

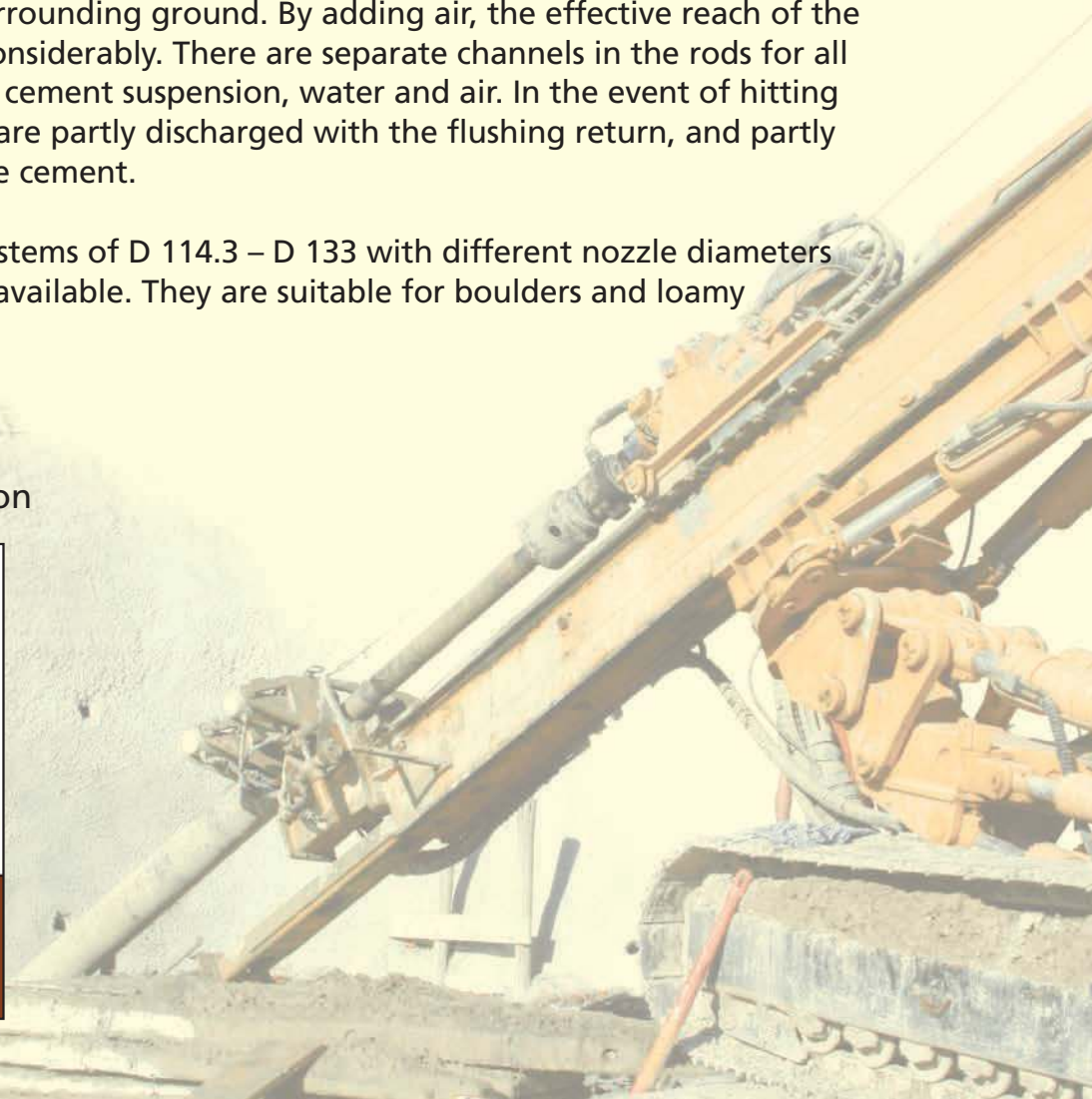
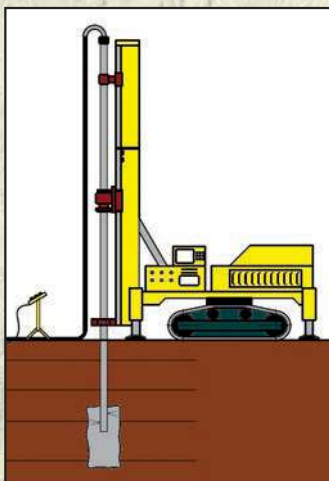
TRIPLEX Jet Grouting Drilling System D 114.3 – D 133 with rotary head and hydraulic chuck

Drilling systems like this are used to consolidate the overburden by grout injection. For this a jet pressure of 100 to 600 bar, with a flow rate of up to 400m/s, is used to cut the soil structure.

