Mincon™

The Driller's Choice Worldwide

courtesy of ROCDRILL

Mincon
develops and manufactures **economical and environmentally friendly tools** for construction and well drilling.

Our products are designed especially **for complex ground conditions** where hardest rocks, sands, clays and tills meet.

WE BASE OUR PRODUCT DEVELOPMENT ON:

40 years of experience in manufacturing of DTH tools

Worksite **experiences from all continents**

World class testing and development partners

New **innovations** and latest manufacturing **technology**

DTH IS THE TOOL FOR DRILLING IN COMPLEX GROUND CONDITIONS

DTH drills a straight pile in any ground, even into inclined bed rock. Pile bottom can be verified.

Pile depths can be over 100 meters. DTH covers wide size range from 89 mm to 1524 mm. DTH can be drilled to any angle.

WE HAVE TAKEN DTH DRILLING TO NEXT LEVEL

We have redesigned the face of the drilling bit and patented it as a new Spiral Flush product range having flushing arrangement crosswise the drilling direction.

With our new flushing technology we can now control air flow and prevent over drilling and air escape. Large diameter DTH drilling can now be taken to urban areas and harbor construction without disturbing the environment.

We have not only enabled the flushing control to DTH drilling, but improved the productivity of the bits same time.

Mincon™

Better overall **efficiency** to our **customers**

OUR ADVANTAGE

SPIRALFLUSH®

WE BASE OUR PRODUCTS ON OUR OWN PATENTED INNOVATIONS

We have invented and patented Spiral Flush-technology where all air is blown crosswise to the casing with no pressure against the ground.

EFFICIENT

- Flushing improves drilling speed
- Drilling speed enhances pilot bit life
- Cutting edges improve drilling in hard clay
- Spiral grooves push material out when rotating

ENVIRONMENTAL

- All cuttings and flushing air are kept inside of the casing - so there is no air escape to the surroundings
- Removes the danger of over drilling (sandy formations)
- Removes the danger of air escape (clay formations)

INCREASED SIZE RANGE

- We have developed the world´s most powerful DTH hammer
- We have designed the most reliable large diameter HD shock absorbers
- We manufacture the biggest DTH bits ever made

Mincon™

Building harbor with 1,3 meters Spiral Flush drill bit system

Full Service
Our knowledge in DTH drilling is one of a kind. We provide full service and help our customers to gain major leaps in productivity with our technologies.

Piling:
DTH Drilling
can handle large diameters on- and offshore.

courtesy of ROCDRILL

SOLUTIONS

For Interlocked **Pipe-pile-wall construction** we offer a special product line of drill bits, connectors, sealants and grouting systems

Horizontal Drilling

Anchoring

Rock Drilling

Well Drilling

Micro Piling

Forepoling

Mincon™

SPIRAL FLUSH®

NEXT GENERATION

DTH is a perfect solution for **Over-burden-drilling** in complex ground conditions. To be able to utilize the superior technology in urban and environmentally sensitive areas the air used in drilling should not escape to the surroundings.

Patented Spiral Flush –technology is a perfect solution to control air in DTH applications. All air is directed crosswise and there are no air channels forward to the drilled ground.

- No pressure against ground
- No air escape
- No over drilling

SPIRAL FLUSH®

Environmental

- All cuttings and flushing air is kept inside of the casing
- Removes the danger of over drilling (sandy formations)
- Removes danger of air escape (clay formations)

Efficient

- Flushing improves drilling speed
- Drilling speed enhances pilot bit life
- Cutting edges improve drilling in hard clay
- Spiral groove pushes material out when rotating

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SPIRAL FLUSH®

- Flushing channels are crosswise to the drilling direction
- Back flush creates vacuum to the pilot bit face area
- Air channels are above the ring bit cutting edge

» No pressure to the ground
» No air leakages
» No over drilling

AIR CONTROL

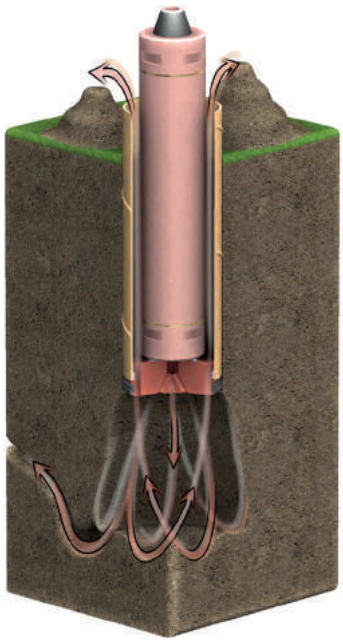
THE FUTURE OF DTH DRILLING

Conventional DTH drilling has two problem areas:

1. Pressurized air over drills material. Over drilling removes more material than anticipated changing ground's original characteristics hazarding nearby structures.

2. Air that is blown forward travels long distances in loose ground or soft clay. This can cause severe damages in nearby buildings and structures.

» As a result the use of conventional DTH drilling is limited already in several city centers, shorelines and other sensitive areas around



» Spiral Flush has been tested and approved also for the areas where conventional DTH drilling is restricted

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SPIRALFLUSH®

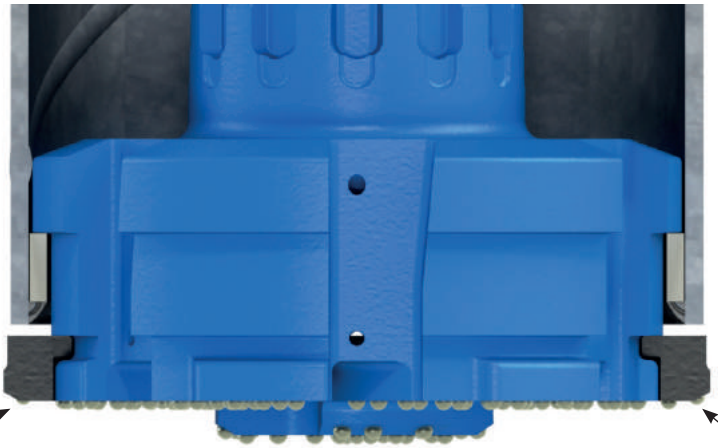
SOLITARY RING BIT SYSTEMS

SOLITARY RING BIT SYSTEMS are designed for drilling end bearing piles to bed rock. System is designed to drill straight piles through boulders, rock layers and also into inclined bed rock. Heavy duty ring bit is not attached to casing shoe, which makes it most economical of the ring bit alternatives.

Main **applications** for solitary systems are:

1. End bearing piles including micro piling
2. Pilings with sacrificed casings, which have no large ID ring bit requirements
3. Slope stabilization
4. Pipe walls, king piles etc.

SOLITARY SYSTEM DESIGN FEATURES



System is available from 114 to 1524 mm casings and for all major shank designs.

