SYSBOHR GMBH

Specialists for Overburden Drilling Products

Duplex Jet Grouting Systems D 76.1 – D 114.3

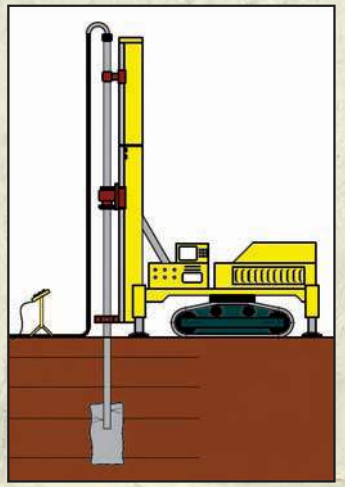
with rotary head and hydraulic chuck

These drilling systems are especially used for grout injection to improve the ground conditions by i.e. consolidation, vertical shoring or lining slicing the soil structure by means of a jet of grout at pressures of 100 to 600 bar.

This drilling process is normally carried out using a rotary head and external 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 to cut the surrounding ground. The depth of penetration of the jet can be increased by air via a separate nozzle. The borings are partly discharged with the flushing return movement, partly homogenized with cement.

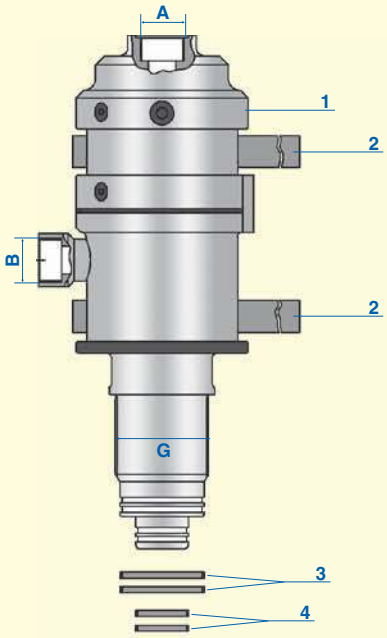
There are complete systems of D76.1 – D114.3 with different nozzle diameters and types of drill bits available. They are suitable for boulders and loamy grounds.

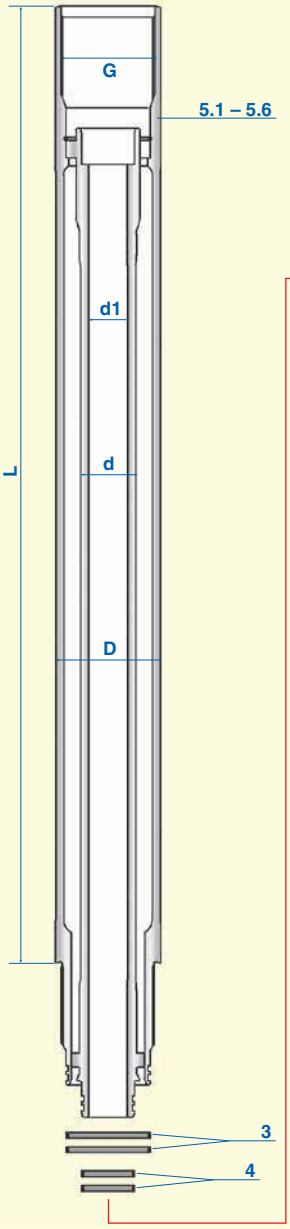
Sample of application:

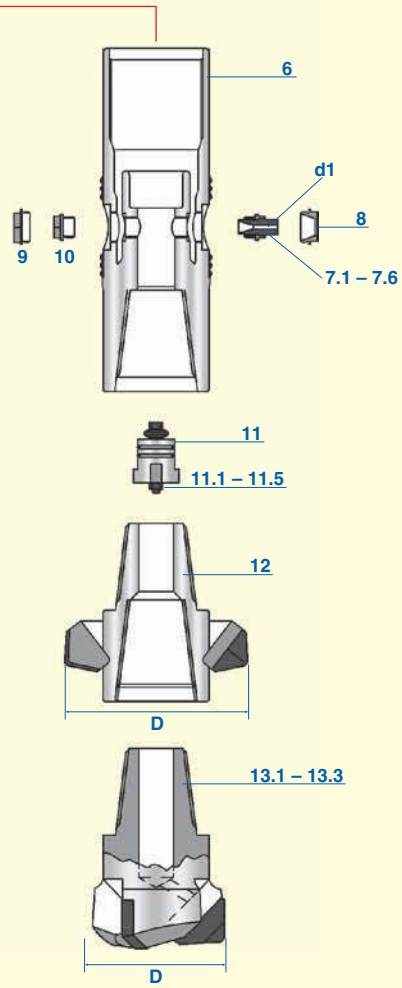


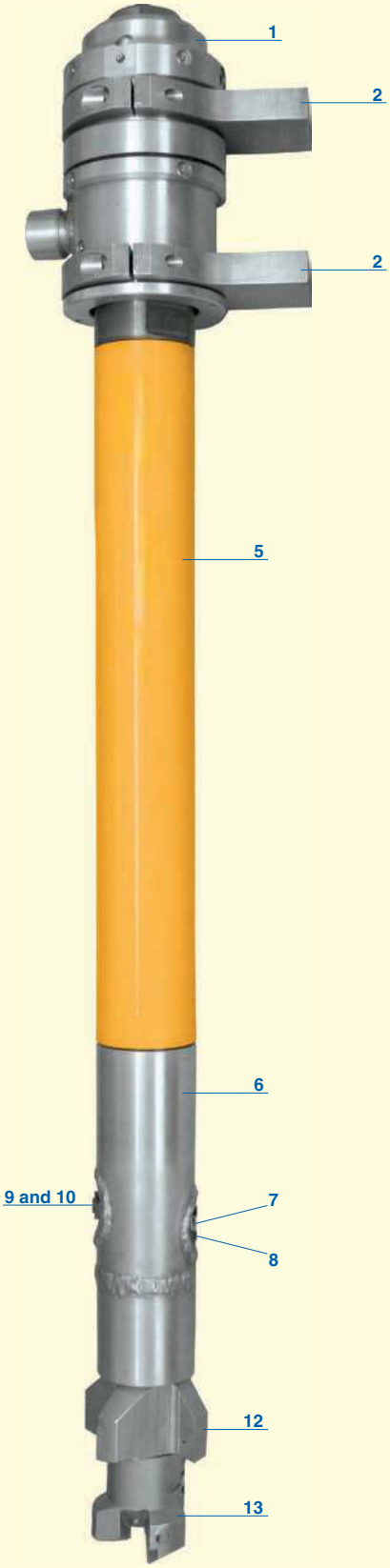
Duplex Jet Grouting Systems

with rotary head and hydraulic chuck









Duplex Jet Grouting System D 76.1

with rotary head and hydraulic chuck

Pos.	Description
1	Duplex jet grouting flushing head D 76.1, 1 start, con. RHT male (2 starts, cyl. RHT on option) x A = G 1 1/4" RHT female x B = G 1" RHT female
2	Holding blades with brackets to attach the duplex jet grouting flushing head D 76.1 to the slide at the mast of the drilling unit
3	Seals for outer rods (option for cyl. thread)
4	Seals for inner rods
5	Jet grouting duplex tubes D 76.1, 1 start, con. RHT. (2 starts, cyl. RHT on option) (G) x 8.8mm wth x d 42.4mm x 20mm (d1). Quality casing: high tempered steel; Welding ends: high tempered steel, friction-welded. Quality inner tube: 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
6	Jet grouting duplex monitor D 76.1, 1 start, con. RHT female (2 starts, cyl. RHT female on option) x 2 3/8" API Reg. RHT female, with 2 nozzle seats M 20 x 1.5mm
7	Jet grouting nozzles M 20 x 1.5mm
7.1	d1 = 2.0mm
7.2	d1 = 2.5mm
7.3	d1 = 3.0mm
7.4	d1 = 3.5mm
7.5	d1 = 4.0mm
7.6	d1 = 4.5mm
8	Jet grouting air ring nozzle M 33 x 1.5mm
9	Sealing plug for air passage M 33 x 1.5mm
10	Sealing plug for high pressure passage M 20 x 1.5mm
11	Jet grouting automatic valve for jet grouting duplex monitor D 76.1, without spring
11.1	Jet grouting spring blanc
11.2	Jet grouting spring green
11.3	Jet grouting spring orange
11.4	Jet grouting spring blue
12	Rotary bit D 76.1, 2 3/8" API Reg. RHT male/female x D 140mm, 4 wings with welding bars (only with pos. 13)
13	Rotary bit D 76.1, 2 3/8" API Reg. RHT male x D 115mm, 3 wings, plate type

Tools

Mounting tool for retaining rings

Dismounting tool for retaining rings

Accessories

Twin-bracket to fix the drive thread between jet grouting flushing head and jet grouting duplex tube

Signs & Symbols

LHT = left hand thread; RHT = right hand thread; D = outer diameter; d = inner diameter; cyl. = cylindrical; con. = conical; SF = spannerflat; L = length; wth = wall thickness; G = thread connection.
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 lot of possible tool variations. Special designs on request.

