

SR-45  
BLUETECH PLUS

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BLUETECH

# Smart Power. Unmatched Efficiency.

Meet the new SR-45 Blue Tech Plus, the drilling rig that redefines energy efficiency in the construction industry.

Engineered with an intelligent hydraulic system and advanced software for seamless pump-distributor communication, it delivers significant fuel savings while boosting mechanical performance.



## More **performance**

- Power and productivity without compromise



## More **saving**

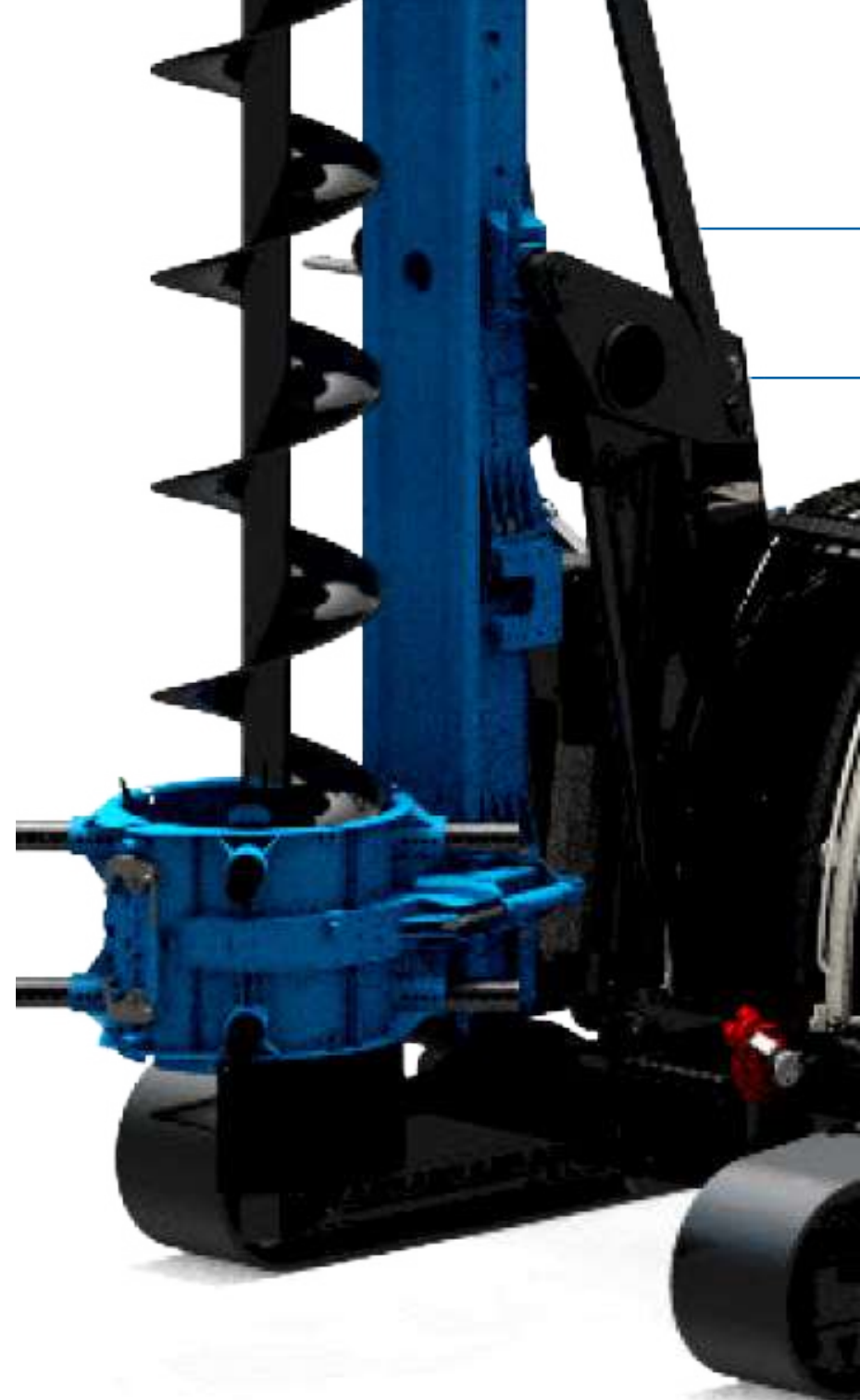
- Lower fuel use, reduced operating costs



## More **sustainability**

- Smaller environmental footprint

With the SR-45 Blue Tech Plus, every work cycle becomes a smarter, cleaner, and more competitive step forward.