System product code	Casing OD mm	Casing OD inch	Max wall mm	Max wall Inch	Ring bit ID mm	Ring bit ID inch	Ring bit OD mm	Ring bit OD inch	Pilot bit OD mm	Pilot bit OD inch
S114-8-68	114,3	4.5”	8	0.315”	68	2.677”	125	4.921”	96	3.780”
S127-10-75	127	5”	10	0.394”	75	2.953”	137	5.394”	105	4.134”
S140-10-86	139,7	5.5”	10	0.394”	86	3.386”	149	5.866”	119	4.685”
S152-10-96	152,4	6”	10	0.394”	96	3.780”	162	6.378”	130	5.118”
S159-10-103	158,8	6,25”	10	0.394”	103	4.055”	169	6.654”	137	5.394”
S168-12.7-106	168,3	6.625”	12,7	0.5”	106	4.173”	179	7.047”	141	5.551”
S178-12.7-116	177,8	7”	12,7	0.5”	116	4.567”	188	7.402”	152	5.984”
S194-12.7-125	193,7	7.625”	12,7	0.5”	125	4.921”	205	8.071”	166	6.535”
S219-12.7-150	219,1	8.625”	12,7	0.5”	150	5.906”	230	9.055”	191	7.520”
S244-14.2-162	244,5	9.625”	14.2	0.559”	162	6.378”	255	10.039”	213	8.386”
S254-14.2-172	254	10”	14.2	0.559”	172	6.772”	265	10.433”	223	8.780”
S273-12.7-192	273	10.75”	12,7	0.5”	192	7.559”	290	11.417”	245	9.646”
S301-14.2-220	301,6	11.875”	14,2	0.559”	220	8.661”	312	12.283”	270	10.630”
S323-14.2-240	323,9	12.75”	14,2	0.559”	240	9.449”	335	13.189”	291	11.622”
S339-14.2-255	339,7	13.375”	14,2	0.559”	255	10.039”	350	13.780”	308	12.126”
S355-14.2-270	355,6	14”	14.2	0.559”	270	10.630”	367	14.449”	324	12.756”
S406-16-318	406,4	16”	16	0.625”	318	12.520”	418	16.457”	370	14.567”
S457-16-360	457,2	18”	16	0.625”	360	14.173”	469	18.465”	423	16.654”
S508-16-422	508	20”	16	0.625”	422	16.614”	520	20.472”	471	18.543”
S559-16-470	558,8	22”	16	0.625”	470	18.504”	571	22.480”	521	20.512”
S610-16-502	609,6	24”	16	0.625”	502	19.764”	622	24.488”	572	22.520”
S660-16-545	660,4	26”	16	0.625”	545	21.457”	675	26.575”	615	24.213”
S711-16-610	711,2	28”	16	0.625”	610	24.016”	735	28.937”	675	26.757”
S762-20-655	762	30”	20	0.787”	655	25.787”	785	30.906”	715	28.150”
S813-20-700	812,8	32”	20	0.787”	700	27.559”	830	32.677”	769	30.276”
S863-20-750	863,6	34”	20	0.787”	750	29.528”	880	34.646”	815	32.087”
S914-20-800	914,4	36”	20	0.787”	800	31.500”	930	36.614”	866	34.213”
S1016-20-880	1016	40”	20	0.787”	880	34.646”	1032	40.630”	966	38.094”
S1066-20-930	1066,8	42”	20	0.787”	930	36.614”	1086	42.756”	1014	39.921”
S1220-20-1080*	1219,2	48”	20	0.787”	1080	42.520”	1240	48.819”	1168	45.984”
S1321-22-1160 *	1320,8	52”	22	0.866”	1150	45.276”	1344	52.913”	1247	49.094”
S1422-22-1250 *	1422,4	56”	22	0.866”	1250	49.213”	1446	56.929”	1348	53.071”
S1524-22-1340*	1524	60”	22	0.866”	1340	52.756”	1548	60.945”	1462	57.559”

*Large diameter systems can be engineered based on the specific customer requirements

SPIRALFLUSH®

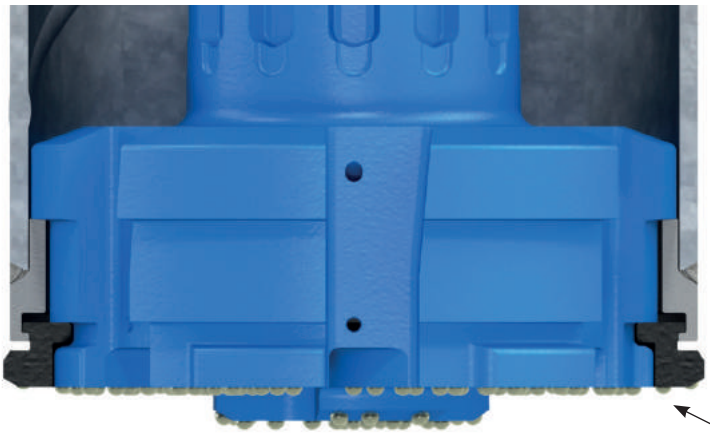
INTEGRATED RING BIT SYSTEMS

INTEGRATED RING BIT SYSTEMS are designed for drilling end bearing piles to bed rock. System is designed to drill straight piles through boulders, rock layers and into inclined bed rock. Heavy duty ring bit is integrated to casing shoe, which makes it safe to drill in loose ground and over the water.

Main **applications** for integrated systems are:

1. End bearing piles including micro piling
2. Pilings with sacrificed casings, which have no large ID ring bit requirements
3. Slope stabilization
4. Pipe walls, king piles

INTEGRATED SYSTEM DESIGN FEATURES



System is available from 114 to 1524 mm casings and for all major shank designs.

System product code	Casing OD mm	Casing OD inch	Max wall mm	Max wall Inch	Ring bit ID mm	Ring bit ID inch	Ring bit OD mm	Ring bit OD inch	Pilot bit OD mm	Pilot bit OD inch
I114-10-76	114.3	4.5”	10	0.394”	76	2.992	130	5.118”	89	3.504”
I127-10-87	127	5”	10	0.394”	87	3.425”	145	5.709”	105	4.134”
I140-10-100	139,7	5.5”	10	0.394”	102	4.016”	160	6.299”	118	4.646”
I152-10-112	152,4	6”	10	0.394”	112	4.409”	172	6.772”	130	5.118”
I159-10-118	158,8	6.25”	10	0.394”	118	4.646”	179	7.047”	137	5.394”
I168-12.7-125	168,3	6.625”	12,7	0.5”	125	4.921”	189	7.441”	140	5.512”
I178-12.7-135	177,8	7”	12,7	0.5”	135	5.315”	199	7.835”	151	5.945”
I194-12.7-147	193,7	7.625”	12,7	0.5”	147	5.787”	221	8.701”	166	6.535”
I219-12.7-171	219,1	8.625”	12.7	0.5”	171	6.732”	243	9.567”	188	7.402”
I244-12.7-190	244,5	9.625”	12,7	0.5”	190	7.480”	269	10.590”	216	8.504”
I254-14.2-197	254	10”	14,2	0.559”	197	7.756”	279	10.984	223	8.780”
I273-12.7-220	273	10.742”	12,7	0.5”	220	8.661”	299	11.772”	244	9.606”
I301-14.2-220	301,6	11.875”	14,2	0.559”	220	8.661”	312	12.283	270	10.630”
I323-14.2-240	323.9	12.742”	14,2	0.559”	240	9.449”	335	13.189”	291	11.457”
I339-14.2-255	339,7	13.375”	14,2	0.559”	255	10.039”	350	13.780”	308	12.126”
I355-14.2-270	355,6	14”	14,2	0.559”	270	10.630”	367	14.449”	324	12.756”
I406-16-318	406,4	16”	16	0.630”	318	12.520”	418	16.457”	370	14.567”
I457-16-360	457,2	18”	16	0.630”	360	14.173”	469	18.465”	423	16.654”
I508-16-422	508	20”	16	0.630”	422	16.614”	520	20.472”	471	18.543”
I559-16-470	558,8	22”	16	0.630”	470	18.504”	571	22.480”	521	20.512”
I610-16-502	609,6	24”	16	0.630”	502	19.764”	622	24.488”	572	22.520”
I660-20-545	660,4	26”	20	0.787”	545	21.457”	675	26,575”	615	24.213”
I711-16-610	711,2	28”	16	0.630”	610	24.016”	735	28.937”	675	26.575”
I762-20-655	762	30”	20	0.787”	655	25.787”	785	30.906”	715	28.150”
I813-16-700	812,8	32”	16	0.630”	700	27.559”	830	32.677”	769	30.276”
I863-20-750	863,6	34”	20	0.787”	750	29.528”	880	34.646”	815	32.087”
I914-20-800	914.4	36”	20	0.787”	800	31.5”	930	36.614”	866	34.094”
I1016-20-880 *	1016	40”	20	0.787”	880	34.646”	1032	40.630”	966	38.031”
I1066-20-930*	1066,8	42”	20	0.787”	930	36.614”	1086	42.756”	1014	39.921”
I1220-20-1080 *	1219.2	48”	20	0.787”	1080	42.520”	1240	48.819”	1168	45.984”
I1321-22-1150 *	1320.8	52”	22	0.866”	1150	45.276”	1344	52.913”	1247	49.094”
I1422-22-1250*	1422,4	56”	22	0.866”	1250	49.213”	1446	56.929”	1348	53.071”
I1524-22-1340 *	1524	60”	22	0.866”	1340	52.756”	1548	60.945”	1462	57.559”

*Large diameter system can be engineered based on the specific customer requirements

SPIRALFLUSH®

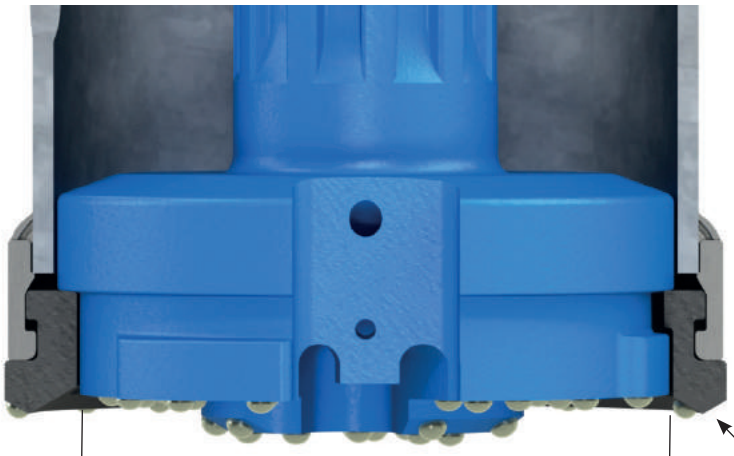
LARGE ID RING BIT SYSTEMS

LARGE ID RING BIT SYSTEMS are used with sacrificed casings when there is a requirement to continue the hole after casing is set. Such casings are left in ground due to economical, corrosion protection or sealing reasons, or because of ground cavities.

