ECCS System



Environmental Concentric Casing System



No air leakages No pressure to the ground No disturbance the surroundings







ECCS System

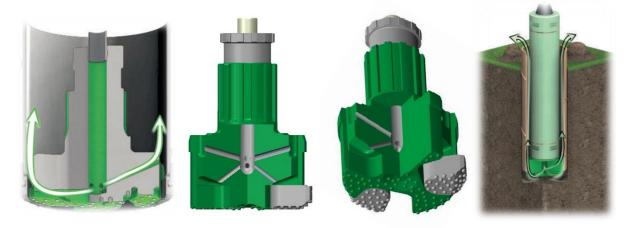


Environmental Concentric Casing System

Nowadays consultants are increasingly interested in utilizing DTH hammers in foundation construction. At the same time they are concerned about the environmental impact of using compressed air among existing structures, risking air leakage and overdrilling. In sensitive ground DTH drilling in foundation works gives one great challenge controlling the removal of cuttings from the hole with compressed air. The flow of compressed air needs to be strong enough to transport the cuttings up to the surface but must not escape into the surrounding ground or remove excessive soil. This issue is most demanding in sensitive ground conditions. In clay, air from the DTH drilling can escape to surrounding working foundations and weaken the adhesion between soil and load-bearing elements. This brings a risk for sudden settlements. In sand, excessive flushing can unconsolidate the ground, decreasing the capacity of existing friction piles, which in turn might cause pile buckling and result in settlements of buildings.

Ming is now to present new generation ECCS system for drilling in Sensitive Ground Conditions.

ECCS system minimizes the air escape to the surrounding ground as the high-pressure air never directly faces to the ground. The system is built on redirection of the air flow. The side air lift holes just keep enough air to get an efficient flushing.



How ECCS system works:

- 1) High-pressure air is travelling down from the DTH hammer to the center of main air holes of the ECCS system.
- 2) Most of the compressed air travels to the side air lift holes and goes to the casing shoe and end of the casing, that preventing air and cuttings from going outside of the casing.
- 3) Only few air goes to the holes between the wings and the bit bace to clear the cuttings back to the ground.

Hence, ECCS system can be the solution that disturbance to the surrounding soil is minimized significantly.

Conventional Concentric Casing System

The conventional DTH drilling system directs the high-pressure air from the flushing grooves straight into the ground this will cause severe damages in nearby buildings and structures.







