

STAREX®

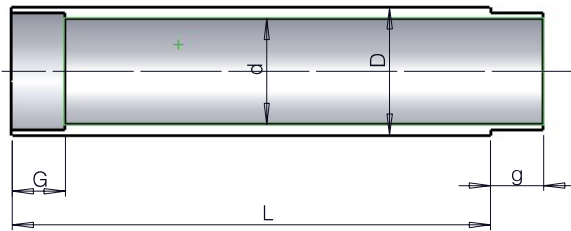
OVERBURDEN DRILLING

The STAREX® is an overburden drilling system enabling simultaneous drilling and casing in different types of formations.

This system is made up of a guide, a reamer and a pilot bit. It is used to drill a hole slightly larger than the external diameter of the casing. This enables the casing tube to follow the pilot bit down the hole without rotation.

The STAREX® series 76 and 90 casings are designed for simultaneous drilling and casing operated with top hammer. In the case of a DTH hammer-operated drilling, series 90 to 240 are to be used. On reaching the target depth, reverse rotation is applied which allows the eccentric reamer to turn in, thus reduced to its smallest diameter. It is then possible to pull up the drill string and leave the casing in place in the soil. Drilling can also continue in the available diameter at the foot of the casing.

STAREX® CASINGS DIMENSIONS



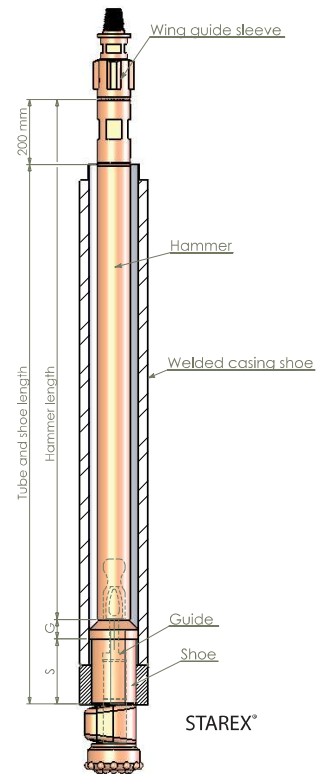
Starex® casing types	D (mm)	Wall Thickness (mm)	ID (mm)	Thread	g
TH 76	88,9	5,5	77,8	Right	60 / 70
TH/TDH 90	114,3	6,35	101,5	TH Right / DTH Left	60 / 70
DTH 115	139,7	6,35	127,0	Left	60 / 70
DTH 140	173,0	8,0	157,0	Left	60 / 70
DTH 165	193,7	6,6	180,5	Left	60 / 70
DTH 190	219,0	7,0	205,0	Left	70
DTH 240	285,0	12,0	261,0	Left	120

STAREX® TECHNICAL SPECIFICATIONS

Starex® types	Ø pilot (mm)	Ø reamer (mm)	Connection thread	DTH hammer*	Suitable drill rods
TH 76	70	96	R 38 female	-	Rod R38
TH 90	90	123	R 38 female	-	Rod R38
DTH 90	90	123	DHD 3.5	3" – DHD 3.5	76 / 89
DTH 115	115	152	COP 44/ DHD 340	4" – COP 44 / DHD 340	89
DTH 140	140	181	DHD 350	5" – DHD 350	114
DTH 165	165	209	SD6	6" – SD6	114
DTH 190	190	237	SD6	6" – SD6	114
DTH 240	240	306,5	SD8	8" – SD8	114

*Adaptable on all our STAREX® tools

FRENCH MANUFACTURING



SHOE WELDED CASING LENGTH DEFINITION:
 $LENGTH (LTS) = S + G + LM - 200 \text{ MM}$

S = Shoe total length (depending on model used)
 G = Guide skirt length (manufacturer specifications)
 LM = Hammer length (manufacturer specifications)

A COMPLETE STAREX® EQUIPMENT IS COMPOSED OF:

- A discharge head allowing cuttings to flush out (Except TH Starex® 90)
- A welded casing shoe at the beginning. (available in length 1m, 2m or 3 meters, depending of the model)
- Casings with right hand thread for the TH method in ø76 and 90 mm and left hand thread for the DTH method generally, ø90 to 240 mm (available in 1m, 1,5m, 2m et 3m)
- A wing guide sleeve (option) stabilizing the drill string.
- A STAREX® composed of a guide, a reamer and a pilot bit.
- A suitable DTH (for the DTH method)
- A drill string with suitable type and diameter (depending on the method chosen)
- An uncasing head to retrieve
- Eventually a coupling adaptor



STAREX® 76 AND 90 TOP HAMMER

Casing and bit	Starex® 76 OD 88,9 / ID 77,8	Starex® 90 OD 114,3 / ID 101,5
Casing 1,22 m length	H4 010007610	H4 0100905
Welded casing shoe	H4 01000767	H4 0100906
Spare shoe		H4 0100907
Driving head FxR R38	H4 01000769	-
Discharge head	H4 01000765	-
Adaptation sleeve head	H4 010007611	-
Wing guide sleeve	H4 01000770	H4 01000771
Brace	H4 01000764	-
Set of 3 washers	H4 01000768	-
Uncasing head	H4 01000766	H4 0100904
Compleat bit (guide, reamer, pilot bit)	H4 0100076	H4 010090
Guide	H4 01000761	H4 0100901
Reamer	H4 01000762	H4 0100902
Pilot bit	H4 01000763	H4 0100903

Other casing lengths, please consult us

see p.89 For drillpipes, please see rotary percussion drillpipes R38.



STAREX® 90 TO 240 DOWN THE HOLE HAMMER

Casing and bit	Starex® 90 OD 114,3 ID 101,5	Starex® 115 OD 139,7 ID 127,0	Starex® 140 OD 173,0 ID 157,0	Starex® 165 OD 193,7 ID 180,5	Starex® 190 OD 219,0 ID 205,0	Starex® 240 OD 285,0 ID 261,0
Casing 1m length	H4 01009008	H4 01001156	H4 01001406	H4 01001656	H4 01001906	H4 01002406
Welded casing shoe	H4 01000905	H4 01001155	H4 01001405	H4 01001655	H4 01001905	H4 01002405
1 m length						
Spare shoe	H4 01000904	H4 01001154	H4 01001404	H4 010016514	H4 01001904	H4 01002404
Discharge head	H4 010009010	H4 01001157	H4 010014012	H4 010016512	H4 010019012	H4 010024012
Uncasing head	H4 010009011	H4 01001158	H4 010014013	H4 010016513	H4 010019013	H4 010024013
Complete bit (guide, reamer, pilot bit)	H4 0100090	H4 0100115	H4 0100140	H4 0100165	H4 0100190	H4 0100240
Guide	H4 01000901	H4 01001151	H4 01001401	H4 01001651	H4 01001901	H4 01002402
Reamer	H4 01000903	H4 01001152	H4 01001402	H4 01001652	H4 01001902	H4 01002401
Pilot bit	H4 01000902	H4 01001153	H4 01001403	H4 01001653	H4 01001903	H4 01002403
Kit with balls and pins	H4 0100908	H4 0100909	H4 0100910	H4 0100911	H4 0100912	H4 0100913

Other tube lengths, please consult us

see p.96 For drillpipes, please see friction welded drillpipes