

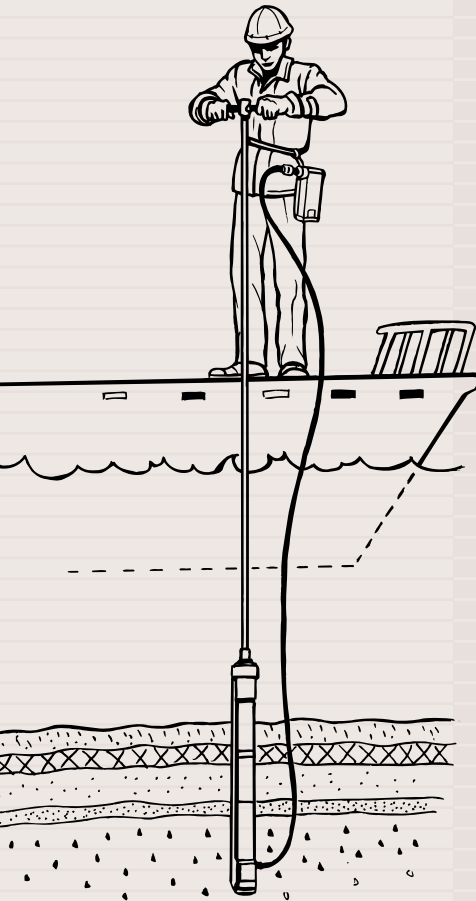


You will return to the contents of P1 SOIL by clicking the pictogram

# UNDISTURBED SEDIMENT CORE SAMPLING

P1.40

Using a Beeker sampler an undisturbed sample is taken from the submerged soil.



The submerged soil appeared to be an easy and invisible dumping place for chemical waste. In case of taking samples from submerged soils it is a problem that the final sample usually is not a good representation of the real stratification of the soil.

Applying the equipment described here it is, however possible to take samples in which the original structure and thickness of the layers is preserved.

## Sediment sampling fast and certain!

The Beeker sampler has for years been the best solution for taking undisturbed samples from submerged soil. The samples are taken in a transparent tube. The original stratification of the sampled material is maintained. This enables a clear profile description to be made. Eijkelpomp now has an improved version of the Beeker sampler, under the name 'Sediment core sampler, type Beeker'.

The sediment core sampler has removed a number of practical drawbacks of the original Beeker Sampler.

The piston can now be operated directly with a rod, so that the sample can be pushed out of the sampler

on site into a sample bucket. The straps have been replaced by rigid steel strips. These keep the sampler better together and ensure that, also because the piston cable is no longer there, the straps, hose and cable no longer get entangled.

The new "Sediment core sampler, type Beeker" consists of: Transparent tube of 1 or 1.5 metres, piston + piston rod and battery powered pressure and vacuum pumps with extension hose. Furthermore hammer + extension rods, non-stretch cord, sample bucket and brush.

The sediment core sampler, type Beeker:

- Takes samples fast and certain.
- Not necessary to assemble and disassemble apparatus with every new sample.
- Sample can be emptied into clean stainless steel bucket or layer by layer in wide-necked sample jars.
- Samples taken with the Beeker sampler compact to max. of 4 to 5%.



Sediment core sampler type Beeker, complete basic set (04.23.SA)

# UNDISTURBED SEDIMENT CORE SAMPLING



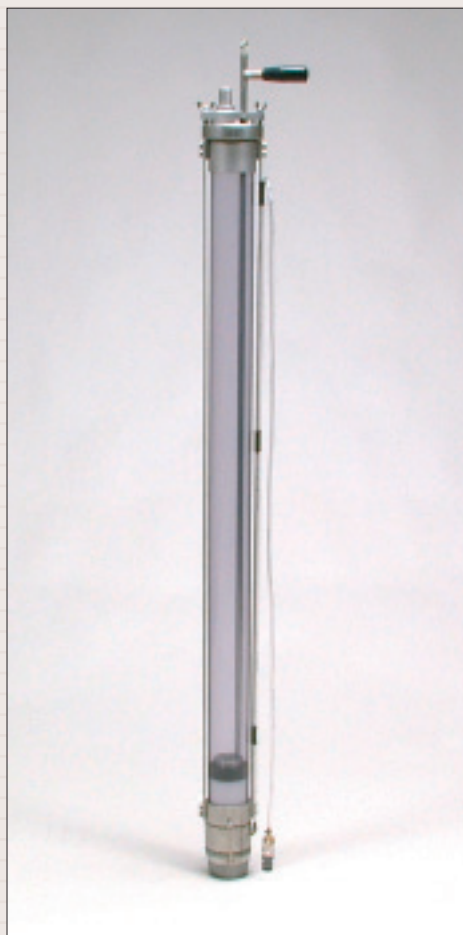
P1.40

The 04.23.SA Sediment core sampler, type Beeker (set A = basic set) can be used as an independent sampler.

