

Structured-wall PE-HD pipes and fittings with smooth bore for underground storm water drains



Saddle connection to
new and existing
storm water drains

AQUATUB-Rw storm water drainage system:

Polyethylene (PE-HD) twin wall pipes and fittings on the basis of DIN EN 13476-3 meeting the requirements of DIN 16961 and DIN 4262-1; compatible chamber systems

Application:

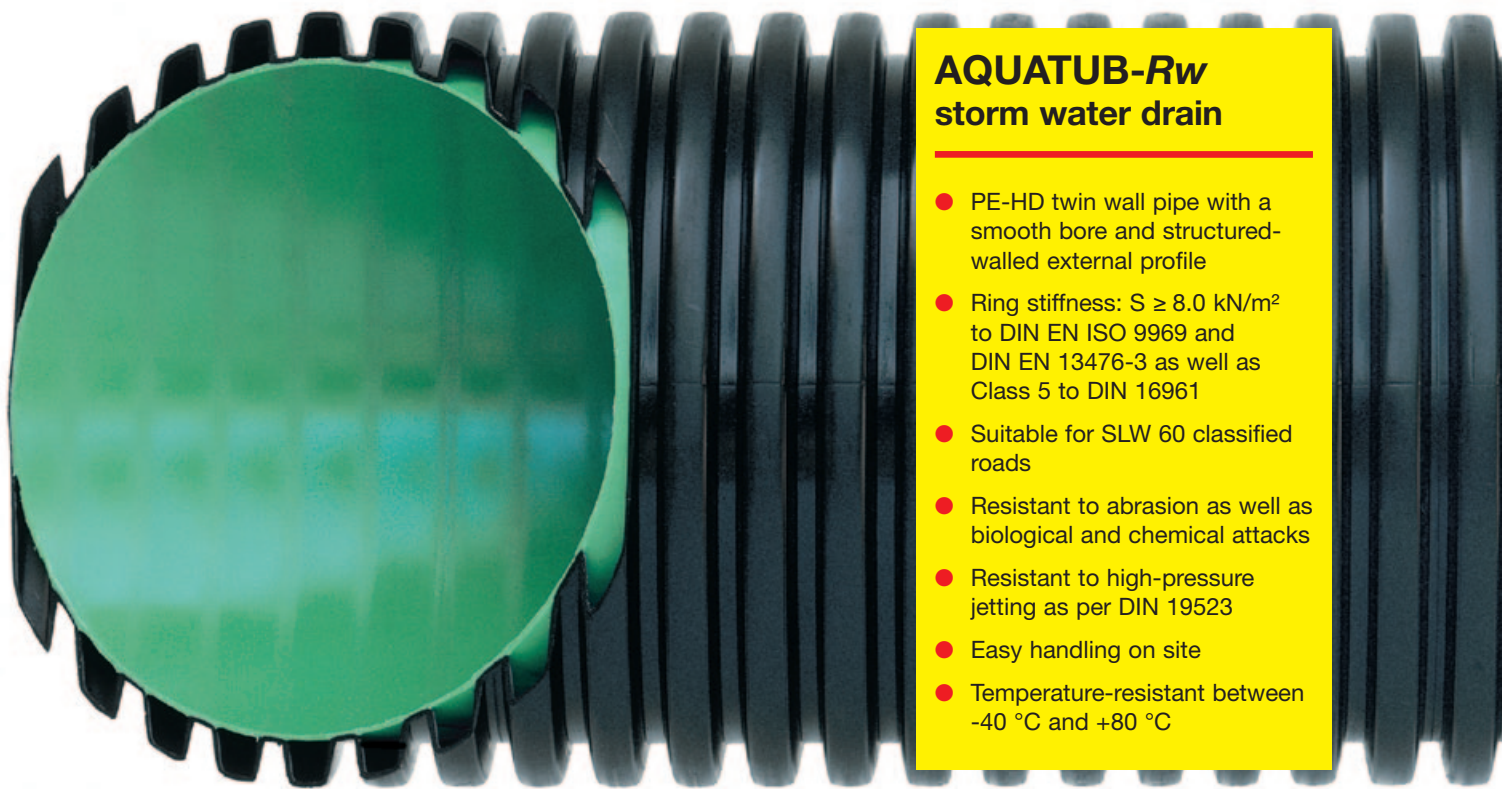
- Highway and surface drainage
- Subsoil road drainage
- Storm water management systems
- Culverts

