

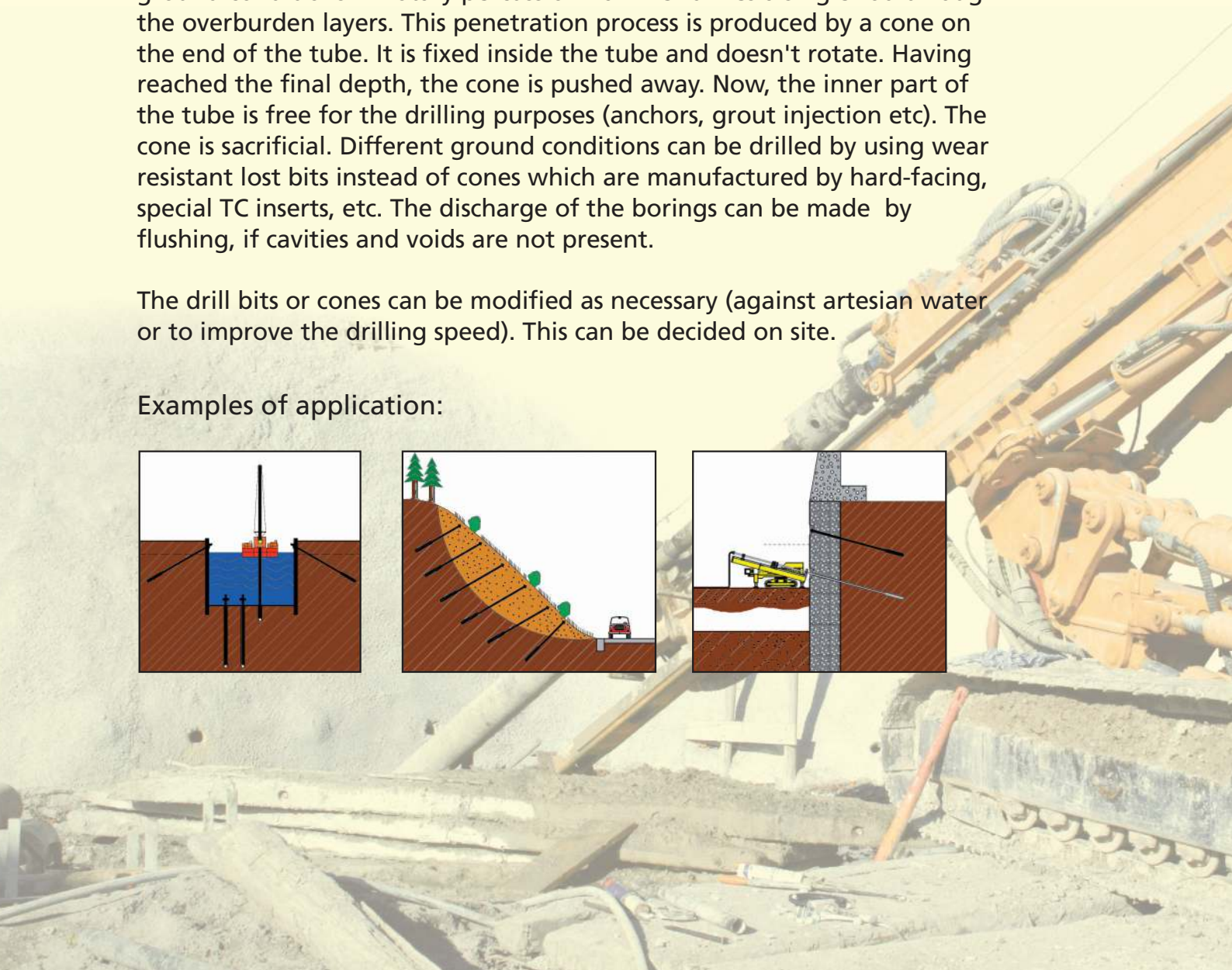
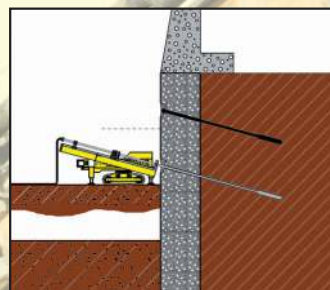
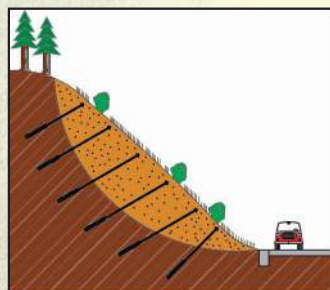
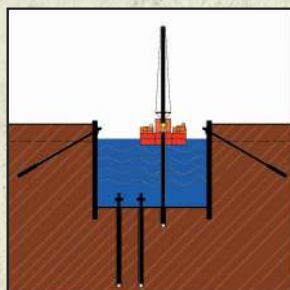
### Drive Drilling Systems D 88.9 – D 152.4 with hydraulic drifter