Diesel engine power  
**209 kW / 280 HP**



Weight  
**40900 - 42800 kg**



Main winch  
**165 kN**



Max torque  
**184 kNm**



Max depth LDP  
**70 m**



Max depth LHR  
**23,5 m**



Max depth CFA  
**26 m**



Max depth DP  
**20 m**

# Power meets precision. Efficiency meets innovation.

- **Less Fuel, More Power**

An intelligent hydraulic system and smart pump control cut diesel use by up to 30%, while boosting rotary torque to 170.3 kNm rated.

- **Lower Maintenance Costs**

New hydraulic system and fewer components mean less downtime and 30% savings on oil changes.

- **Fast Kelly to CFA Conversion**

Switch drilling modes in just half days - stay agile, stay productive.

- **Built for a Greener Future**

Compatible with HVO diesel and biodegradable oil, with up to 30% CO<sub>2</sub> savings per cycle and the lowest noise emissions on the market.



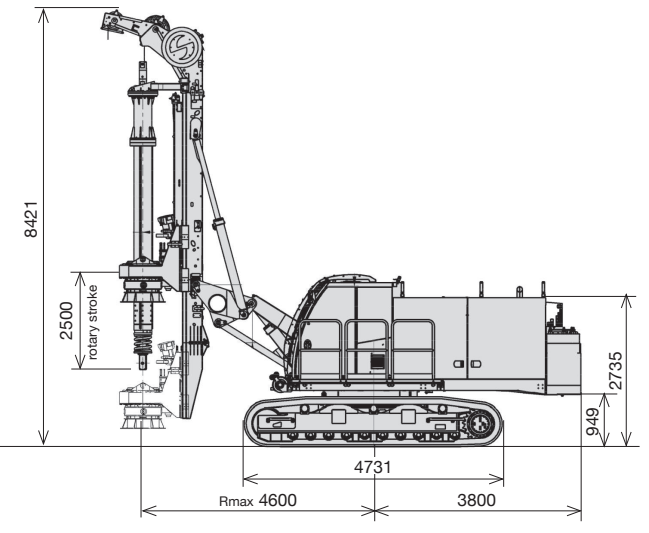
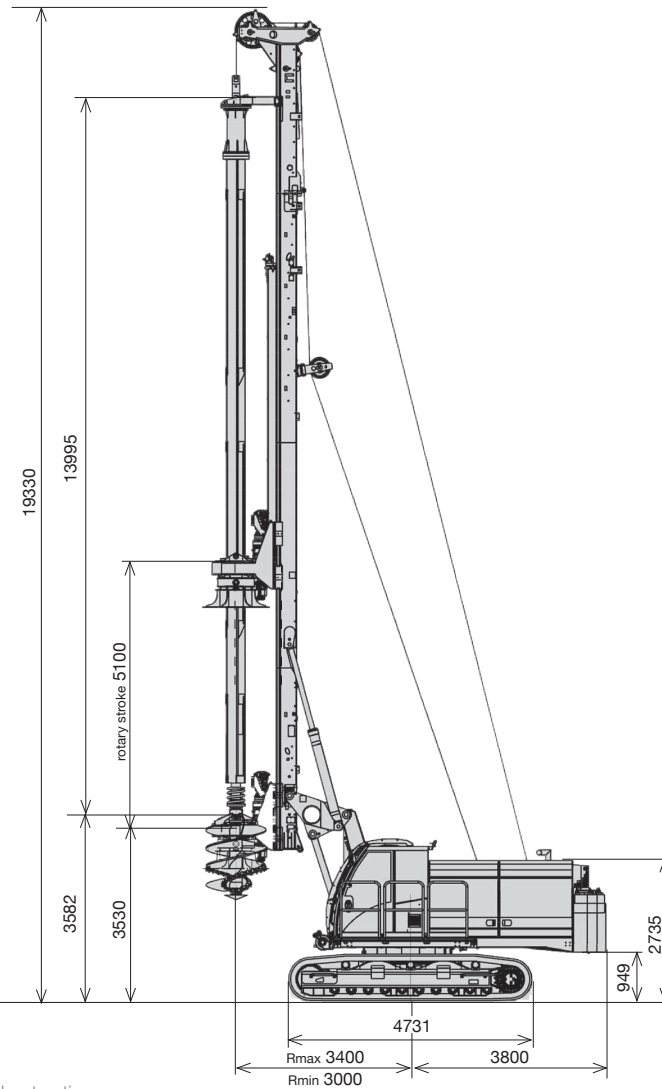
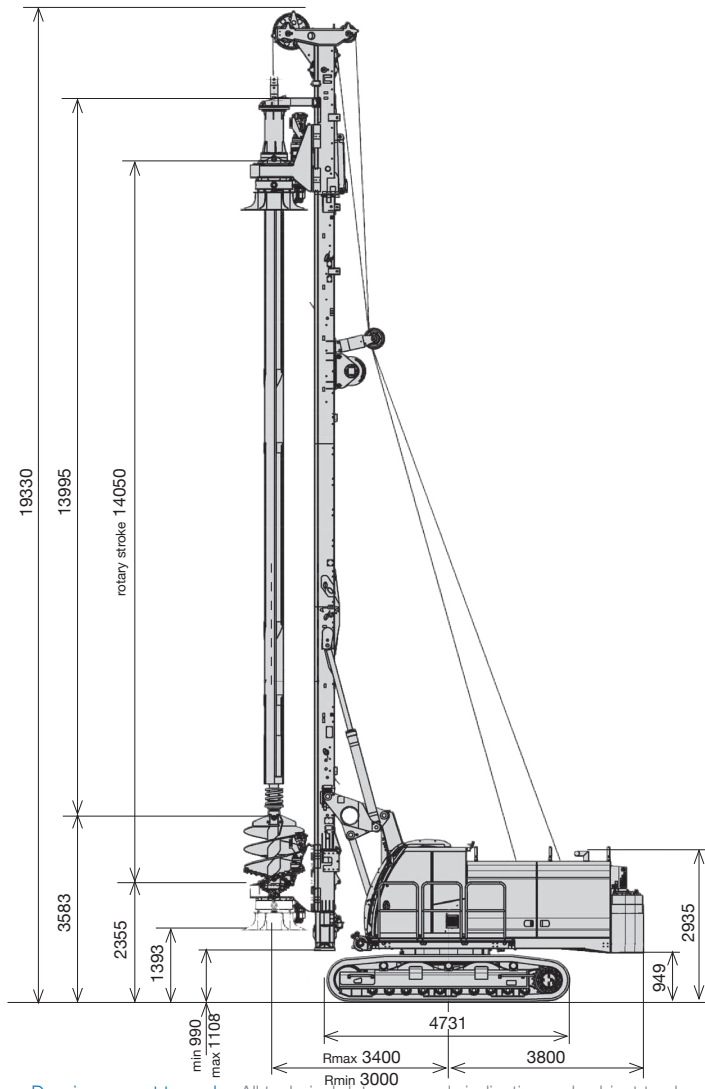


