



Quality monitoring wells

Fast and accurate installation of a monitoring well with prepacked filter sand and bentonite collar? The solution: a quality monitoring well from Eijkelkamp !

The quality filter consists of three elements:

1. Plain pipe with (fixed) bentonite collar with high swelling capacity.
2. Sand catcher to prevent sand from flowing past the filter before the collar is swollen.
3. Ready-to-use filter pipe with prepacked filter sand fixed by filter gauze.

All main elements (HDPE pipe, filter sand and bentonite) are approved for application in environmental soil research.

Advantages of the system

- Easy and fast installation: save time and money !
- Reliable hydrological sealing* of sealable layers, swelling capacity (63 mm version) Ø 180 mm (7 inch).
- Prevents spreading of contamination in polluted area research
- International and widely used sizes of monitoring well.
- Bentonite guaranteed in the right place.
- Clean way of working.
- Loose filter pipe, filter gauze or filter sand no longer required.
- Perfect centering of the filter pipe.
- With 63 mm version easy access for MP 1 submersible pump and other groundwater pumps.

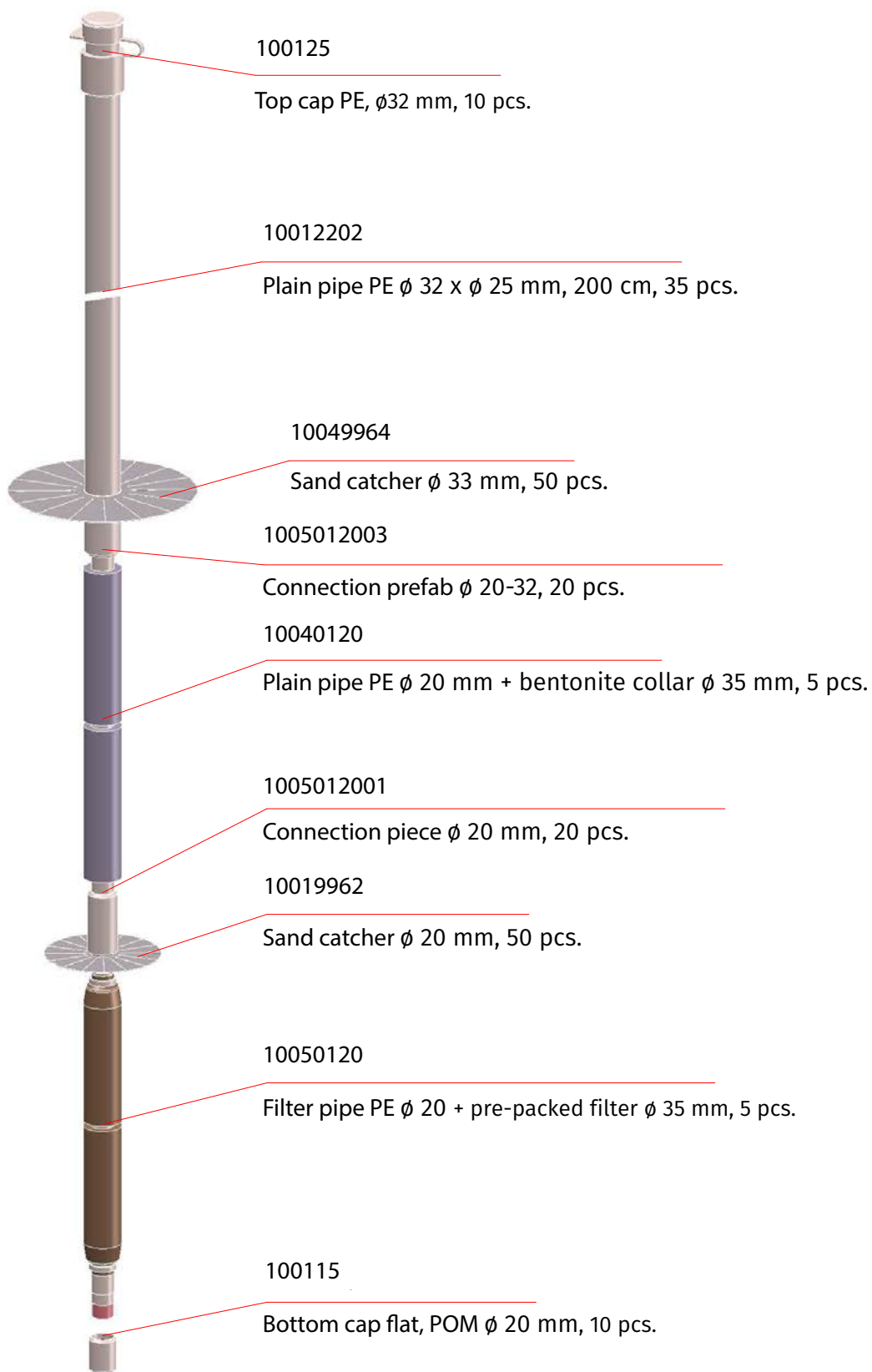


Now available

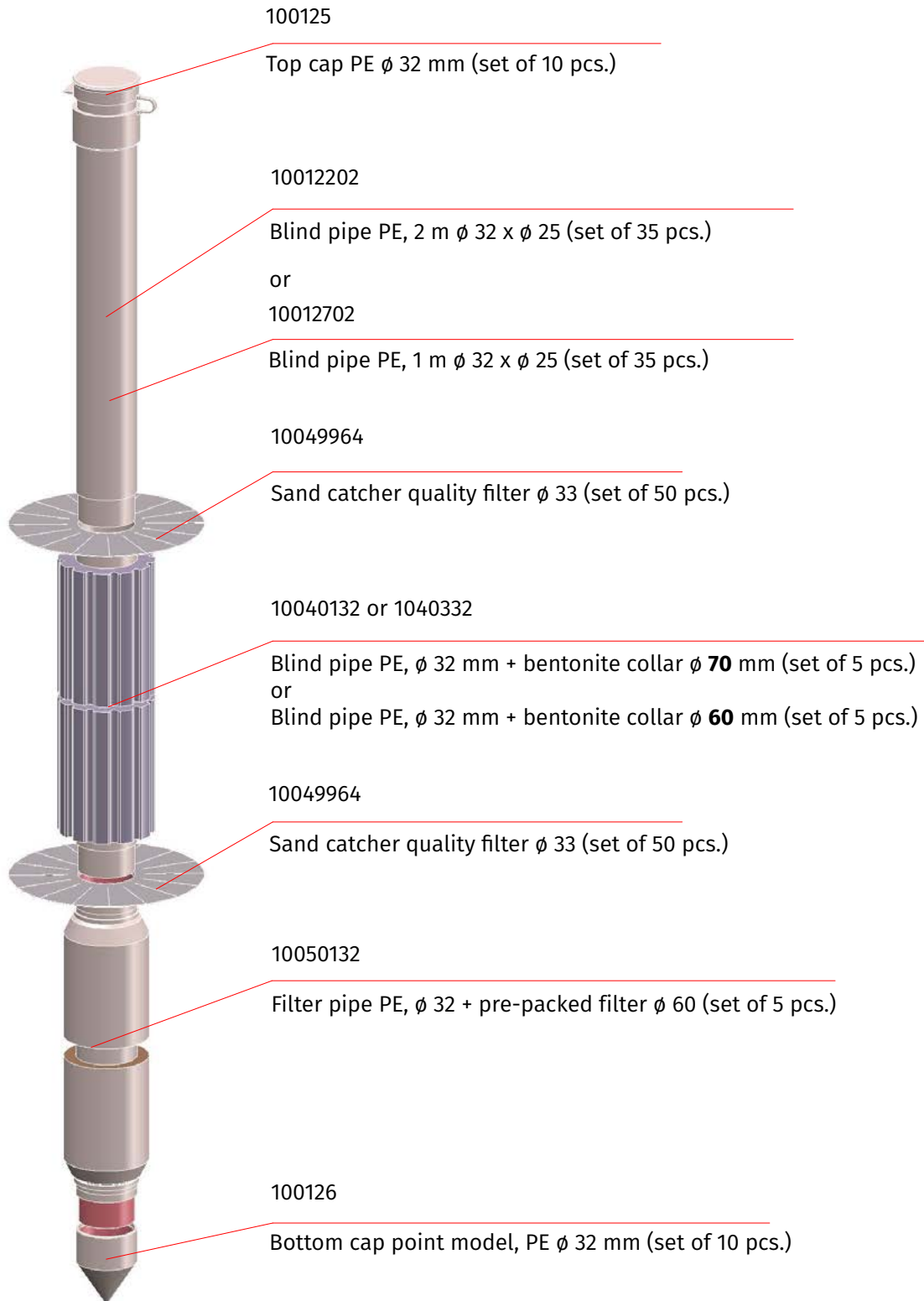
- Ready-to-use plain pipes, HDPE, Ø 20, 32 and 63 mm, length 100 cm, with bentonite collar Ø 35, 60, 70 and 100 mm. Length 1 m.
- Sand catchers in various sizes.
- Ready-to-use perforated pipes, HDPE, Ø 20, 32 and 63 mm, length 100 cm, with filter sand fixed by filter gauze (total diameter (pipe with sand) resp. max. 35, 60 and 88 mm).