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Corrugated and Twin
Wall Pipes of Plastics

AQUATUB-*Rw*: Polyethylene Storm Water Drain



AQUATUB-*Rw* storm water drain

- PE-HD twin wall pipe with a smooth bore and structured-walled external profile
- Ring stiffness: $S \geq 8.0 \text{ kN/m}^2$ to DIN EN ISO 9969 and DIN EN 13476-3 as well as Class 5 to DIN 16961
- Suitable for SLW 60 classified roads
- Resistant to abrasion as well as biological and chemical attacks
- Resistant to high-pressure jetting as per DIN 19523
- Easy handling on site
- Temperature-resistant between -40°C and $+80^\circ \text{C}$

AQUATUB-*Rw* storm water drainage system

AQUATUB-*Rw* is a PE-HD twin wall pipe with a smooth inner and structured-walled outer surface, produced by a process developed by and patented to HEGLER in 1968. AQUATUB-*Rw* combines the ring stiffness of a corrugated pipe with the good hydraulic properties of a smooth pipe.



Profile section

Based on the specifications of DIN EN 13476-3, the AQUATUB-*Rw* storm water pipe meets the requirements of DIN 16961 (Class 5) and DIN 4262-1 (UP). The requirements of DIN EN 1277 regarding the leak-tightness of joints in "Subsoil Thermoplastics Piping Systems" are exceeded.

Pipe system

The pipe system has been designed for use in storm water drainage applications (for foul water sewers use the HP waste water sewer system). AQUATUB-*Rw* pipes have a green internal bore. The system comprises integral sockets and special seals as well as an extensive range of accessories. It is available in nominal sizes of DN 150 to DN 800.

System advantages

Low weight/simple handling

Thanks to its design AQUATUB-*Rw* is very light-weight. So transportation and handling on site are very simple.

High load-bearing capacity

The ring stiffness resulting from the combination of pipe material and profile design allows the pipe system to be installed over a wide range of depths. With $S \geq 8.0 \text{ kN/m}^2$ to DIN EN ISO 9969 or Class 5 to DIN 16961, the ring stiffness meets the conventional and proven requirements for sewer pipes. When installed in accordance with DIN EN 1610 the system easily withstands maximum traffic loads (60 t vehicles) at laying depths ranging from 0.75 to 10.00 m.

