

Rainwater utilisation

Pump Systems with System Separation	Wilo-RainSystem AF BASIC, -AF Comfort, -AF 150, -AF 400	
	Wilo-RainCollector II RWN	142
	Series overview	142
	Wilo-RainSystem AF BASIC, -AF Comfort, -AF 150, -AF 400	
	Wilo-RainCollector II RWN	144
	Equipment/Function	146
	Technical Data	148
	Wilo-RainSystem AF Basic and AF Comfort	150
	System description	150
	System description	151
	Pump Curves, Dimensions	152
	Wilo-RainSystem AF 150	153
	System description	153
	Pump Curves	154
	Pump Curves, Motor Data	155
	Dimensions Wilo-RainSystem	156
	Wilo-RainSystem AF 400	157
	System description	157
	Pump Curves, Motor Data	159
	Dimensions	160
	Wilo-RWN 1500	161
	System description	161
	Pump Curves, Dimensions	162

Rainwater Utilisation

Contents

Rainwater utilisation

Accessories	Accessories for Wilo filter systems	163
	Accessories for RainSystem AF Basic, AF Comfort, AF 150	167

Rainwater Utilisation

Contents

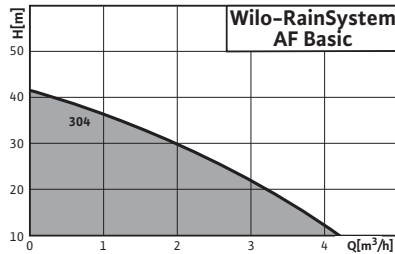


Rainwater Utilisation

Pump Systems with System Separation

Series overview Wilo-RainSystem AF ...

Series: Wilo-RainSystem AF Basic

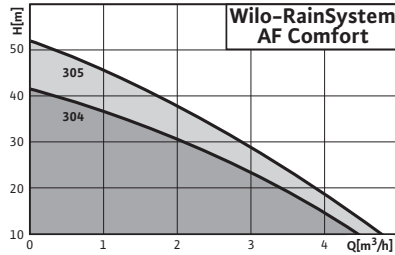


> Rainwater utilisation for reducing potable water consumption in connection with cisterns or tanks:

- Toilet flushing
- Sprinkling/irrigation
- Supplying machinery
- Secondary cleaning purposes and other applications in the non-potable water sector



Series: Wilo-RainSystem AF Comfort

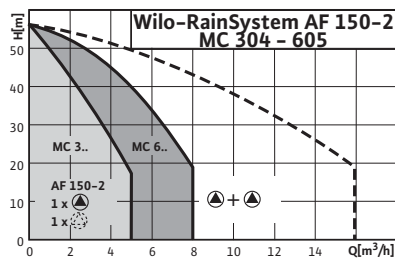


> Rainwater utilisation for reducing potable water consumption in connection with cisterns or tanks:

- Toilet flushing
- Sprinkling/irrigation
- Supplying machinery
- Secondary cleaning purposes and other applications in the non-potable water sector



Series: Wilo-RainSystem AF 150



> Rainwater utilisation in multifamily houses and small trade businesses for reducing potable water consumption in connection with cisterns or tanks.



Series overview Wilo-RainSystem AF ...

Series: Wilo-RainSystem AF Basic

> Product advantages

- Compact, ready-to-plug rainwater utilisation system
- Low-noise, thanks to multistage rotodynamic pump and complete encapsulation of the system
- In compliance with DIN 1989 and EN 1717
- High economic efficiency, thanks to fresh water replenishment according to requirements
- Flow-optimised and noise-optimised replenishment vessels
- All parts in contact with the fluid are corrosion-free

> Additional information:

	Page
• System description	150
• Equipment/Function	146
• Technical Data	148
• Pump Curves, Dimensions	152
• Accessories for Wilo filter systems	163
• Accessories	167

Series: Wilo-RainSystem AF Comfort

> Product advantages

- Compact, ready-to-plug rainwater utilisation system
- Low-noise, thanks to multistage rotodynamic pump and complete encapsulation of the system
- Automatic support function for evacuation of air from the suction line
- In compliance with DIN 1989 and EN 1717
- Upholding of previous performance parameters; this ensures that interchangeability with previous systems will be maintained
- High economic efficiency, thanks to fresh water replenishment according to requirements

> Additional information:

	Page
• System description	151
• Equipment/Function	146
• Technical Data	148
• Pump Curves, Dimensions	152
• Accessories for Wilo filter systems	163
• Accessories	167

Series: Wilo-RainSystem AF 150

> Product advantages

- Low-noise, thanks to standard series multistage rotodynamic pumps
- All parts in contact with the fluid are corrosion-free
- Highest operational safety, thanks to trendsetting fully electronic RainControl Professional controller
- High economic efficiency, thanks to fresh water replenishment according to requirements
- High reliability, thanks to flow-optimised and noise-optimised replenishment vessel

> Additional information:

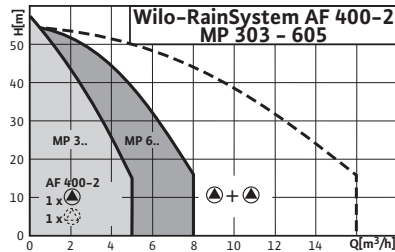
	Page
• System description	153
• Equipment/Function	146
• Technical Data	148
• Pump Curves, Dimensions	154
• Accessories for Wilo filter systems	163
• Accessories	167

Rainwater Utilisation

Pump Systems with System Separation

Series overview Wilo-RainSystem AF 400, RainCollector II RWN, Accessories

Series: Wilo-RainSystem AF 400

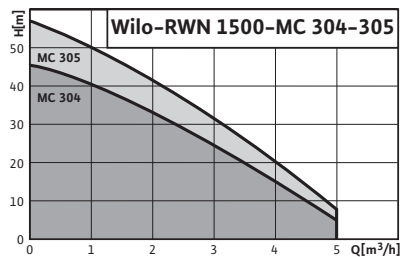


> Rainwater utilisation for reducing potable water consumption in connection with cisterns or tanks:

- Toilet flushing
- Sprinkling/irrigation
- Supplying machinery
- Secondary cleaning purposes and other applications in the commercial and industrial non-potable water sector



Series: Wilo-RainCollector II RWN



> Rainwater utilisation for reducing potable water consumption for:

- Toilet flushing
- Sprinkling/irrigation
- Supplying washing machines
- Secondary cleaning purposes and other applications in the non-potable water sector



Accessories



- > Filter
- > Connection accessories
- > etc.

Series overview Wilo-RainSystem AF 400, RainCollector II RWN, Accessories

Series: Wilo-RainSystem AF 400

> Product advantages

- Low-noise, thanks to standard series multistage rotodynamic pumps
- All parts in contact with the fluid are corrosion-free
- Highest operational safety, thanks to trendsetting fully electronic RainControl Hybrid controller
- High economic efficiency, thanks to fresh water replenishment according to requirements
- High reliability, thanks to flow-optimised and noise-optimised overall concept
- Automatic control of the feeding pump
- System/level control in low-voltage range

> Additional information:

	Page
• System description	157
• Equipment/Function	146
• Technical Data	148
• Pump Curves	158
• Pump Curves, Motor Data	159
• Dimensions	160
• Accessories for Wilo filter systems	163

Series: Wilo-RainCollector II RWN

> Product advantages

- Particularly suitable for retrofitting existing buildings
- Low-noise, self-priming pump guarantees almost noiseless system operation
- Corrosion-free
- System can be expanded at any time
- Patented multi-vessel system with replenishment and settling zone (Wilo MKS-System)
- Greatest possible connection flexibility, thanks to rotatable rainwater inlet

> Additional information:

	Page
• System description	161
• Equipment/Function	146
• Technical Data	148
• Pump Curves, Dimensions	162
• Accessories for Wilo filter systems	163

Rainwater Utilisation

Pump Systems with System Separation

Equipment/Function Wilo-RainSystem/Rain-Collector				
	Wilo-RainSystem AF Basic and Comfort	Wilo-RainSystem AF 150	Wilo-RainSystem AF 400	Wilo-Rain-Collector II RWN
Construction				
Compact rainwater utilisation system	•	–	–	–
Replenishment reservoirs [l]	11	150	400	1500
Self-priming pump	•	•	–	•
Corrosion-free	•	•	•	•
Protection against low water level	•	•	•	•
UV-stabilised system vessel	•	•	•	•
Diaphragm pressure vessel	–	•	•	–
Connection for back-up warning	• (only Comfort)	•	–	–
Corrosion-free steel tubing framework	–	•	•	–
Suction-side and pressure-side ball valve	–	• (not for connection with cisterns)	•	–
Pressure side joint tubing	–	•	•	–
Pressure gauge	–	•	•	•
Hydraulics				
Self-priming	•	•	–	•
Non-self-priming	–	optional	•	optional
Multistage rotodynamic pump	•	•	•	•
Directly flanged motor	•	•	•	•
Motor				
Mains connection 1–230 V	•	•	•	•
Mains connection 3–400 V	–	–	•	–
Equipment/Scope of delivery				
RainControl Professional electronic control unit	–	•	–	–
RainControl Hybrid electronic system control unit	–	–	•	–
Menu-driven operation and LCD display	• (only Comfort)	•	–	–
Signals concerning operation and malfunctions	•	•	•	–
Wilo-Fluidcontrol	• (only Basic)	–	–	•
Cyclical pump alteration and test run function	–	•	•	–
Automatic fault-actuated switchover and peak-load cut-in	–	•	•	–
Automatic water replacement in the replenishment vessel	•	•	•	–
Automatic protection of the solenoid valve against lime deposits	• (only Comfort)	•	–	–

• = available, – = not available

Rainwater Utilisation

Pump Systems with System Separation



Equipment / Function Wilo-RainSystem/Rain-Collector

	Wilo- RainSystem AF Basic and Comfort	Wilo- RainSystem AF 150	Wilo- RainSystem AF 400	Wilo-Rain- Collector II RWN
Equipment/scope of delivery (Continued)				
Permanent display of cistern level, system pressure, operating state via LCD	• (only Comfort)	•	optional	–
Accessories				
Operating hours counter	–	–	optional	–
Individual run and individual fault signals	–	optional	optional	–
Water backup signalling device	–	•	–	–
Extension module	–	–	•	–
EPP hood	• 1)	–	–	–
Overflow signalling device	•	–	–	–

• = available, – = not available

¹⁾ only for AF Basic, already included in the scope of delivery for AF Comfort

Rainwater Utilisation

Pump Systems with System Separation

Technical Data Wilo-RainSystem/Rain-Collector

	Wilo-RainSystem AF Basic and Comfort	Wilo-RainSystem AF 150	Wilo-RainSystem AF 400	Wilo-Rain-Collector II RWN
Approved fluids				
Pure water without settling sediment	•	•	•	•
Rainwater	•	•	•	•
Performance				
Maximum flow volume [m ³ /h]	5	16	32	5
Maximum delivery head [m]	52/42	55	55	52
Suction height maximum [m]	8	8	–	8
Nominal power of the pump(s) (P ₂) [W]	550/750	550/750/1100	550/750/1100	550/750
Start-up pressure [bar]	1.5/1.2	starting at 1.0 bar, variably adjustable		1.5
Switch-off pressure min. [bar]	2.2/4.0	starting at 1.0 bar, variably adjustable		2.2 ¹⁾
Fluid temperature [°C]	+5 to +35	+5 to +35	+5 to +35	+5 to +35
Ambient temperature [°C]	40	40	40	40
Maximum operating pressure [bar]	8	8	10	6
Mains connection 1–230 V, 50 Hz	•	•	optional	•
Mains connection 3–400 V, 50 Hz	–	optional	•	–
Replenishment reservoir [l]	11	150	400	1500
Pressure gauge [bar]	–	0–10	0–10	0–6
System weight [kg]	25	109	138	76
Motor				
Protection Class	IP 54/IP 42	IP 41	IP 54	IP 54
Insulation Class	F	F	F	F
Connections				
Pressure pipe/pressure side	Rp 1	Joint tubing R 1½	Joint tubing R 1½	Hose 1"
Feed-in connection	–	–	–	HT 100 (DN 50 with version AU)
Suction side	R 1/G 1	2 x G 1¼	–	–
Inlets	R ¾	R 1¼ ²⁾	³⁾	HT 100
Connection overflow [DN]	70	100	100 ⁴⁾	2 x HT 100
Expansion pieces	–	–	–	2 x HT 100
Materials				
Pump housing	1.4301	1.4301	1.4301	1.4301

• = available, – = not available

¹⁾ and less than 0.6 l/min flow

²⁾ Fresh water replenishment by means of float valve with unimpeded discharge in accordance with EN 1717

³⁾ Fresh water replenishment via independent supply in accordance with EN 1717 (vessel-integrated refilling funnel and non-turbulent supply).
Cistern pump connection: Pipe connections d.50 (vessel-integrated supply with non-turbulent supply)

⁴⁾ with overflow siphon as drain trap and complete flow-through in accordance with DIN 1986

Technical Data Wilo-RainSystem/Rain-Collector

	Wilo-RainSystem AF Basic and Comfort	Wilo-RainSystem AF 150	Wilo-RainSystem AF 400	Wilo-Rain-Collector II RWN
Impeller	Noryl	Noryl	Noryl	Noryl
Materials (continued)				
Shaft	1.4028	1.4028	1.4028	1.4028
Mechanical seal	Carbon/ceramic	Carbon/ceramic	Carbon/ceramic	Carbon/ceramic
Stage chambers	Noryl	Noryl	Noryl	Noryl
Diaphragm expansion vessel in accordance with DIN 4807	–	8 l	8 l	–

• = available, – = not available

- 1) and less than 0.6 l/min flow
- 2) Fresh water replenishment by means of float valve with unimpeded discharge in accordance with EN 1717
- 3) Fresh water replenishment via independent supply in accordance with EN 1717 (vessel-integrated refilling funnel and non-turbulent supply).
Cistern pump connection: Pipe connections d.50 (vessel-integrated supply with non-turbulent supply)
- 4) with overflow siphon as drain trap and complete flow-through in accordance with DIN 1986

Rainwater Utilisation

Pump Systems with System Separation

System description Wilo-RainSystem AF Basic



Type key

Example: Wilo-AF Basic MC 304 EM

AF	Automatic rainwater utilisation and potable water replenishment installation (Aqua Feed)
MC	Self-priming, horizontal, multistage rotodynamic pump of the MultiCargo MC series
304	Flow volume [m ³ /h] at optimum efficiency
304	Number of stages
EM	Single-phase AC motor 1~230 V, 50 Hz

Application

Rainwater utilisation in single-family houses for reducing potable water consumption in connection with cisterns or tanks.

Function/construction

Ready-to-plug single-pump water supply system as compact module for single-family houses. For completely automatic supplying of rainwater from an underground tank or from a cistern. The 11-litre replenishment vessel offers optimised replenishment of potable water into the consumer network when cisterns are not full. Automatic Switchover to potable water replenishment, time-sensitive water exchange in replenishment vessel, built-in automatic switch-off in the presence of dry running. Simple handling by means of RainControl Basic RCB with Fluidcontrol. The system fulfils the criteria outlined in DIN 1989 and in EN 1717.