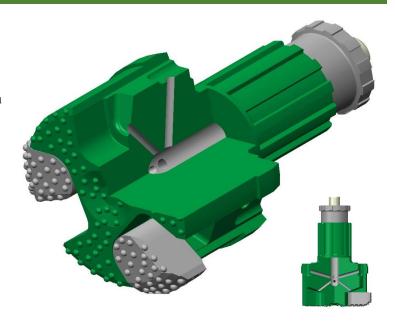




Environmental Concentric Casing System

SPECIFICATION

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Expanded		Retracted		I.D.		O.D.		
inch	mm	inch	mm	inch	mm	inch	mm	Shank
9.37	238	7.48	190	8.11	206	8.62	219	DHD360
10.86	276	8.46	215	9.45	240	10	254	DHD380,SD8
11.54	293	9.29	236	10	254	10.75	273	DHD380,SD8
11.54	293	9.49	241	10.24	260	10.75	273	DHD380,SD8
13.58	345	11.02	280	11.89	302	12.72	323	SD10
14.69	373	12.4	315	13.27	337	14.02	356	N120,N125,SD12
16.93	430	14.37	365	15.24	387	15.98	406	N120,N125,SD12
18.82	478	16.22	412	17.13	435	17.99	457	N120,N125,SD12
20.87	530	17.95	456	19.02	483	20	508	N180,SD18
22.83	580	19.92	506	20.98	533	22.01	559	N180,SD18
25	635	21.89	556	22.99	584	24.02	610	N180,SD18
26.85	682	23.82	605	24.88	632	25.98	660	N240
28.86	733	25.83	656	26.97	685	27.99	711	N240
32.99	838	29.53	750	30.71	780	32.01	813	N240
36.93	938	32.48	825	34.49	876	35.98	914	M240S
38.58	980	35.63	905	36.81	935	37.99	965	M240S
41.5	1054	37.4	950	38.82	986	40	1016	M240S
49.02	1245	45.08	1145	46.5	1181	47.99	1219	M330
	9.37 10.86 11.54 11.54 13.58 14.69 16.93 18.82 20.87 22.83 25 26.85 28.86 32.99 36.93 38.58 41.5	9.37 238 10.86 276 11.54 293 11.54 293 13.58 345 14.69 373 16.93 430 18.82 478 20.87 530 22.83 580 25 635 26.85 682 28.86 733 32.99 838 36.93 938 38.58 980 41.5 1054	Expanded inch Retracted inch 9.37 238 7.48 10.86 276 8.46 11.54 293 9.29 11.54 293 9.49 13.58 345 11.02 14.69 373 12.4 16.93 430 14.37 18.82 478 16.22 20.87 530 17.95 22.83 580 19.92 25 635 21.89 26.85 682 23.82 28.86 733 25.83 32.99 838 29.53 36.93 938 32.48 38.58 980 35.63 41.5 1054 37.4	Expanded Retracted inch mm inch mm 9.37 238 7.48 190 10.86 276 8.46 215 11.54 293 9.29 236 11.54 293 9.49 241 13.58 345 11.02 280 14.69 373 12.4 315 16.93 430 14.37 365 18.82 478 16.22 412 20.87 530 17.95 456 22.83 580 19.92 506 25 635 21.89 556 26.85 682 23.82 605 28.86 733 25.83 656 32.99 838 29.53 750 36.93 938 32.48 825 38.58 980 35.63 905 41.5 1054 37.4 950	Expanded inch Retracted inch I.D. 9.37 238 7.48 190 8.11 10.86 276 8.46 215 9.45 11.54 293 9.29 236 10 11.54 293 9.49 241 10.24 13.58 345 11.02 280 11.89 14.69 373 12.4 315 13.27 16.93 430 14.37 365 15.24 18.82 478 16.22 412 17.13 20.87 530 17.95 456 19.02 22.83 580 19.92 506 20.98 25 635 21.89 556 22.99 26.85 682 23.82 605 24.88 28.86 733 25.83 656 26.97 32.99 838 29.53 750 30.71 36.93 938 32.48 825 34.49	Expanded inch Retracted inch I.D. 9.37 238 7.48 190 8.11 206 10.86 276 8.46 215 9.45 240 11.54 293 9.29 236 10 254 11.54 293 9.49 241 10.24 260 13.58 345 11.02 280 11.89 302 14.69 373 12.4 315 13.27 337 16.93 430 14.37 365 15.24 387 18.82 478 16.22 412 17.13 435 20.87 530 17.95 456 19.02 483 22.83 580 19.92 506 20.98 533 25 635 21.89 556 22.99 584 26.85 682 23.82 605 24.88 632 28.86 733 25.83 656 26.97 685	Expanded inch Retracted inch I.D. O.D. 9.37 238 7.48 190 8.11 206 8.62 10.86 276 8.46 215 9.45 240 10 11.54 293 9.29 236 10 254 10.75 11.54 293 9.49 241 10.24 260 10.75 13.58 345 11.02 280 11.89 302 12.72 14.69 373 12.4 315 13.27 337 14.02 16.93 430 14.37 365 15.24 387 15.98 18.82 478 16.22 412 17.13 435 17.99 20.87 530 17.95 456 19.02 483 20 22.83 580 19.92 506 20.98 533 22.01 25 635 21.89 556 22.99 584 24.02 26.8	Expanded inch Retracted inch I.D. O.D. 9.37 238 7.48 190 8.11 206 8.62 219 10.86 276 8.46 215 9.45 240 10 254 11.54 293 9.29 236 10 254 10.75 273 11.54 293 9.49 241 10.24 260 10.75 273 13.58 345 11.02 280 11.89 302 12.72 323 14.69 373 12.4 315 13.27 337 14.02 356 16.93 430 14.37 365 15.24 387 15.98 406 18.82 478 16.22 412 17.13 435 17.99 457 20.87 530 17.95 456 19.02 483 20 508 22.83 580 19.92 506 20.98 533 22.01 559 </th

ECCS System



Environmental Concentric Casing System

SPECIFICATION

Ming System: ECCS-610/12.7





PART LIST

NO.	Part Name	Part No.
1	Guide Device x 1	MCEGD560N180
2	Wing x 3	MC560W

SPECIFICATION

SIZE
581mm
558mm
638mm

APPLICABLE

ITEM	SIZE
Casing Outer Dia.	610mm
Casing Wall Max.	12.5mm
Hammer	Chuck N180

CASING SHOE



MING MACHINERY COMPANY LIMITED

Tel: 3705 9834 / 3705 9835

Fax: 3705 9871

Email: info@mingmac.com.hk www.mingdthrockdrills.com