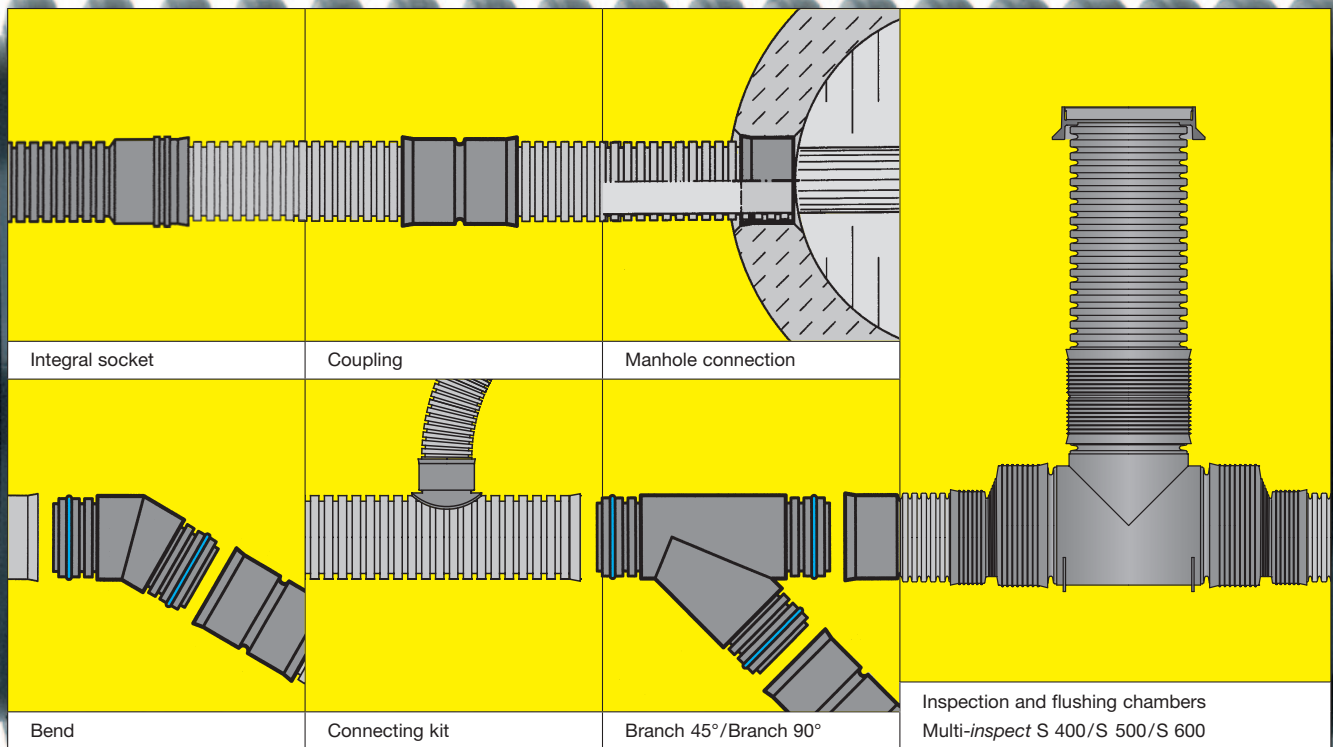
High abrasion resistance

Extensive comparative examinations in accordance with the so-called „Darmstadt Model“ have shown that the abrasion properties of AQUATUB-*Rw* pipes are extremely good and by far in excess of those of any other pipe material. Cleaning by high-pressure jetting (120 bar at the nozzle) is possible without problems. Any impact loads caused by the jetting head are absorbed. The green internal bore facilitates TV inspection.

Service life

The raw material properties render AQUATUB-*Rw* extremely durable. Its resistance to chemical attacks is very high. The pipe's flexibility activates the reaction forces of the soil, resulting in a high load-bearing capacity of the system. Flexibility in the axial direction ensures reliability and integrity of the system even in case of unexpected settlements of the soil.

ain – Ecologically Compatible and Economic



System accessories

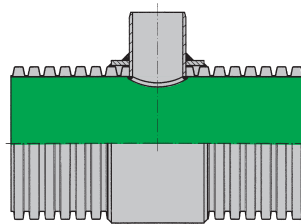
Pipe joints

Joints are made by simply pushing pipes into the integral sockets or separate couplings (double sockets). Leak-tightness to DIN EN 1277 of the joints is ensured by special profiled seals adapted to the profile of the AQUATUB-Rw twin wall pipe.

Fittings

AQUATUB-Rw fittings are injection-moulded or fabricated. Fabricated fittings are made up of pipe material and reinforced on the outside by adding a smooth-walled envelope pipe. All joints and ends of the reinforcing envelope pipes are connected to the AQUATUB-Rw pipe in a leak-tight way by extrusion welding. The ring stiffness of the fittings is at least equivalent to that of the AQUATUB-Rw pipe, thus high reliability can be ensured for fittings as well.

The inner diameters of the fittings match the inner diameters of the AQUATUB-Rw pipes. So there are no transitions or obstacles inside the system.



90° branch with consistently smooth inner surface

Subsequent connection by HP-CONNECT

HP-CONNECT allows saddle connection of 150 and 200 mm pipes in new or existing installations. The flexible branch lines AQUATUB-RwR are an inexpensive option for connection to road gullies. For the advantages of HP-CONNECT please refer to our current leaflet.