Options

- Overflow signalling device
- Cover made of EPP

Scope of delivery

- Connection-ready module in compact construction. Complete electrical and hydraulic switching and base-frame mounting. Comprising:
- Self-priming, corrosion-free, low-noise rotodynamic pump of the MultiCargo MC series
 - Pressure side pipework R 1
 - Potable water replenishment vessel (11 l) with float valve
 - Rain Control Basic RCB switchgear with control electronics and flow and
 - Pressure controller, 3-way valve and float switch with 20 m cable for cistern filling and monitoring
 - Connection for overflow warning
 - EPP-coated base frame, protected against corrosion
 - 1.8 m connection cable and power plug
 - Fixation material including assembly diagram, Installation and operating instructions and packaging.

Planning Guide

The suction line is to be laid in an uninterrupted rise from the cistern to the AF system.

A clearance of at least 200 mm is to be provided for above the system for correction purposes. A clearance of at least 100 mm is to be provided for to the left of the system in order to ensure ventilation of the pump motor.

For additional planning instructions and/or details concerning the planning of rainwater utilisation systems, see Wilo-Brain "Rainwater Technology Handbook".

System description Wilo-RainSystem AF Comfort



Type key

Example:	Wilo-AF Comfort MC 304 EM
AF	Automatic rainwater utilisation and potable water replenishment installation (Aqua Feed)
MC	self-priming, horizontal, multistage rotodynamic pump of the MultiCargo MC series
304	Flow volume [m ³ /h] at optimum efficiency
304	Number of stages
EM	Single-phase AC motor 1~230 V, 50 Hz

Application

Rainwater utilisation in single-family houses for reducing potable water consumption in connection with cisterns or tanks.

Function/construction

Ready-to-plug single-pump water supply system as compact module for single-family houses. For completely automatic supplying of rainwater from an underground tank or from a cistern. The 11-litre replenishment vessel offers optimised replenishment of potable water into the consumer network when cisterns are not full.

Automatic Switchover to potable water replenishment, pump operating time-dependent water replacement in the replenishment vessel, anti-lime deposit protection through automatic actuation of the solenoid valve, built-in automatic switch-off during dry running. Variable switch-off pressure.

Commissioning with base parameters set ex-works (plug & play) by means of the RainControl Economy RCE electronic control device. Permanent operating data recording, energy-saving mode function, operating state protocol. Operation and parameterisation by means of user-friendly, menu-driven function keys.

The system fulfils the criteria outlined in DIN 1989 and in EN 1717.

Options

- Overflow signalling device

Scope of delivery

Connection-ready module in compact construction, including cover made of recyclable EPP. Complete electrical and hydraulic switching and base-frame mounting. Comprising:

- Self-priming, corrosion-free, low-noise rotodynamic pump of the MultiCargo MC series
- Pressure side pipework R 1
- Potable water replenishment vessel (11 litre) with mechanical float valve
- Rain Control Economy RCE central switchgear with control electronics including solenoid valve and pressure transmitter, 4-20 mA and level sensor with 20 m cable for level indicator
- Connection for overflow signalling device and/or back-up warning as standard equipment
- Cover made of EPP
- EPP-coated base frame, protected against corrosion
- 3.0 m connection cable and power plug
- Fixation material including assembly diagram, Installation and operating instructions and packaging.

Planning Guide

The suction line is to be laid in an uninterrupted rise from the cistern to the AF system.

A clearance of at least 200 mm is to be provided for above the system for correction purposes. A clearance of at least 100 mm is to be provided for to the left of the system in order to ensure ventilation of the pump motor.

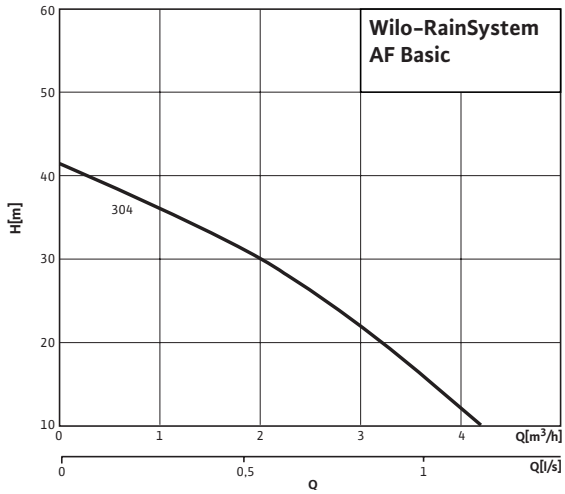
For additional planning instructions and/or details concerning the planning of rainwater utilisation systems, see Wilo-Brain "Rainwater Technology Handbook".

Rainwater Utilisation

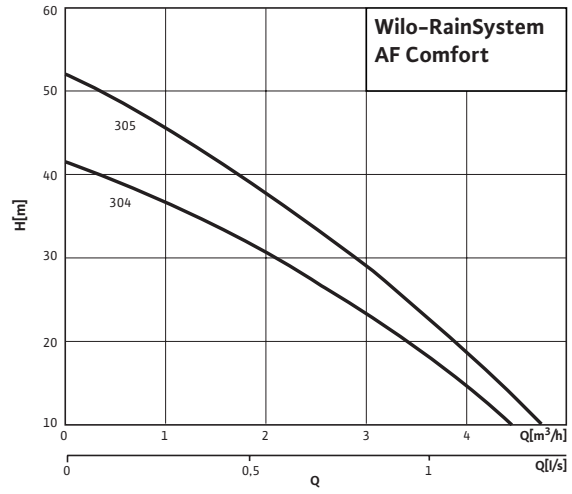
Pump Systems with System Separation

Pump Curves, Dimensions Wilo-RainSystem AF Basic and AF Comfort

Wilo-RainSystem AF Basic

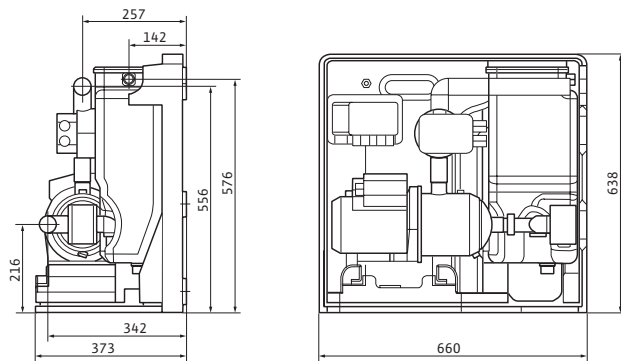


Wilo-RainSystem AF Comfort

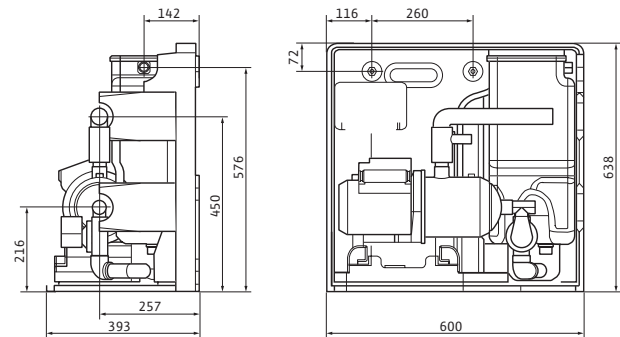


Dimension Drawings

Wilo-RainSystem AF Basic



Wilo-RainSystem AF Comfort



Rainwater Utilisation

Pump Systems with System Separation



System description Wilo-RainSystem AF 150



Type key

Example:	Wilo-AF 150
AF	Automatic rainwater supply and fresh water replenishment system
150	Content of the potable water replenishment reservoir [l]
2	Number of pumps
MC	Self-priming, horizontal, multistage rotodynamic pump of the MultiCargo series
3	Flow volume [m ³ /h] at optimum efficiency
05	Number of stages
EM	AC 1-230 V, 50 Hz
RCP	Control unit: RainControl Professional

Application

Rainwater utilisation in multifamily houses and small trade businesses for reducing potable water consumption in connection with cisterns or tanks.

