

# Gallagher 660V Drill Rig



Built by Gallagher Engineering the 660V is a new high capacity drilling rig for the Australian coal seam gas industry and is the first of its kind built in Australia.

A state of the art drill rig built for the unique Australian conditions and considerations such road and community restrictions. It enables

access to coal seams previously inaccessible to traditional drilling methods with conventional drill rigs.

The 660V's rack and pinion feed system teamed with custom built Auto Rod Handler has many special features some of which are:

- Ability to drill in excess of 3,500 metres measured depth
- Capable of vertical or angled drilling from 90 deg back to 60 deg
- Removes the reliance on gravity as it can push, as well as pull, creating 660,000 lbs of both thrust and pullback
- Reduces drilling time by enabling access to shallow formations immediately, thus reducing client costs
- Creates a safer work environment for drill crew by removing the need of cables for push and pull with the added bonus of reducing downtime from rope inspections and replacement.
- Climate controlled drillers cabin



## Specifications (quick look )

### Dimensions:

Length,	15.3 metres
Width	3 metres
Height,	4.3 metres
	Gallagher Quad Axle Trailer

### Rotary Drive:

Rotary (High Torque)	65,000 ftlb @ 26 rpm
Rotary (Low Torque)	17,500 ftlb @ 70 rpm
Drilling Capacity	>3,500 mtrs drilling @ 312 mm

### Wrenches:

Wrench/Clamp	Triple Jaw Wrenches
	Quick Change Dies
	Separating Jaws

### Power Unit:

Engine	Cummins QSK 19
Rating	800 HP

### Other Features:

88 mm Hollow Spindle

### Carriage Drive:

Max Thrust/Pullback	660,000 lb (300 ton) high
Max Thrust/Pullback	300,000 lb (150 ton) low
Max Carriage speed	100ft/min

### Max Breakout:

120,000 ftlbs

### Shipping Weight:

65 tonnes



## Drilling Control Room

The control room offers the driller a safe and comfortable, climate controlled working environment, in which he can oversee all aspects of the drilling operation. With all the functions at his finger tips, the driller is able to trip pipe, make up and break joints, as well as control and monitor the mud pumps. This reduces the risk to the drilling crew by removing them from these tasks.

### GALLAGHER 660V Drilling Rig Full Specs

<b>Top Head Drive:</b>		<b>Rig Trailer:</b>	
Top Head Drive System:	Rack & Pinion Drive with Adjustable Force Limiter	Axels & spacing:	4 Rows of 8
Max Hookload:	660,000lbs, - 300 Tonnes	Dimensions:	
Rotary System:	(3) Pinion & Gear Drive with Infinitely Variable Torque	Length:	48 ft - 14.6 metres
Max Rotary Torque:	65,000ftlbs. (88,128 Nm)	Width:	9.8 ft - 3.0 metres
Max Rotary Speed:	70 RPM	Height:	4.5 metres
Max Rotary Pressure:	5,100 psi (350 bar)	Total weight:	75,000 KG
Slip Spindle:	6 5/8 API-FH Lower Tool Joint Connection	Weight per axel:	9,000 KG allowable
Top Head Drive Dimensions:			
Length:	2.5 metres	<b>Power Train:</b>	
Width:	2.25 metres	Engine:	Cummins QSK 19
Top Head Drive Weight:	12,000 KG	Single Engine Rating	800 HP
		Mounting:	Sound-Reducing
<b>Derrick Mounted Drill Rig:</b>			
Transport Dimensions (with Lower Derrick):		<b>Derrick:</b>	
Length:	16.5 metres	Configuration:	One piece Working Assembly
Width:	3 metres	Dimension:	
Height:	4.5 metres	Length:	16.5 metres
Weight (with Lower Derrick):	75,000 KG	Width:	1.0 metres
King pin size:	50 mm	Trailer mounted Derrick weight:	32,000 KG with top drive
Weight on king pin:	20,000 KG	Total Drill rig working height:	64 ft.- 19.5 metres
Boom hoist:	Hydraulic		
		<b>Substructure:</b>	
<b>Self-Erecting Driller's Cabin:</b>		Drill Rig Base:	4 Piece Steel Elevated
Driller's Cabin Dimensions:		Dimensions:	
Length:	20 ft. - 6.09 metres	Length:	72.17 ft. - 22.0 metres
Height:	8.5 ft. - 2.59 metres	Width:	19.68 ft. - 6.00 metres
Driller's Cabin Support Skid:	(1) Steel Constructed Platform	Weight:	60,000 KG
Cabin   Support Skid dimensions:			
Length:	46 ft. - 14.02 metres	<b>Wrench:</b>	
Width:	10 ft.- 3.04 metres	Wrench Type:	Triple Jaw with Quick change Dies
Height:	2 ft.- 0.60 metres	Max Breakout Torque:	100,000 ft. lbs
Platform Weight (including Cabin):	49,000 lbs. - 22,226 KG each	Max Makeup torque:	85,000 ft. lbs
<b>Pipe Handling System:</b>		Clamp/Grip range:	4 in. – 15 in. (interchangeable clamp blocks)
Max Drill Pipe size:	Range II	Wrench Assembly Weight:	9,900 lbs - 4,500 KG
Max Drill Pipe/Casing Tubular			
Dimension:	4 in. 101.6 mm-15 in. 381mm OD	<b>Indexing Pipe Racks:</b>	
Max Drill Collar Size:	8 in. 203.2mm Range II	Pipe Rack Dimensions (each):	
Max Lift Rating:	9 5/8 Mud motor - 2,700 KG	Length:	20 ft.- 6.10 metres
Range II:	4,400 lbs - 1,996 KG	Width:	4 ft. - 1.21 metres
Pipe handler assembly Dimensions (Including Skid in transport position):		Height:	5 ft - 1.52 metres
Length:	43 ft. 6 in.- 13.26 metres	Pipe Rack Total Weight:	5,300 lbs.- 2,404 KG each
Width:	10 ft.- 3.00 metres		
Height:	10 ft. 5 in.- 3.17 metres		
Total Weight:	44,000 lbs. - 20,000 KG		