The name „Overburden Drilling“ results from the composition of the earth crust. The bedrock is covered with loose layers of earth consisting of sand, gravel, boulders combined with loose soil and other deposits. All these formations are grouped together under the umbrella term “Overburden”, which overlies the bedrock.

„Drive Drilling“ is another drilling system used to manage the overburden ground conditions. A rotary percussion hammer drives a single rod through the overburden layers. This penetration process is produced by a cone on the end of the tube. It is fixed inside the tube and doesn't rotate. Having reached the final depth, the cone is pushed away. Now, the inner part of the tube is free for the drilling purposes (anchors, grout injection etc). The cone is sacrificial. Different ground conditions can be drilled by using wear resistant lost bits instead of cones which are manufactured by hard-facing, special TC inserts, etc. The discharge of the borings can be made by flushing, if cavities and voids are not present.

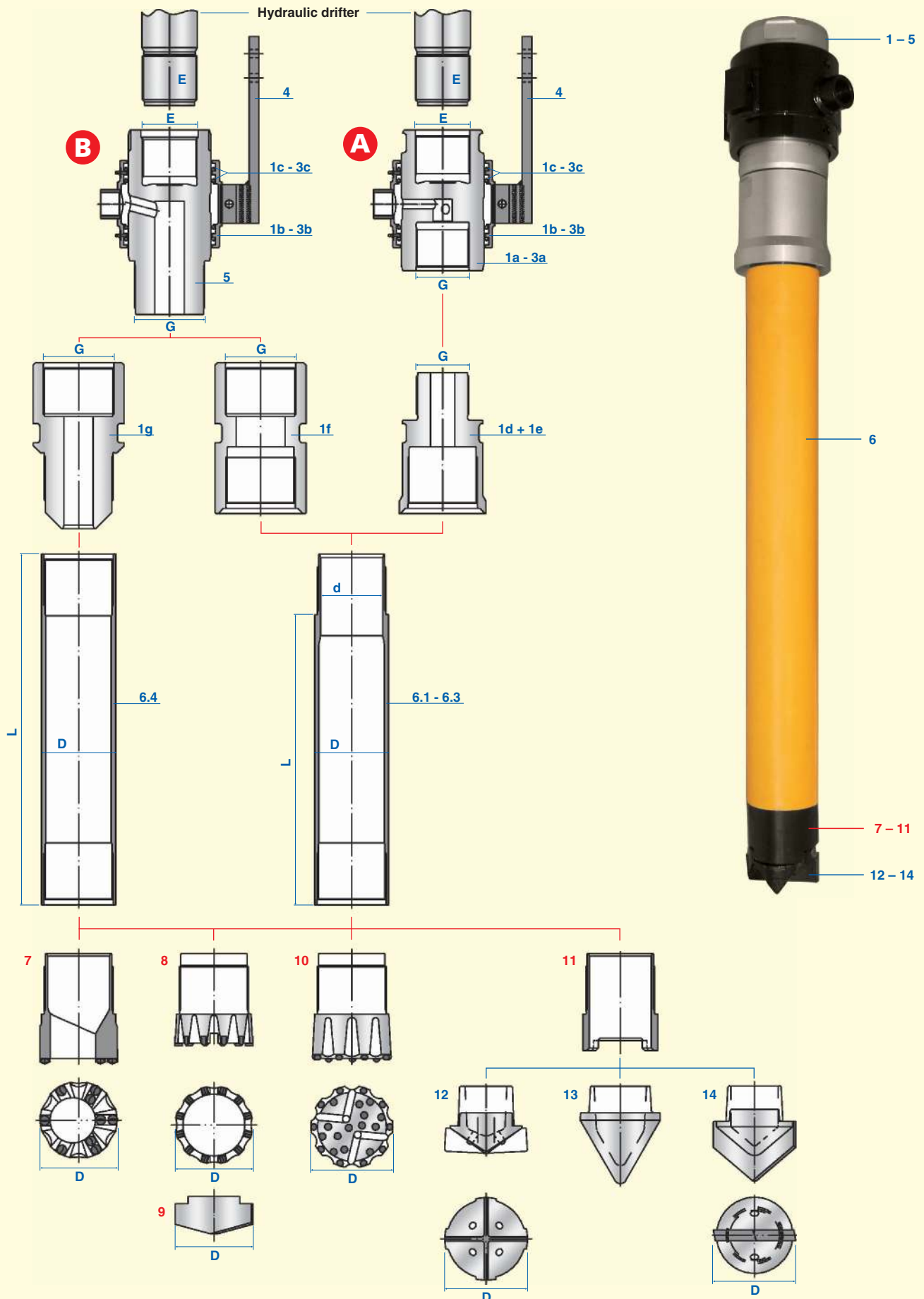
The drill bits or cones can be modified as necessary (against artesian water or to improve the drilling speed). This can be decided on site.