Duplex Jet Grouting System D 88.9

with rotary head and hydraulic chuck

Pos.	Description
1	Duplex jet grouting flushing head D 88.9, 1 start, con. RHT male (2 starts, cyl. RHT on option) x A = G 1 1/4" RHT female x B = G 1" RHT female
2	Holding blades with brackets to attach the duplex jet grouting flushing head D 88.9 to the slide at the mast of the drilling unit
3	Seals for outer rods (option for cyl. thread)
4	Seals for inner rods
5	Jet grouting duplex tubes D 88.9, 1 start, con. RHT. (2 starts, cyl. RHT on option) (G) x 8.8mm wth x d 57mm x 32mm (d1). Quality casing: high tempered steel; Welding ends: high tempered steel, friction-welded. Quality inner tube: 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
6	Jet grouting duplex monitor D 88.9, 1 start, con. RHT female (2 starts cyl. RHT female on option) x 2 7/8" API Reg. short version, RHT female, with 2 nozzle seats M 20 x 1.5mm
7	Jet grouting nozzles M 20 x 1.5mm
7.1	d1 = 2.0mm
7.2	d1 = 2.5mm
7.3	d1 = 3.0mm
7.4	d1 = 3.5mm
7.5	d1 = 4.0mm
7.6	d1 = 4.5mm
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 jet grouting duplex monitor D 88.9 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 88.9 x 2 7/8" API Reg. short version, RHT male/female x D 150mm, 4 wings with welding bars (only with pos. 13)
13	Rotary bit D 88.9 x 2 7/8" API Reg. short version, RHT male x D 127mm, 3 wings, plate type

Tools

Mounting tool for retaining rings

Dismounting tool for retaining rings

Accessories

Twin-bracket to fix the drive thread between jet grouting flushing head and jet grouting duplex tube

Signs & Symbols

LHT = left hand thread; RHT = right hand thread; D = outer diameter; d = inner diameter; cyl. = cylindrical; con. = conical; SF = spannerflat; L = length; wth = wall thickness; G = thread connection.
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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Duplex Jet Grouting System D 114.3

with rotary head and hydraulic chuck

Pos.	Description
1	Duplex jet grouting flushing head D 114.3, 2 starts, cyl. RHT male x A = G 1 1/2" RHT female x B = G 1 1/2" RHT female
2	Holding blades with brackets to attach the duplex jet grouting flushing head D 114.3 to the slide at the mast of the drilling unit
3	Seals for outer rods (option for cyl. thread)
4	Seals for inner rods
5	Jet grouting duplex tubes D 114.3, 2 starts, cyl. RHT (G) x 8.8mm wth x d 60.3mm x 42mm (d1). Quality casing: high tempered steel; Welding ends: high tempered steel, friction-welded. Quality inner tube: 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
6	Jet grouting duplex monitor D 114.3, 2 starts, cyl. RHT female x 3 1/2" API Reg. RHT female, with 2 nozzle seats M 22 x 1.5mm
7	Jet grouting nozzles M 22 x 1.5mm
7.1	d1 = 2.0mm
7.2	d1 = 2.5mm
7.3	d1 = 3.0mm
7.4	d1 = 3.5mm
7.5	d1 = 4.0mm
7.6	d1 = 4.5mm
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 22 x 1.5mm
11	Jet grouting automatic valve for jet grouting duplex 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 x 3 1/2" API Reg. RHT male/female x D 180mm, 4 wings with welding bars (only with pos. 13)
13	Rotary bit D 114.3 x 3 1/2" API Reg. RHT male x D 150mm, 3 wings, plate type

Tools

Mounting tool for retaining rings

Dismounting tool for retaining rings

Accessories

Twin-bracket to fix the drive thread between jet grouting flushing head and jet grouting duplex tube

Signs & Symbols

LHT = left hand thread; RHT = right hand thread; D = outer diameter; d = inner diameter; cyl. = cylindrical; con. = conical; SF = spannerflat; L = length; wth = wall thickness; G = thread connection.
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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