The drilling process is achieved mainly with outer flushing. The drilling tools are adapted for the extreme pressures used. Having reached the final depth the rods will be pulled up with slow pull back, allowing a jet of cement suspension or water to cut the surrounding ground. By adding air, the effective reach of the jet can be increased considerably. There are separate channels in the rods for all flushing mediums like cement suspension, water and air. In the event of hitting boulders the cuttings are partly discharged with the flushing return, and partly homogenized with the cement.

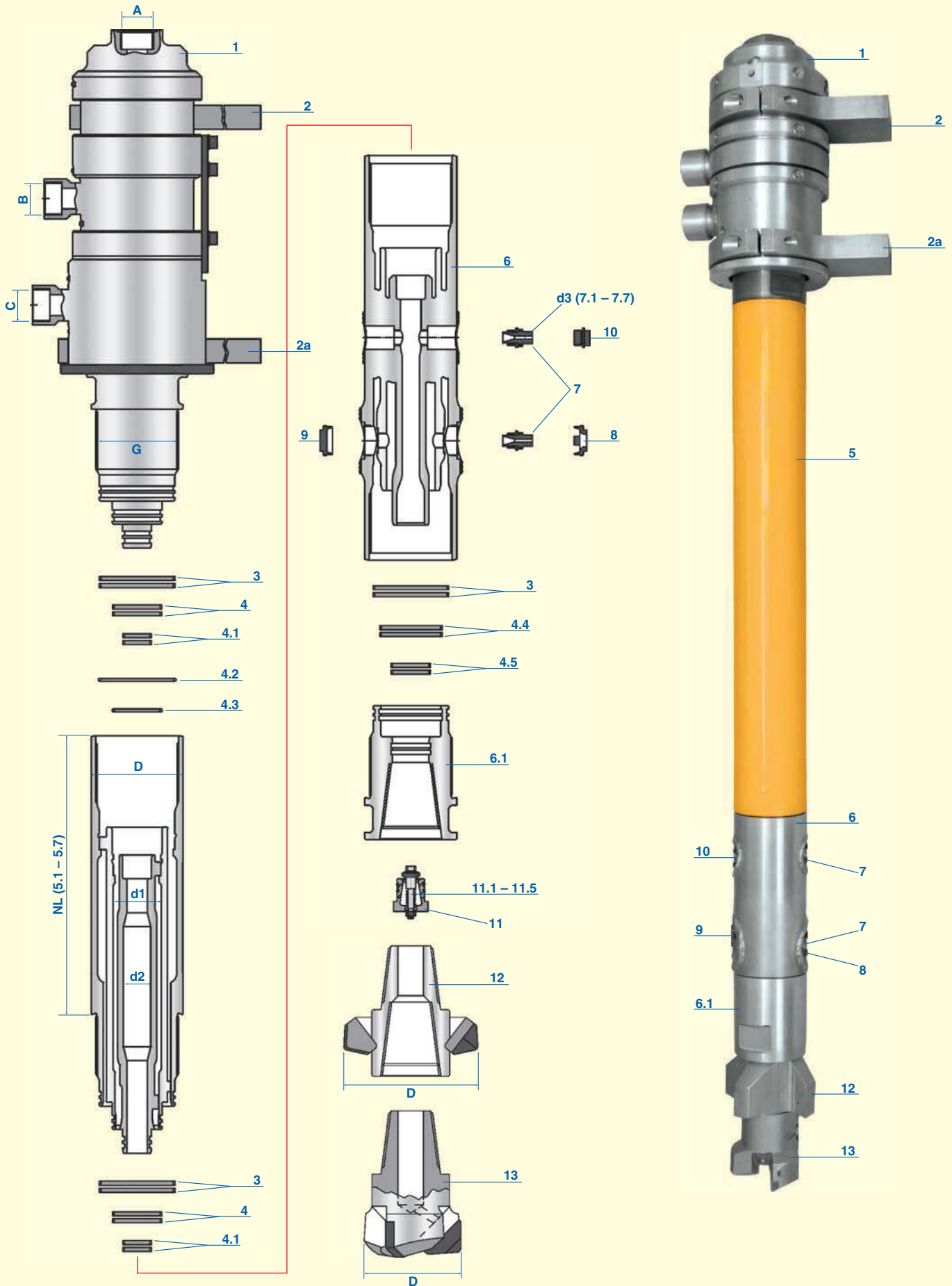
There are complete systems of D 114.3 – D 133 with different nozzle diameters and types of drill bits available. They are suitable for boulders and loamy grounds.