Main **applications** for large ID ring bit systems are:

1. Piling with sacrificed casings and rock socket
2. Energy/water wells
3. Surface casings (sealing, dewatering)

LARGE ID SYSTEM DESIGN FEATURES



Ring bit and casing shoe are integrated

Easy locking with single shoulder design

Large ID for maximum hole through and maximum space for installed elements

Ring bit protects the pilot gauge buttons

System is available from 114 to 660 mm casings and for all major shank designs.

System product code	Casing OD mm	Casing OD inch	Max wall mm	Max wall Inch	Ring bit ID mm	Ring bit ID inch	Ring bit OD mm	Ring bit OD inch	Pilot bit OD mm	Pilot bit OD inch
I114-5.5-91	114,3	4.5”	5,5	0.217”	91	3.583”	133	5.236”	101.5	3.996
I127-5.5-103	127	5”	5,5	0.217”	103	4.055”	147	5.787”	114	4.488”
I140-5.5-116	139,7	5.5”	5,5	0.217”	116	4.567”	160	6.299”	127	5”
HDI140-5.5-116 *	139,7	5.5”	5,5	0.217”	116	4.567”	170	6.693”	127	5”
I159-6-134	158,8	6.25”	6	0.236”	134	5.276”	179	7.047	145	5.709”
I168-5.5-141	168,3	6.626”	5,5	0.217”	141	5.551”	189	7.441”	152	5.984”
HDI168-5.5-141 *	168,3	6.626”	5,5	0.217”	141	5.551”	199	7.835”	152	5.984”
I178-7-153	177,8	7”	7	0.276”	153	6.024”	204	8.031”	162	6.378”
I194-6-165	193,7	7.626”	6	0.236”	165	6.496”	224	8.819”	179	7.047”
I219-6.5-190	219,1	8.626”	6,5	0.265”	190	7.480”	245	9.646”	203	7.992”
I244-8-212	244,5	9.625”	8	0.315”	212	8.346”	270	10.630”	225	8.858”
I254-8-222	254	10”	8	0.315”	222	8.740”	280	11.024”	235	9.252”
I273-8-240	273	10.748”	8	0,315”	240	9.449”	299	11.772”	254	10”
I301-10-260	301,6	11.875”	10	0.394”	260	10.236”	327	12.874	279	10.984”
I323-10-280	323,9	12.752”	10	0.394”	280	11.024”	350	13.780”	298	11.732”
I339-10-295	339,7	13.375”	10	0.394”	295	11.614”	366	14.409”	316	12.441”
I355-10-211	355,6	14”	10	0.394”	311	12.244”	383	15.079”	332	13.071”
I406-10-360	406,4	16”	10	0.394”	360	14.173”	436	17.165”	382	15.039”
I457-10-405	457,2	18”	10	0.394”	405	15.945”	487	19.173”	432	17.008”
I508-12,7-450	508	20”	12,7	0.5”	450	17.717”	538	21.181”	478	18.819”
I559-12.7-500	558,8	22”	12,7	0.5”	500	19.685”	589	23.189”	528	20.787”
I610-12.7-555	609,6	24”	12,7	0.5”	555	21.850”	640	25.197”	580	22.835”
I660-12.7-600	660,4	26”	12.7	0.5”	600	23.622”	690	27.165”	629	24.764”
I711-12.7-641	711,2	28”	12,7	0.5”	641	25.236”	741	29.173”	679	26.732”
I762-12.7-690	762	30”	12.7	0.5”	690	27.1	794	31.260”	729	28.701”
I813-12.7-735	812,8	34”	12,7	0.5”	735	28.937	845	33.268”	780	30.709”

* Heavy duty systems for deep casing drilling. Special design with large ID.

**Large diameter system can be engineered based on the specific customer requirements(660-1524mm)

SPIRALFLUSH®

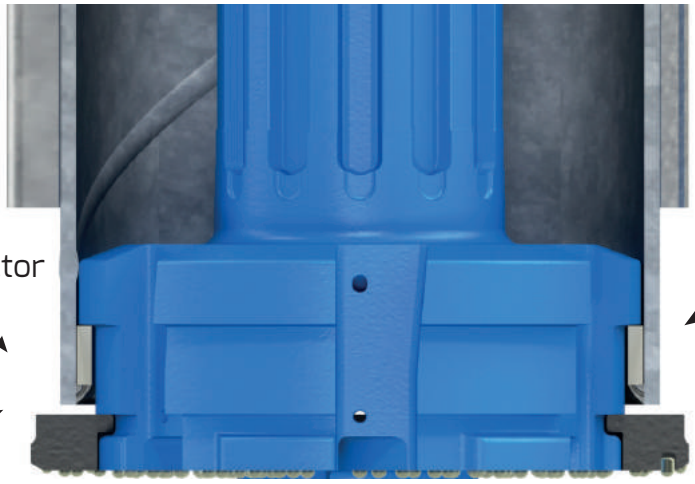
O-PILE RING BIT SYSTEMS

SOLITARY O-PILE RING BIT SYSTEMS are used to drill straight interlocked casings through boulders, rock layers even into inclined bed rock. With O-pile technique one can build interlocked casing walls, roofs and other structures for construction industry. O-Piles can also replace sheet piles and slurry walls in rocky ground conditions. Heavy duty ring bit is not attached to casing shoe, which makes it most economical of the ring bit alternatives.

Main **applications** for O-pile systems are:

1. O-pile walls
2. O-pile roofs
3. Cofferdams
4. Retaining walls
5. Watertight cut off walls

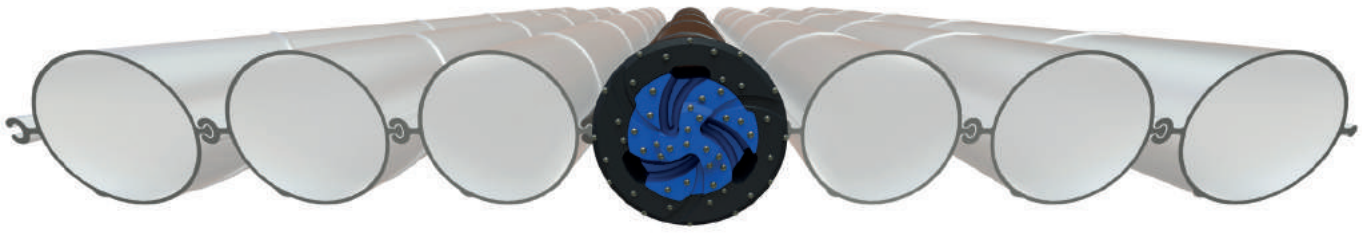
O-PILE SYSTEM DESIGN FEATURES



System is available from 219 to 1220 mm casings and for all major shank designs.