# Large Diameter Piles

| WCS

| CCS

| LHR



Drawing are not to scale All technical data are purely indicative and subject to change without notice

### LDP WCS - Large Diameter Piles

Operating weight (c/w 4x9 kelly bar)	42800 kg	94357 lb
Working radius	3000 - 3400 mm	118 - 134 in
Max pile diameter (tool along the mast)	1400 mm	55 in
Max pile diameter w/o lower mast section (tool below the mast)	3000 mm	118 in
Max pile depth - friction kelly	65 m	213 ft
Max pile depth - locking kelly	52 m	171 ft
Max pile depth - extended version	70 m	229 ft

### LDP CCS - Large Diameter Piles

Operating weight (c/w 4x9 kelly bar)	40900 kg	90168 lb
Working radius	3000 - 3400 mm	118 - 134 in
Max pile diameter (tool along the mast)	1500 mm	59 in
Max pile diameter w/o lower mast section (tool below the mast)	3000 mm	118 in
Max pile depth - friction kelly	59 m	195 ft
Max pile depth - locking kelly	47 m	156 ft
Max pile depth - extended version	64 m	209 ft

### LHR Large Diameter Piles

Min operating height	8,4 m	28 ft
Working radius	4600 - 3000 mm	181 - 118 in
CCS rotary stroke	2500 mm	98 in
Max pile diameter (tool along the mast)	1500 mm	59 in
Max pile diameter w/o lower mast section (tool below the mast)	3000 mm	118 in
Max pile depth - friction kelly	23,5 m	77 ft
Max pile depth - locking kelly	19 m	62 ft