Examples of application:



# Drive Drilling Systems

with hydraulic drifter



# Drive Drilling System D 88.9

with hydraulic drifter

Pos.	Description
<b>FLUSHING HEAD A</b>	
1	Flushing head D 88.9, 1 start, cyl. LHT female x H 55 LHT female (E) x S 68 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 1a, 1b, 1c and 1d) <b>alternatively:</b>
2	Flushing head D 88.9, 1 start, cyl. LHT female x H 64 LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 2a, 2b, 2c and 1e) <b>alternatively:</b>
3	Flushing head D 88.9, 1 start, cyl. LHT female x H 112 (C112) LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 3a, 3b, 3c and 1e)
1a	Flushing body D 100 x H 55 LHT female (E) x S 68 LHT female (G)
2a	Flushing body D 120 x H 64 LHT female (E) x S 78 LHT female (G)
3a	Flushing body D 170 x H 112 (C 112) LHT female (E) x S 78 LHT female (G)
1b	Flushing ring D 100 x connection G 1 1/4" female
2b	Flushing ring D 120 x connection G 1 1/4" female
3b	Flushing ring D 170 x connection G 1 1/4" female
1c	Seal D 100
2c	Seal D 120
3c	Seal D 170
1d	Adaptor D 88.9, 1 start, cyl. LHT female x S 68 LHT male (G)
1e	Adaptor D 88.9, 1 start, cyl. LHT female x S 78 LHT male (G)
4	Flushing ring holder suitable for hydraulic drifter (indicated with order)
<b>FLUSHING HEAD B (alternatively to pos. 1-3)</b>	
5	Flushing body D 170 x H 112 (C 112) LHT female (E) x D 152.4, 2 starts, cyl. LHT male (G)
1f	Adaptor D 88.9, 1 start, cyl. LHT female x D 152.4, 2 starts, cyl. LHT female (G)
1g	Adaptor D 88.9, 1 start, cyl. LHT male x D 152.4, 2 starts, cyl. LHT female (G)
6	Rotary percussion tube D 88.9, 1 start, cyl. LHT x 8.8mm wth x 64.5mm (d), of high tempered steel quality, only male side friction welded, without spanner flats
6.1	3000 mm length
6.2	2000 mm length
6.3	1000 mm length
6.4	900 mm length, both sides female, starting tube using part pos. 1f
7	Casing bit D 88.9, 1 start, cyl. LHT male x D 100mm, button type and excentric hole
8	Casing bit D 88.9, 1 start, cyl. LHT male x D 100mm, button type, grooves for blade
9	Lost blade D 100mm x 15mm, hard faced
10	Percussion bit D 88.9, 1 start, cyl. LHT x D 100mm, button type, flushing holes
11	Casing shoe D 88.9, 1 start, cyl. LHT male x radial groove
12	Lost bit D 88.9 x D 105mm x radial groove x cross plate, flushing holes
13	Lost point D 88.9 x radial groove
14	Lost point D 88.9 x radial groove x D 105mm x cross plate, flushing holes

## Tools

Fishing tap D 88.9, cyl. LHT, male  
Fishing bell D 88.9, cyl. LHT, male

## Accessories

Grouting cap D 88.9, 1 start, cyl. LHT, female x G 1 1/4" connection  
Grouting nipple D 88.9, 1 start, cyl. LHT, male x G 1 1/4" connection

