

KmN 1.4UA - 2.0UA - 2.5UA

Safe and hardworking autonomous drill rig, with performance features built for optimal results



DRILL RIG FEATURES

- Fully electronic interface
- One-operator drill rig
- Automated complete 3 m drill run (no supervision needed), can run during shift changes
- Automatic trip in/out function with safety interlock (pressure monitoring and safety control)
- Automatic thread breaking/making
- Allow operation of the drill rig while using rod handlers (need optical safety device)
- Automated wireline descent/retrieve function
- Water pump (water flow control, abnormal pressure monitoring)
- Depth measurement
- Rod count, rod string length and position
- Inner tube length (user defined) + inner tube fill-up monitoring + inner tube clog detection
- Data collection

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STANDARD MACHINE

Power unit

	93 kW, 1 750 RPM	125 HP, 1 750 RPM
Main power panel 575 V/60 Hz/460 V/60 Hz/3 ph		
Auxiliary 24 VDC panel (control unit)		
Primary pump (130 cc)	6 500 psi (448 Bar)	60 gpm (228 lpm)
Auxiliary pump (74 cc)	4 000 psi (276 Bar)	34 gpm (130 lpm)
Feed pump (9.5 cc)	4 000 psi (276 Bar)	4 gpm (17 lpm)
Hydraulic oil cooling, air and water (if needed)		

Mast and feed system

Mast dump	40 in (1,02 m)	
Tilt angle	-90 @ 90 deg (depending on options chosen)	
Feed stroke	66 in (1,68 m)	
Working pressure	4 100 psi (283 Bar)	
Thrust/pull (telescopic hydraulic cylinder)	26 000 lb (116 kN)	170 ft/min (81 m/s)

Depth based on pull capacity

Size B wireline drill rod	40 lb/³ m (18,2 kg/³ m)	6 391 ft (1 948 m)
Size N wireline drill rod	51 lb/³ m (23,2 kg/³ m)	5 014 ft (1 528 m)
Size H wireline drill rod	76 lb/³ m (34,5 kg/³ m)	3 372 ft (1 028 m)
Size P wireline drill rod	115 lb/³ m (52,2 kg/³ m)	2 228 ft (679 m)

Wireline 315 cc motor @ 3500 psi

Length capacity	9514 ft (2 900 m)	3/16 in (4,76 mm)
	5085 ft (1 550 m)	1/4 in (6,35 mm)
Bare drum pull capacity/speed	2974 lb (14 kN)	334 ft/min (102 m/min)
Full drum pull capacity/speed	731 lb (3 kN)	1 300 ft/min (396 m/min)

Drill head (compatible with rod sizes A to P)

Final drive HV-80-3 chain in an oil bath with 1:2.33 ratio		
Lubrication pump for bearings		
No transmission		

Drill head (compatible with rod sizes A to P)

380 cc motor with proportional hydraulic control	
Holding capacity	38 000 lb (169 kN)
Rotation speed and torque	918 lb*ft (1 254 N*m) @ 1 250 RPM
	2 296 lb*ft (3 113 N*m) @ 500 RPM
Breaking torque (computer controlled to prevent damage)	4 526 lb*ft (6137 N*m)

Rod clamp (compatible with rod sizes A to P)

Holding capacity	38 000 lb (169 kN)
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Operator control interface

Information	10" Danfoss DM1000 touchscreen, colour display	
Drilling information	Rotation	Speed (RPM), pressure (torque)
	Feed	Penetration rate, calculated WOB, RPI (RPC)
	Water pump	Water flow rate, water pressure
	Wireline	RPM, drum turn count, pull pressure
	Diagnostics	Warning, operator instructions, alarm, machine status, operating mode, etc.
Drilling control	2 x joysticks (2-axis)	
	3 x HMR rotary devices (button and POT)	
	Keypad near drill rig (mode control)	

OPTIONAL

- Side rod handler
- Optical safety guard with real-time moving element tracking (ex. operator) (safety device)
- Rod handler

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FEED CYLINDER INCREASE

Power unit

	93 kW, 1 750 RPM	125 HP, 1 750 RPM
Main power panel 575 V/60 Hz/460 V/60 Hz/3 ph		
Auxiliary 24 VDC panel (control unit)		
Primary pump (130 cc)	6 500 psi (448 Bar)	60 gpm (228 lpm)
Auxiliary pump (74 cc)	4 000 psi (276 Bar)	34 gpm (130 lpm)
Feed pump (9.5 cc)	4 000 psi (276 Bar)	4 gpm (17 lpm)
Hydraulic oil cooling, air and water (if needed)		

Mast and feed system

Mast dump	40 in (1,02 m)	
Tilt angle	-90 @ 90 deg (depending on options chosen)	
Feed stroke	66 in (1,68 m)	
Working pressure	4 100 psi (283 Bar)	
Thrust/pull (telescopic hydraulic cylinder)	37 000 lb (165 kN)	170 ft/min (81 m/s)