## Kelly bars for LDP

Kelly type	Kelly dimens.	Drilling Depth <sup>1</sup>		Weight		L Length		H CCS system		H WCS system		
		m	ft	ton	US ton	m	ft	m	ft	m	ft	
3 parts	BL HD	3 x 8	21,6	70.9	3,1	3.4	9,1	29.9	7,8	25.6	8,6	28.2
	BL HD	3 x 9	24,5	80.4	3,4	3.7	10,1	33.1	7,6	24.9	7,6	24.9
	BL HD	3 x 12	33,6	110.2	4,3	4.7	13,1	43.0	4,5	14.8	4,6	15.1
	BL HD <sup>5</sup>	3 x 14	38,9	127.6	4,9	5.4	14,9	48.9	4,0 <sup>3</sup>	13.1 <sup>3</sup>	2,8	9.2
	BL HD	4 x 8	29,0	95.1	3,5	3.9	9,1	29.9	7,8	25.6	8,6	28.2
4 parts	BL HD	4 x 9	32,0	105.0	3,9	4.3	9,9	32.5	7,7	25.3	7,8	25.6
	BL HD	4 x 10,5	38,4	126.0	4,4	4.9	11,6	38.1	6,1	20.0	6,1	20.0
	BL HD	4 x 12	44,7	146.7	5,0	5.5	13,2	43.3	4,5	14.8	4,6	15.1
	BL HD	4 x 13	48,2	158.1	5,3	5.8	14,0	45.9	3,7	12.1	3,7	12.1
	BL HD	4 x 14	51,5	169.0	5,7	6.3	14,9	48.9	4,0 <sup>3</sup>	13.1 <sup>3</sup>	2,8	9.2
	FR HD	4 x 9	32,6	107.0	3,9	4.3	10,0	32.8	7,7	25.3	7,7	25.3
	FR HD	4 x 12	44,2	145.0	5,0	5.5	12,9	42.3	4,8	15.7	4,8	15.7
	FR HD	4 x 13	48,5	159.1	5,3	5.8	14,0	45.9	3,7	12.1	3,7	12.1
	FR HD <sup>5</sup>	4 x 14	52,1	170.9	5,7	6.3	14,9	48.9	4,0 <sup>3</sup>	13.1 <sup>3</sup>	2,8	9.2
	FR HD	5 x 9	40,7	133.5	4,1	4.5	10,0	32.8	7,7	25.3	7,7	25.3
5 parts <sup>2</sup>	FR HD	5 x 11	48,8	160.1	4,8	5.3	11,6	38.1	6,0	19.7	6,1	20.0
	FR HD	5 x 12	55,1	180.8	5,2	5.7	12,9	42.3	4,8	15.7	4,8	15.7
	FR HD	5 x 13	60,5	198.5	5,5	6.1	14,0	45.9	3,7	12.1	3,7	12.1
	FR HD <sup>5-6</sup>	5 x 13,5	63,8	209.3	5,7	6.3	14,6	47.9	4,3 <sup>3</sup>	14.1 <sup>3</sup>	3,1	10.2
	FR HD <sup>5-6</sup>	5 x 14	65,0	213.3	5,9	6.5	14,9	48.9	4,0 <sup>3</sup>	13.1 <sup>3</sup>	2,8	9.2
FR HD <sup>4-5-7</sup>	5 x 15	69,8	229.0	6,3	6.9	15,8	51.8	3,1 <sup>3</sup>	10.2 <sup>3</sup>	3,1 <sup>3</sup>	10.2 <sup>3</sup>	

<sup>1</sup> Drilling depth is calculated with 1500 mm (4.9 ft) long, kelly bar c/w stub 150x150 or 130x130; Reduced drilling depth by 1100 mm (3.6 ft) in CCS version and in WCS version without lower mast section. Kelly bars are also available with stub 200x200 (depth, length and clearance are subject to changes).