## 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 many possible tool variations. Special designs on request.

# Drive Drilling System D 101,6

with hydraulic drifter

Pos.	Description
<b>FLUSHING HEAD A</b>	
1	Flushing head D 101.6, 3 starts, cyl. LHT female x H 55 LHT female (E) x S 68 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 1a, 1b, 1c and 1d) <b>alternatively:</b>
2	Flushing head D 101.6, 3 starts, cyl. LHT female x H 64 LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 2a, 2b, 2c and 1e) <b>alternatively:</b>
3	Flushing head D 101.6, 3 starts, cyl. LHT female x H 112 (C 112) LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 3a, 3b, 3c and 1e)
1a	Flushing body D 100 x H 55 LHT female (E) x S 68 LHT female (G)
2a	Flushing body D 120 x H 64 LHT female (E) x S 78 LHT female (G)
3a	Flushing body D 170 x H 112 (C 112) LHT female (E) x S 78 LHT female (G)
1b	Flushing ring D 100 x connection G 1 1/4" female
2b	Flushing ring D 120 x connection G 1 1/4" female
3b	Flushing ring D 170 x connection G 1 1/4" female
1c	Seal D 100
2c	Seal D 120
3c	Seal D 170
1d	Adaptor D 101.6, 3 starts, cyl. LHT female x S 68 LHT male (G)
1e	Adaptor D 101.6, 3 starts, cyl. LHT female x S 78 LHT male (G)
4	Flushing ring holder suitable for hydraulic drifter (indicated with order)
<b>FLUSHING HEAD B (alternatively to pos. 1-3)</b>	
5	Flushing body D 170 x H 112 (C 112) LHT female (E) x D 152.4, 2 starts, cyl. LHT male (G)
1f	Adaptor D 101.6, 3 starts, cyl. LHT female x D 152.4, 2 starts, cyl. LHT female (G)
1g	Adaptor D 101.6, 3 starts, cyl. LHT male x D 152.4, 2 starts, cyl. LHT female (G)
6	Rotary percussion tube D 101.6, 3 starts, cyl. LHT x 10mm wth x 75mm (d), in high tempered steel quality, only male side friction welded, without spanner flats
6.1	3000 mm length
6.2	2000 mm length
6.3	1000 mm length
6.4	900 mm length, both sides female, used as starting tube with part pos. 1f
7	Casing bit D 101.6, 3 starts, cyl. LHT male x D 107mm, button type and excentric hole
8	Casing bit D 101.6, 3 starts, cyl. LHT male x D 107mm, button type, grooves for blade
9	Lost blade D 115mm x 15mm, hard faced
10	Percussion bit D 101.6, 3 starts, cyl. LHT x D 107mm, button type, flushing holes
11	Casing shoe D 101.6, 1 start, cyl. LHT male x radial groove
12	Lost percussion bit D 101,6 x D 120mm x radial groove x cross plate, flushing holes
13	Lost point D 101.6 x radial groove
14	Lost point D 101.6 x radial groove x D 120mm x cross plate, flushing holes

## Tools

Fishing tap D 101.6, cyl. LHT, male  
Fishing bell D 101.6, cyl. LHT, male

## Accessories

Grouting cap D 101.6, 3 start, cyl. LHT, female x G 1 1/4" connection  
Grouting nipple D 101.6, 3 start, cyl. LHT, male x G 1 1/4" connection

## 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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# Drive Drilling System D 114,3