- ☐ Like Multisampler / piston sampler but with lockable head and it is possible to hammer the sampler.
- ☐ 1.0 and 1.5 m long sampling tubes.
- ☐ Only suitable for assessing / pressing out samples on site.
- ☐ Operation almost as simple as Multisampler or piston sampler.
- ☐ Much cheaper than the old Beeker sampler set.
- ☐ The standard set is suitable for application in water to a maximum depth of 5 meter. Using extra extension rods sampling is possible to a greater depth in certain cases.

- ☐ Because of the compressed-air reservoirs and the large hose couplings the sampler has a maximum mobility and a variety of applications.
- ☐ The sampler is lightweight and easy to use, so many samples can be taken in a day.
- ☐ It is able to cope with many types of sediment varying in consistency from very watery and uncohesive to unconsolidated sands, regardless of the stratification of the soil.

Before sampling starts the piston is positioned inside the cutting head.



Sediment sampler, type Beeker

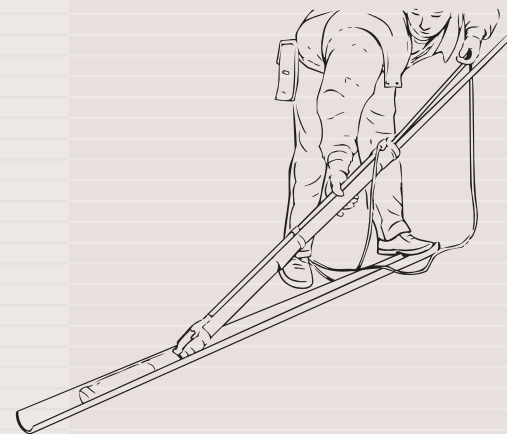


Cutting head



Cutting head with inflated membrane

The sampler is emptied in the sample gutter.



## BENEFITS

### 04.23.SA and SB Beeker sampler

- No loss of sample in any case
- Cutting head can be closed with air pressure
- Piston assures perfect core sample length
- Can be hammered to sample all sediments
- For sample lengths up till 150 cm
- Transparent: Easiest profile description
- Contaminant free stainless steel body
- Set B allows for 10cm sub sample transfer

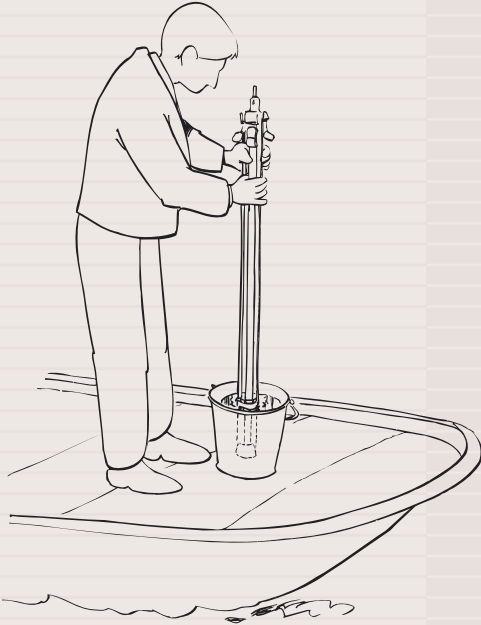


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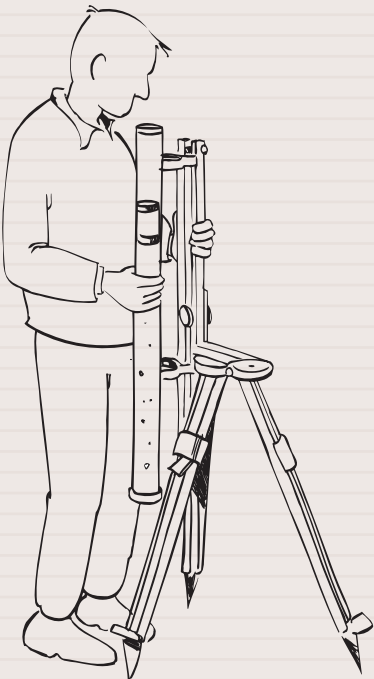


