



Diamond Drill Rig

kmB 1.4

Model 2004

Range of uses

- Surface and underground drilling
- Heliport drill for fly-in program
- Environmental drilling
- Geotechnical drilling

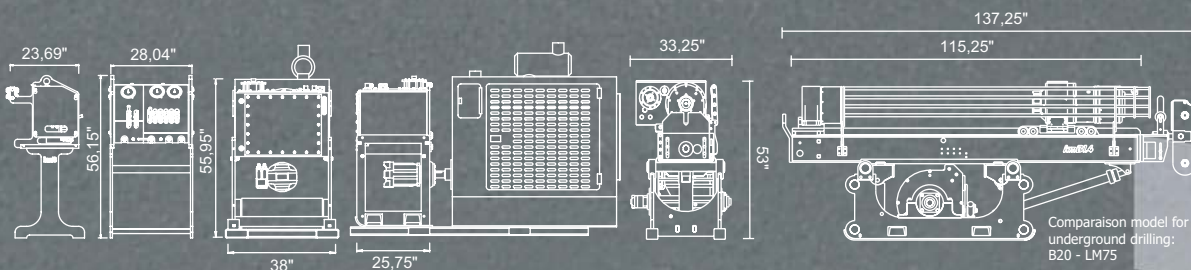
New:

- Wireline hoist with hydraulic cable guide. (capacity:6000')
- Automatic opening and self locking of drill head.
- Extendable security guard.



This model is more compact and performs better than its competitors. It is also reliable, heavy duty, safe and easy to maintain.

This picture represents the underground version



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OVERVIEW OF THE kmB 1.4 DRILL'S FEATURES

VersaDrill Canada's mandate at the outset was to fill the gap for the need of a lightweight long stroke portable drill rig. The final concept to the VersaDrill design was brought about in part by listening to the industry principals, contractors including the exploration sector.

The formula for bringing this type of drill rig to fruition was drilling know how, determination and having a good understanding of the marketplace. The concept of a versatile drill that can be utilized on the surface just as easily as underground with minimum retrofitting has merit from an end user's view point, especially when it minimizes capital cost for those who offer both types of service.

Aside from the numerous technical aspects of our drill rig, the next feature is its greater depth capacity to weight ratio brought about by the employment of aluminium and its conception. This lightweight design facilitates and reduces the number of helicopter moves. The power pack is constructed in a two-piece configuration for transportation and to facilitate and accommodate the changing of the power type to suit either drilling application. Particularly interesting on our drill is the rod holder and chuck that are capable of handling 1.75" to 4.9" (44.5 mm to 124 mm) diameter drill rods.

PERFORMANCE

Depth capacity for diamond drilling:		Depth capacity for auger drilling:	
B 2-3/16" (55,6 mm)	4600' (1400 m)	4" (10,1 cm) exterior	200' (58 m)
N 2-3/4" (69,9 mm)	3600' (1100 m)	4-1/4" (10,8 cm) interior	150' (46 m)
H 3-1/2" (88,9 mm)	2900' (880 m)		
P 4-5/8" (117,5 mm)	1800' (550 m)		

Electric motor recommended for underground: 100 hp (75 kw) at 1800 rpm
 Motor recommended for surface: 185 hp (138 kw) at 2100 rpm

*The Versa 1.4 kmB drill rig can be mounted on tracks, truck, barge, sled and others.

OPTIONS

UNDERGROUND PULLEY KIT
 The underground pulley kit is especially designed to prevent breakage of hoses. It adjusts according to the size of rods and displaces for removal of samples from the hole. Weight: 53 lbs (24kg)

CATHEAD
 The cathead is positioned to the side of the feed frame and is used to hammer the sampler.

HYDRAULIC MODULE

This module contains a hydraulic load-sensing circuit perfected to use hydraulic oil only as needed therefore economising on fuel consumption. The hydraulic valves are mounted directly on the control panel to minimize the complexity of pilot control, overall weight and the maintenance.

One return line filters are mounted on the aluminium pressurized hydraulic tank employing a 10 micron element to protect the lubrication circuit oil. The water heat exchangers offers predetermined coolant to the hydraulic system, which in turn allows the operator to maximize drilling performance and production with a high degree of efficiency. (Air/oil cooler is optional)

Functions: -Floating rotary head and synchronized rod holder
 -Torque limit on rotary head

Hydraulic pump:	65 gpm (246 l/min) @ 1800rpm (max.4000 psi (275 bar))
Weight:	1250 lbs (567 kg) dry

(Optional oil-to-air heat exchanger)

ROD HOLDER

This rod holder has the same characteristics as the chuck.
 Weight: 352 lbs (160 kg)

SAFETY GUARD

The safety guard, which is anchored on the feed frame, is light and removable
 Weight: 7lbs (3.2 kg)

ROTARY HEAD AND CHUCK

The rotary head and chuck provide a holding capacity of 25000 lbs (11340 kg).

Speed :	Variable up to 1200 rpm	Speed and torque based on a 107 cc hydraulic motor at 345 bar (5000 psi).						
Spindle interior dimension :	4.9" (124 mm)							
Chuck operation :	Spring closed and hydraulically opened							
Final drive :	HV 80-3 chain in an oil bath							
Hydraulic motor :	Rexroth 160cc variable							
Transmission :	Funk 4 speeds or Hi-Lo 2 speeds							
Rotary head ratio :	1: 2,33							
Lubrication :	Pump pressurized, 10 micron filter and cooler							
Fabrication :	Aluminium and steel (all steel optional)							
Weight with motor and transmission :	744 lbs (337 kg)							

Speed	Ratio	Min RPM	Lb*ft	N*m	Max RPM	Lb*ft	N*m
1	6.63	132	7736	10489	227	4696	6367
2	3.17	276	3699	5015	474	2245	3044
3	1.72	508	2007	2721	873	1218	1652
4	1	874	1167	1582	1200	885	1199

FEED FRAME

The feed frame is characterized by a carriage that uses cam follower bearings to roll along the lightweight, heavy-duty mast. The carriage is driven by a telescopic hydraulic cylinder.

Stroke :	5,5' (1,68 m)
Maximum stroke speed :	143 ft/min (43 m/min)
Push and pull capacity :	26000 lbs (11800 kg) @ 4000 psi
Weight :	721 lbs (327 kg)

FEED FRAME BASE

The base is designed with many anchoring points allowing ease in handling. The slide enables the mast to be positioned to the desired height.

Inclination:	180 degrees
Weight:	341 lbs (155 kg)

SURFACE MAST

The retractable surface mast consists of a pull apparatus, a slide, a work platform, pulley system, adjustable support legs and anchoring rings.

Single line pull capacity:	20000 lbs (9072 kg) @ 4500 psi
Pull speed:	220 feet/min (67 m/min)
Speed of descent:	370 feet/min (113 m/min)
Weight:	1057 lbs (480 kg) approx.

WIRELINE HOIST WITH SAFETY GUARD

The wireline hoist is driven by a low speed, high torque hydraulic motor providing variable speed. It is equipped with cable guide and safety guard.

Cable capacity 3/16" (4.8mm):	4600' (1400 m)
Pull capacity (empty):	2000 lbs (907 Kg)
Pull capacity (full):	650 lbs (295 Kg)
Weight:	160 lbs (73 kg)



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