

The all-hydraulically driven rig features:

- multi-purpose applications
- quick and versatile handling
- high performance
- sturdy design
- biologically degradable oil for the hydraulics

The drilling- and sounding rig **RSB 0/ 1.4** is suitable for soil investigation according to DIN 4021 table 3, sub 1 and 2 as listed below:

- Soil sampling for soil mechanics, investigating construction sites by means of percussion coring tubes respectively by rotary-coring.
- Geological and hydrological investigations, e.g. on dumps or for investigating former plants etc.
- Dynamic penetrometer according to DIN 4094

Auger drilling

The power head, mounted to the mast with its hydraulic drill feed, is applied for drilling through overburden or constructing monitoring wells by means of continuous flight auger O.D. 83 up to 185 mm, respectively by hollow stem auger HBS 79 / 185 or HBS 111 / 205.

Percussion coring tube -RKS-

For sampling purposes, the mast-mounted hydraulic hammer enables ramming of the well known percussion coring tubes (see leaflet RKS), whereas the hydraulic pull-up system offers 1,400 daN pulling capacity. To overcome the usually high friction when pulling is just started, a hollow jack is available offering 14,000 daN pull-up.

Dynamic penetrometer -DPL/DPM/DPH-

By means of the hydraulically driven automatic dynamic penetrometer, soil investigation according to DIN 4094 with drop weights of 10, 30 or 50 kg and a drop height of 50 cm can be performed. A penetrometer is also available for Standard Penetration Tests (SPT) with 63.5 kg drop weight and 76.2 cm height of fall.

Rotary coring

Coring in hard rock by means of single- or double tube core barrel (O.D. 66 or 86 mm) is done by means of a separate available pumping station. When the hydraulic hammer is swivelled aside the hydraulic power head SBK 20 is mounted to the carriage by locking levers.

Bailing and hammering

For percussion drilling with bailer or for driving the RKR sampler with a drop weight, optionally a cable tool percussion mechanism is available.

Cased drilling

A hydraulic casing push/pull-device is available for lowering and hoisting casing O.D. 133 up to 219 mm. The device supplies a pull up of 3,300 daN and in special version 10,000 daN.

Straight flush rotary drilling

A water swivel and an on-board or separate mud pump enable straight flush drilling to some 50 m depth.

Conception

Carriers

The crawler with steel-enforced rubber tracks provides optimum manoeuvrability in all terrain conditions. In supply are fixed as well as vario crawlers (width : 760 - 1,020 mm). The rig is equipped with just those options to meet the requirements of each individual client. The trailer is a light weight and cheaper alternative. However not every available option can be mounted on the trailer, due to the restricted pay-load.

Specification

The **basic execution** consists of the following parts:

Frame with 4 hydraulic jacks, diesel-engine with hydraulic station and control panel, mast with hydraulic drill feed, hydraulic power head and/or hydraulic hammer, masthead, hydraulic catching clamp, and the carrier (either crawler or trailer).

Optionally available are:

Hydraulic pulling device, remote control for driving the crawler, hydraulic driven water swivel and the separate flush pump, the automatic dynamic penetrometer DPH (must be transported separately when the rig is trailer mounted), cable tool percussion device, push/pull casing device ¹⁾.



RSB 0/1.4 -
standard execution
- mounted on crawler-

optional

RSB 0/1.4 - vario
- adjustable crawler-
rig width : 760 - 1,020 mm

Hydr. power head BK 150
with hollow stem auger
HBS - 79 /185 -
optional:
HBS 111/205 and BK 190.

The hydr. hammer is
swivelled aside.

Rig in driving position-

In this case towing a lockable trailer with tools, accessories and further equipment.



Preparing rig transport on a lowbed trailer -

The necessary tools are mostly carried on the towing vehicle.

optional :
Rig transportation on the towing vehicle-

The tools and accessories in a lockable trailer (as shown above).



RSB 0/1.4 - "Driving position"

Standard execution
mounted on trailer.

¹⁾ not possible for a trailer mounted rig.

**Hydr. power head
BK 150 / BK 190 / BK 210
Hydr. catching clamp**

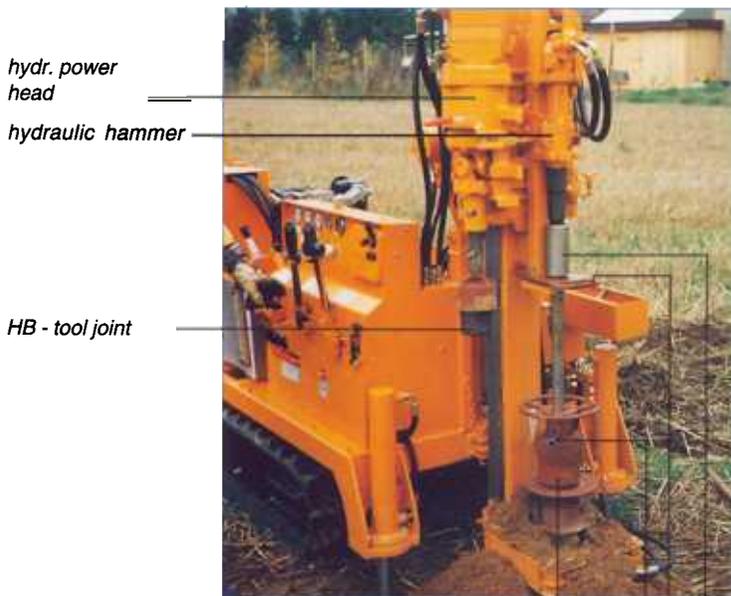
Power head rotating clockwise and anti-clockwise, manually hinged aside, tool joint thread-protection by a mechanical length compensator. Hydraulically catching clamp mounted at the bottom of the mast, swivelling sideways with interchangeable jaws.