Function/construction

Wilo-RainSystem AF 150, connection-ready twin-head pump water supply system as compact module for multifamily houses and public buildings.

For completely automatic supplying of rainwater from an underground tank or from a cistern. High operational safety by means of two separately guided suction lines (to be observed onsite). The large-volume, DVGW-certified replenishment vessel offers requirements-oriented replenishment of potable water into the consumer network when cisterns are not full. A connection for back-up warning is provided as standard equipment.

A cross-flow diaphragm pressure vessel in accordance with DIN 4807 provides energy savings when there is minor leakage at the building site.

Consistent system control is achieved through cyclical pump duty cycling and an integrated test run when the pumps are at rest.

Automatic fault-actuated switchover and peak-load cut-in ensure the highest level of system readiness.

Potable water replenishment proceeds in a completely automatic and demand-optimised manner. Pumping operation-dependent water replacement in the replenishment vessel also proceeds automatically. The Wilo-RainSystem AF 150 is equipped with integrated electronic motor protection, integrated dry-running protection of the pump unit and automatic anti-lime deposit protection of the solenoid valve.

A wide range of signals is displayed on the control device; it is also equipped with potential-free contacts for collective run signals and collective fault signals. Operation and parameterisation of the fully electronic RainControl Professional controller takes place by means of user-friendly, menu-driven function keys. Permanent displays of the cistern level, of the system pressure and of the operating state are to be seen via LCDs.

The system is ideally suitable for connection with the building control technology (GLT/DDC).

Scope of delivery

Connection-ready module in compact construction, with attractive design tailored to functionality. Complete electrical and hydraulic switching already in place and mounted on vibration-insulated grid pipe frames, comprising:

- 2 pcs. self-priming, corrosion-free, low-noise rotodynamic pumps of the MultiCargo series
- Pressure-side joint tubing R 1¹/₂ including transmitter unit with 8-l flow-through diaphragm pressure vessel in accordance with DIN 4807 and blocking device with evacuation, pressure gauge 0 - 10 bar
- Ball valves on the suction-side and pressure-side
- Large-volume fresh water replenishment vessel (150 litre) with mechanical float valve
- RainControl Professional central switchgear with control electronics including solenoid valves, pressure transmitter 4-20 mA and level sensor with 20 m cable for monitoring levels
- Corrosion-free enamelled steel tubing framework
- Installation and operating instructions and packaging
- Options
- Operating hours counter
- Individual run and individual fault signals
- Water backup signalling device

Planning Guide

Note:

Every pump is to be provided with its own suction line.

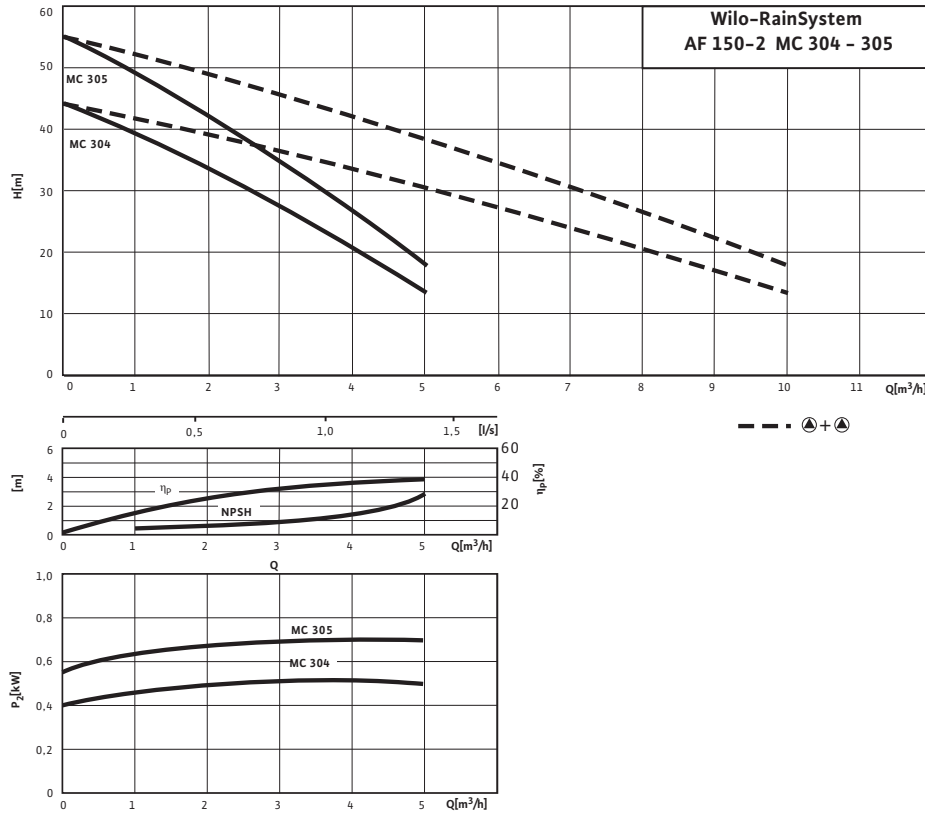
For additional planning instructions and/or details concerning the planning of rainwater utilisation systems, see Wilo-Brain "Rainwater Technology Handbook".

Rainwater Utilisation

Pump Systems with System Separation

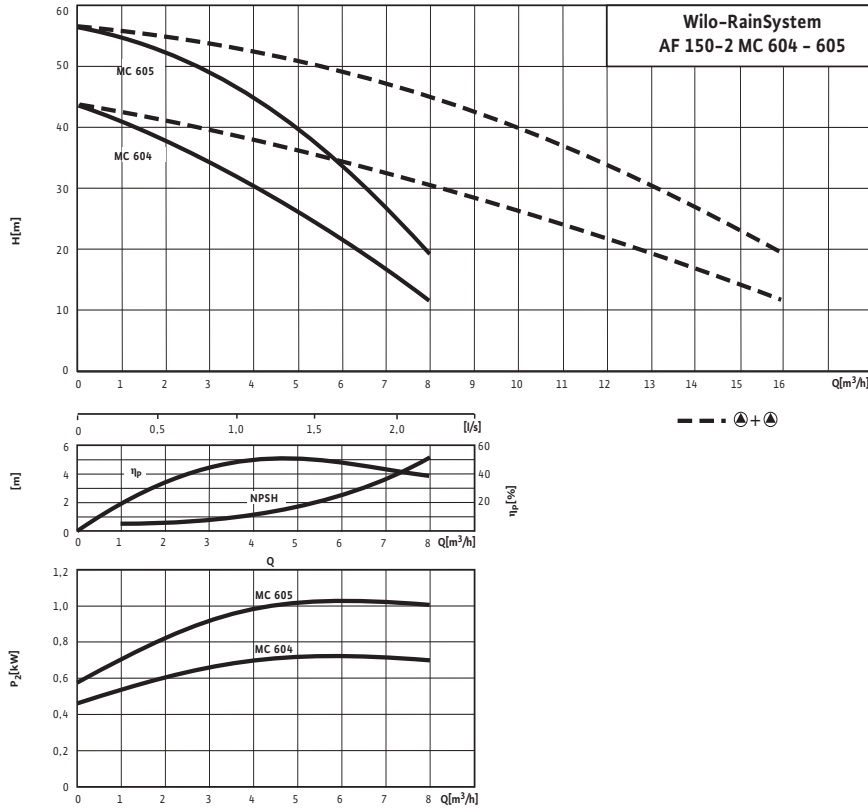
Pump Curves Wilo-RainSystem AF 150

Wilo-RainSystem AF 150-2 MC 304 - 305



Pump Curves, Motor Data Wilo-RainSystem AF 150

Wilo-RainSystem AF 150-2 MC 604 - 605



Motor Data				
Wilo-RainSystem AF 150-2 ...	No. of pumps	Number of stages	Nominal power P_2	Nominal current I_N
MC 304 EM	2	4	0.55	4.0
MC 305 EM	2	5	0.75	5.3
MC 604 EM	2	4	0.75	5.3
MC 605 EM	2	5	1.10	7.2