Sample of Application



TRIPLEX Jet Grouting Drilling System

with rotary head and hydraulic chuck



TRIPLEX Jet Grouting Drilling System D 114.3

with rotary head and hydraulic chuck

Pos.	Description
1	Triplex jet grouting flushing head D 114.3, 2 starts cyl. RHT male (G) x A = G 1 1/2" female thread x B = G 1 1/2" female thread
2	Holding blades with brackets to attach the triplex jet grouting flushing head D 114.3 to the slide of the mast of the drilling unit
3	Seals for casings D
4	Seals for inner tubes d1
4.1	Seals for inner tubes d2
4.2	Sealing ring for inner tubes d1
4.3	Sealing ring for inner tubes d2
4.4	Seals for inner tubes d3 to adapter pos. 6.1
4.5	Seals for inner tubes d4 to adapter pos. 6.1
5	Jet grouting triplex tubes D 114.3, 2 starts cyl. RHT (G) x 8.8mm wth x 63.5mm x 45.7mm (d1) x 35mm x 18mm (d2). Quality casing: high tempered steel; welding ends: high tempered steel, friction welded. Quality inner tubes: S355J2H; Plug and socket: high tempered steel.
5.1	500 mm length
5.2	1000 mm length
5.3	1500 mm length
5.4	2000 mm length
5.5	3000 mm length
5.6	4000 mm length
5.7	6000 mm length
6	Jet grouting triplex monitor D 114.3, 2 starts cyl. RHT female x 3 1/2" API Reg. RHT female, with 2 nozzle seats M 20 x 1.5mm.
6.1	Adapter D 114.3, 2 starts cyl. RHT male x 3 1/2" API Reg. female thread
7	Jet grouting nozzles with thread M 20 x 1.5mm
7.1	d1 = 3.0 mm
7.2	d1 = 3.,5 mm
7.3	d1 = 4.0 mm
7.4	d1 = 4.5 mm
7.5	d1 = 5.0 mm
7.6	d1 = 5.5 mm
7.7	d1 = 6.0 mm

Tools

Assembling tool for safety rings for inner rods

Disassembling tool for safety rings for inner rods

Accessories

Double clamp to mount between drive thread of jet grouting flushing head and triplex jet grouting rod. (to avoid the loosening of the thread during the jet grouting process)

Abbreviations

LHT = left hand thread; RHT = right hand thread; SF = spanner flat; cyl. = cylindrical thread con. = conical thread; wth = wall thickness
The following threads are on offer: right hand, left hand, cylindrical or conical. All casings can be made friction-welded or with nipples.
Please note that this production sheet shows only standard versions due to the many possible tool variations. Special designs on request.

TRIPLEX Jet Grouting Drilling System D 114.3

with rotary head and hydraulic chuck

Pos.	Description
8	Jet grouting air ring nozzle M 40 x 1.5mm
9	Sealing plug for air passage M 40 x 1.5mm
10	Sealing plug for high pressure passage M 20 x 1.5mm
11	Jet grouting automatic valve for triplex jet grouting monitor D 114.3 without spring.
11.1	Jet grouting spring blanc
11.2	Jet grouting spring green
11.3	Jet grouting spring copper
11.4	Jet grouting spring red
11.5	Jet grouting spring blue
12	Rotary bit D 114.3, 3 1/2" API Reg. male/female thread x D 180mm, 4 wings with welding bars (only with pos. 13).
13	Rotary bit D 114.3, 3 1/2" API Reg. male thread x D 130mm, 3 wings.

