

ICE® MODEL HS7

HYDRAULIC ROTARY HEAD

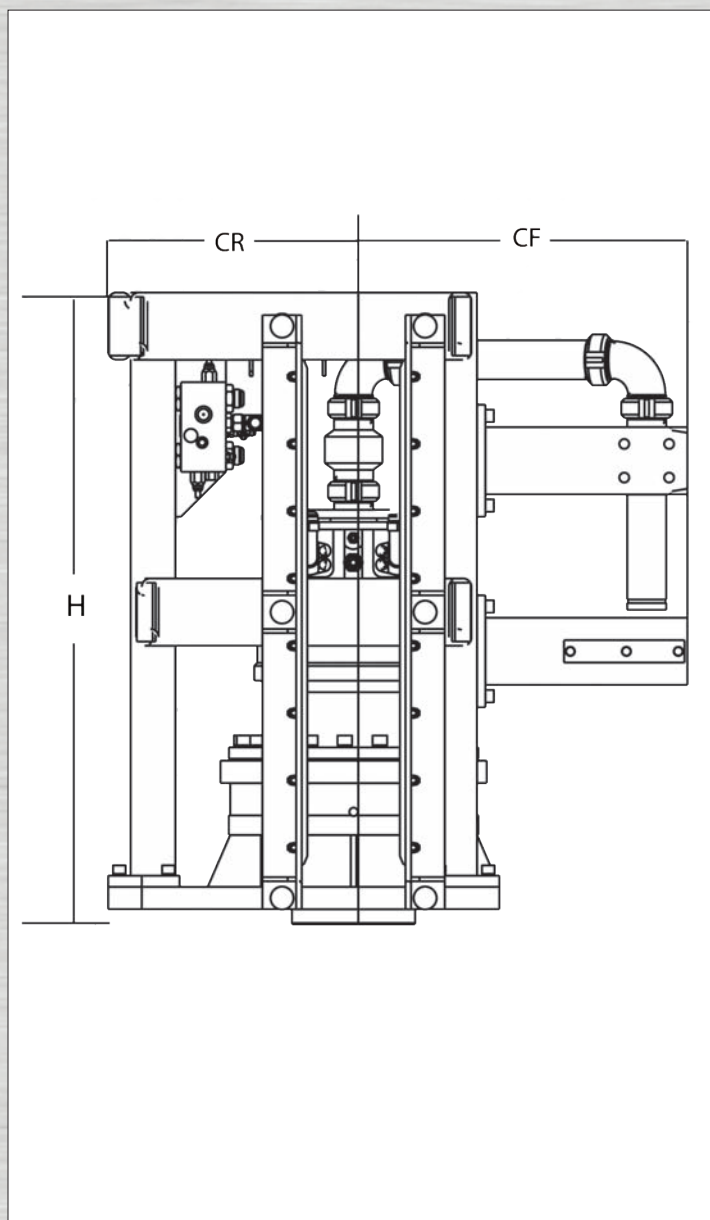


Designed specifically for simple, efficient operation on small to medium auger cast and pre-drill jobs.

Maximum torque of 7,000 ft-lbs. (9490 Nm)

Up to 340 rpm drilling speed (150 rpm with ICE® Model 230M power unit).

Maximum crowd and extract force of 20,000 lbs (90 kN).



Angle guides for 26" (660 mm) leads.
Optional guides for leads side-mount or H-Beam available.

Available Hex or API auger flighting connectors.

Hollow output shaft. Optional swivel for injecting air, water or grout.

Open-loop hydraulic system for reliability and quick, simple unit serviceability.

High efficient, direct-drive hydraulic motor gives maximum reliability and production.

Optional Model 230M power unit is compact, lightweight and incorporates a central lifting eye for maximum mobility.

ICE® power units may be used for other ICE® equipment including vibrators and hydraulic impact hammers.

Made in USA by ICE®, America's leader in cost-effective foundation equipment since 1974.

Environmentally friendly Chevron Clarity® non-toxic, biodegradable hydraulic oil contributes to a clean and toxin-free jobsite.

EPA-certified Caterpillar engine provides high reliability, worldwide parts and service, excellent fuel economy and low emissions.

INTERNATIONAL CONSTRUCTION EQUIPMENT, INC.

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ICE® MODEL HS7

HYDRAULIC ROTARY HEAD

WITH ICE® MODEL 230M POWER UNITS



PERFORMANCE	WITH ICE 230M		MAXIMUMS	
Torque (ft-lbs, Nm)	7,000 ft-lbs	9490 Nm	7,000 ft-lbs	9490 Nm
Speed (rpm)	150 rpm		340 rpm	

* Speeds are shown for free-hanging (no-load) units. Speed under actual drilling conditions may be 10% to 15% lower.

