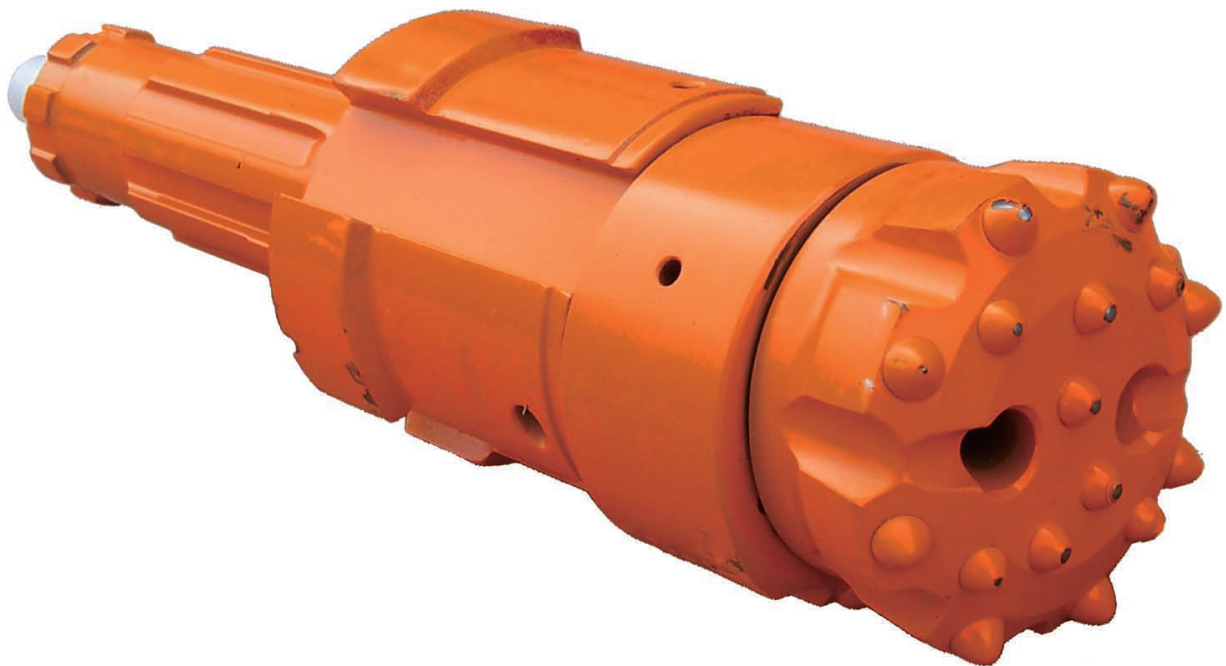


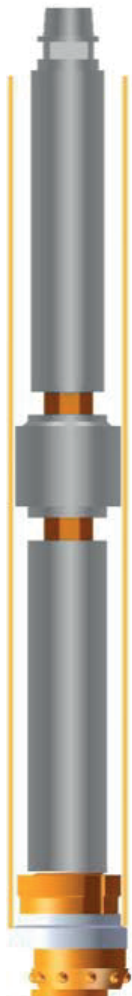
TECHMASH
SERVICE Overburden drilling systems