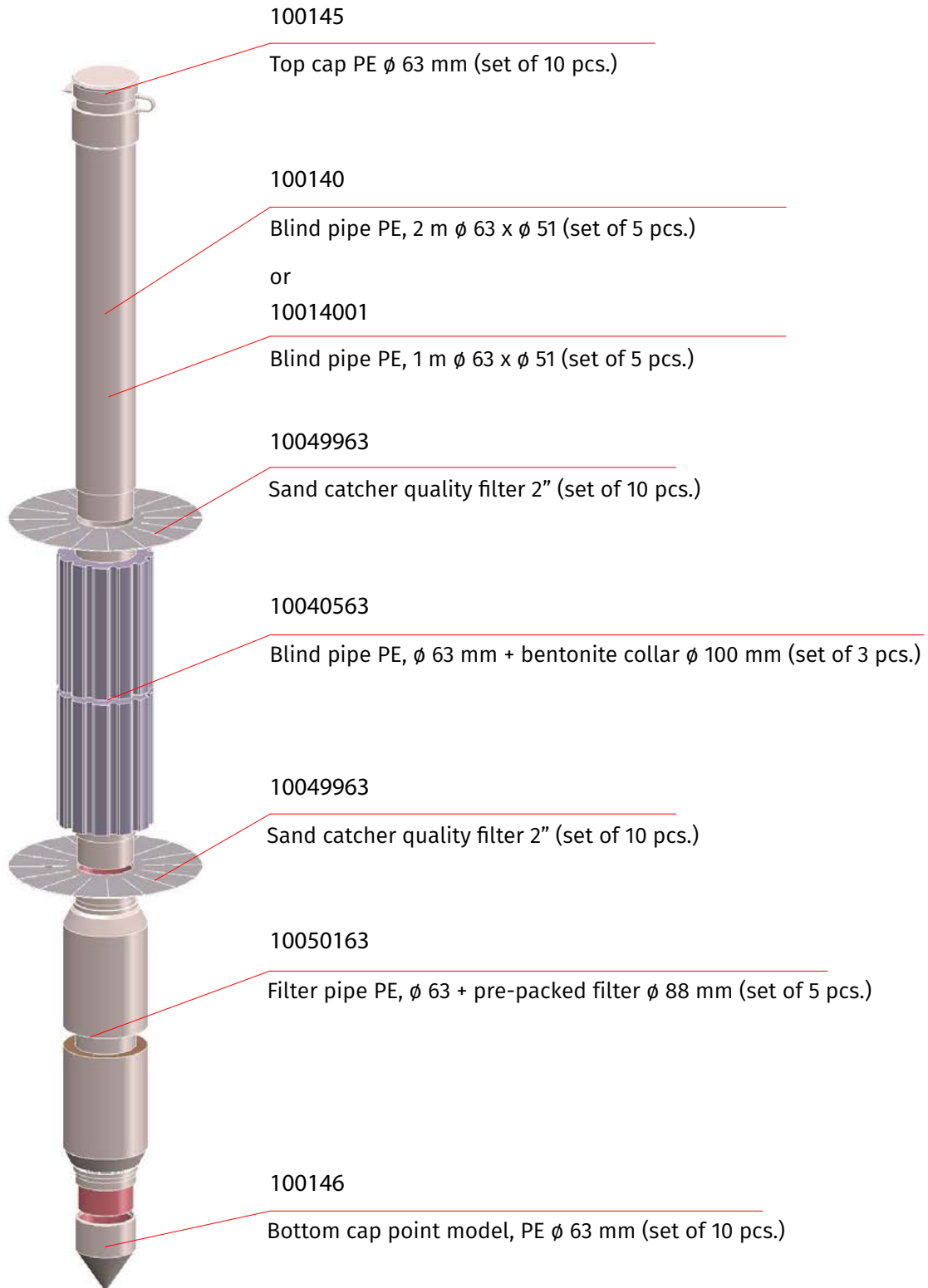
Example of quality monitoring well diameter 20 mm