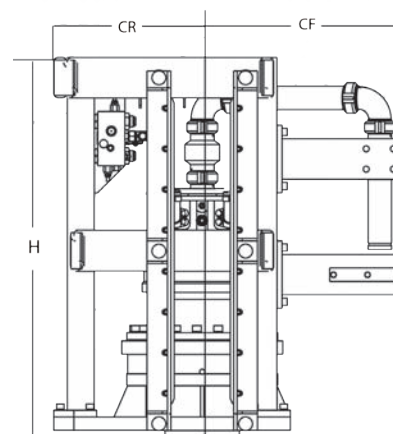
** Maximum torque requires a power unit capable of 4,500 psi (310 bar).

** Maximum speed requires a power unit capable of 180 gpm (680 lpm).

** Recommended max power for the HS7 is 400 HP (300 kW).

CAPABILITIES, WEIGHTS & DIMENSIONS

Crowd Force	13,900	lbs	6300	kg
Extraction Force	13,900	lbs	6300	kg
Optional Shaft ID	2 1/8"	in	54	mm
Optional Swivel ID	3"	in	75	mm
Weight with Guide & Swivel	3,100	lbs	1405	kg
Weight of 100' (30m) Hoses	830	lbs	375	kg
Height (H)	59"	in	1500	mm
Width with Leads	31"	in	790	mm
Depth (CF + CR)	33.5"	in	850	mm
Center to Front (CF)	22.75"	in	580	mm
Center to Rear (CR)	10.75"	in	275	mm



POWER UNIT SPECIFICATIONS

	Model 230M			
Engine	CAT	C6.6	Tier 3	
Power	225	HP	168	kW
Flow (no load)	73	gpm	275	lpm
Max Pressure	4,500	psi	310	bar
Weight	9,310	lbs	4225	mm
Length	110	in	2800	mm
Height	77	in	1960	mm
Width	58	in	1475	mm

Constant improvement and engineering progress make it necessary that ICE®, Inc reserve the right to make specification changes without notice. Please consult ICE® for the latest available information.

RH-HS7-Mar-2012

ICE® MODEL HS27

HYDRAULIC ROTARY HEAD



Two torque-speed combinations allow choice of high speed or high torque for maximum drilling production and profitability.

120 rpm or 23,100 ft-lbs (31300 Nm)

Simple single-motor and open-frame design for maximum reliability and ease of service and maintenance.

225HP (168 kW) or 300HP (224 kW) CAT Tier 3 (State IIIA) engine meets all EPA & EU emission regulations.

Angle or optional roller guides for 26" (660 mm) leads. Optional leads side-mount and H-Beam guides available.

Available Hex or API auger flighting connectors.

Available swivel for injecting air, water or grout.

High crowd and extraction forces to maximize drilling production.

Remote-control pendant with emergency stop engine speed control for fuel efficiency.

Environmentally friendly Chevron Clarity® non-toxic, biodegradable hydraulic oil.

Maximum efficiency and reliability ensured by our open-loop hydraulic system. Highest quality, reliable piston pumps and motor.

ICE® power units may be used for other ICE® equipment including vibratory drivers/extractors and hydraulic impact hammers.

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ICE® MODEL HS27

HYDRAULIC ROTARY HEAD

WITH ICE® MODEL 230M OR 300M POWER UNITS



Performance						
	HS27 with 230M		HS27 with 300M		HS27 Maximum**	
High-torque Setting						
Torque	19,000 ft-lbs	25600 Nm	23,100 ft-lbs	31300 Nm	27,300 ft-lbs	37000 Nm
Speed*	60 rpm		60 rpm		100 rpm	
High-speed Setting						
Torque	9,500 ft-lbs	12800 Nm	11,550 ft-lbs	15700 Nm	13,650 ft-lbs	18500 Nm
Speed*	120 rpm		120 rpm		120 rpm	

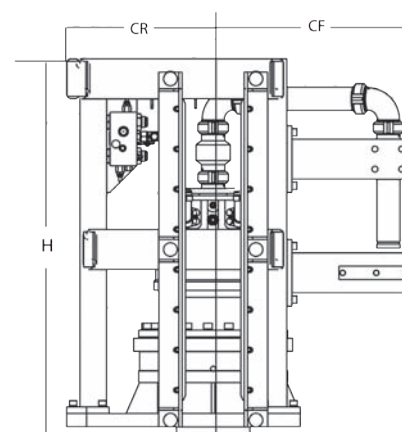
* Speeds are shown for free-hanging (no-load) units. Speed under actual drilling conditions may be 10% to 15% lower.