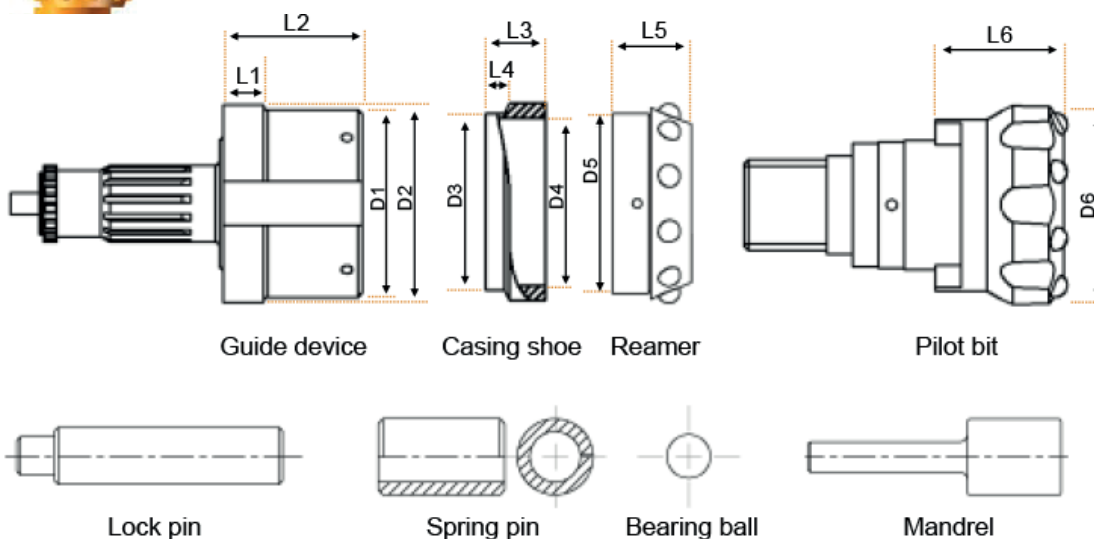
Overburden drilling system

OD90

Component parts



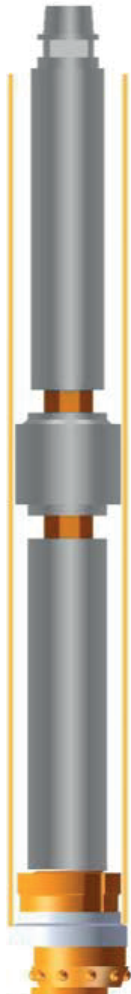
Ref	Item	Description
1	Casing tube	Maximum O.D: 115mm Minimum O.D: 105mm
2	Drill pipe	Connection thread: API 2 3/8" O.D: 76mm Wrench flat: 65mm
3	Guide sleeve	Effective length: 225mm
4	DTH Hammer	HD35, COP34, SD3, IR3.5 MISSION30, QL30
5	Casing shoe	L3=80mm, L4=55mm D3=101.7mm, D4=93mm
6	Guide device	L1=38mm, L2=138mm D1=92mm, D2=100mm
7	Reamer	D5=91mm, L5=70mm Reamer has 4×12 buttons
8	Pilot bit	D6=90mm, L6=59mm Gauge button: 8×φ12 Face button: 5×φ10