with hydraulic drifter

Pos.	Description
<b>FLUSHING HEAD A</b>	
1	Flushing head D 114.3, 3 starts, cyl. LHT female x H 55 LHT female (E) x S 68 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 1a, 1b, 1c and 1d) <b>alternatively:</b>
2	Flushing head D 114.3, 3 starts, cyl. LHT female x H 64 LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 2a, 2b, 2c and 1e) <b>alternatively:</b>
3	Flushing head D 114.3, 3 starts, cyl. LHT female x H 112 (C 112) LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/4" female (component parts see pos. 3a, 3b, 3c and 1e)
1a	Flushing body D 100 x H 55 LHT female (E) x S 68 LHT female (G)
2a	Flushing body D 120 x H 64 LHT female (E) x S 78 LHT female (G)
3a	Flushing body D 170 x H 112 (C 112) LHT female (E) x S 78 LHT female (G)
1b	Flushing ring D 100 x connection G 1 1/4" female
2b	Flushing ring D 120 x connection G 1 1/4" female
3b	Flushing ring D 170 x connection G 1 1/4" female
1c	Seal D 100
2c	Seal D 120
3c	Seal D 170
1d	Adaptor D 114.3, 3 starts, cyl. LHT female x S 68 LHT male (G)
1e	Adaptor D 114.3, 3 starts, cyl. LHT female x S 78 LHT male (G)
4	Flushing ring holder suitable for hydraulic drifter (indicated with order)
<b>FLUSHING HEAD B (alternatively to pos. 1-3)</b>	
5	Flushing body D 170 x H 112 (C 112) LHT female (E) x D 152.4, 2 starts, cyl. LHT male (G)
1f	Adaptor D 114.3, 3 starts, cyl. LHT female x D 152.4, 2 starts, cyl. LHT female (G)
1g	Adaptor D 114.3, 3 starts, cyl. LHT male x D 152.4, 2 starts, cyl. LHT female (G)
6	Rotary percussion tube D 114.3, 3 starts, cyl. LHT x 8.8mm Wd x 88mm (d), in high tempered steel quality, only male side friction welded, without spanner flats
6.1	3000 mm length
6.2	2000 mm length
6.3	1000 mm length
6.4	900 mm length, both sides female, used as starting tube with part pos. 1f.
7	Casing bit D 114.3, 3 starts, cyl. LHT male x D 120mm, button type and excentric hole
8	Casing bit D 114.3, 3 starts, cyl. LHT male x D 120mm, button type, grooves for blade
9	Lost blade D 125mm x 15mm, hard faced
10	Percussion bit D 114.3, 3 starts, cyl. LHT male x D 120mm, button type, flushing holes
11	Casing shoe D 114.3, 3 starts, cyl. LHT male x radial groove
12	Lost percussion bit D 114.3, x D 125mm x radial groove x cross plate, flushing holes
13	Lost point D 114.3 x radial groove
14	Lost point D 114.3 x radial groove x D 125mm x cross plate, flushing holes

## Tools

Fishing tap D 114.3, cyl. LHT, male  
Fishing bell D 114.3, cyl. LHT, male

## Accessories

Grouting cap D 114.3, 3 starts, cyl. LHT, female x G 1 1/4" connection  
Grouting nipple D 114.3, 3 starts, cyl. LHT, male x G 1 1/4" connection

## 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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# Drive Drilling System D 133

with hydraulic drifter

Pos.	Description
<b>FLUSHING HEAD A</b>	
1	Flushing head D 133, 3 starts, cyl. LHT female x H 55 LHT female (E) x S 68 (G), complete with flushing ring, connection G 1 1/2" female (component parts see pos. 1a, 1b, 1c and 1d)
<b>alternatively:</b>	
2	Flushing head D 133, 3 starts, cyl. LHT female x H 64 LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/2" female (component parts see pos. 2a, 2b, 2c and 1e)
<b>alternatively:</b>	
3	Flushing head D 133, 3 starts, cyl. LHT female x H 112 (C 112) LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/2" female (component parts see pos. 3a, 3b, 3c and 1e)
1a	Flushing body D 100 x H 55 LHT female (E) x S 68 LHT female (G)
2a	Flushing body D 120 x H 64 LHT female (E) x S 78 LHT female (G)
3a	Flushing body D 170 x H 112 (C 112) LHT female (E) x S 78 LHT female (G)
1b	Flushing ring D 100 x connection G 1 1/2" female
2b	Flushing ring D 120 x connection G 1 1/2" female
3b	Flushing ring D 170 x connection G 1 1/2" female
1c	Seal D 100
2c	Seal D 120
3c	Seal D 170
1d	Adaptor D 133, 3 starts, cyl. LHT female x S 68 LHT male (G)
1e	Adaptor D 133, 3 starts, cyl. LHT female x S 78 LHT male (G)
4	Flushing ring holder suitable for hydraulic drifter (indicated with order)
<b>FLUSHING HEAD B (alternatively to pos. 1-3)</b>	
5	Flushing body D 170 x H 112 (C 112) LHT female (E) x D 152.4, 2 starts, cyl. LHT male (G)
1f	Adaptor D 133, 3 starts, cyl. LHT female x D 152.4, 2 starts, cyl. LHT female (G)
1g	Adaptor D 133, 3 starts, cyl. LHT male x D 152.4, 2 starts, cyl. LHT female (G)
6	Rotary percussion tube D 133, 3 starts, cyl. LHT x 8.8mm wth x 108mm (d), in high tempered steel quality, only male side friction welded, without spanner flats
6.1	3000 mm length
6.2	2000 mm length
6.3	1000 mm length
6.4	900 mm length, both sides female, used as starting tube with part pos. 1f
7	Casing bit D 133, 3 starts, cyl. LHT male x D 140mm, button type and excentric hole
8	Casing bit D 133, 3 starts, cyl. LHT male x D 140mm, button type, grooves for blade
9	Lost blade D 145mm x 15mm, hard faced
10	Percussion bit D 133, 1 start, cyl. LHT x D140mm, button type, flushing holes
11	Casing shoe D 133, 3 starts, cyl. LHT male x radial groove
12	Lost percussion bit D 133 x D 145mm x radial groove x cross plate, flushing holes
13	Lost point D 133 x radial groove
14	Lost point D 133 x radial groove x D 145mm x cross plate, flushing holes