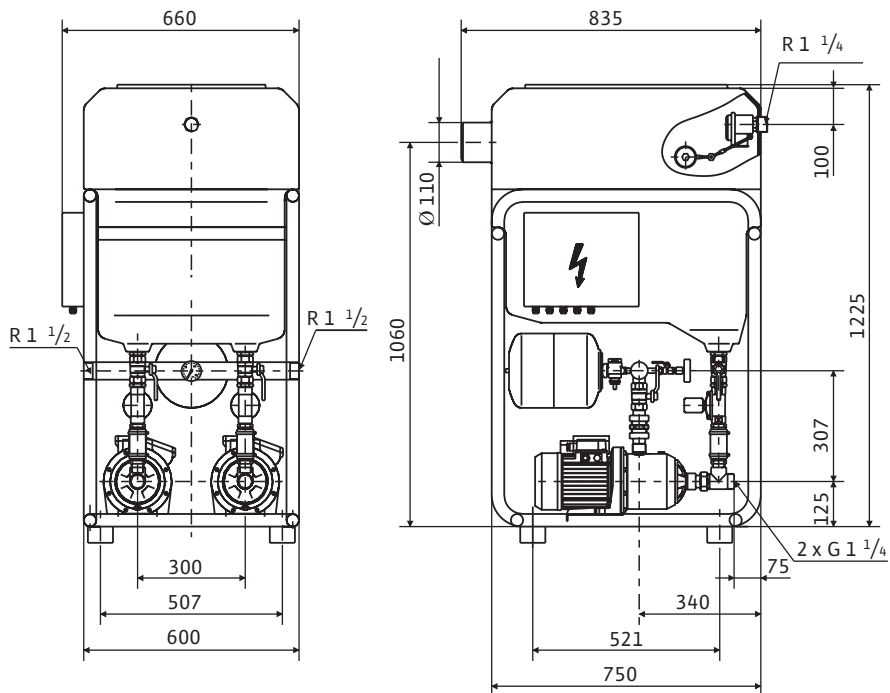
Rainwater Utilisation

Pump Systems with System Separation

Dimensions Wilo-RainSystem AF 150 MC 604 - 605

Dimension drawing

Wilo-RainSystem AF 150 - 2 MC 604 - 605



System description Wilo-RainSystem AF 400



Type key

Example:	Wilo-AF 400-2 MP 605 DM/RCH 2+1
AF	Automatic rainwater supply and fresh water replenishment system
400	Volume of the hybrid tank [l]
2	Number of pumps
MC	Non-self-priming, horizontal, multistage rotodynamic pump of the MultiPress series
6	Flow volume [m ³ /h] at optimum efficiency
05	Number of stages
DM	Three-phase current 3-400 V, 50 Hz
EM	AC 1-230 V, 50 Hz
RCH	Control unit: RainControl Hybrid
1+2	Number of water supply pumps: 2 Number of feeding pumps: 1

Application

Hybrid system for commercial and industrial rainwater utilisation for reducing potable water consumption in connection with cisterns or tanks.

Function/construction

Connection-ready water supply system with 2 to 4 water supply pumps as compact module for commercial and industrial rainwater utilisation.

For fully automatic rainwater supply from an underground tank or a cistern by means of submersible pumps as feeding pumps.

Depending on the pump design, greater distances between the system and the cistern can also be bridged with this hybrid system (see in this connection Wilo-Submersible pumps in the Wilo-Drain TS series).

The large-volume hybrid vessel with all of its integrated functions offers requirements-oriented replenishment of potable water into the consumer network when cisterns are not full.

The completely electronic regulatory unit for controlling the water supply pumps and cistern pumps is equipped with a main switch, control switches for each pump with Manual-0-Automatic function, and a display of the operation/malfunction operating states for each pump as well as low water levels. Depending on pressure, the pumps are switched on and off in cascading fashion in accordance with water requirements.

A cross-flow diaphragm pressure vessel in accordance with DIN 4807 provides energy savings when there is minor leakage at the building site.

Consistent system control is achieved through cyclical pump duty cycling and an integrated test run when the pumps are at rest. Automatic fault-actuated switchover and peak-load cut-in ensure the highest level of system readiness.

The system is switched off by an integrated dry-running protection device when water levels become too low.

The Wilo-RainSystem AF 400 is equipped with integrated electronic motor protection.

A wide range of signals is displayed on the control device; it is also equipped with potential-free contacts for collective run signals and collective fault signals. The system is ideally suitable for connection with the building control technology (GLT/DDC).

Options

Extension modules

- Cisterns level indicator
- operating hours counter
- individual run and individual fault signals
- Time switch
- 3-230 V, 50 Hz
- 60-Hz versions

Scope of delivery

Connection-ready module in compact construction, with attractive design tailored to functionality. Complete electrical and hydraulic switching already in place and mounted on vibration-insulated, height-adjustable grid pipe frames, comprising:

- 2 pcs. non-self-priming, corrosion-free, low-noise rotodynamic pumps of the MultiPress series
- Pressure-side joint tubing R 1¹/₂ including transmitter unit with 8-l flow-through diaphragm pressure vessel in accordance with DIN 4807 and blocking device with evacuation, pressure gauge 0 - 10 bar
- A suction-side and pressure-side ball valve and non-return valve
- A large-volume hybrid tank with all connections, non-turbulent supply lines and siphon-equipped overflow
- Raincontrol Hybrid central switchgear with control electronics, 4-20 mA pressure transmitter and level control in the low-voltage range
- Installation and operating instructions and packaging

Note:

For submersible pumps which are required as feeding pumps in the cistern, see Wilo-Drain.

Systems with three and four pressure boosting pumps and two cistern pumps on request.