** Maximum torque requires a power unit capable of 6,500 psi (450 bar).

** Maximum speed requires a power unit capable of 137 gpm (520 lpm).

** Recommended max power for the HS27 is 300 HP (224 kW).

Capabilities, Weights & Dimensions				
Crowd Force	56,200	lbs	25500	kg
Extraction Force	56,200	lbs	25500	kg
Optional Shaft ID	3	in	75	mm
Optional Swivel ID	3	in	75	mm
Weight with Guide & Swivel	2,430	lbs	1100	kg
Weight of 100' (30m) Hoses	830	lbs	375	kg
Height (H)	68	in	1730	mm
Width with Leads	26	in	660	mm
Depth (CF + CR)	43.5	in	1110	mm
Center to Front (CF)	25.5	in	650	mm
Center to Rear (CR)	18	in	460	mm



Power Unit Specifications								
	Model 230M				Model 300M			
Engine	CAT	C6.6	Tier 3		CAT	C7	Tier 3	
Power	225	HP	168	kW	300	HP	224	kW
Flow (no load)	85	gpm	320	lpm	85	gpm	320	lpm
Max Pressure	4,500	psi	310	bar	5,500	psi	380	bar
Weight	9,310	lbs	4225	mm	10,500	lbs	4765	mm
Length	110	in	2800	mm	130	in	3300	mm
Height	77	in	1960	mm	87	in	2200	mm
Width	58	in	1475	mm	63	in	1600	mm

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ICE[®] MODEL HS50

HYDRAULIC ROTARY HEAD



Two torque-speed combinations allow choice of high speed or high torque for maximum drilling production and profitability.

75 rpm or 45,000 ft-lbs (61000 Nm)

Simple single-motor and open-frame design for maximum reliability and ease of service and maintenance.



300HP (224 kW) or 350HP (250 kW) CAT Tier 3 (State IIIA) engine meets all EPA & EU emission regulations.

Angle or optional roller guides for 26" (660 mm) leads. Optional leads side-mount and H-Beam guides available.

Available Hex or API auger flighting connectors.

Available swivel for injecting air, water or grout.

High crowd and extraction forces to maximize drilling production.

Remote-control pendant with emergency stop engine speed control for fuel efficiency.

Environmentally friendly Chevron Clarity[®] non-toxic, biodegradable hydraulic oil.

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ICE® MODEL HS50

HYDRAULIC ROTARY HEAD



WITH ICE® MODEL 300M OR 350E POWER UNITS

Performance						
	HS50 with 300M		HS50 with 350E		HS50 Maximum**	
High-torque Setting						
Torque	45,000 ft-lbs	61000 Nm	45,000 ft-lbs	61000 Nm	52,650 ft-lbs	71400 Nm
Speed*	32 rpm		40 rpm		75 rpm	
High-speed Setting						
Torque	22,500 ft-lbs	30500 Nm	22,500 ft-lbs	30500 Nm	26,325 ft-lbs	35700 Nm
Speed*	65 rpm		75 rpm		75 rpm	

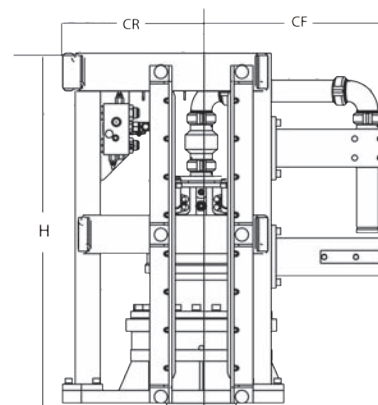
* Speeds are shown for free-hanging (no-load) units. Speed under actual drilling conditions may be 10% to 15% lower.