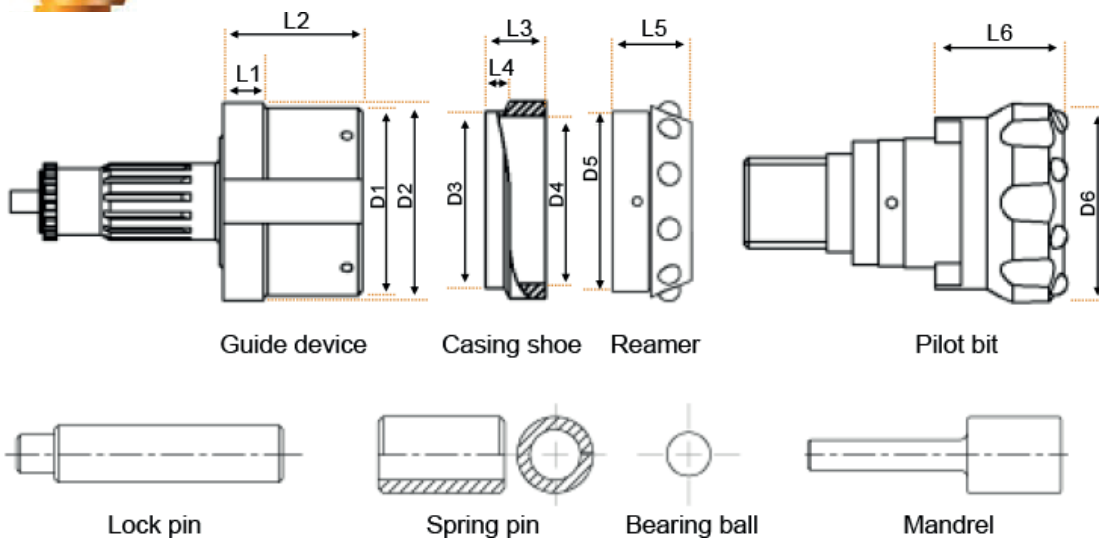
Overburden drilling system

OD115

Component parts



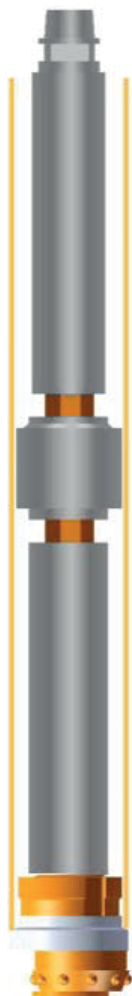
Ref	Item	Description
1	Casing tube	Maximum O.D: 142mm Minimum O.D: 128mm
2	Drill pipe	Connection thread: API 2 3/8" O.D: 76mm Wrench flat: 65mm
3	Guide sleeve	Effective length: 225mm
4	DTH Hammer	HD45, COP44, SD4, DHD340A MISSION30, QL30
5	Casing shoe	L3=76mm, L4=50mm D3=127mm, D4=116mm
6	Guide device	L1=48mm, L2=136mm D1=115mm, D2=126mm D5=114mm, L5=89mm
7	Reamer	Reamer Diameter: 152mm Reamer has 5×14 buttons D6=114mm, L6=89mm
8	Pilot bit	Gauge button: 8×φ14 Face button: 6×φ12