<sup>2</sup> Rotary head derated

<sup>3</sup> Clearance value with 1,25 m (4.1 ft) mast extension

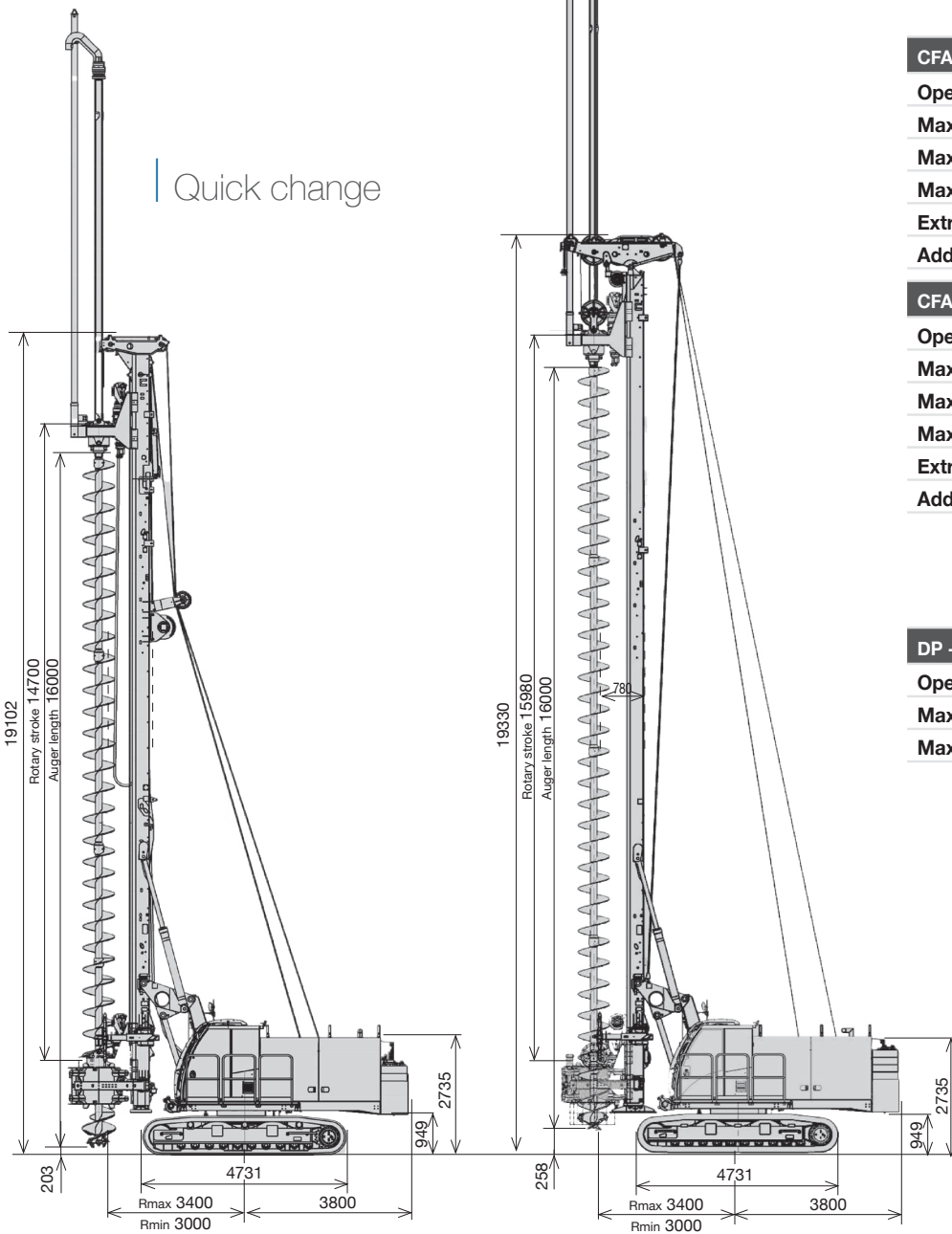
<sup>4</sup> Not self mounting without mast extension

<sup>5</sup> Not self mounting in CCS version without mast extension

<sup>6</sup> Could be necessary longer rope

<sup>7</sup> Must be necessary longer rope

# Continuous Flight Auger



CFA - Continuous Flight Auger - 4 lines pull		
Operating weight w/o auger (std - extended)	41200 - 42950 kg	90830 - 94688 lb
Max pile diameter	1000 mm	39 in
Max pile depth (c/w 8 m - 23 ft sleeve extension)	23,5 m	77 ft
Max pile depth with extended kit (c/w 8 m - 23 ft sleeve ext.)	26 m	85 ft
Extraction force	530 kN	119147 lbf
Additional crowd force on auger	100 kN	22481 lbf

