
Transport and storage

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Guidelines: For the handling of pipes and adapter fittings made of ductile cast iron

The careful handling of piping components should be ensured during transport, handling and storage, as well as on site. This is, together with professional laying, one of the most important prerequisites for the perfect operation of piping networks over a period of many years.

1. Pipe-bundle / packaging

DN 80 – 300 push-in joint pipes made of ductile cast iron are delivered in bundles.

Pipes with DN > 300 are delivered as single pipes.

The wooden supports are not part of the delivery for bundled pipes.

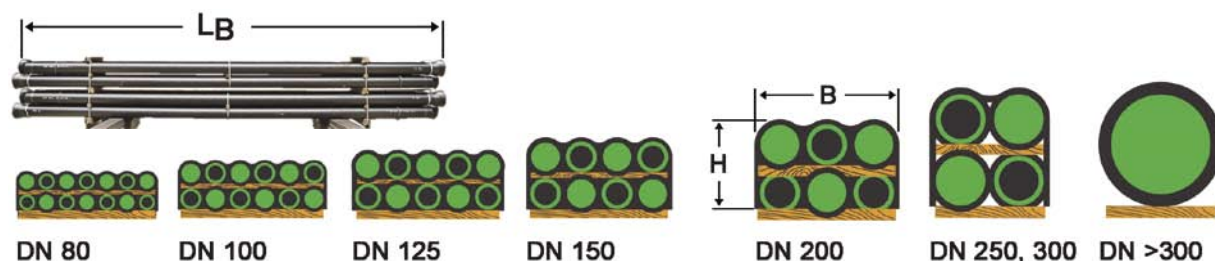
ecopur pipe-bundles are covered with a UV-protective film. This covering should only be opened when necessary and should always be closed again afterwards.

All types of external effects, mechanical damage and improper treatment are to be avoided. Out-of-place or unsuitably placed packaging elements such as steel bands, protective films, pallets etc. should be corrected.



2. Pipe bundles / permissible stacking height

Permissible stacking heights or permissible number of layers for stacked pipes for pipe classes $\geq K 9$



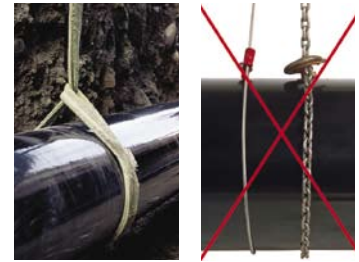
DN	pipe length m	pipes per bundle	pipe length per bundle m	bundle height cm	bundle width cm	bundle length cm	weight per bundle kg	max. no. of bundles stackable
80	6	14	84	30	74	630	1200	15
100	6	12	72	35	78	630	1250	13
125	6	10	60	40	78	630	1260	12
150	6	8	48	45	77	630	1280	11
200	6	6	36	58	73	630	1315	9
250	6	4	24	67	62	635	1040	8
300	6	4	24	80	75	635	1360	7

For each layer, the pipes are to be secured with wooden wedges against rolling apart.

The wooden wedges under the outside pipes are to be nailed to the bottom and intermediate wooden supports respectively.

3. Loading and unloading pipes

- Wide lifting-belt slings are to be used when loading and unloading pipes.
- Individual pipes of all dimensions should be loaded and unloaded using mechanical aids using appropriate lifting gear (belts).
- Chains and unsheathed wire slings that can come into contact with the pipes may not be used.
- Under no circumstances are crane hooks to be hooked into the steel bands or in the sockets or spigot-ends of the pipes.
- Pipes should be hooked up one at a time.
- Pipes should never be dragged along the ground or rolled.



4. Storage of pipes

Pipe bundles should be stored on two wooden supports (A), about 20x15 cm in size. Storage direct on the ground is not allowed. When stacked, two intermediate wooden spacers, about 5x5 cm in size (B) should be placed between each layer. The pipes are to be stored so that socket and spigot ends alternate with each other. The permissible stacking height shown in the table in section 2 should be observed. Cut the steel bindings using metal shears or diagonal-cutters. Chisels, crowbars, pick-axes etc. may not be used.



5. Storage of piping components made of elastomer materials (sealing rings, thrust-resisting rings, retaining rings)

Rubber components can be affected by the following environmental factors:

- oxygen	- heat	- dampness (micro-organisms)
- ozone	- light	- solvents
		- Storage under tension

Storage of elastomer seals (>6 months)

(Recommendations according to ISO 2230, DIN 7716, EN 682).

- Temperature under 25°C, preferably 15°C, but not under -10°C.
- Keep away from light, especially light with a high proportion of UV-light (sunlight).
- Rel. Humidity under 65%.
- The storage room should contain no devices that produce ozone (e.g. electric motors) or solvents, fuels or chemicals.
- Do not use any films containing softener for packing.
- The seals should be stored without tension, pressure or other deformation; they should not, for example, be hung up on any part of their circumference.