## P1.40

**On the boat a rubber plug is pushed into the sampler. After mounting a new tube the next sample is taken.**



**By applying the discharge- and partitioning system the sample can be discharged and partitioned in a controlled manner.**



# UNDISTURBED SEDIMENT CORE SAMPLING

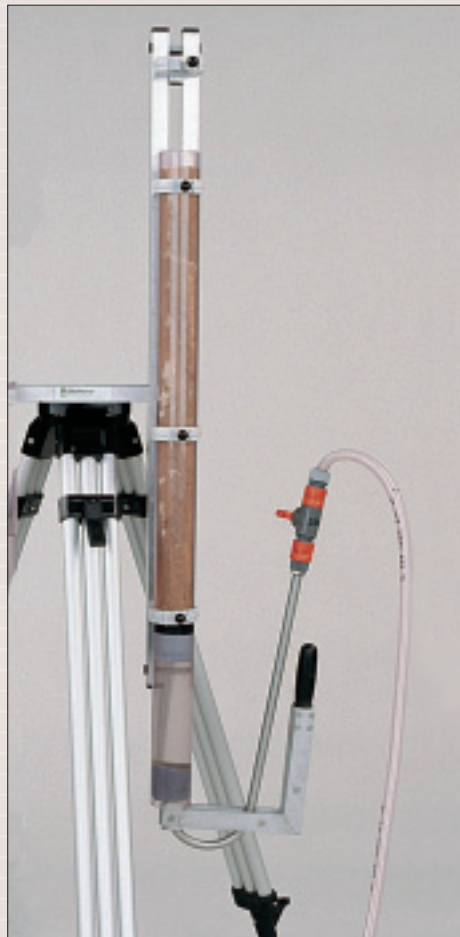
**04.23 SB Sediment core sampler, type Beeker** (set B = extended set). Similar to the basic set, however supplied with the discharge and partitioning system to describe and press out samples on a very sophisticated, accurate manner.

- Tubes can be used directly in column tests.
- Transfer samples anaerobic in nitrogen environment.
- Describe and press out etc. at home base.

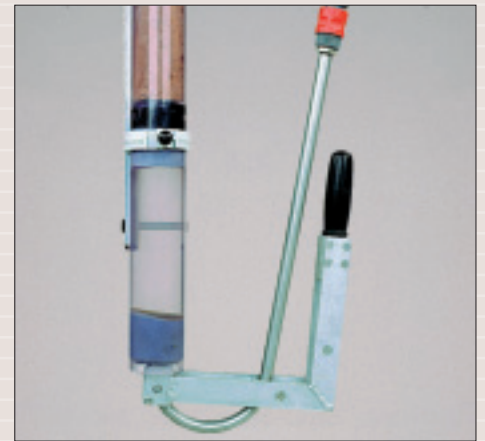
- A simple and controlled discharge- and/or partitioning of the sample with the hydro-pneumatic discharge- and partitioning system.

Note:

As sampling depth increases in flowing waters sampling will be more difficult.



Discharge and partitioning system



Pressure tube with clamp plug



Sample divider

# UNDISTURBED SEDIMENT CORE SAMPLING

## 12.42 Multisampler, rod operated, set for sampling to a depth of 5 m

The multisampler has been developed originally for sampling of wet, solid as well as fluid material.

The standard set is suitable for sampling up to a depth of 5 meter. The materials used for the multisampler are stainless steel, NBR- rubber (the piston) and transparent acrylic plastic (sampling tube).

The standard set (with bayonet connection), among other items, contains: a multisampler, inclusive of two cutting heads (one for fluid- and one for solid material), sampling tubes, pistons, extension rods, a top-piece and various accessories. The complete set can be transported in a carrying bag with shoulder strap.