Planning Guide

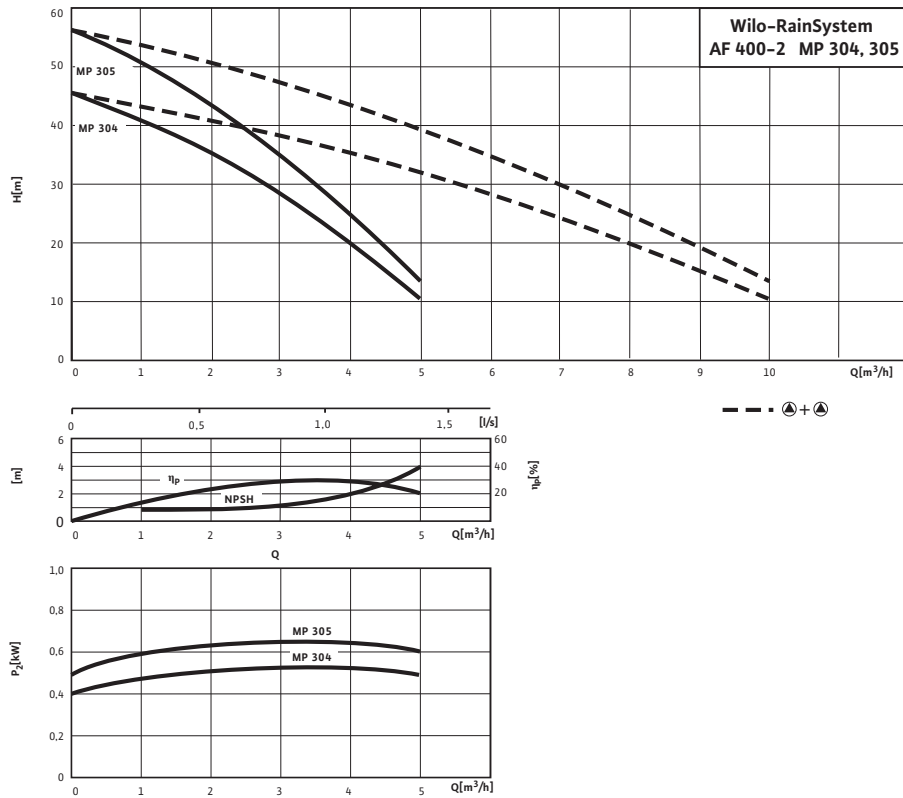
For planning guide and/or details concerning the planning of rainwater utilisation systems, see Wilo-Brain "Rainwater Technology Handbook".

Rainwater Utilisation

Pump Systems with System Separation

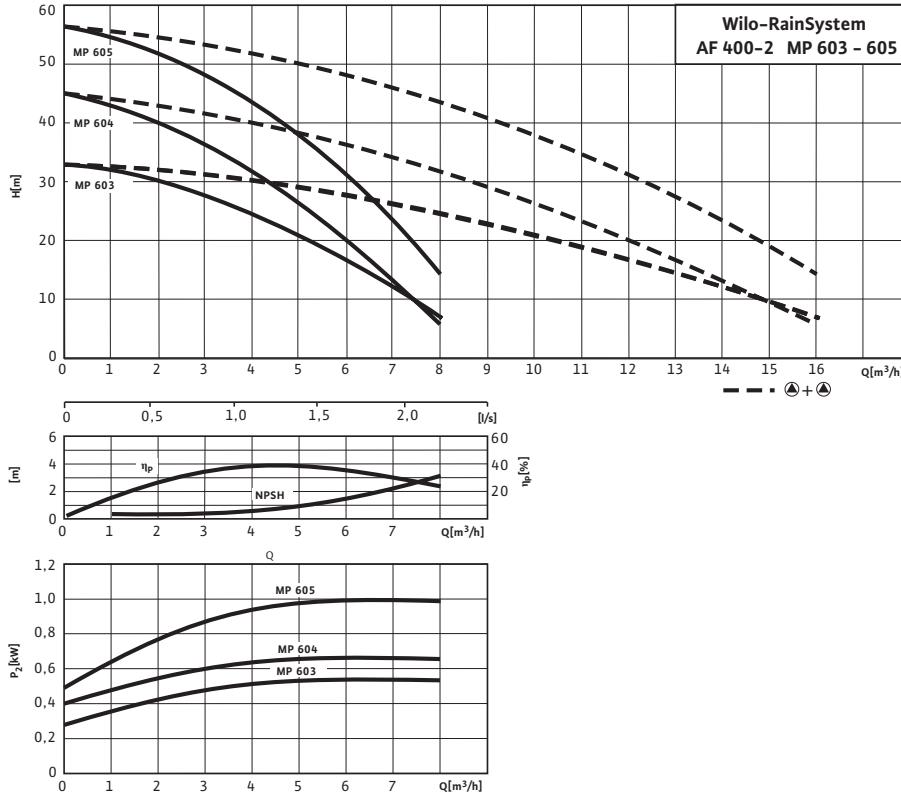
Pump Curves Wilo-RainSystem AF 400

Wilo-RainSystem AF 400-2 MP 304 - 305



Pump Curves, Motor Data Wilo-RainSystem AF 400

Wilo-RainSystem AF 400-2 MP 603 - 605



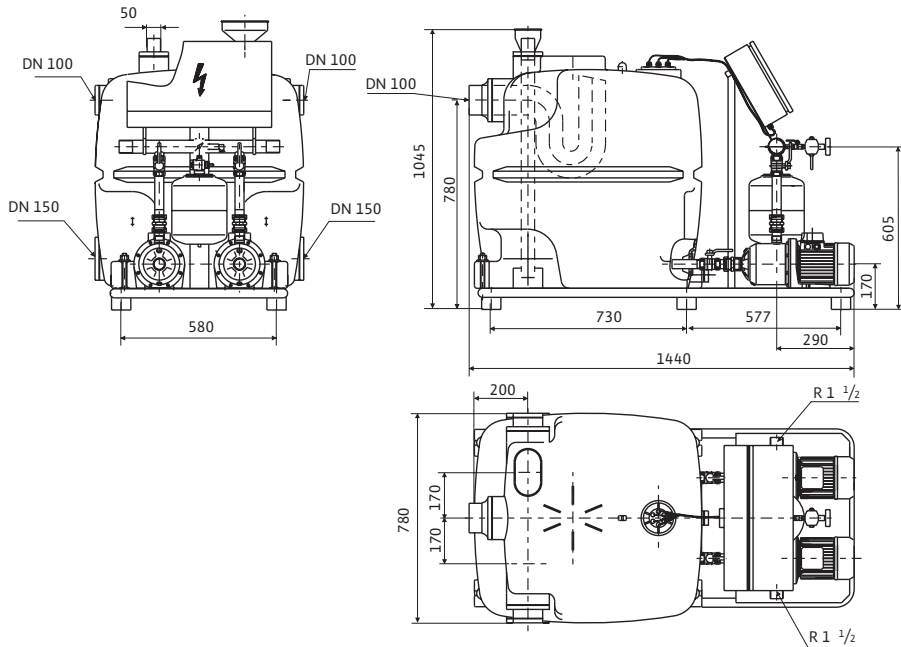
Motor Data					
Wilo-RainSystem AF 400-2 ...	No. of pumps	Number of stages	Nominal power p_2 [kW]	Nominal current I_N	
				3-230 V	3-400 V
				[A]	
MP 304	2	4	0.55	3.3	1.9
MP 305	2	5	0.75	3.6	2.1
MP 603	2	3	0.55	3.3	1.9
MP 604	2	4	0.75	3.6	2.1
MP 605	2	5	1.10	4.9	2.8

Rainwater Utilisation

Pump Systems with System Separation

Dimensions Wilo-RainSystem AF 400

Dimension drawing



System description Wilo- RWN 1500



Type key

Example:	Wilo-RWN 1500 A – MC 305 EM
RWN	Rainwater utilisation system with patented multi-chamber storage tank
1500	Contents of the storage tank [l], standard version
A	Automatic version
AU	Automatic version for installation underneath the backflow level
MC	Self-priming, horizontal, multistage rotodynamic pump of the MultiCargo series
3	Flow volume [m ³ /h] at optimum efficiency
05	Number of stages
EM	AC 1-230 V, 50 Hz

Application

Rainwater utilisation for conserving potable water, particularly suitable for retrofitting existing buildings.

Areas of application e.g.:

- Toilet flushing
- Sprinkling/irrigation
- Supplying washing machines
- Secondary cleaning purposes
- Additional applications in non-potable water sector

Function/construction

The Wilo-Regen Collector II reflects Wilo's many years of experience with industrially manufactured professional compact systems for rainwater utilisation. Thanks to the unique MehrKammer-Speicher-System (MKS-System) multi-chamber storage system, the reduction of freshwater requirements to the minimum amount mandatory for securing functional capability during dry periods has been achieved. Whereas conventional systems require that the entire storage volume be raised, here replenishment takes place in an MKS System chamber earmarked for that purpose. As a result, maximum storage capacity is retained for rainwater when the rains resume. Specially co-ordinated materials and the utilisation of particularly high-quality pumping technology make practically noiseless operation possible. The MehrKammer-Speicher vessels are made of UV-stabilised, black polyethylene (PE), thus providing effective protection against algae formation.