Tools

Assembling tool for safety rings for inner rods

Disassembling tool for safety rings for inner rods

Accessories

Double clamp to mount between drive thread of jet grouting flushing head and triplex jet grouting rod. (to avoid the loosening of the thread during the jet grouting process)

Abbreviations

LHT = left hand thread; RHT = right hand thread; SF = spanner flat; cyl. = cylindrical thread con. = conical thread; wth = wall thickness
The following threads are on offer: right hand, left hand, cylindrical or conical. All casings can be made friction-welded or with nipples.
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TRIPLEX Jet Grouting Drilling System D 133

with rotary head and hydraulic chuck

Pos.	Description
1	Triplex jet grouting flushing head D 133, 2 starts cyl. RHT male (G) x thread A = G 1 1/2" female x thread B = G 1 1/2" female.
2	Brackets with clamps to fix the triplex jet grouting flushing head D 133 to the slide plate of the feeder
3	Seals for the casing
4	Seals for the inner tubes d1
4.1	Seals for inner tubes d2
4.2	Sealing ring for inner tubes d1
4.3	Sealing ring for inner tubes d2
4.4	Seals for inner tubes d3 to adapter pos. 6.1
4.5	Seals for inner tubes d4 to adapter pos. 6.1
5	Triplex Jet Grouting casing D133, 2 starts cyl. RHT (G) x 8.8mm wth x 88.9 x 62mm (d1) x 57mm x 30mm (d2). Quality: casing: tempered steel, welding ends: high tempered steel, friction welded thread ends. Quality inner tubes: S355J2H: connections: high tempered steel.
5.1	500 mm length
5.2	1000 mm length
5.3	1500 mm length
5.4	2000 mm length
5.5	3000 mm length
5.6	4000 mm length
5.7	6000 mm length
6	Triplex jet grouting monitor D133, 2 starts cyl. RHT female x 3 1/2" API Reg female thread, with 2 nozzle seats M 22 x 1.5mm
6.1	Adapter D 133, 2 starts cyl. RHT male x 3 1/2" API Reg. female thread
7	Jet grouting nozzles with thread M 22 x 1.5mm
7.1	d1 = 3.0 mm
7.2	d1 = 3.5 mm
7.3	d1 = 4.0 mm
7.4	d1 = 4.5 mm
7.5	d1 = 5.0 mm
7.6	d1 = 5.5 mm
7.7	d1 = 6.0 mm

Tools

Assembling tool for safety rings for inner rods

Disassembling tool for safety rings for inner rods

Accessories

Double clamp to mount between drive thread of jet grouting flushing head and triplex jet grouting rod. (to avoid the loosening of the thread during the jet grouting process)

Abbreviations

LHT = left hand thread; RHT = right hand thread; SF = spanner flat; cyl. = cylindrical thread con. = conical thread; wth = wall thickness
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TRIPLEX Jet Grouting Drilling System D 133

with rotary head and hydraulic chuck

Pos.	Description
8	Jet grouting air ring nozzle M 40 x 1.5mm
9	Plug for air channel M 40 x 1.5mm
10	Plug for high pressure channel M 22 x 1.5mm
11	Jet grouting automatic valve for jet grouting triplex monitor D133, without spring
11.1	HDI-spring blanc
11.2	HDI-spring green
11.3	HDI-spring copper
11.4	HDI-spring red
11.5	HDI-spring blue
12	Casing bits D 133, 3 1/2" API Reg. male/female thread x D 200mm, 4 wings, with welding bar (only in combination with pos. 13).
13	Casing bits D 133, 3 1/2" API Reg. male thread x D 170mm, 3 wings

Tools

Assembling tool for safety rings for inner rods

Disassembling tool for safety rings for inner rods

Accessories

Double clamp to mount between drive thread of jet grouting flushing head and triplex jet grouting rod. (to avoid the loosening of the thread during the jet grouting process)

Abbreviations

LHT = left hand thread; RHT = right hand thread; SF = spanner flat; cyl. = cylindrical thread con. = conical thread; wth = wall thickness
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