Using the multisampler it is possible to take anaerobe samples in a wide variety of wet materials, solid as well as fluid. Using the piston rod (usually extended by means of a wire-line)

it is possible to move the piston in the sampling tube while this tube is held stationary. In this way the original stratification of the sampled material is maintained.

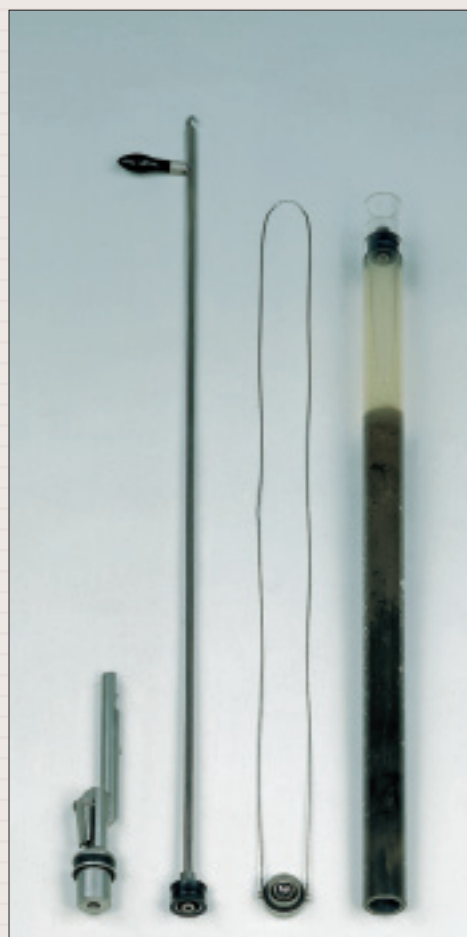
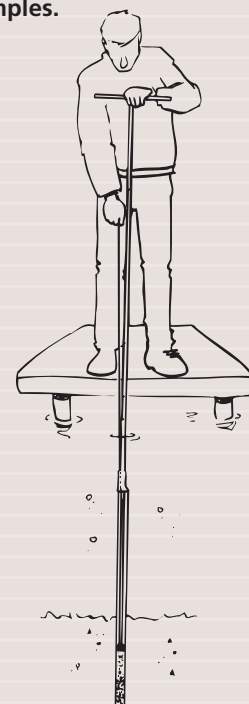
### Advantages

- ❑ Quick and simple sampling.
- ❑ Minimal compaction which makes it possible to maintain the original thickness- and stratification of the layers.
- ❑ The transparent sampling tube allows for immediate visual checking of the sample.
- ❑ The option of sampling at accurate depth (without mixing with higher situated strata).
- ❑ Accurate mix-sampling during one procedure.
- ❑ The sampling tube can be changed and/or decontaminated quickly.
- ❑ Sampling with a minimum of disturbance (with cutting ring) or with little agitation (using a ball valve).



P1.40

The multisampler is used to take sediment samples.



Multisampler, demounted

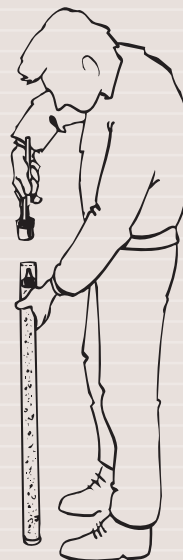


Multisampler, top-piece



Cutting heads

After demounting and fitting of a cap the sampling tube can be transported to the laboratory.



## BENEFITS

### 12.42 Multisampler

- For sediment sampling with a small budget
- Professional tool with transparent tube
- Open cutting head for undisturbed samples
- Ball valve to sample sewers, bassins a.s.o.
- Piston assures perfect core sample length
- No hammering possible
- Loss of sample in watery or coarse sediments