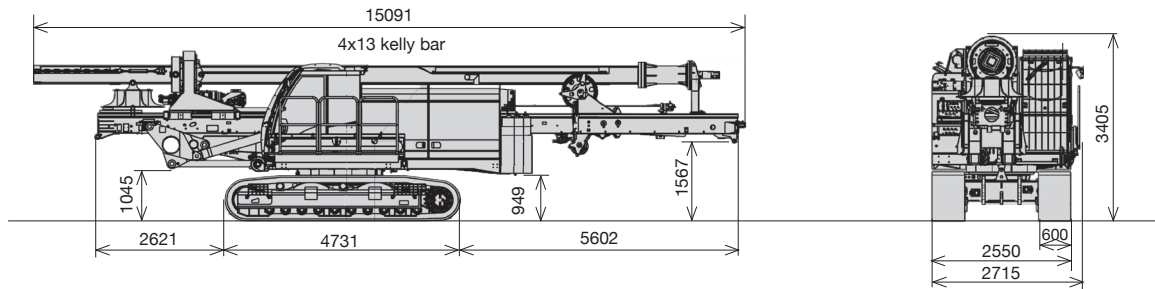
CFA - Continuous Flight Auger - Quick change		
Operating weight w/o auger	41300 kg	91050 lb
Max pile diameter	1000 mm	39 in
Max pile depth (c/w 8 m - 23 ft sleeve extension)	22,5 m	74 ft
Max pile depth with extended kit (c/w 8 m - 23 ft sleeve ext.)	23,5 m	77 ft
Extraction force	394 kN	88573 lbf
Additional crowd force on auger	140 kN	31473 lbf

DP - Displacement Piles - Quick change		
Operating weight w/o string	41300 kg	91050 lb
Max pile diameter (DP - TCT)	350 - 400 mm	14 - 16 in
Max pile depth (c/w 7 m - 22.5 ft sleeve extension)	20 m	66 ft

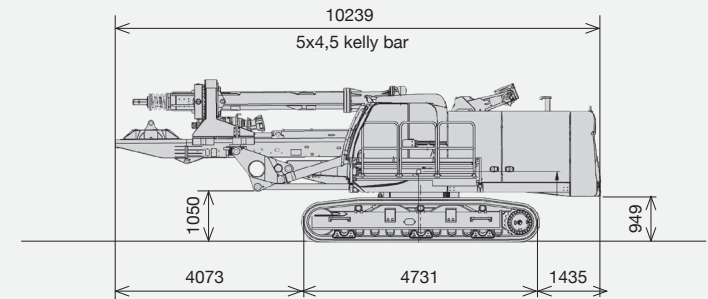
# Transport

## Dimensions and Weights

Standard version

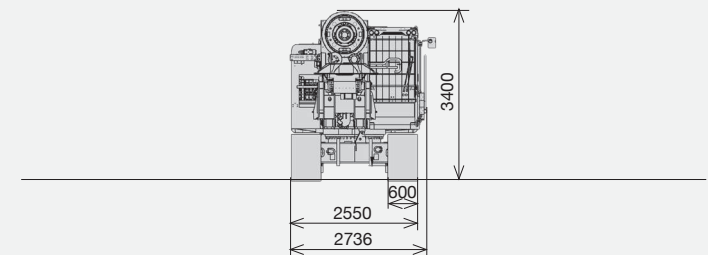
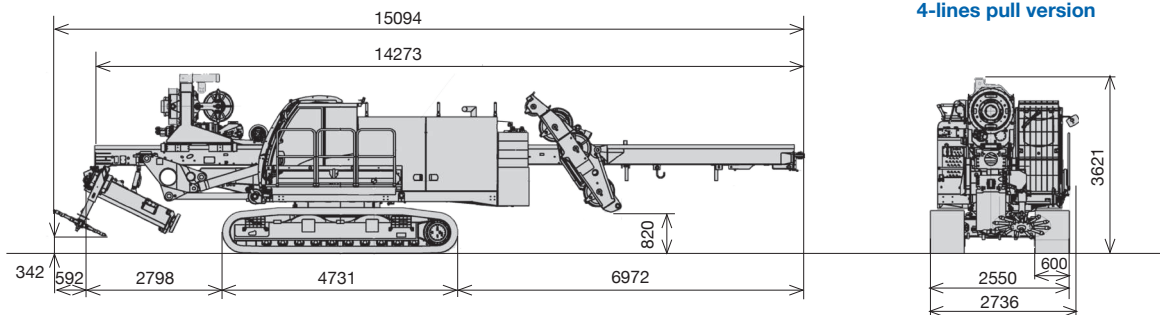