System product code	Casing OD mm	Casing OD inch	Max wall mm	Max wall inch	Ring bit ID mm	Ring bit ID inch	Ring bit OD mm	Ring bit OD inch	Pilot bit OD mm	Pilot bit OD inch
XL219-12.7-150	219,1	8.625”	12,7	0.5”	150	5.906”	279	10.984”	191	7.520”
XL244-12.7-164	244,5	9.625”	12,7	0.5”	164	6.457”	304	11.969”	216	8.504”
XL254-12.7-197	254	10”	12,7	0.5”	174	6.850	314	12.362”	226	8.898”
XL273-12.7-192	273	10.75”	12,7	0.5”	192	7.559”	333	13.110”	245	9.646”
XL301-12.7-220	301,6	11.875”	12.7	0.5”	220	8.661”	361	14.213”	270	10.630”
XL323-14.2-240	323,9	12,75”	14,2	0.559”	240	9.449”	383	15.079”	291	11.622”
XL339-14.2-255	339,7	13.375”	14.2	0.559”	255	10.039”	399	15.709”	308	12.126”
XL355-14.2-270	355,6	14”	14.2	0.559”	270	10.630”	415	16.339”	324	12.756”
XL406-16-318	406,4	16”	16	0.625”	318	12.520”	466	18.346”	370	14.567”
XL457-16-360	457,2	18”	16	0.625”	360	14.173”	517	20.354”	423	16.654”
XL508-16-422	508	20”	16	0.625”	422	16.614”	568	22.362”	471	18.543”
XL559-16-470	558,8	22”	16	0.625”	470	18.504”	619	24.370”	521	20.512”
XL610-16-502	609,6	24”	16	0.625”	502	19.764”	670	26.378”	572	22.520”
XL660-16-545	660,4	26”	16	0.625”	545	21.457”	720	28.346”	615	24.213”
XL711-16-610	711,2	28”	16	0.625”	610	24.016”	771	30.354”	675	26.757”
XL762-20-655	762	30”	20	0.787”	655	25.787”	822	32.362”	715	28.150”
XL813-20-700	812,8	32”	20	0.787”	700	27.559”	873	34.370”	769	30.276”
XL863-20-750	863,6	34”	20	0.787”	750	29.528”	923	36.339”	815	32.087”
XL914-22-800	914,4	36”	20	0.787”	800	31.500”	974	38.346”	862	34.213”
XL1016-20-880 *	1016	40”	20	0.787”	880	34.646”	1076	42.362”	966	38.094”
XL1220-20-1080 *	1219,2	48”	20	0.787”	1080	42.520	1280	50.394”	1168	45.984”

*Large diameter system can be engineered based on the specific customer requirements



SPIRALFLUSH®

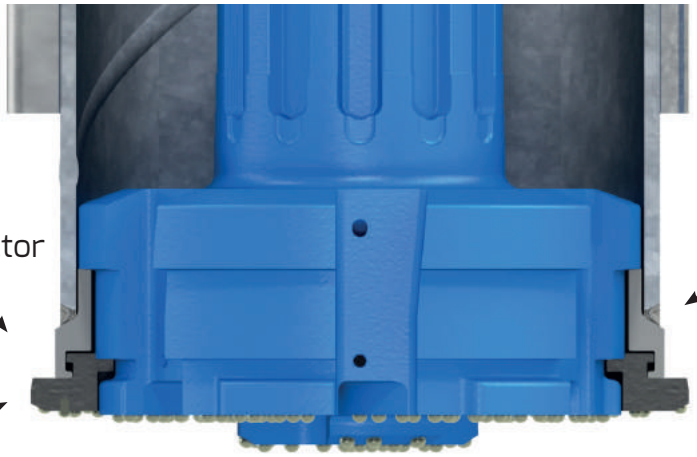
INTEGRATED O-PILE SYSTEMS

INTEGRATED O-PILE RING BIT SYSTEMS are used to drill straight interlocked casings through boulders, rock layers even into inclined bed rock. With O-pile technique one can build interlocked casing walls, roofs and other structures for construction industry. O-Piles can also replace sheet piles and slurry walls in rocky ground conditions. Heavy duty ring bit is integrated to casing shoe, which makes it safe to drill in loose ground and over the water.

Main **applications** for O-pile systems are:

1. O-pile walls
2. O-pile roofs
3. Cofferdams
4. Retaining walls
5. Watertight cut off walls

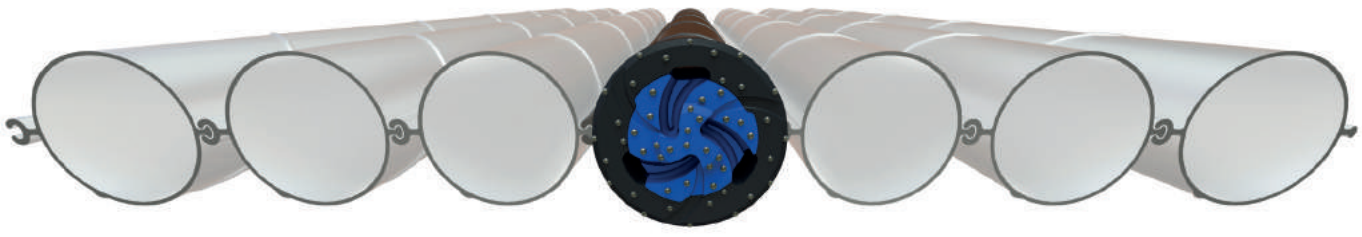
INTEGRATED O-PILE SYSTEM DESIGN FEATURES



System is available from 219 to 1220 mm casings and for all major shank designs.

System product code	Casing OD mm	Casing OD inch	Max wall mm	Max wall Inch	Ring bit ID mm	Ring bit ID inch	Ring bit OD mm	Ring bit OD inch	Pilot bit OD mm	Pilot bit OD inch
XLI219-12.7-171	219,1	8.625”	12,7	0.5”	171	6.732”	279	10.984”	191	7.520”
XLI244-12.7-190	244,5	9.625”	12,7	0.5”	190	7.480”	269	10.591”	216	8.622”
XLI254-12.7-197	254	10”	12,7	0.5”	197	7.756”	314	12.362”	223	8.780”
XLI273-12.7-192	273	10.75”	12,7	0.5”	192	7.559”	333	13.110”	245	9.646”
XLI301-12.7-220	301,6	11.875”	12.7	0.5”	220	8.661”	361	14.213”	270	10.630”
XLI323-14.2-240	323,9	12,75”	14,2	0.559”	240	9.449”	383	15.079”	291	11.622”
XLI339-14.2-255	339,7	13.375”	14.2	0.559”	255	10.039”	399	15.709”	308	12.126”
XLI355-14.2-270	355,6	14”	14.2	0.559”	270	10.630”	415	16.339”	324	12.756”
XLI406-16-318	406,4	16”	16	0.625”	318	12.520”	466	18.346”	370	14.567”
XLI457-16-360	457,2	18”	16	0.625”	360	14.173”	517	20.354”	423	16.654”
XLI508-16-422	508	20”	16	0.625”	422	16.614”	568	22.362”	471	18.543”
XLI559-16-470	558,8	22”	16	0.625”	470	18.504”	619	24.370”	521	20.512”
XLI610-16-502	609,6	24”	16	0.625”	502	19.764”	670	26.378”	572	22.520”
XLI660-16-545	660,4	26”	16	0.625”	545	21.457”	720	28.346”	615	24.213”
XLI711-16-610	711,2	28”	16	0.625”	610	24.016”	771	30.354”	675	26.757”
XLI762-20-655	762	30”	20	0.787”	655	25.787”	822	32.362”	715	28.150”
XLI813-20-700	812,8	32”	20	0.787”	700	27.559”	873	34.370”	769	30.276”
XLI863-20-750	863,6	34”	20	0.787”	750	29.528”	923	36.339”	815	32.087”
XLI914-22-800	914,4	36”	20	0.787”	800	31.500”	974	38.346”	862	34.213”
XLI1016-20-880 *	1016	40”	20	0.787”	880	34.646”	1076	42.362”	966	38.094”
XLI1220-20-1080 *	1219,2	48”	20	0.787”	1080	42.520	1280	50.394”	1168	45.984”

*Large diameter system can be engineered based on the specific customer requirements



SPIRALFLUSH®

RETRIEVABLE RING BIT SYSTEMS

RETRIEVABLE RING BIT SYSTEMS can be used several times. System is designed so that the casing can always be pulled out after drilling. Large ID enables the use of maximum size rock socket and installed elements.