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## PARTS LIST

Art.no.	Description	Qty. in set	Art.no.	Description	Qty. in set
<b>P1.40</b>	<b>Undisturbed sediment core sampling</b>		**04.05.05	Steel hammer with nylon heads, Ø 70 mm, 2 kg, impact absorbing design	1
	Two types of rod operated sediment samplers are supplied:		**01.10.15	Push/pull handle, Ø 25.4 mm	1
	- The Beeker sampler for high accuracy sampling of very soft to medium hard sediment layers. (supplied in two different sets):		**01.11.04	Field data registration set	1
	- The Multisampler for relatively soft sediments.		**01.11.03	Work gloves, pair, oil- and grease resistant, sturdy, with short sleeve	2
			**08.09.08	Flat brush, length 35 cm	1
			**01.10.21	Steel brush (stainless)	1
			**99.08.10	Stainless steel bucket with graduation in litres, contents 10 litres	1
<b>04.23.SA</b>	<b>Sediment core sampler type Beeker, rod operated, with closable cutting head and piston.</b>		**01.12.08	Aluminium transport case, dim. 112x39x32 cm (outside)	1
	Standard set for sampling and discharging core samples, length 1 m, in bucket or jars. Suitable for sampling submerged soils to a depth of 5 m of very watery sediment to non-consolidated sand.		**01.11.02.01	Padlock	1
			<b>04.23.SB</b>	<b>Sediment core sampler type Beeker, rod operated, with closable cutting head and piston. Comprehensive set for sampling and discharging core samples, length 1 m or 1.5 m, in bucket or jars and to transport and divide in sub-samples with water pressure. Suitable for sampling submerged soils to a depth of 5 m of very watery sediment to non-consolidated sand.</b>	
**04.23.01.C	Collar for sediment core sampler type Beeker with conical screwthread.	1	**04.23.01.C	Collar for sediment core sampler type Beeker with conical screwthread.	1
**04.23.02	Cutting head incl. steel strips for sample tube 1 m, with air hose with large quick connect coupling.	1	**04.23.02	Cutting head incl. steel strips for sample tube 1 m, with air hose with large quick connect coupling.	1
**04.20.02.01	Rubber for cutting head	2	**04.20.02.01	Rubber for cutting head	2
**04.20.15.10	Sample tube, Ø 63x57 mm, length 100 cm, pvc transparent, incl. covers, set of 3 pcs	1	**04.20.15.10	Sample tube, Ø 63x57 mm, length 100 cm, pvc transparent, incl. covers, set of 3 pcs	3
**04.23.04	Piston, double action, with scraper rubbers, Ø 56 mm, for sample tube sediment core sampler type Beeker.	1	**04.23.04	Piston, double action, with scraper rubbers, Ø 56 mm, for sample tube sediment core sampler type Beeker.	9
**04.23.05	Piston rod with detachable handle for sample tube 1 m.	1	**04.23.05	Piston rod with detachable handle for sample tube 1 m.	1
**04.20.07	Hose reel with 10 m hose with large quick connect couplings	1	**04.20.07	Hose reel with 10 m hose with large quick connect couplings	1
**04.23.06	Pressure pump with manometer and large coupling connection (female) with carabine hook, incl. charger.	1	**04.23.06	Pressure pump with manometer and large coupling connection (female) with carabine hook, incl. charger.	1
**04.23.08	Vacuum pump with large coupling connection (female) with carabine hook, incl. charger.	1	**04.23.08	Vacuum pump with large coupling connection (female) with carabine hook, incl. charger.	1
**01.09.00.02	Ropes (2), stretch-proof, with noose, length 5 m. Polyester covering, strong stretch-proof core material for accurate operation of pistons in core samplers. Complete with one carabine hook	1	**01.09.00.02	Ropes (2), stretch-proof, with noose, length 5 m. Polyester covering, strong stretch-proof core material for accurate operation of pistons in core samplers. Complete with one carabine hook	1
**04.20.21	Toolbag with appropriate tools	1	**04.20.21	Toolbag with appropriate tools	1
**04.23.04.01	Set of spare parts for the double action piston (04.23.04) consisting of 2 lip rings and 2 sets scraping rubbers.	1	**04.23.04.01	Set of spare parts for the double action piston (04.23.04) consisting of 2 lip rings and 2 sets scraping rubbers.	1
**01.10.10.C	Handle, normal, 60 cm, with all synthetic, detachable grip, conical screw thread	1	**01.10.10.C	Handle, normal, 60 cm, with all synthetic, detachable grip, conical screw thread	1
**01.10.11.C	Handle, short, 10 cm, with beating head, c.sc..	1	**01.10.11.C	Handle, short, 10 cm, with beating head, c.sc..	1
**01.10.12.C	Extension rod, 100 cm, c.sc.	5	**01.10.12.C	Extension rod, 100 cm, c.sc.	5
**01.10.13.C	Extension rod, 50 cm, c.sc.	1	**01.10.13.C	Extension rod, 50 cm, c.sc.	1
			**01.10.10.C	Handle, normal, 60 cm,	1