LHR version



Transport standard version	CCS		WCS	
Transport weight <sup>1-2</sup>	40900 kg	90169 lb	42800 kg	94358 lb
Transport length <sup>3</sup>	13050 mm	42.8 ft	13250 mm	43.5 ft

4-lines pull version



Transport CFA version	4-lines pull		Quick change	
Transport weight <sup>1</sup>	37600 kg	82894 lb	38500 kg	84878 lb
Transport length	13226 mm	43.4 ft	13250 mm	43.5 ft

Transport LHR version	8.5	
Transport weight <sup>1</sup>	39500 kg	87083 lb

<sup>1</sup> For Monolithic mast and Stage V version. For segmental mast version add 300 kg (661 lb) in WCS and Quick Change or add 400 kg (882 lb) in CCS and 4-lines pull; for Tier 3 version weight reduced by 300 kg (661 lb).

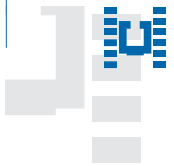
<sup>2</sup> c/w 4 x 9 m kelly bar.

<sup>3</sup> c/w kelly bar < 12 m.

<sup>1</sup> c/w 5 x 4,5 m, kelly bar and additional counterweight

# Technical data

## Undercarriage



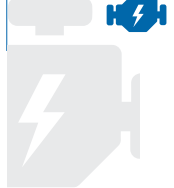
Undercarriage		
Type	variable gauge, telescoping sides frames	
Overall width with retracted crawlers	2550 mm	100 in
Overall width with extended crawlers	3750 mm	148 in
Track shoes width	600 mm	24 in
Overall length of crawlers	4731 mm	186 in
Travelling speed	1,7 km/h	1.0 mph

## Upperframe



Upperframe		
Operators' cabin width	950 mm	37.4 in
Control system interface	DMS 4.0 touch 12"	
Tail swing radius	3800 mm	150 in
Slewing speed	3 rpm	3 rpm
Stackable counterweight	4600 kg	10141 lb
Additional counterweight	up to 1100 kg	up to 2425 lb

## Engine



Engine		
Engine model	Cummins B6.7	
Power rating	209 kW @ 2000 rpm	280 HP @ 2000 rpm
Engine conforms to Exhaust emission Std.	EU stage V	US EPA Tier 4f
Fuel tank capacity	380 l	100 US gal
AD Blue tank capacity	57 l	15 US gal
Sound pressure level in cab	75 dB(A)	75 dB(A)
Sound power level	107 dB(A)	107 dB(A)

## Hydraulic system



Hydraulic system		
Main pump flow	390 l/min	103 US gal/min
Hydraulic oil tank capacity	300 l	79 US gal

## Rotary



Rotary		
Max torque	185 kNm	136447 lb*ft
Rated torque	170 kNm	125383 lb*ft
Max drilling speed	48,0 rpm	48 rpm
Spin off speed	146 rpm	146 rpm

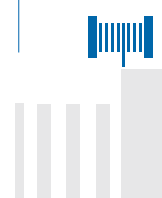
## Crowd system



CCS_Cylinder Crowd System		
Stroke	5100 mm	201 in
Pull up force	207 kN	46535 lbf
Pull down force	140 kN	31473 lbf
Speed up	18,8 m/min	62 ft/min
Speed up	25,1 m/min	82 ft/min

WCS_Winch Crowd System		
Stroke	14700 mm	579 in
Pull up force	240 kN	53953 lbf
Pull down force	240 kN	53953 lbf
Speed up	21,5 m/min	71 ft/min
Speed up	21,5 m/min	71 ft/min

## Winches



Main winch		
Line pull (1st layer)	165 kN	37093 lbf
Rope diameter	24 mm	0.94 in
Rope speed (1st layer)	78 m/min	256 ft/min

Auxiliary winch		
Line pull (1st layer)	65 kN	14612 lbf
Rope diameter	18 mm	0.71 in