Inspection and flushing chambers MULTI-inspect S 400/S 500/S 600

There are three chamber systems to cover the whole size range of AQUATUB-Rw. The chambers MULTI-inspect S 400, S 500 and S 600 do not only differ in the basic body but also in the diameter of the riser pipe. By modern inspection systems, these chambers can be serviced and flushed in an optimal and cost-effective way. For the advantages of the

three systems compared to conventional chambers please refer to the current leaflets.

Adaptation to the gradient is possible by means of special riser pipes which can be cut to the required length, on site. For MULTI-inspect S 400 chamber covers of cast iron are available in load classes A, B and D. S 500 and S 600 chambers match with standard top rings to DIN 4034 and standard chamber covers to DIN EN 124.

Quality control

Constancy in the quality of AQUATUB-Rw pipes is ensured by a surveillance contract with Süddeutsches Kunststoffzentrum at Würzburg (SKZ), an official testing laboratory.



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Important:

- If possible, AQUATUB-Rw pipes should be transported and stored on site in the original stillages. They should always be stored on an even and smooth surface. Individual lengths can be lifted in the centre.
- Continuous support at the given gradient must be provided in the pipe trench. The supporting layer of at least 10 cm must be well compacted and consist of sand/gravel of a grain size distribution of 0/8 (percentage passing sieve according to DIN EN 1610). Local depressions should be provided at joints so that the couplings do not initially rest on the support.
- Joints should be made using the recommended lubricant.
- For installation DIN EN 1610 should be followed. It is recommended to use sand/gravel 0/8 for the embedding.

The information given in this brochure is the most up-to-date available and is intended to provide information on our products and their possible applications. It is not a guarantee of certain features or of their suitability for certain specific applications. Our guarantee applies to compliance with our specifications, within the scope of our General Terms and Conditions. The schematic drawings (pipe/accessories) are indicative only. They are not binding as to product geometry. The current edition supersedes any former versions. Subject to change.

Technical data AQUATUB-Rw

Nominal size	DN	150	200	250	300	400	500	600	800
Outside diameter	mm	174.8	235.2	293.8	352.8	464.1	580.0	692.0	919.0
Inside diameter	mm	151.4	202.2	253.2	300.0	395.0	495.0	592.0	790.0

Packing data AQUATUB-Rw

Nominal size	DN	150	200	250	300	400	500	600	800
Item No.	7668...	615	620	625	130	140	150	160	180
Stillage contents	units	54	32	18	11	6	4	5	2
	m	324	192	108	66	36	24	30	12
Stillage dimensions	length	m	6.05	6.05	6.00	6.46	6.40	6.50	6.70
	width	m	1.20	1.23	1.24	1.16	1.20	1.26	2.33
	height	m	1.47	1.51	1.36	1.38	1.35	1.29	1.37

Technical data AQUATUB-RwR

Nominal size	DN	150 (ID)	200 (OD)
Outside diameter	mm	174.8	200.0
Inside diameter	mm	153.5	173.0

Packing data AQUATUB-RwR

Nominal size	DN	150 (ID)	200 (OD)
Item No.		7669015	7669120
Coil contents	m	25	25

System accessoires AQUATUB-Rw/RwR

Nominal size	DN	150	200	250	300	400	500	600	800
Coupling		○	○	○	○	○	○	○	○
Sleeve		○	○	○	○	○	○	○	○
Profiled seal		○	○	○	○	○	○	○	○
Manhole connection		○	○	○	○	○	○	○	○
Bend 15°/30°/45°		○	○	○	○	○	○	X	X
Branch 45° DN 150		○	○	○	○	○	○	-	-
Branch 45° DN 200		-	○	○	○	○	○	-	-
Branch 90° DN 150		○	○	○	○	○	○	○	○
Branch 90° DN 200		-	○	○	○	○	○	X	X
Plug		○	○	○	○	○	○	X	X
HP-CONNECT for subsequent connection of DN 150		-	-	○	○	○	○	○	○
HP-CONNECT for subsequent connection of DN 200		-	-	-	○	○	○	○	○
Lubricant						○			

Special accessories on request.
X on request

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