# PARTS LIST



Art.no.	Description	Qty. in set	Art.no.	Description	Qty. in set
**01.10.11.C	with all synthetic, detachable grip, conical screw thread Handle, short, 10 cm, with beating head, c.sc.	1	**12.42.08	for sample tube multisampler internal Ø 39-41 mm Cap, polyethylene, for inside 40 mm, set of 20 pcs.	1
**01.10.12.C	Extension rod, 100 cm, c.sc.	5	**12.42.06	Stainless steel ball, Ø 25 mm	2
**04.05.05	Steel hammer with nylon heads, Ø 70 mm, 2 kg, impact absorbing design	1	**01.09.00.02	Ropes (2), stretch-proof, with noose, length 5 m. Polyester covering, strong stretch-proof core material for accurate operation of pistons in core samplers. Complete with onecarabine hook.	1
**01.10.15	Push-/pull handle, Ø 25.4 mm	1	**01.10.17.B	Handle, normal, 60 cm, with all synthetic, detachable grip (incl. coupling sleeve), bay.	1
**01.11.04	Field data registration set	1	**01.10.07.B	Extension rod, 100 cm (incl. coupling sleeve) bay.	4
**01.11.03	Work gloves, pair, oil- and grease resistant, sturdy, with short sleeve	2	**01.10.09.B	Coupling sleeve	2
**08.09.08	Flat brush, length 35 cm	1	**01.14	Carrying bag for field equipment, with two shoulder straps (backpack model), (inside) Ø 17x 50 cm	1
**01.10.21	Steel brush (stainless)	1		<b>Previous to taking sediment samples it is necessary to know about the thickness of the layer to be sampled and the composition of the sub-soil (use peat sampler).</b>	
**99.08.10	Stainless steel bucket with graduation in litres, contents 10 litres	1	13.49	Sludge blanket detector, bargraph display with integral audible alarm. Measuring principle:transmission method with light source + photocell. Sensitivity: 0 to 5000 ppm ab. Complete with sensor + 10 m cable. Supplied in carry holster; incl. battery charger	
**01.12.08	Aluminium transport case, dim. 112x39x32 cm (outside)	1	13.51	Sediment level stave, standard set to measure the sediment level to a depth of 4 m, incl. transport bag	
**01.11.02.01	Padlock	1	04.09	Peat sampler, standard set for sampling to a depth of 10 m.	
**04.23.10	Discharge and partitioning system for sediment core sampler type Beeker. For connection to the mainsdrinking water network. Excl. tripod. Incl. tube holder, 9 rubber stops and lipped rings, insertion plate,pressure tube with clamp plug and tubes, sealing spatula, caps and rubber sleeves.	1			
**17.04.01	Aluminium tripod with 5/8" screw	1			
**04.20.12	Stackable container, dim. 60x40x13 cm, with 24 pvc transparant sample tubes, Ø 63x57 mm, length 11 cm, incl. covers	1			
**04.23.09	Extension set to enable working with sample tubes with a length of 150 cm, consisting of set of steelstrips for sample tube 150 cm and a piston rod 150 cm.	1			
**04.20.15.15	Sample tube, Ø 63x57 mm, length 150 cm, pvc transparant, incl. covers, set of 3 pcs	1			
	<b>Spare parts for Beeker sampler:</b>				
04.20.02.03	Cutting shoe incl. membrane for cuttinghead Beekersampler				
04.20.10.02	Rubber stop with seal to push the sample out of the tube by means of the sample discharge- and partitioning system of the Beeker sampler				
<b>12.42</b>	<b>Multisampler, rod operated, standard set, for sampling to a depth of 5 m</b>				
**12.42.01.B	Multi sampler, rod operated, transparent acrylic, Ø 50 mm, length 1 m, contents 1.14 l, bay. (incl. 1 sharp cutting head and 1 cutting head with ball valve seating and ball)	1			
**12.42.02	Sampling tube for multi-sampler acrylic, Ø 50x5 mm, length 1 m, contents 1.14 l.	3			
**12.42.09	Double action piston, NBR rubber, with rod connector,	3			