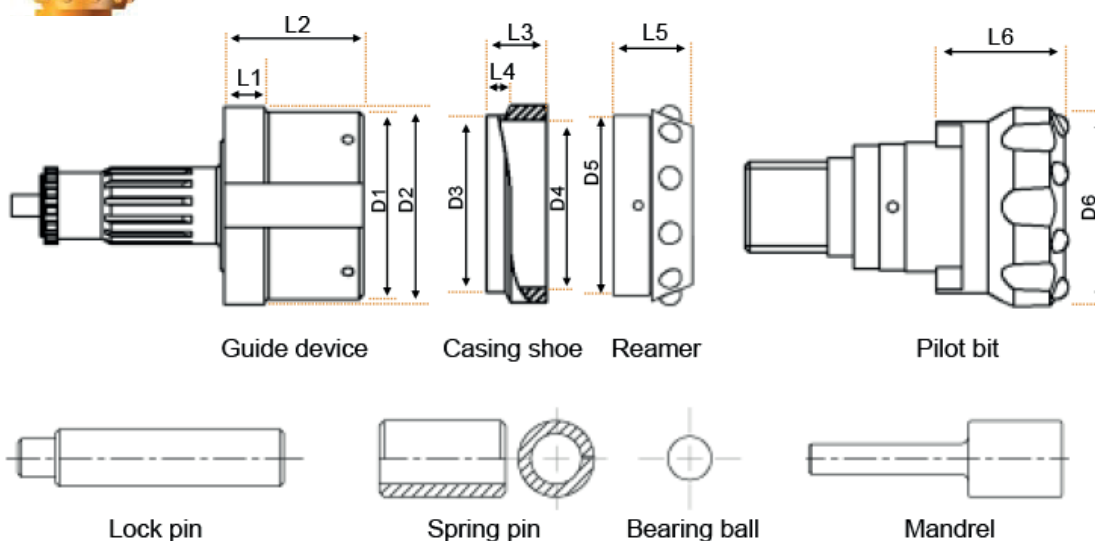
Overburden drilling system

OD140

Component parts

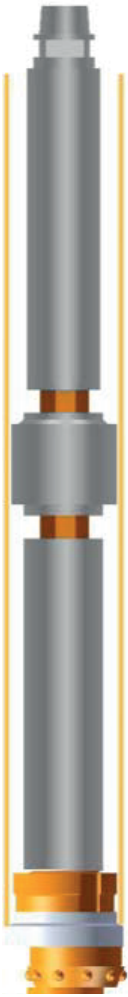


Ref	Item	Description
1	Casing tube	Maximum O.D: 171mm Minimum O.D: 155.6mm
2	Drill pipe	Connection thread: API 2 3/8" O.D: 89mm Wrench flat: 65mm
3	Guide sleeve	Effective length: 225mm
4	DTH Hammer	HD55, COP54, SD4, SD5 DHD350R, MISSION50, QL50
5	Casing shoe	L3=90mm, L4=63mm D3=155.3mm, D4=141mm
6	Guide device	L1=48mm, L2=136mm D1=115mm, D2=126mm D5=138mm, L5=70mm
7	Reamer	Reamer Diameter: 185mm Reamer has 7×14 buttons
8	Pilot bit	D6=138mm, L6=66mm Gauge button: 8×φ16 Face button: 8×φ14