Example of quality monitoring well diameter 32 mm



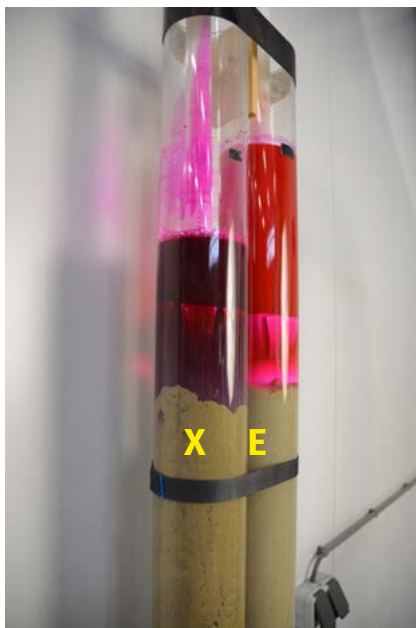
Example of quality monitoring well diameter 63 mm (2")



Swelling and permeability test

During a comparative research in 2020 we tested our bentonite collars for swelling capacity and permeability. After swelling, our bentonite collar resulted in a solid, impermeable layer while the product of supplier X washed out and did not seal as an impermeable layer.

When the bentonite collar was swollen we added some test dye to the water. When pumping the filter part of both monitoring wells, the monitoring well of supplier X showed polluted water that was leaking through the bentonite (coloured liquid) into the filter part. In the Eijkelkamp monitoring well the test dye solution stayed on top of the impermeable bentonite collar (E).



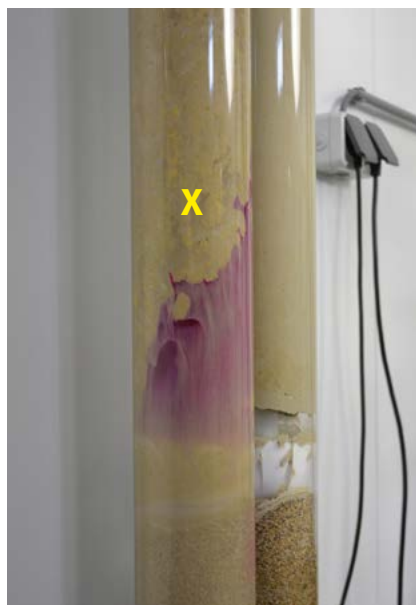
Product X permeable
E: impermeable swollen bentonite collar Eijkelkamp.



Detail product X permeable, test dye is leaking through bentonite when pumping.



Product X test dye is leaking through bentonite when pumping.



Product X test dye is leaking through bentonite when pumping.



Product X test dye is leaking through bentonite when pumping.



Left: product X test dye is leaking through bentonite when pumping and reaches filter sand.

Right: bentonite collar Eijkelkamp, test dye stays on top of impermeable bentonite sealing, filter part stays clean.



See also: <https://youtu.be/MKyBWEHEB4Y>



Bentonite plugs

Bentonite plugs are used for sealing boreholes and decommissioning old monitoring wells and extraction wells.

The plugs are made from bentonite with a high swelling capacity without parts that could cause obstructions. An auger hole will be entirely closed off in about three days.

The swollen bentonite will prevent seeping of water. The material used and the plug shape ensure a reliable hydrological seal*.

The plugs are available in 50 cm length with various diameters, designs and packaging units (see table).

The properties of bentonite plugs are:

- Sealing is 100%*.
- Due to their rigidity and shape, the bentonite plugs can easily be pushed down to the desired depth.
- Bentonite plugs are environmentally safe.



Art. no.:	Description
1091	Bentonite plug, Ø 17 mm, length 50 cm, seals a borehole of max. 30 mm in approx. 48 hours, pack of 40 pieces (20 m total).
1093	Bentonite plug, Ø 25 mm, length 50 cm, seals a borehole of max. 45 mm in approx. 48 hours, pack of 30 pieces (15 m total).
109201	Bentonite plugs, Ø 48 mm, length 50 cm, seals a borehole with a Ø of 110 mm maximum, pack of 8 pieces (4 m total).
1092	Bentonite plugs, Ø 48 mm, length 50 cm, seals a borehole with a Ø of 110 mm maximum, pallet with 100 packs of 4 m (total 400 m).
1094	Bentonite plugs, Ø 34 mm, length 50 cm, seals a borehole with a Ø of 70 mm maximum, pack of 20 pieces (10 m total)
1095	Bentonite plugs, Ø 34 mm, length 50 cm, seals a borehole with a Ø of 70 mm maximum, pallet with 80 packs (800 m total).

- * Note concerning the use of bentonite: swells poorly in water with an electrical conductivity of 20 mS/cm or higher or in water that is very heavily polluted (e.g. groundwater with floating layers containing oil products).