Main **applications** for multi-use retrievable systems are:

1. In situ piles (skin friction) where casing is fully retrieved
2. Anchoring applications
3. Pre-drilling/temporary casing applications
4. Energy/water wells where casing is fully removed

Mincon™

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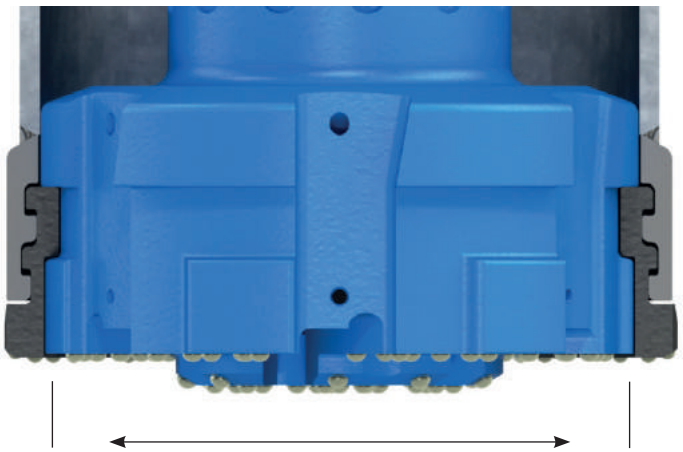
RETRIEVABLE SYSTEM DESIGN FEATURES



Integrated wear resistant steel ring set

Slim desing for easy retrieving

Double shoulders for long service life

Large ID for maximum hole through and maximum space for installed elements

System is available from 114 to 1524 mm casings and for all major shank designs.

System product code	Casing OD mm	Casing OD inch	Max wall mm	Max wall Inch	Ring bit ID mm	Ring bit ID inch	Ring bit OD mm	Ring bit OD inch	Pilot bit OD mm	Pilot bit OD inch
R114-10-82	114,3	4.5”	10	0.394”	82	3.228”	122	4.803”	90	3.543”
R127-10-95	127	5”	10	0.394”	95	3.740”	138	5.433”	105	4.134”
R140-10-104	139,7	5.5”	10	0.394”	104	4.094”	147	5.787”	118	4.647”
R152-10-116	152,4	6”	10	0.394”	116	4.567”	160	6.299”	129	5.079”
R168-10-132	168,3	6.626”	10	0.394”	132	5.197”	178	7.008”	146	5.748”
R178-10-142	177,8	7”	10	0.394”	142	5.591”	188	7.402”	156	6.142”
R194-12.7-154	193,7	7.626”	12,7	0.5”	154	6.063”	204	8.031”	165	6.496”
R219-12.7-175	219,1	8.626”	12,7	0.5”	175	6.890”	229	9.016”	191	7.520”
R244-12.7-200	244,5	9.625”	12,7	0.5”	200	7.874	258	10.157”	216	8.504”
R254-12.7-210	254	10”	12,7	0.5”	210	8.268”	268	10.551”	226	8.898”
R273-12.7-226	273	10.748”	12,7	0.5”	226	8.898”	286	11.260”	245	9.646”
R301-12.7-251	301,6	11.875”	12,7	0.5”	251	9.882”	316	12.441”	273	10.748”
R323-12.7-273	323,9	12.748”	12,7	0.5”	273	10.748”	338	13.307”	294	11.575”
R339-12.7-287	339,7	13.375”	12,7	0.5”	287	11.299”	354	13.937”	311	12.244”
R355-12.7-305	355,6	14”	12,7	0.5”	305	12.008”	368	14.488”	326	12.835”
R406-12.7-352	406,4	16”	12,7	0.5”	352	13.858”	430	16.929”	376	14.803”
R457-12.7-378	457,2	18”	12,7	0.5”	378	14.882”	474	18.661”	427	16.811”
R508-16-446	508	20”	16	0.630”	446	17.559”	538	21.181”	475	18.701”
R559-16-504	558,8	22”	16	0.630”	504	19.843”	584	22.992”	522	20.551”
R610-16-555	609,6	24”	16	0.630”	555	21.850”	638	25.118”	574	22.598”
R660-16-580	660,4	26”	16	0.630”	580	22.835”	680	26.772”	622	24.488”
R711-16-641	711,2	28”	16	0.630”	641	25.236”	738	29.055”	674	26.535”
R762-16-685	762	30”	16	0.630”	685	26.969”	788	31.024”	723	28.819”
R813-16-736	812,8	32”	16	0.630”	736	28.976”	837	32.953”	775	30.512”
R863-16-775	863,6	34”	16	0.630”	775	30.512”	890	35.039”	823	32.402”
R914-16-837	914,4	36”	16	0.630”	837	32.953”	940	37.008”	874	34.409”
R1016-16-926*	1016	40”	16	0.630”	926	36.457”	1042	41 .024”	969	38.150”
R1066-16*	1066,8	42”	16	0.630”	970	38.190”	1092	42.992”	1025	40.354”
R1220-20-1120*	1219,2	48”	20	0.787”	1120	44.094”	1247	49.094”	1163	45.787”
R1321-22-1210*	1320,8	52”	22	0.866”	1210	47.638”	1349	53.110”	1259	49.567”
R1524-22-1404*	1524	60”	22	0.866”	1404	55.276”	1552	61.102”	1460	57.480”

*Large diameter system can be engineered based on the specific customer requirements

SPIRALFLUSH®

HORIZONTAL RING BIT SYSTEMS

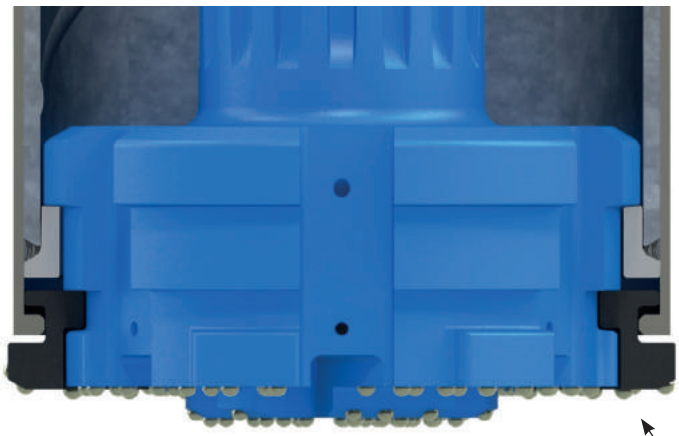
HORIZONTAL RING BIT SYSTEMS are made for horizontal drilling of utility lines. High casing friction calls for heavy duty ring bit system. Drilling under roads and railways requires advanced air control. Due to strong design the ring bit system can be used several times.

Main **applications** for horizontal systems are:

1. Horizontal drilling of utility lines
   - Road and railway underpasses
   - Replacing of concrete culverts
2. HDD surface casings
3. All break through drilling

SPIRALFLUSH®

HORIZONTAL SYSTEM DESIGN FEATURES



Extra strong casing shoe

Extra large impact shoulders for multi use

Slot for guide sleeve to prevent air escape, keep drilling direction and integration.
(connecting ring and sleeve not included)

Ring bit protects the pilot gauge buttons

System is available from 219 to 1524 mm casings and for all major shank designs.

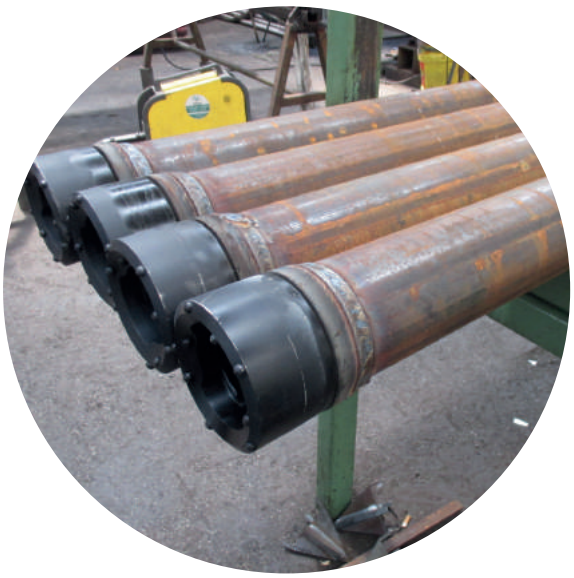
System product code	Casing OD mm	inch	Max wall mm	Inch	Ring bit ID mm	inch	Ring bit OD mm	inch	Pilot bit OD mm	inch
HZ219-12.7-138	219,1	8.625”	12,7	0.5”	138	5.433”	237	9.331”	191	7.520”
HZ273-12.7-170	273	10.75”	12,7	0.5”	170	6.693”	285	11.220”	245	9.646”
HZ323-12.7-215	323,9	12.75”	12,7	0.5”	215	8.465”	341	13.425”	294	11.575”
HZ406-12.7-300	406,4	16”	12,7	0.5”	300	11.811”	440	17.323”	376	14.803”
HZ508-12.7-400	508	20”	12,7	0.5”	400	15.748”	540	21.260”	477	18.780”
HZ610-16-495	609,6	24”	16	0.625”	495	19.488”	640	25.197”	572	22.520”
HZ711-16-590	711,2	28”	16	0.625”	590	23.228”	740	29.134”	675	26.575”
HZ813-12.7-675	812,8	32”	16	0.625”	675	26.575”	845	33.268”	774	30.472”
HZ914-16-775	914,4	36”	16	0.625”	775	30.512”	945	37.205”	874	34.409”
HZ1016-16-860	1016	40”	16	0.625”	860	33.858”	1050	41.339”	974	38.346”
HZ1219-16-1050*	1219,2	48”	16	0.625”	1050	41.339”	1239	48.780”	1176	46.299”
HZ1321-16-1150*	1320,8	52”	16	0.625”	1150	45.276”	1341	52.800”	1273	50.118”
HZ1422-20-1250*	1422,4	56”	20	0.787”	1250	49.213”	1442	56.772”	1366	53.780”
HZ1524-20-1340*	1524	60”	20	0.787”	1340	52.756”	1544	60.787”	1466	57.717”