# Configurations

## UNDERCARRIAGE

Variable gauge, telescopic side frames	●
Upgraded undercarriage	○
700 mm (27.5 in) wide shoe	○
800 mm (31.5 in) wide shoe	○
Machine anchor points for transport	●
Mechanical prearrangement for casing oscillator	●
Hydraulic prearrangement for casing oscillator	○
VRM120KL casing oscillator	○
Radio remote control for tramming operation	●

## UPPER STRUCTURE

Diesel engine Cummins QSB 6.7	○
Diesel engine Cummins B 6.7 EU Stage V – US EPA Tier 4f	●
Start and slow system	●
Automatic Greasing package	○
PTO kit for washing lancer	○
Prearrangement for Air compressor kit	○
Air compressor kit	○
Foldable side catwalks for cabin with hand rails	●
Machine lifting kit (harbor use)	○
Acoustic & light alarm for tramming	●
Lighting led system package	●
Front support for tools	●
Additional counterweight 1100 kg (2425 lb)	○

## CAB

Front protective grille	●
Falling object protective structure (FOPS)	●
Rearview mirrors	●
Comfort package (cup holder, radio, A/C system, USB port & 12 V power socket, roll-up awning, courtesy lights)	●
Operator seat (air suspension, lumbar support, fully adjustable positioning, safety belt & operator presence micro-switch)	●
Lighting system in front of the cab	●

## CONTROL AND MONITORING SYSTEM

DMS ON BOARD 4.0 with technological package	●
DMS PC	●
DMS manager 4.0	○
GSM / GPRS / WIFI Modem	●
DMS ON BOARD adjustable monitor 12" touch screen	●
Video control by 4 cameras with display in the cab	●

## WINCHES

Main winch SW160 model	●
Load cell for main winch	○
Main & service winch pull instant value displayed on DMS On Board	○
Limit switch for rope winding and winches	●
Depthmeter for main winch	●
Anti-slack system for main winch	○
Service winch SW65 model	●
Load cell for service winch	●

## ROTARY UNIT

Replaceable drive ribs	●
Quick disassembling rotary kit	○

## MAST

Segmental mast	○
Monolithic mast	●
Mast guide cleaner	●
Kit for assisted rasing mast ( <i>patented</i> )	○
Hydraulic cathead folding kit	○
Cathead greasing kit	○
Double positioning of cylinder ( <i>in LHR version</i> )	●

## KELLY BAR TECHNOLOGY

Rotary sleeve with 3 ribs	●
Spin off discharging system	●
Cardan joint	○
Flange for casing driving d.1300 mm (51.1 in)	○
Flange for casing driving d.900 mm (34.4 in)	○

Automatic return to the centre hole	●
Kelly bar guide	●

## OTHER TECHNOLOGIES

HD-4 or HD-5 or 15-HD5 Sleeve 3 m (9.8 ft) long	○
HD-4 or HD-5 or 15-HD5 Sleeve 6 m (19.7 ft) long	○
HD-4 or HD-5 or 15-HD5 Sleeve 7 m (23 ft) long	○
HD-4 or HD-5 or 15-HD5 Sleeve 8 m (27.8 ft) long	○
Package for CFA quick change 16 m (52 ft) auger length	○
Package for CFA 4-lines pull 16 m (52 ft) auger length	○
Package for CFA 4-lines pull 18,5 m (61 ft) auger length	○
Package for CFA 4-lines pull 20,5 m (67,2 in) auger length	○
Automatic auger lifting	●
Autodrilling package	●
Autorotary package	●
CFA 4-lines pull additional pull-down winch 100 kN (22481 lbf)	○
Hydraulic universal openable lower guide d.1000 mm (39.4 in)	○
Auger cleaner star type	○
Double roller auger cleaner d.1000 mm (39.4 in)	○
Two pressure transducers kit	○
WiFi sensore for concrete pressure	○
Warning system for CFA sleeve extension coupling ( <i>patent pending</i> )	●
Hydraulic prearrangement for VTH-1 vibrator	○
Add. package for DP/TCT technology 20 m (66 ft) depth with lattice ext.	○
Add. package for TJ technology 20 m (66 ft) depth with lattice ext.	○
Package for DTH	○
3 clamps 60-415mm (2.4-16.3 in) for DTH version	○
4" swivel and bent curve	○
5" swivel and bent curve	○
Drilling energy measurement kit for displacement/CFA	●
Automatic greasing kit for concrete swivel	○
Concrete line for turret and mast	○

● standard

○ optional



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