The hydr. hammer is swivelled aside. Optional to the hydr. catching clamp a push/pull casing device is available.



Hydr. power swivel SBK 20

Power swivel for rotary coring with single- or double tube core barrel whilst flushing with clear water. Provided with thread-protector by means of a mechanical length compensator. Both hydraulic hammer and power head are swivelled aside.



hydr. power head

hydraulic hammer

HB - tool joint

Hydraulic hammer

Hydraulic hammer with adapter and hammer head on top of the rods. The catching-fork on the hammer head prevents loosening of threads during hammering and is also used as a pulling lock whilst retracting the rods.

The jaw-clamp is fully opened during hammering by means of the jaw-fork. Swivelled aside to the left the power head is shown equipped with an adapter for HBS-hollow augers.



Pumping station

Separate pumping station with high-pressure piston pump for flushing during core drilling in hard rock.

hammer head
catching-fork
jaw-fork
jaw-clamp

Hydr. pulling device

Should the rigs' normal pull up not suffice for pulling the hammer rods or sounding rods, the additional hollow jack, combined with ball- or jaw clamp, is available.



**Dynamic penetrometer
DPL / DPM / DPH (SPT)**

Provided the necessary hydraulics are installed on the standard version of the rig -"RSB 0/1.4"-, the dynamic penetrometer device is (as a unit) simply mounted to the mast by means of the winch.

Power head and hydraulic hammer are swivelled aside beforehand. The pulling of the sounding rods is performed by the pull up of the rig or aided by the hollow stem jack and ball clamp.



Percussion device

For percussion bailing or for driving drop weights for sampling, optionally a cable tool percussion device mounted on top of the mast is available.



Push/Pull casing device

For lowering and hoisting casing, the push/pull device is available mounted at the lower end of the mast. When the rig is anchored to the ground, a pull down force up to 1,500 daN is available.



Drilling tools and accessories

A typical combination of standard tools is shown (right to left) :

- Percussion coring tube (RKS open version)
- Hammer rods
O.D./I.D. 35.5 / 19 mm
with threaded nipple M 22
- Continuous flight auger
O.D. 83 mm
with 29 mm (1 1/8") hex. connection
- Jaw clamp I.D. 36 mm
- Hollow stem auger HBS 79 / 185

The "Site"

- 1 - Inclined drilling with hollow stem auger.
- 2 - Rotary coring along the railway.
- 3 - Rig with remote control.
Transport in special truck including the compl. drilling tools.
- 4 - RSB 0/1.4 ..."on site
- 5 - Monitoring wells along a motorway.



**Working with
Nordmeyer
Drilling Equipment.**

**... we are convinced that
job sites are located
anywhere.-
... our design is based
on this conviction.-**



**RSB
0/1.4**

**The "small rig"
with a huge potential.**

Nordmeyer
Maschinen- und Brunnenbohrgerätebau

Technical Data

CARRIER

crawler, with rubber tracks -
steel enforced
gross weight approx. 1,600 kg
trailer -
gross weight max. 1,300 kg

DRIVE

diesel engine, 2 cylinder,
A)
10.5 kW (14.3 HP),
B)
23.2 kW (31.6 HP).

HYDRAULIC SYSTEM

three high-pressure gear pumps
70 l. biological degradable oil

MAST - "RSB 0/1.4"-

built-in hydraulic drill feed
travel : 2,200 mm
pull up max. : 1,400 daN
pull down max. : 700 daN
speed up : 0 - 0.5 m/s
speed down : 0 - 0.4 m/s

WINCHES

type BW 300 K / BW 1100 K
pull
on first layer : 320 / 1,000 daN
cable speed : 0.4 m/s
capacity : 30 / 50 m
cable O.D. : 6 / 8 mm

HYDRAULIC HAMMERS

KRUPP, type HM 12 C / HM 60
single
stroke energy : 8 / 20 daNm
frequency : 1,350 / min
connection : O.D. 25 x 75 mm long
with collar O.D. 42 mm

HYDRAULIC POWER HEADS

type BK 150 / BK 190 / BK 210
torque : 150 / 190 / 210 daNm
speed : 0 - 80 rpm
connection : 41 mm Hex
(1 5/8")

HYDRAULIC POWER SWIVEL

type SBK 20
torque : 27 daNm
speed : 450 rpm
connection : AW pin
max. water
pressure : 12 bar clear water
water connection : R 1/2"

SEPARATE PUMPING STATION

high pressure piston pump 10 10
capacity : max. 44 l/min
pressure : 12 bar
drive : petrol engine
1.47 kW (2.0 HP)
L x W x H, approx. : 0.90 x 0.45 x 0.60 m
weight : 65 kg

HYDRAULIC CATCHING CLAMP

clamping O.D. : 205 mm
passage : 220 mm max.