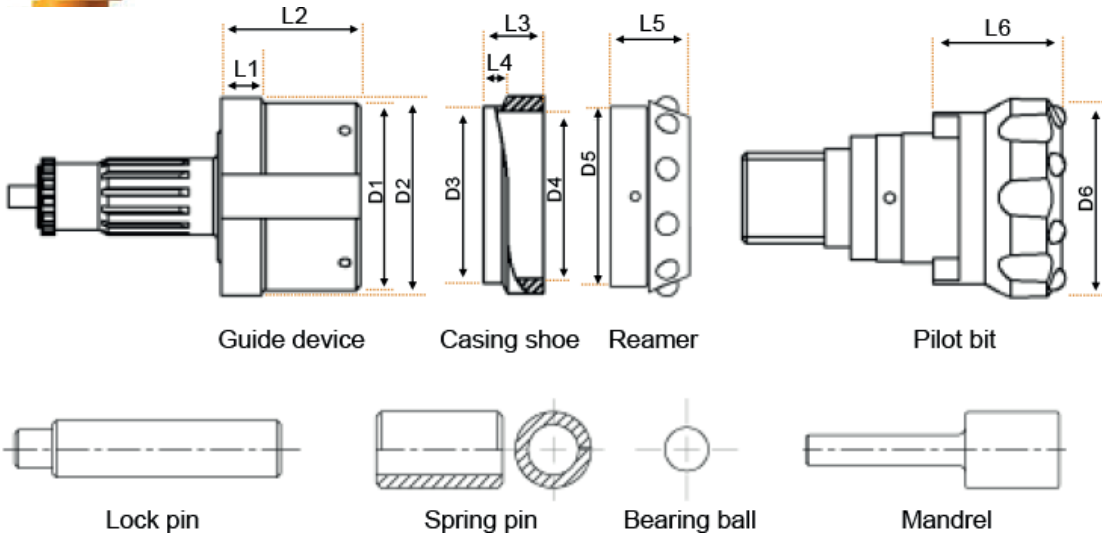
Overburden drilling system

OD165



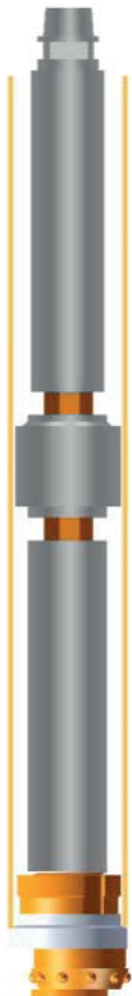
Component parts

Ref	Item	Description
1	Casing tube	Maximum O.D: 195mm Minimum O.D: 182.6mm
2	Drill pipe	Connection thread: API 3 1/2" O.D: 114mm Wrench flat: 95mm
3	Guide sleeve	Effective length: 225mm
4	DTH Hammer	HD65, COP64, SD6 DHD360, MISSION60, QL60
5	Casing shoe	L3=95mm, L4=65mm D3=180mm, D4=168mm
6	Guide device	L1=61.5mm, L2=181.5mm D1=166mm, D2=179.6mm
7	Reamer	D5=165mm, L5=80mm Reamer Diameter: 211mm Reamer has 7×14 buttons
8	Pilot bit	D6=165mm, L6=82.5mm Gauge button: 8×φ16 Face button: 8×φ16



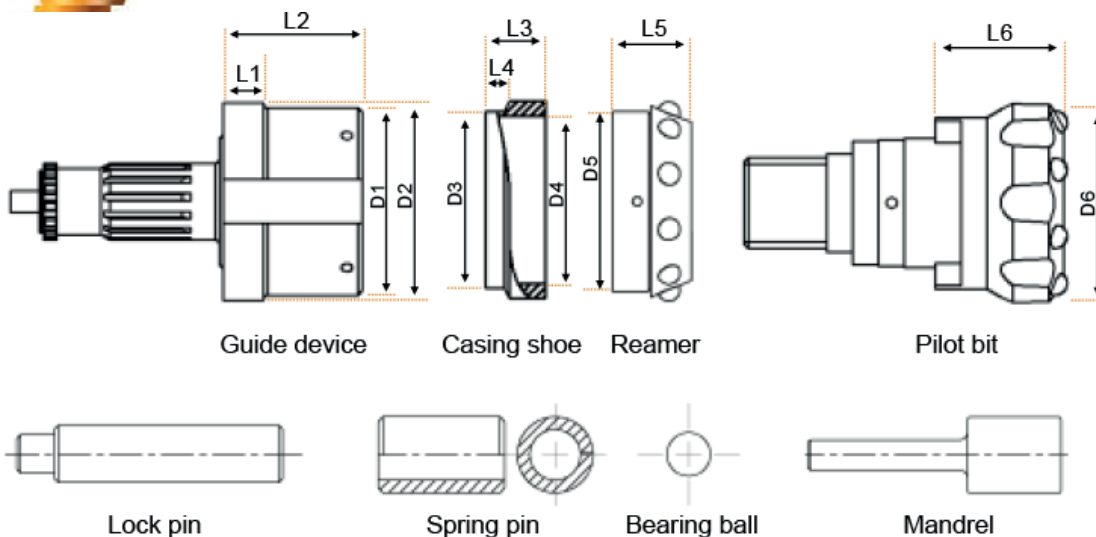
Overburden drilling system

OD190



Component parts

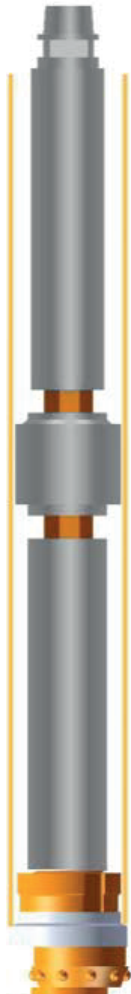
Ref	Item	Description
1	Casing tube	Maximum O.D: 222mm Minimum O.D: 205mm
2	Drill pipe	Connection thread: API 3 1/2" O.D: 114mm Wrench flat: 95mm
3	Guide sleeve	Effective length: 250mm
4	DTH Hammer	HD65, COP64, SD6 DHD360, MISSION60, QL60
5	Casing shoe	L3=110mm, L4=72mm D3=204.7mm, D4=193mm
6	Guide device	L1=62.8mm, L2=185mm D1=191mm, D2=203mm D5=190mm, L5=90mm
7	Reamer	Reamer Diameter: 237mm Reamer has 7×16 buttons
8	Pilot bit	D6=190mm, L6=82mm Gauge button: 9×φ18 Face button: 9×φ16