The electronic control of the pump with Wilo-Fluidcontrol eliminates the need for diaphragm compensation vessels.

In order to ensure optimum usability for the system, both in new buildings and in retrofitting projects, the dimensions of the system were selected in such a way that it would be able to be brought through any door in upright position. The input connection can be swivelled by 300 degrees.

The system can be expanded to include any number of auxiliary tanks with content volumes of 1700 litres each. This expansion is also possible in very small amounts of time, even with existing systems. This means that the Wilo-Regen Collector meets the changing needs of its users in optimal fashion.

Scope of delivery

RWN 1500:

- Self-priming rotodynamic pump
- Electronic pump control with Wilo Fluidcontrol
- Connection cable with plug
- Storage tank made of polyethylene
- Inside tank
- Refilling funnel
- Dome cover
- Protection against low water level
- Flexible connection on pressure side
- 4 Transport carrying handles

RWN 1500 A:

the same as RWN 1500, although also with

- Float switches and solenoid valves for automatic water replenishment, including cable kit and plug. Construction in accordance with DIN 1989 and EN 1717.

RWN 1500 AU:

the same as RWN 1500 A, although also with

- Float valve for overflow protection when installed under backflow level

Extension kit 1500:

For increasing the storage volume by 1700 litre. Extension kits can be retrofitted at any time. The vessels can be connected on the left or on the right. The vessel is UV-stabilised, made of black polyethylene, and includes the DN 100 connection line and the required fastening accessories.

Planning Guide

For planning guide and/or details concerning the planning of rainwater utilisation systems, see Wilo-Brain "Rainwater Technology Handbook".

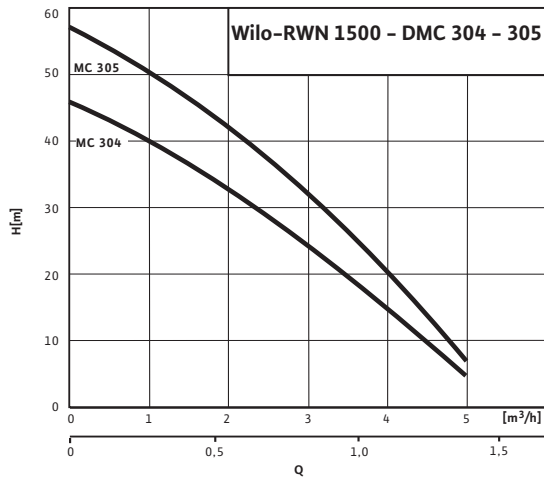
Rainwater Utilisation

Pump Systems with System Separation

Pump Curves, Dimensions Wilo-RWN 1500

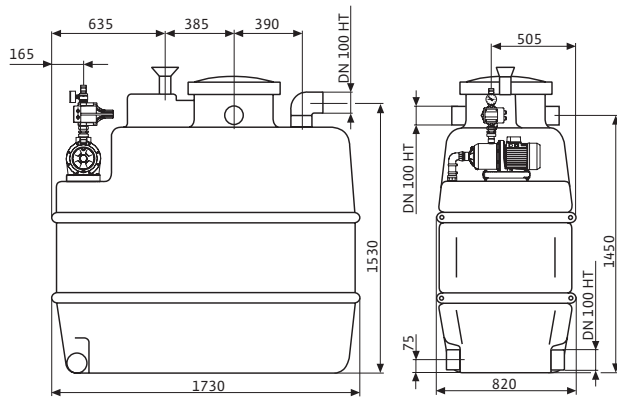
Wilo-RWN 1500-MC 304 - 305

n = 2900 rpm

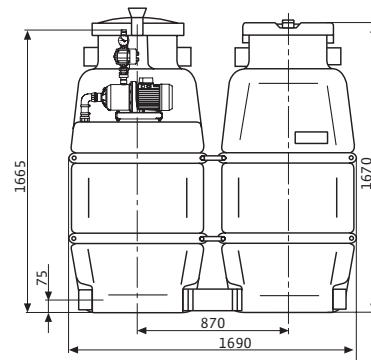


Dimension Drawings

Wilo-RWN 1500-MC 304 - 305



Extension kit 1500



Accessories for Wilo-Filter systems

Rainwater-Fine filter



The Rainwater-Fine filter is used for the filtration of rain and/or surface water in channel and collection lines running horizontally. Ideal for utilisation on roof surfaces up to 350 m².

> Versions

The Wilo Rainwater-Fine filter is available in the nominal connection diameter DN 125. Extension parts for easy cleaning are available in DN 400 as accessories.

> Installation

The Wilo Rainwater-Fine filter is a filter for ground installation with a wide range of applications. The water yield amounts to nearly 100%, even during heavy rains. When used in combination with a coarse filter (not illustrated), it is also suitable for pure seepage. Even retrofitting installation in existing pipelines is no problem, because there is no height differential between inlet and outlet. Installation is to be carried out with a gradient of approximately 2% in the direction of flow.

> Materials

Filter housing with reinforcement ribs:	Plastic die-cast, black
Cover plate can be walked on:	Plastic die-cast, black
Coarse filter insert (not illustrated):	PE
Fine filter insert:	1.4301
Plug coupler:	PE

> Scope of delivery

Coarse filter zone for ground installation:

- Coarse filter insert with 5 mm mesh width
- Connection plug coupler
- Extension part
- Cover
- Gasket kit

Fine filter zone for ground installation:

- Fine filter with 0.5 mm or 1.0 mm mesh width
- Extension part
- Cover
- Gasket kit

Coarse filter zone for cistern installation:

- Coarse filter with 5 mm mesh width
- Connection plug coupler

Fine filter zone for cistern installation:

- Fine filter with 0.5 mm or 1.0 mm mesh width

Each with Installation and operating instructions and packaging.

> Accessories

- Extension part PE – Ø 400 mm/ Length 750 mm, can be cut
- Cover can be walked on when locked
- Dirt removal strainer made of VA for coarse filter zone

> Options

- Draining of pure water to the ground reservoir vertically downwards, in addition to lateral draining in other directions (90° steps)

Rainwater Utilisation

Pump Systems with System Separation

Accessories for Wilo-Filter systems

Pipe filter



The pipe filter is used for the filtration of rain and/or surface water in channel and collection lines running horizontally. Ideal for utilisation on roof surfaces up to 350 m².

> Materials

Filter housing with reinforcement ribs:	Plastic PE, black
Extension part:	Plastic PE, black
Correction cover:	Plastic PP, black
Split strainer insert:	1.4301

> Versions

The Wilo Pipe filter is available in the nominal connection diameter DN 125. Including extension part in DN 400 for easy cleaning in the ground construction version.

> Installation

The Wilo Pipe filter is a filter that can be used in many ways for ground installation or dome shaft installation in cisterns.

The water yield amounts to nearly 100%, even during heavy rains.

Even retrofitting installation in existing pipelines is no problem, because there is no height differential between inlet and overflow.

Installation is to be carried out with a gradient of 2% in the direction of flow. Lateral draining of pure water DN 100 to the ground reservoir. Height differential between filter inlet and reservoir inlet 150 mm.