*Large diameter system can be engineered based on the specific customer requirements

SPIRALFLUSH®

FOREPOLING SYSTEMS

FOREPOLING RING BITS AND CASINGS are designed for drilling injection casings for tunnel construction in weak ground conditions. Ring bit systems are designed for both top and DTH hammers. Ring bit systems can be delivered with or without the casings.



Main **applications** for forepoling systems are:

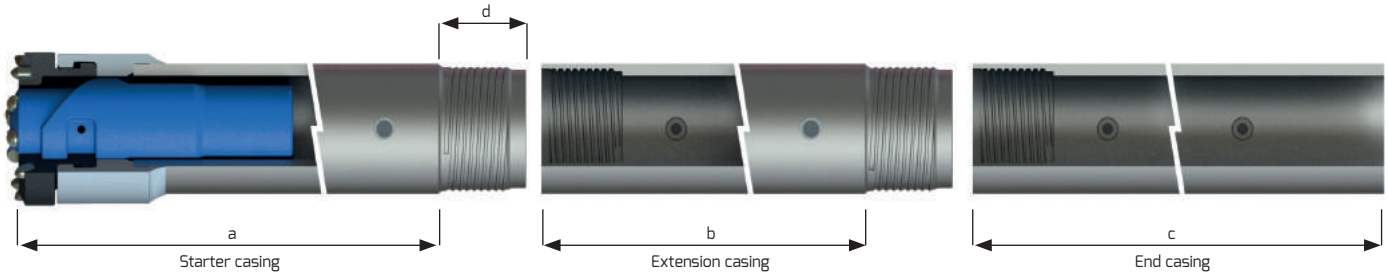
1. Spiling casings
2. Fibre glass face stabilization
3. PVC foundations

SPIRALFLUSH®

FOREPOLING SYSTEM DESIGN FEATURES

Casing shoe and ring bit are integrated with strong shoulders

Ring bit welded to starter casing in factory



Heavy duty ring bit protects the pilot gauge buttons

Optional one way valves for grouting installed in factory (3-10bar)

System is available from 76 to 216 mm casings and for all major DTH shanks and top hammer threads. Threaded casings are available with 2-3 start trapezoidal threads and 10mm entrance.

System product code	Casing OD mm	inch	Wall mm	Ring bit ID mm	Ring bit OD mm	Pilot bit OD mm	Lenght a/b/c m	Lenght d mm
F76-8-47	76,1	3”	7,1	47	89	59	2,95 / 3 / 3	80
F89-8-60	88.9	3.5”	6,3 / 7,1 / 8	60	105	71	2,95 / 3 / 3	80
F102-8-68	101,6	4”	7.1 / 8	68	118	80	2,95 / 3 / 3	80
F114-10-76	114,3	4.5”	6,3 / 7,1 / 8 / 10	76	130	89	2,95 / 3 / 3	100
F140-10-102	139.7	5.5”	7,1 / 8 / 10	102	156	116	2,95 / 3 / 3	100
F159-10-120	159	6.25”	8 / 10	120	175	136	2,95 / 3 / 3	100
F168-10-128	168.3	6.625”	8 / 10	128	184	145	2,95 / 3 / 3	100
F216-12.7-171	215,9	8.5”	8 / 10 / 12.7	171	237	186	2,95 / 3 / 3	100

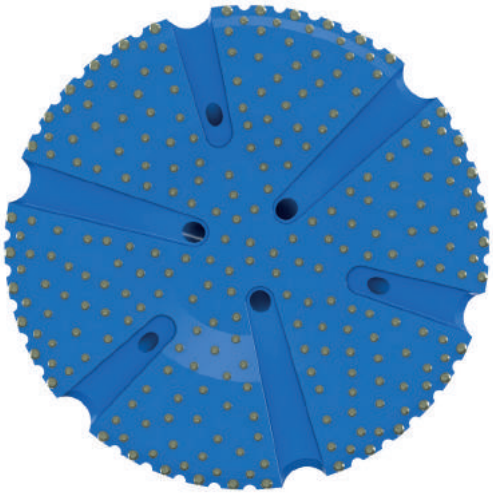
LARGE DIAMETER ROCK BITS

LARGE DIAMETER ROCK BITS are engineered for customer requirements. Concave structure gives excellent accuracy in challenging jobs with high demands for hole straightness.

Main **applications** for rock bits are:

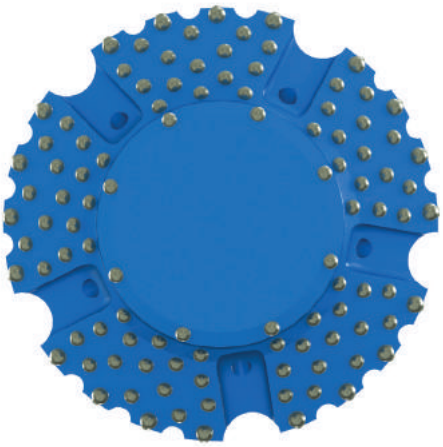
1. Air ventilation for tunnels
2. Shafts for utility lines
3. Rescue shafts for mining
4. Rock sockets

LARGE DIAMETER ROCK BIT DESIGN



Large diameter rock bits are available from 300 to 1220mm diameter and for all major shank designs.

HOLE OPENER ROCK BIT DESIGN



Hole opener rock bits are available up to 1220mm diameter and for all major shank designs.

MINCON DTH HAMMERS

Mincon DTH hammers are designed around proven technology to perform at the top end of the performance scale.
Our hammers are excellent for all types of drilling applications including residential geothermal, production quarry drilling, seismic drilling and construction drilling.

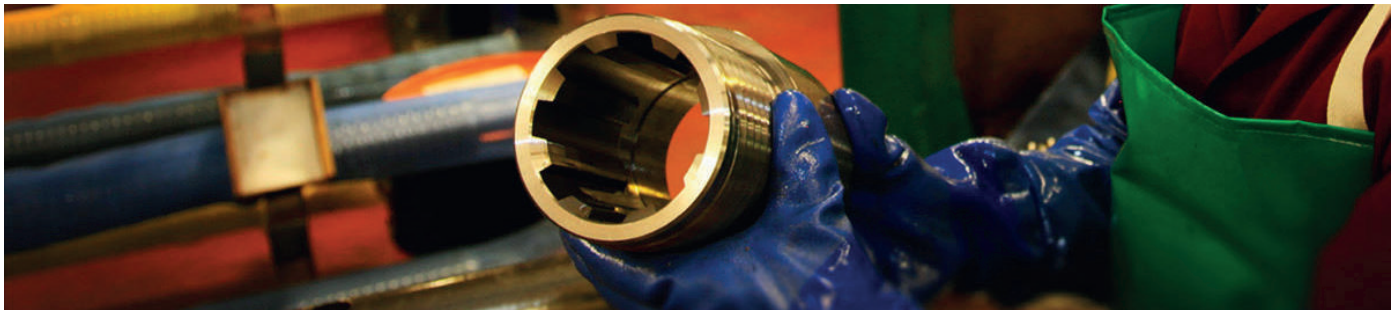
KEY FEATURES AND BENEFITS

- Patented features maximize energy output and reduce service requirements.
- Fewer internal components minimize service requirements.
- Valveless, high frequency design ensures smooth operation.
- All critical internal components are heat treated under strict control to maximize tool longevity.