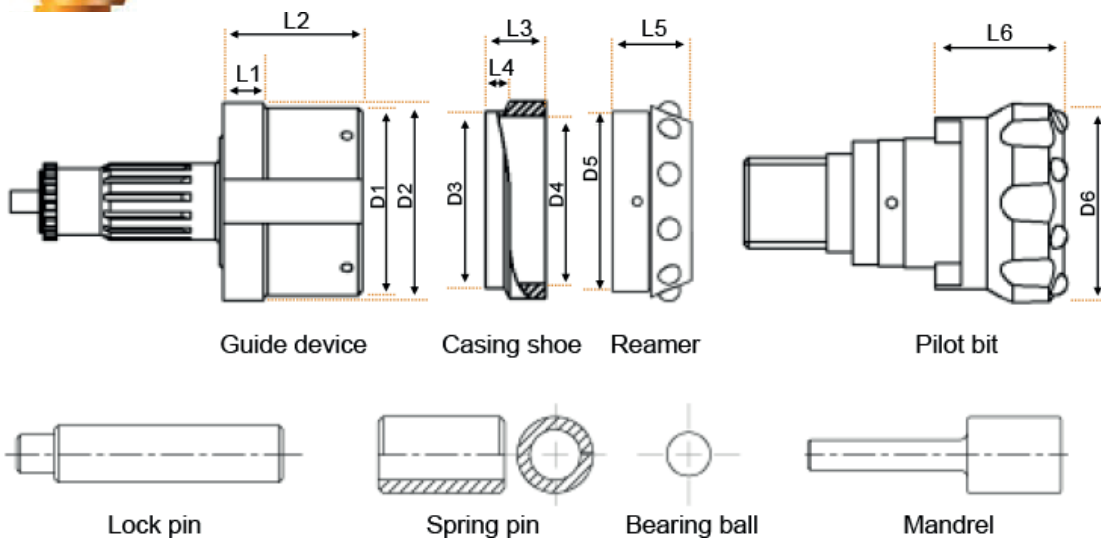
Overburden drilling system

OD240

Component parts



Ref	Item	Description
1	Casing tube	Maximum O.D: 273mm Minimum O.D: 260.4mm
2	Drill pipe	Connection thread: API 3 1/2" O.D: 114mm Wrench flat: 95mm
3	Guide sleeve	Effective length: 317mm
4	DTH Hammer	HD85, COP84, SD8 DHD380, MISSION80, QL80
5	Casing shoe	L3=111mm, L4=75mm D3=208.3mm, D4=242mm
6	Guide device	L1=70mm, L2=190mm D1=240mm, D2=257mm D5=240mm, L5=100mm
7	Reamer	Reamer Diameter: 308mm Reamer has 16×16 buttons
8	Pilot bit	Gauge button: 12×φ18 Face button: 32×φ16



Symmetrix concentric drilling system



Product type	Case OD	Casing wall max	Ring bit ID	Ring bit OD	Pilot bit OD	Hammer
JSOD114	114.3	6/10	91/78	128/124	100/92.5	DHH35
JSOD127	126.7	7	99	140	110.00	DHH35
JSOD140	139.7	7/10	116/94	154/150	124/117.5	DHH45, DHQ40
JSOD168	168.3	8/12.7	142/121	182/178	150/140	DHH55, DHQ50
JSOD178	178.3	10	145	195	156	DHH55, DHQ50
JSOD194	193.7	6/12.7	167/148	212/203	180/167	DHH65, DHQ60
JSOD219	219.1	7/12.7	186/167	234	203/191	DHH65, DHQ60
JSOD273	273.0	8/12.7	232/219	292	255/246	DHH85, DHQ80
JSOD325	323.9	8/12.7	281/270	342/342	306/297	DHH85, DSD8
JSOD406	406.4	12.7	328	419	374.00	DSD10, DHN125
JSOD508	508.0	15	412	526	470.00	DHH475, DSD15
JSOD609	609.6	15	513	637	570.00	DHH525, DSD18