## Tools

Fishing tap D 133, 3 starts, cyl. LHT, male  
Fishing bell D 133, 3 starts, cyl. LHT male

## Accessories

Grouting cap D 133, 3 starts, cyl. LHT, female x G 1 1/4" connection  
Grouting nipple D 133, 3 starts, cyl. LHT, male x G 1 1/4" connection

## 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 many possible tool variations. Special designs on request.

# Drive Drilling System D 152,4

with hydraulic drifter

Pos.	Description
<b>FLUSHING HEAD A</b>	
1	Flushing head D 152.4, 3 starts, cyl. LHT female x H 64 LHT female (E) x S 78 (G), complete with flushing ring, connection G 1 1/2" female (component parts see pos. 2a, 2b, 2c and 1d)
<b>alternatively:</b>	
2	Flushing head D 152.4, 3 starts, cyl. LHT female x H 112 LHT female (E) x S 108 (G), complete with flushing ring, connection G 1 1/2" female (component parts see pos. 3a, 3b, 3c and 1e)
2a	Flushing body D 120 x H 64 LHT female (E) x S 78 LHT female (G)
3a	Flushing body D 170 x H 112 (C 112) LHT female (E) x S 108 LHT female (G)
2b	Flushing ring D 120 x connection G 1 1/2" female
3b	Flushing ring D 170 x connection G 1 1/2" female
2c	Seal D 120
3c	Seal D 170
1d	Adaptor D 152.4, 3 starts, cyl. LHT female x S 78 LHT male (G)
1e	Adaptor D 152.4, 3 starts, cyl. LHT female x S 108 LHT male (G)
4	Flushing ring holder suitable for hydraulic drifter (indicated with order)
<b>FLUSHING HEAD B (alternatively to pos. 1-2)</b>	
5	Flushing body D 170 x H 112 (C 112) LHT female (E) x D 152.4, 2 starts, cyl. LHT male (G)
1f	Adaptor D 152.4, 3 starts, cyl. LHT female x D 152.4, 2 starts, cyl. LHT female (G)
1g	Adaptor D 152.4, 3 starts, cyl. LHT male x D 152.4, 2 starts, cyl. LHT female (G)
6	Rotary percussion tube D 152.4, 3 starts, cyl. LHT x 8.8mm wth x 128mm (d), in high tempered steel quality, only male side friction welded, without spanner flats
6.1	3000 mm length
6.2	2000 mm length
6.3	1000 mm length
6.4	900 mm length, both sides female, used as starting tube with part pos. 1f.
7	Casing bit D 152.4, 3 starts, cyl. LHT male x D 160mm, button type and excentric hole
8	Casing bit D 152.4, 3 starts, cyl. LHT male x D 160mm, button type, grooves for blade
9	Lost blade D 165mm x 15mm, with button type
10	Percussion bit D 152.4, 3 starts, cyl. LHT x D160mm, button type, flushing holes
11	Casing shoe D 152.4, 3 starts, cyl. LHT male x radial groove
12	Lost percussion bit D 152.4 x D 165mm x radial groove x cross plate, flushing holes
13	Lost point D 152.4 x radial groove
14	Lost point D 154.4 x radial groove x D 165mm x cross plate, flushing holes

## Tools

Fishing tap D 152.4, 3 starts, cyl. LHT, male  
Fishing bell D 152.4, 3 starts, cyl. LHT male

## Accessories

Grouting cap D 152.4, 3 starts, cyl. LHT, female x G 1 1/2" connection  
Grouting nipple D 152.4, 3 starts, cyl. LHT, male x G 1 1/2" connection

## 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 many possible tool variations. Special designs on request.