> Scope of delivery

- Pipe filter housing
- For ground installation: Extension part including correction cover can be walked on and locked
- Split strainer insert mesh width 0.5 mm
- Installation and operating instructions and packaging

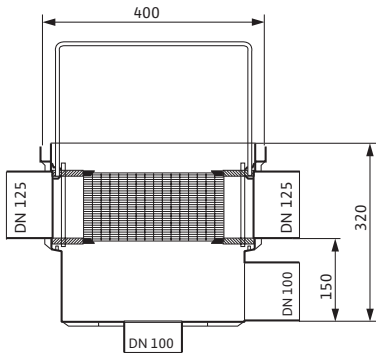
> Accessories

- Extension part PE – Ø 400 mm/ Length 750 mm, can be cut

> Options

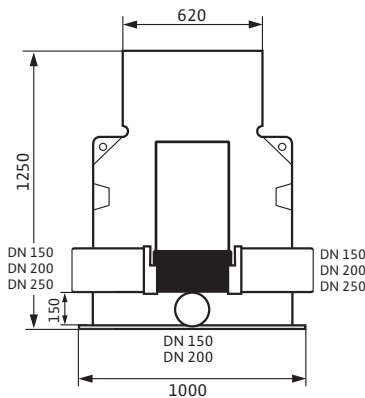
- Draining of pure water to the ground reservoir vertically downwards, in addition to lateral draining in other directions (90° stops)

Conveyance of filtered water to the cistern either laterally or downwards



Accessories for Wilo-Filter systems

Pipe filter shaft



The Pipe filter shaft is used for the filtration of rain and/or surface water in channel and collection lines running horizontally.

Ideal for utilisation on roof surfaces up to 2000 m².

> Materials

Filter housing with reinforcement ribs: Plastic PE, black
 Correction cover: Plastic PP, black
 Split strainer insert: 1.4301

> Versions

The Wilo-Pipe filter shaft are available for selection in the following nominal connection widths:

DN 150 = roof surfaces up to 2500 m²
 DN 200 = roof surfaces up to 1000 m²
 DN 250 = roof surfaces up to 2000 m²
 for supply and overflow.

Shaft diameter 800/600 mm,
 H 1200 mm, can be cut.

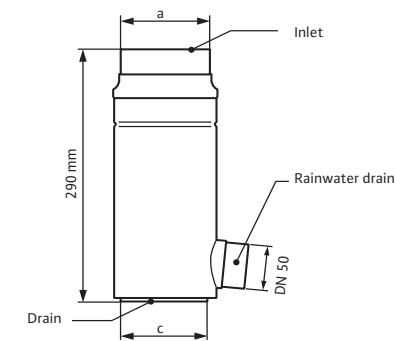
> Installation

The Wilo Pipe filter shaft is a filter for ground installation with a wide range of applications. The water yield amounts to nearly 100%, even during heavy rains. Even retrofitting installation in existing pipelines is no problem, because there is no height differential between inlet and overflow. Installation is to be carried out with a gradient of 2% in the direction of flow. Lateral draining of pure water DN 150 or DN 200 to the ground reservoir. Height differential between filter inlet and reservoir inlet 150 mm.

> Scope of delivery

- Pipe filter shaft housing
- Correction cover can be walked on and can be locked
- Split strainer insert mesh width 0.5 mm
- Installation and operating instructions and packaging

Filter collector



a: depending on the drainspout construction

The Wilo-Filter collector is ideal for fine filtration of rainwater directly into the drainspout. For utilisation on roof surfaces up to 180 m².

> Materials

Filter housing: Titanium zinc or copper
 Micro-strainer and baffle system: Stainless steel

> Versions

The Wilo Filter collector is available to fit commercially available plastic, zinc or copper drainspouts in nominal diameters of 110, 100, 87 and 80 mm.

> Alignment

Wilo-Filter collector/drainspout dimensions

Nominal	Filter collector	Drainspout (onsite)
Downpipe/Drain Pure water	Filter collector	Plastic
DN 110/50	Titanium zinc	Titanium zinc 6-part
DN 100/50	Titanium zinc	Titanium zinc 7-part
DN 87/50	Titanium zinc	Titanium zinc 7-part
DN 100/50	Copper	Copper 6-part
DN 87/50	Copper	Copper 7-part
DN 80/50	Copper	Copper 8-part

> Installation

The filter collector is distinguished for the ease of its installation. Its placement is effected by simple sawing-out of the drainspout. A vertical drainspout section of at least 1 m to be positioned upstream of the filter collector.

> Scope of delivery

- Filter housing
- Micro-strainer/baffle system, mesh width 0.17 mm
- Housing cover
- Installation and operating instructions and packaging

Rainwater Utilisation

Pump Systems with System Separation

Accessories for Wilo-Filter systems

Automatic kit for replenishment from the city water mains



Replenishment of the water from the water mains through free drainage from the pipe in the refilling funnel of the vessel.

Note: The potable water connection is not permitted to project directly into the rainwater. Maintain minimum clearance in accordance with EN 1717.

> Scope of delivery

- WA 065 float switch including small switchgear for direct control of the solenoid valve. For cable length, see price list.
- Solenoid valve R¹/₂ or R 1 with 2 m cable including grounding plug, electrical connection: 1-230 V, 50 Hz.

Cisterns/rain water storage containers

no illustration available

in plastic or concrete upon request. Connection-ready system of 2,000 to 10,000 litres, individual larger sizes also possible.

Accessories for RainSystem AF Basic, AF Comfort, AF 150

Floating suction coarse filter G/GR



Floating suction coarse filter, mesh width 1.2 mm, for near-surface water extraction of the prefiltered rainwater (see Chapter on Filter Systems).
Linkage by means of suction-resistant hose connections to be provided by customer.
Version with hose connexion gland 1 1/4".

> Materials

Floating globe: Polyethylene
Filter: Stainless steel

> Versions

Filter type: Designation:
G Suction filter, coarse without non-return valve
GR Suction filter, coarse with non-return valve

Floating suction fine filter F/FR



As with coarse filter G, although the floating extractor suction filter has a mesh width of 0.23 mm. Offers ideal protection against dirtying the downstream rainwater supply system in the presence of non-prefiltered rainwater.
Version with hose connexion gland 1 1/4".

> Materials

Floating globe: Polyethylene
Filter: Stainless steel

> Versions

Filter type: Designation:
F Suction filter, fine without non-return valve
FR Suction filter, fine with non-return valve

Suction/pressure hose 1 1/4" SE – PN 10

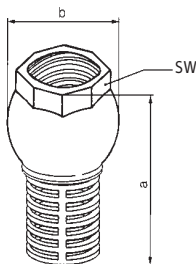


Suction-resistant and pressure-resistant hose, -25 °C to 55 °C including two hose clips made of VA, as well as hose connexion glands R 1 and R 1 1/4 for connection with the floating extractor.

> Versions

Diameter (inside): Length:
30 mm 1.5 m complete
3.0 m complete
5.0 m complete
10.0 m complete
15.0 m complete

Foot valve



Foot valve with built-in non-return valve for the suction line to the pump station.

> Materials

Housing: brass
Strainer: brass

> Versions

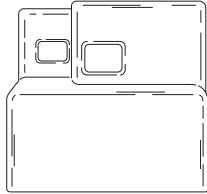
Overall size	SW	a [mm]	b [mm]	Weight [kg]
Rp 1 1/4	49	95	62	0.4
Rp 1 1/2	57	105	70	0.6
Rp 2	69	116	83	0.9
Rp 2 1/2	85	146	103	1.2

Rainwater Utilisation

Pump Systems with System Separation

Accessories for RainSystem AF Basic, AF Comfort, AF 150

Cover



Cover for AF Basic in modern, up-to-date design acts at the same time as transport packaging for environmental reasons.

> Versions

Noise insulating, made of recyclable EPP.