3-34” HAMMER SPECIFICATIONS

For more hammer models and additional information, please visit mincon.com

Range	Hammer product name	Shank	Hammer OD mm	Hammer OD inch	Length mm	Length Inch	Piston weight Kgs	Piston weight Lbs	Weight Kgs	Weight Lbs	Std. Backhead
3”	Mincon 3”	DHD3.5	77	3.05”	865	34”	4.1	9	22.3	49	2 3/8” A.P.I Reg Pin
	Mincon 3.5”	DHD3.5	85	3.35”	805	31.7”	3.9	8.7	24.5	54	2 3/8” A.P.I Reg Pin
4”	4HRTD	TD40	97	3.82”	956	37.6”	7.7	17	38.6	85	2 3/8” A.P.I Reg Pin
	4HR	DHD340	97	3.82”	956	37.6”	7.7	17	38.6	85	2 3/8” A.P.I Reg Pin
	MP40TD	TD40	101.5	4”	967	38.1”	8.3	18.3	41.0	90	2 3/8” A.P.I Reg Pin
5”	MP55	QL50	124	4.88”	993	39.1”	15	33.6	67.3	148	3 1/2” A.P.I Reg Pin
	5DHQL	QL50	124	4.88”	1033	40.7”	15	33.6	67.3	148	3 1/2” A.P.I Reg Pin
	5DH	DHD350	124	4.88”	1054	41.5”	15	33.6	67.3	148	3 1/2” A.P.I Reg Pin
6”	6DHSD	SD6	140	5.5”	1085	42.7”	20	44	95,3	210	3 1/2” A.P.I Reg Pin
	6DH360	DHD360	140	5.5”	1034	40.7”	20	44	95.3	210	3 1/2” A.P.I Reg Pin
	6DH	QL60	140	5.5”	1034	40.7”	20	44	95.3	210	3 1/2” A.P.I Reg Pin
	MP65	QL60	146	5,75”	1002	39,5	21.6	47.6	91.8	202	3 1/2” A.P.I Reg Pin
8”	8DHSD	SD8	181	7.15”	1186	46.7”	39	86	173.2	381	4 1/2” A.P.I Reg Pin
	MP80	QL80	181	7.15”	1186	46.7”	39	86	173.2	381	4 1/2” A.P.I Reg Pin
	8DH	DHD380	181	7.15”	1186	46.7”	39	86	173.2	381	4 1/2” A.P.I Reg Pin
10”	MP100SD	SD10	219	8.62”	1359	53.50”	77,8	171.5	295	650	6 5/8” A.P.I Reg Pin
12”	MP120QL	QL120	273	10.75”	1454	57.24”	140	308.6	455	1003	6 5/8” A.P.I Reg Pin
	MP120N125	N125	273	10.75”	1452	57.17”	140	308.6	462	1019	6 5/8” A.P.I Reg Pin
	MP120SD	SD12	273	10.75”	1432	56.38”	140	308.6	470	1036	6 5/8” A.P.I Reg Pin
18”	MP180N180	N180	400	15.75”	1618	63.70”	280	617	1152	2540	8 5/8” A.P.I Reg Pin
	MP180QL200	QL200	400	15.75”	1582	62.28”	280	617	1170	2579	8 5/8” A.P.I Reg Pin
24”	MP240	N240	525	20.67”	1925	75.79”	550	1213	2450	5401	HEX275 Pin
34”	MP340	MF34	750	29.53”	2351	92.56”	1050	2315	5807	12802	HE370 Pin

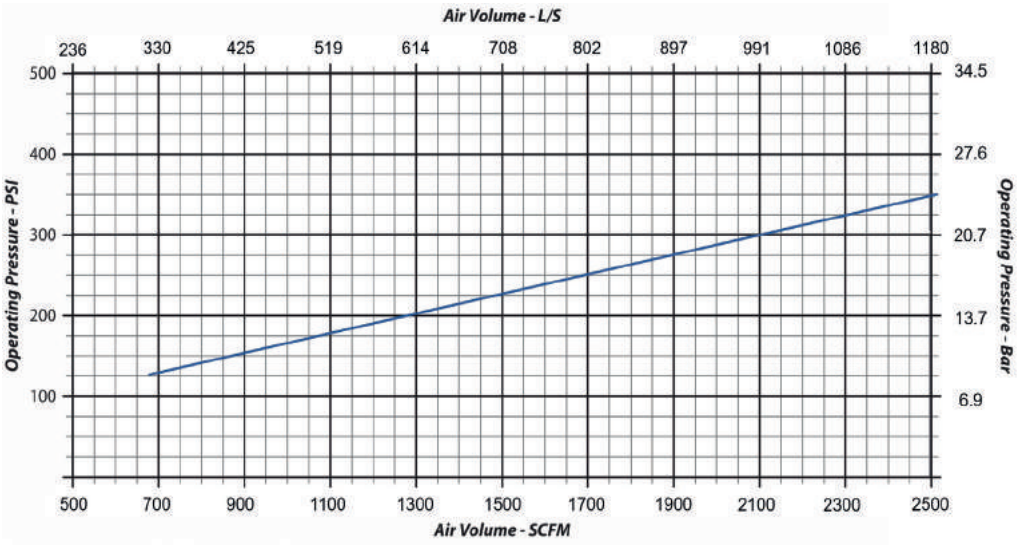


MP120 SPECIFICATIONS

Technical specifications:	MP120QL		MP120N125		MP120SD	
Outside diameter	273 mm	10.75"	273	10.75"	273	10.75"
Length shoulder to shoulder	1454mm	57.24"	1452	57.17"	1432	56.38
Weigth without bit	455	1003 lbs	462	1019 lbs	470	1036 lbs
Piston weigth	140	308.6 lbs	140	308.6 lbs	140	308.6 lbs
Stroke	100	4"	100	4"	100	4"
Shank	QL120		N125		SD12	
Backhead	6 5/8" A.P.I Reg Pin					
Beats per minute	1286 $^{1}/_{min}$ @ 300psi					

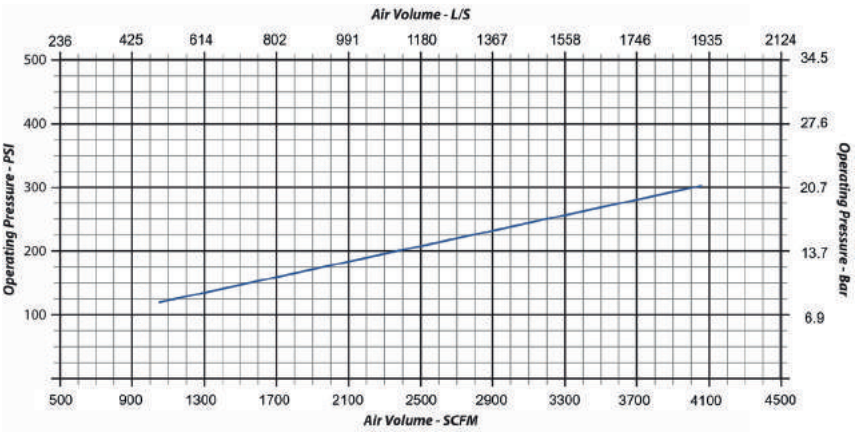
Drill bit diameters:			
Minimum size	Overburden Rock	406 mm 304.8 mm	16 inch 12 inch
Maximum size	Overburden Rock	508 mm 457.2 mm	20 inch 18 inch

Air consumption:



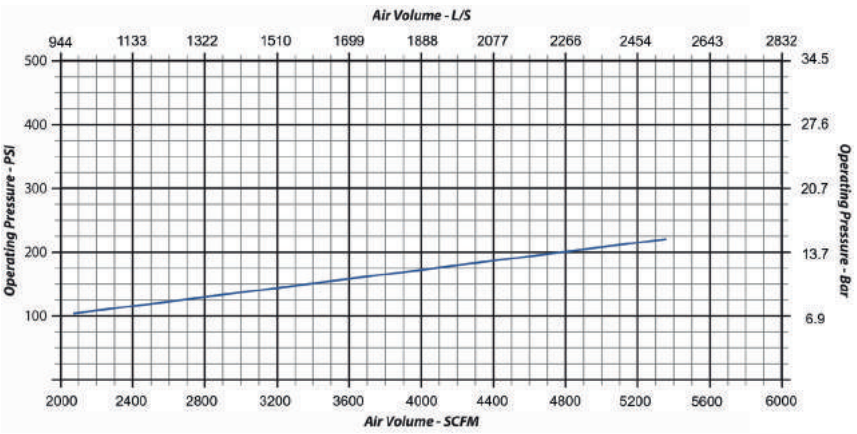
MP180 SPECIFICATIONS

Technical specifications:		MP180N180		MP180QL200	
Outside diameter		400 mm	15.75"	400 mm	15.75"
Length shoulder to shoulder		1618 mm	63,70"	1582mm	62.28"
Weigth without bit		1152 kg	2540 lbs	1170 kg	2579 lbs
Piston weigth		280 kg	617 lbs	280 kg	617 lbs
Stroke		127 mm	5"	127 mm	5"
Shank		N180		QL200	
Backhead		8 5/8" A.P.I Reg Pin			
Beats per minute		1025 $^{1}/_{min}$ @ 250psi			
Drill bit diameters:					
Minimum size	Overburden Rock	508 mm 457 mm		20 inch 18 inch	
Maximum size	Overburden Rock	711 mm 609.6 mm		28 inch 24 inch	
Air consumption:					



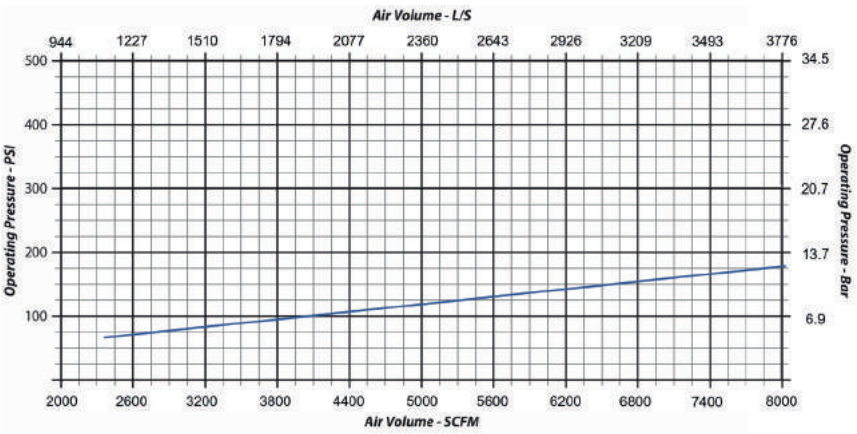
MP240 SPECIFICATIONS

Technical specifications:		
Outside diameter	525 mm	20.67 inch
Length shoulder to shoulder	1925 mm	75.79 inch
Weigth without bit	2450 kg	5401 lbs
Piston weigth	550 kg	1213 lbs
Stroke	140 mm	5.5 inch
Beats per minute	860 $^{1}/_{min}$ @ 200psi	
Connections:		
Backhead - Heaxagonal (douple pin)	HEX275 mm	10.83 inch
Shank	N240	
Drill bit diameters:		
Minimum size Overburden Rock	711mm 609.6mm	28inch 24 inch
Maximum size Overburden Rock	914.4mm 863.6mm	36 inch 34 inch
Air consumption:		



MP340 SPECIFICATIONS

Technical specifications:			
Outside diameter		750 mm	29.53 inch
Length shoulder to shoulder		2351 mm	92.56 inch
Weigth without bit		5807 kg	12802 lbs
Piston weigth		1050 kg	2315 lbs
Stroke		150 mm	6 inch
Beats per minute		580 $^{1}/_{min}$ @ 150psi	
Connections:			
Backhead - Heaxagonal (douple pin)		370 mm	14.57 inch
Shank		MF34	
Drill bit diameters:			
Minimum size	Overburden Rock	914,4 mm 850 mm	36 inch 33.46 inch
Maximum size	Overburden Rock	1524 mm 1220 mm	60 inch 48 inch
Air consumption:			



SHOCK ABSORBERS

For protecting your drill rig, rotary head, boom joints and drill string components we have engineered a product line of heavy duty shock absorbers. Shock absorber are designed for easy maintenance ensuring trouble free operations on worksite every day.

Features:

- Three cushion construction
- Damping on both directions
- Easy to change wear pins for rotation
- Available for 18",24" and 34" hammers
- Connections according to requirements

SA34 SPECIFICATIONS

Dimensions:		
Outside diameter	607 mm	23 $^{57}/_{64}$ inch
Length	1398 mm	55 $^{3}/_{64}$ inch
Length shoulder to shoulder	1118 mm	44 $^{1}/_{64}$ inch
Weigth	1821 Kg	4014 lbs
Connections: *		
Bottom	370 mm hexagonal	
Top	275 mm hexagonal	

SA24 SPECIFICATIONS

Dimensions:		
Outside diameter	507 mm	19 $^{61}/_{64}$ inch
Length	1211 mm	47 $^{43}/_{64}$ inch
Length shoulder to shoulder	1001 mm	39 $^{13}/_{32}$ inch
Weigth	1073 Kg	2366 lbs
Connections: *		
Bottom	275 mm hexagonal	
Top	200 mm hexagonal	

SA18 SPECIFICATIONS

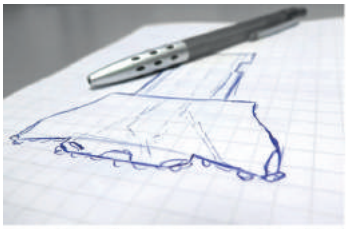
Dimensions:		
Outside diameter	407 mm	16 $^{1}/_{32}$ inch
Length	1048 mm	41 $^{17}/_{64}$ inch
Length shoulder to shoulder	911 mm	35 $^{55}/_{64}$ inch
Weigth	609 Kg	1343 lbs
Connections: *		
Bottom	API 8 5/8 regular	
Top	API 8 5/8 regular	

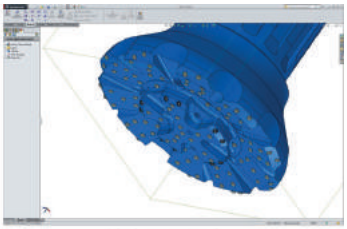
* Adapters according to the requirements

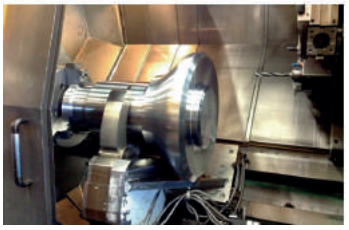
Mincon™

CUSTOMIZED SYSTEMS

CUSTOMIZED RING BIT SYSTEMS are used when the job is so challenging that standard products are not enough. For these purposes we will make a project specific product where the design and materials will be chosen depending on customers requirements.





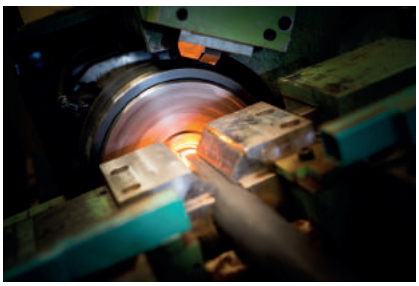


Applications for **customized systems** are e.g:

1. Drilling casing in extremely tough overburden
2. Long distances casing pulling in solid rock
3. Mine dump leaching
4. Drilling with internal grouting pipes
5. Hole openers
6. Rock removal drilling

DRILL PIPES & ACCESSORIES

DRILL PIPES



- Friction welding 48-140mm
- Large diameter pipes 140->
- Cold Drawn Seamless pipes
- High strength, straight pipes with no scale
- API certified testing after production

REVERSE CIRCULATION (RC)

- Friction welded dual wall pipes
- Pipes up to 140mm
- RC accessories
- Complete RC conversion kits

ADAPTERS/SUBS

- Wide range of standard cross over subs, saver subs and subs with API threads
- Customized subs by your specifications
- The subs are made out of micro alloy steel with a hard surface for wear resistance and a tough core for fatigue resistance as standard

ACCESSORIES

- Wide range of accessories for drilling
- Non-return valves for mud and air
- Stabilizers, wrenches, hammer sleeves
- Chucks with guiding, fishing and lifting tools

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For more infomation please visit driconeq.com


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