	330	-	-	77.69	-	26.40	50.44	8.66	16.63
6	360	-	-	-	-	30.90	59.07	10.13	19.46
6.5	390	-	-	-	-	35.72	68.31	11.70	22.49
7	420	-	-	-	-	40.86	-	13.38	25.72

Flov	v rate		Friction Loss (	metres/100 mo	etres of pipe)	
I/s	I/min	¾"	1"	1¼"	1½"	2"
0.4	24	11.8	2.9	1.0	0.4	0.1
0.5	30	20.8	5.1	1.7	0.7	0.2
0.6	36	-	7.8	2.6	1.1	0.3
0.7	42	-	9.1	3.0	1.3	0.3
0.8	48	-	12.7	4.3	1.7	0.5
0.9	54	-	14.3	4.9	1.9	0.5
1	60	-	18.5	6.2	2.6	0.6
1.2	72	-	27.1	9.5	4.0	1.0
1.4	84	-	31.6	11.1	4.6	1.2
1.6	96	-	-	15.5	6.3	1.5
1.8	108	-	-	17.4	7.1	1.7
2	120	-	-	-	9.6	2.4
2.5	150	-	-	-	13.0	3.4
3	180	-	-	-	-	4.7
3.5	210	-	-	-	-	6.2
4	240	-	-	-	-	8.5
4.5	270	-	-	-	-	9.6
5	300	-	-	-	-	-
5.5	330	-	-	-	-	-
6	360	-	-	-	-	-
6.5	390	-	-	-	-	-
7	420	-	-	-	-	-

#### **PVC PIPE FRICTION LOSS (AS/NZS 1477)**

					Friction I	Loss (metre	s/100 metre	s of pipe)			
Flov	v rate	Nom. 32mm 5/32"			Nom. 40mm 5/16"		50mm /32		80mm /32"	Nom.	100mm
l/s	l/min	PN9	PN12	PN9	PN12	PN9	PN12	PN9	PN12	PN9	PN12
0.4	24	0.48	0.54	0.25	0.29	0.09	0.1	-	-	-	-
0.5	30	0.70	0.80	0.37	0.42	0.13	0.14	-	-	-	-
0.6	36	0.97	1.10	0.51	0.58	0.17	0.2	-	-	-	-
0.7	42	1.27	1.44	0.66	0.77	0.23	0.26	-	-	-	-
0.8	48	1.61	1.82	0.84	0.97	0.29	0.33	-	-	-	-
0.9	54	1.98	2.24	1.03	1.19	0.35	0.4	0.06	0.06	-	-
1	60	2.38	2.70	1.24	1.43	0.42	0.48	0.07	0.08	-	-
1.2	72	3.29	3.74	1.72	1.98	0.59	0.67	0.09	0.11	-	-
1.4	84	4.33	4.91	2.25	2.60	0.77	0.88	0.12	0.14	-	-
1.6	96	5.49	6.23	2.86	3.30	0.97	1.11	0.15	0.18	-	0.05
1.8	108	6.77	7.68	3.52	4.06	1.20	1.37	0.19	0.22	0.06	0.06
2	120	8.17	9.27	4.25	4.90	1.45	1.65	0.23	0.26	0.07	0.08
2.5	150	12.18	13.83	6.33	7.30	2.15	2.45	0.34	0.39	0.1	0.12
3	180	16.89	19.18	8.77	10.12	2.97	3.4	0.46	0.53	0.14	0.16
3.5	210	22.29	-	11.56	13.35	3.92	4.47	0.61	0.70	0.18	0.21
4	240	-	-	14.70	16.98	4.98	5.68	0.77	0.89	0.23	0.26
4.5	270	-	-	18.18	20.99	6.15	7.02	0.95	1.1	0.29	0.33
5	300	-	-	-	-	7.43	8.49	1.15	1.32	0.34	0.39
5.5	330	-	-	-	-	8.82	10.07	1.37	1.57	0.41	0.47
6	360	-	-	-	-	10.32	11.78	1.60	1.83	0.48	0.55
7	420	-	-	-	-	13.62	15.59	2.11	2.42	0.63	0.72
8	480	-	-	-	-	-	19.82	2.68	3.07	0.8	0.91
9	540	-	-	-	-	-	24.54	3.31	3.8	0.98	1.13
10	600	-	-	-	-	-	29.71	4.0	4.59	1.19	1.36
11	660	-	-	-	-	-	-	4.75	5.46	1.41	1.62
12	720	-	-	-	-	-		5.56	6.39	1.65	1.89

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