HYDRAULIC PULLING DEVICE

Hollow jack Z 6958. 1
passage I.D. : 105 mm
stroke : 150 mm
pull out : 14,000 daN
(at 210 bar)

jaw clamps
clamp I.D. : 32 - 80 mm
or
ball clamps
clamp I.D. : 22 - 36 mm

DYNAMIC PENETROMETER DPL/DPM/DPH (SPT)

DIN 4094 :
drop weight : 10/30/50 kg (63.5)
drop height : 50 cm (76.2)
frequency : 15 - 30 / min
total weight : 140 kg (160 kg)

PERCUSSION MECHANISM

max. pull : 200 daN
frequency max. : 45 / min
stroke length : 300 mm

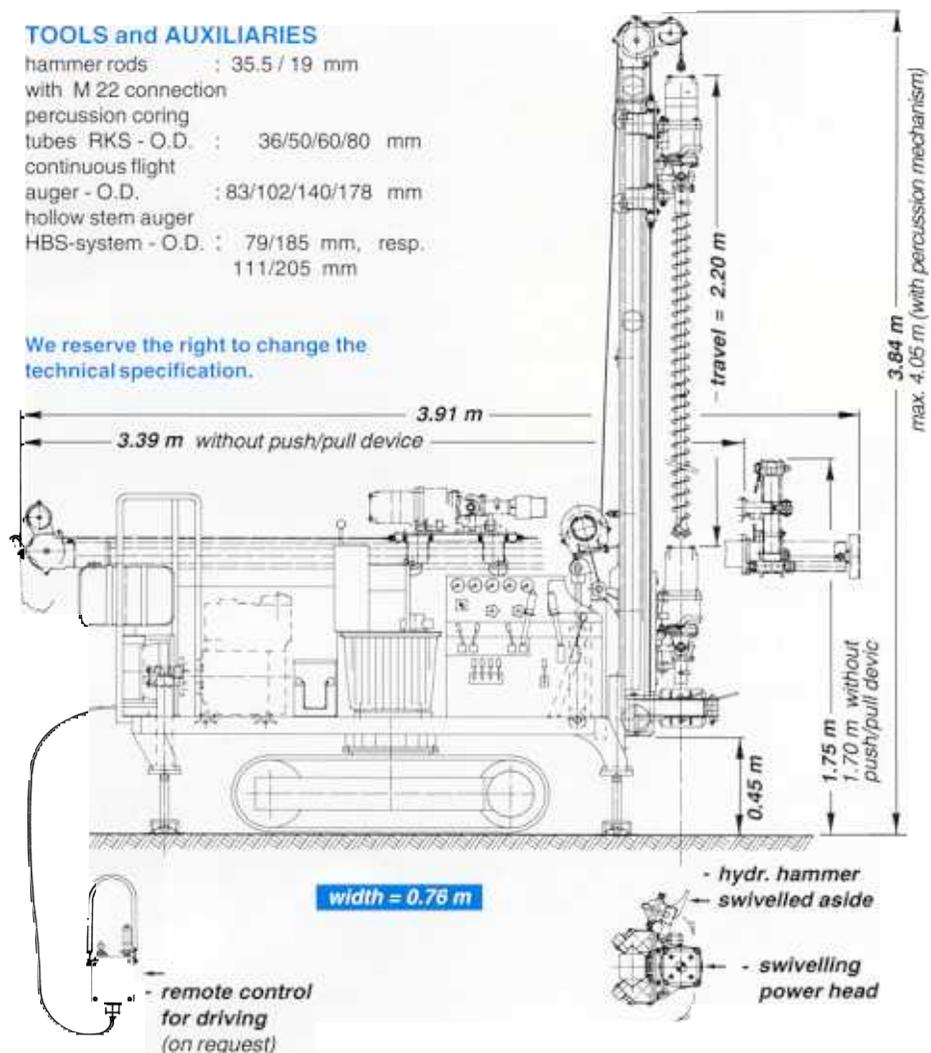
PUSH/PULL CASING DEVICES

max. casing O.D. : 205 mm
max. passage : 220 mm
max. pull down
(anchored) : 1,500 daN
max. pull up : 3,300 / 10,000 daN

TOOLS and AUXILIARIES

hammer rods : 35.5 / 19 mm
with M 22 connection
percussion coring
tubes RKS - O.D. : 36/50/60/80 mm
continuous flight
auger - O.D. : 83/102/140/178 mm
hollow stem auger
HBS-system - O.D. : 79/185 mm, resp.
111/205 mm

We reserve the right to change the
technical specification.



**Assembly
of
various parts
and units
according
to customer's
requirements.**