Depth based on pull capacity

Size B wireline drill rod	40 lb/³ m (18,2 kg/³ m)	9 095 ft (2 772 m)
Size N wireline drill rod	51 lb/³ m (23,2 kg/³ m)	7 135 ft (2 175 m)
Size H wireline drill rod	76 lb/³ m (34,5 kg/³ m)	4 798 ft (1 462 m)
Size P wireline drill rod	115 lb/³ m (52,2 kg/³ m)	3 171 ft (967 m)

Wireline 315 cc motor @ 3500 psi

Length capacity	9514 ft (2 900 m)	3/16 in (4,76 mm)
	5085 ft (1 550 m)	1/4 in (6,35 mm)
Bare drum pull capacity/speed	2974 lb (14 kN)	334 ft/min (102 m/min)
Full drum pull capacity/speed	731 lb (3 kN)	1 300 ft/min (396 m/min)

Drill head (compatible with rod sizes A to P)

Final drive HV-80-3 chain in an oil bath with 1:2.33 ratio
Lubrication pump for bearings
No transmission

Drill head (compatible with rod sizes A to P)

380 cc motor with proportional hydraulic control	
Holding capacity	38 000 lb (169 kN)
Rotation speed and torque	918 lb*ft (1 254 N*m) @ 1 250 RPM
	2 296 lb*ft (3 113 N*m) @ 500 RPM
Breaking torque (computer controlled to prevent damage)	4 526 lb*ft (6137 N*m)

Rod clamp (compatible with rod sizes A to P)

Holding capacity	38 000 lb (169 kN)
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Operator control interface

Information	10" Danfoss DM1000 touchscreen, colour display	
Drilling information	Rotation	Speed (RPM), pressure (torque)
	Feed	Penetration rate, calculated WOB, RPI (RPC)
	Water pump	Water flow rate, water pressure
	Wireline	RPM, drum turn count, pull pressure
	Diagnostics	Warning, operator instructions, alarm, machine status, operating mode, etc.
Drilling control	2 x joysticks (2-axis)	
	3 x HMR rotary devices (button and POT)	
	Keypad near drill rig (mode control)	

OPTIONAL

- Side rod handler
- Optical safety guard with real-time moving element tracking (ex. operator)(safety device)
- Rod handler

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MAIN FEED FRAME INCREASE, FEED CYLINDER INCREASE

Power unit

	93 kW, 1 750 RPM	125 HP, 1 750 RPM
Main power panel 575 V/60 Hz/460 V/60 Hz/3 ph		
Auxiliary 24 VDC panel (control unit)		
Primary pump (130 cc)	6 500 psi (448 Bar)	60 gpm (228 lpm)
Auxiliary pump (74 cc)	4 000 psi (276 Bar)	34 gpm (130 lpm)
Feed pump (9.5 cc)	4 000 psi (276 Bar)	4 gpm (17 lpm)
Hydraulic oil cooling, air and water (if needed)		

Mast and feed system

Mast dump	40 in (1,02 m)	
Tilt angle	-90 @ 90 deg (depending on options chosen)	
Feed stroke	66 in (1,68 m)	
Working pressure	4 500 psi (310 Bar)	
Thrust/pull (telescopic hydraulic cylinder)	45 000 lb (200 kN)	170 ft/min (81 m/s)

Depth based on pull capacity

Size B wireline drill rod	40 lb/³ m (18,2 kg/³ m)	9 095 ft (3 372 m)
Size N wireline drill rod	51 lb/³ m (23,2 kg/³ m)	8 678 ft (2 645 m)
Size H wireline drill rod	76 lb/³ m (34,5 kg/³ m)	5 835 ft (1 779 m)
Size P wireline drill rod	115 lb/³ m (52,2 kg/³ m)	3 857 ft (1 176 m)

Wireline 315 cc motor @ 3500 psi

Length capacity	9514 ft (2 900 m)	3/16 in (4,76 mm)
	5085 ft (1 550 m)	1/4 in (6,35 mm)
Bare drum pull capacity/speed	2974 lb (14 kN)	334 ft/min (102 m/min)
Full drum pull capacity/speed	731 lb (3 kN)	1 300 ft/min (396 m/min)

Drill head (compatible with rod sizes A to P)

Final drive HV-80-3 chain in an oil bath with 1:2.33 ratio		
Lubrication pump for bearings		
No transmission		

Drill head (compatible with rod sizes A to P)

380 cc motor with proportional hydraulic control		
Holding capacity	38 000 lb (169 kN)	
Rotation speed and torque	1 254 lb*ft (1 254 N*m) @ 1 250 RPM	
	2 296 lb*ft (3 113 N*m) @ 500 RPM	
Breaking torque (computer controlled to prevent damage)	4 526 lb*ft (6137 N*m)	

Rod clamp (compatible with rod sizes A to P)

Holding capacity	38 000 lb (169 kN)
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Operator control interface

Information	10" Danfoss DM1000 touchscreen, colour display	
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Drilling control	2 x joysticks (2-axis)	
	3 x HMR rotary devices (button and POT)	
	Keypad near drill rig (mode control)	

OPTIONAL

- Side rod handler
- Optical safety guard with real-time moving element tracking (ex. operator)(safety device)
- Rod handler



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