** Maximum torque requires a power unit capable of 6,500 psi (450 bar).

** Maximum speed requires a power unit capable of 106 gpm (395 lpm).

** Recommended maximum power for the HS50 is 350 HP (261 kW).

Capabilities, Weights & Dimensions				
Crowd Force	80,000	lbs	36300	kg
Extraction Force	80,000	lbs	36300	kg
Optional Shaft ID	3	in	75	mm
Optional Swivel ID	3	in	75	mm
Weight with Guide & Swivel	3,050	lbs	1385	kg
Weight of 100' (30m) Hoses	1000	lbs	450	kg
Height (H)	57	in	1450	mm
Width with Leads	26	in	660	mm
Depth (CF + CR)	52	in	1312	mm
Center to Front (CF)	30	in	756	mm
Center to Rear (CR)	22	in	556	mm



Power Unit Specifications						
	Model 300M			Model 350E		
Engine	CAT	C7	Tier 3	CAT	C9	Tier 3
Power	300	HP	250 kW	350	HP	250 kW
Flow (no load)	85	gpm	320 lpm	104	gpm	395 lpm
Max Pressure	5,500	psi	380 bar	5,500	psi	380 bar
Weight	10,500	lbs	4765 mm	11,300	lbs	5150 mm
Length	130	in	3300 mm	130	in	3300 mm
Height	87	in	2200 mm	87	in	2200 mm
Width	63	in	1600 mm	63	in	1600 mm

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RH-HS50-Mar-2012

ICE[®] MODEL HS75

HYDRAULIC ROTARY HEAD



Two torque-speed combinations allow choice of high speed or high torque for maximum drilling production and profitability.

60 rpm or 57,000 ft-lbs (72200 Nm)

Simple single-motor and open-frame design for maximum reliability and ease of service and maintenance.



350HP (250 kW) or 440HP (328 kW) CAT Tier 3 (State IIIA) engine meets all EPA & EU emission regulations.

Angle or optional roller guides for 26" (660 mm) leads. Optional leads side-mount and H-Beam guides available.

Available Hex or API auger flighting connectors.

Available swivel for injecting air, water or grout.

High crowd and extraction forces to maximize drilling production.

Remote-control pendant with emergency stop engine speed control for fuel efficiency.

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ICE® MODEL HS75

HYDRAULIC ROTARY HEAD

WITH ICE® MODEL 350E OR 450E POWER UNITS



Performance						
	HS75 with 350E		HS75 with 450E		HS75 Maximum**	
High-torque Setting						
Torque	57,000 ft-lbs	72200 Nm	57,000 ft-lbs	72200 Nm	78,780 ft-lbs	106800 Nm
Speed*	25 rpm		34 rpm		60 rpm	
High-speed Setting						
Torque	28,500 ft-lbs	38600 Nm	28,500 ft-lbs	38600 Nm	39,390 ft-lbs	53400 Nm
Speed*	50 rpm		60 rpm		60 rpm	

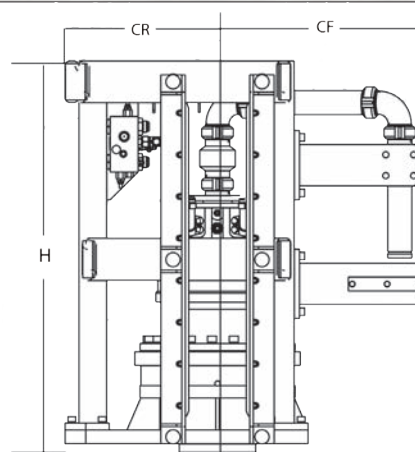
* Speeds are shown for free-hanging (no-load) units. Speed under actual drilling conditions may be 10% to 15% lower.

** Maximum torque requires a power unit capable of 6,500 psi (450 bar).

** Maximum speed requires a power unit capable of 119 gpm (450 lpm).

** Recommended max power for the HS75 is 440 HP (328 kW).

Capabilities, Weights & Dimensions				
Crowd Force	80,000	lbs	36300	kg
Extraction Force	80,000	lbs	36300	kg
Optional Shaft ID	3	in	75	mm
Optional Swivel Joint ID	3	in	75	mm
Weight with Guide & Swivel	3,100	lbs	1405	kg
Weight of 100' (30m) Hoses	1000	lbs	450	kg
Height (H)	57	in	1450	mm
Width with Leads	26	in	660	mm
Depth (CF + CR)	52	in	1312	mm
Center to Front (CF)	30	in	756	mm
Center to Rear (CR)	22	in	556	mm



Power Unit Specifications							
	Model 350E				Model 450E		
Engine	CAT	C9	Tier 3		CAT	C13	Tier 3
Power	350	HP	250	kW	440	HP	328 kW
Flow (zero load)	104	gpm	395	lpm	130	gpm	490 lpm
Max Pressure	4,700	psi	325	bar	4,700	psi	325 bar
Weight	11,300	lbs	5150	mm	13,500	lbs	6125 mm
Length	130	in	3300	mm	147	in	3730 mm
Height	87	in	2200	mm	91	in	2310 mm
Width	63	in	1600	mm	64	in	1615 mm

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RH-HS75-Mar-2012