

# GOS WHEELED EXCAVATORS DOOSAN DX170W-7 ROAD/RAIL CONVERSIONS



World leading technology



Renowned for its innovative road/rail vehicles (RRV's) over many years, GOS uses the well-proven Doosan DX170W-7 wheeled excavator as the base for a comprehensive range of friction drive and hydrostatic drive machines to match all challenging work applications.



## STANDARD EQUIPMENT

- Built in general accordance with local railway legislation, such as RIS-1530-PLT, EN 15746 and AS 7502.
- Available in 1435 mm and 1600 mm nominal gauges.
- Ability to on/off track on 150mm cant. Fully stable on 180 mm cant in work mode and 200 mm in travel mode.
- Available with or without drop down stabilisers
- 700 mm diameter cast steel rail wheels with fitted EN16T steel axles
- Friction driver version – travel drive using rubber tyres directly driving rail wheels
- Direct rail wheel braking (friction driver version) – using separate brake disc and actuating system.
- Hydrostatic drive version - travel drive using hydrostatic motors bolted to rail wheels, including slip reduction system
- Rail wheel braking (hydrostatic drive version) - via hydrostatic drive system/motor
- Hydraulically operated railgear with double pilot-operated check valves
- Anti-burst protection on ALL boom elements
- Rail gear raise/lower deployment interlock system
- Pivoting axle with axle-lock cylinders and pilot-operated check valves
- GKD 3rci Rated Capacity Indicator system, including data logging
- Automatic trailer park and service braking with quick connect service and park brake couplings front and rear
- Electrical sockets front and rear for operating automatic lighting on trailers.
- Chassis mounted rail lighting with automatic direction switching and neutral “all red” condition
- Emergency recovery system, using 11 HP diesel recovery engine with electric start, together with tow bar
- Cab fitted fire extinguisher
- GOS RailSafe CANbus based control system with diagnostic capabilities. Cab mounted display screen.

## AVAILABLE OPTIONS

- Double cab. Seating for one passenger.
- FIRETRACE automatic AFFF system
- “Deadman” or “vigilance” operator systems.
- “Blind side” CCTV system
- 5.5m and 10 m “long reach” dippers

- ENGCON specific Tiltrotator driver controls
- MOVAX Pile Driver specific driver controls
- Rail wheel brake emergency recovery hydraulic connection
- Work restraint anchor point
- Power connections on boom elements
- Hydraulically operated retractable machine stabiliser legs at front and rear of the machine (HS and HS-SL variant only)
- Optional GKD RCI system wireless tandem link available.
- Dedicated hammer flow valve for enhanced equipment operations, eg rail brushing

## RELIABILITY

Building on the standard Doosan excavator's reliability, all GOS engineering changes follow the Doosan philosophy, using superior material and enhanced impact strength components. Against the Network Rail Plant Performance System (PPS) criteria, GOS DX170W-7 based machines score 99.8 % reliability.

## SUPERIOR STABILITY

Using “in-house” design and manufacturing facilities, GOS optimise the use of additional counterweight and chassis mounted mass, to ensure superior machine stability, delivering class - leading lift capability.

## YOUR SAFETY IS OUR PRIORITY

As well as the standard Doosan equipment, GOS road/rail machines feature additional cameras and work lights, fire suppression systems, additional strategically positioned emergency stops, enhanced “working at height” guards. All in accordance with exacting Network Rail safety standards.

## TOTAL CONTROL

Using upgraded components, towing connections for fully automatic rail trailer braking (air or hydraulically actuated) fitted to both ends of the machine. Direct rail wheel or hydrostatic braking available, depending on selected model. All machines feature the latest GKD Series 3 Network Rail Approved Rated Capacity Indicator (RCI), in accordance with the current issues of industry standards RIS-1530-PLT and BS EN 15746.

## FRICITION DRIVE VERSION

GOS DX170 Series road/rail machines have become the company's core product - they are the UK market leader, for this size of machine. Friction drive version is the acknowledged prime workhorse of the UK rail maintenance industry.

As the name implies, travel drive utilises the friction between the machine's rubber tyres and the rail wheels.

This is the simplest and most robust option built by GOS and has a measured reliability factor of 99.8 %.

Currently two main variants available:

- DX170 Ultimate 250

Approx finished machine weight : 25 tonnes

- DX170 Ultimate 270- the "heavy lifter"

Approx finished machine weight : 31 tonnes

Key features include:

- Direct rail wheel braking
- Rail trailer towing (both hydraulic and air actuation) up to 140 tonnes
- Enhanced lift performance
- Full function Network Rail approved GKD RCI system with "virtual wall" and height limitation, enabling operation under live OLE and with adjacent line open (ALO)
- Various dipper configurations available, including 2.1m (civil option) and 5.5m (lifting option). Longer booms also available, up to 10m length



## HYDROSTATIC DRIVE VERSION

Similar to the friction drive variant, except for the use of hydrostatic motors bolted directly to the rail wheels. Based on the Doosan DX170 wheeled excavator, the GOS DX170W Hydrostatic Drive Series includes:

- Hydrostatic travel drive capability, including hydrostatic wheel braking
- Optional retractable stabiliser legs at each "corner" of the machine to provide additional stability in operation (Variant HS only)
- Re-configured boom lift geometry, resulting in up to 30 % additional hydraulic capacity

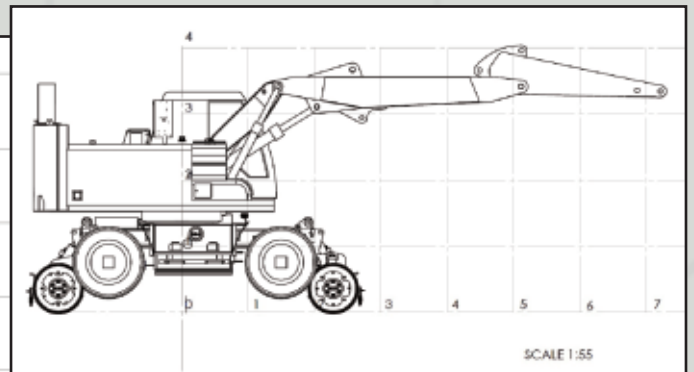
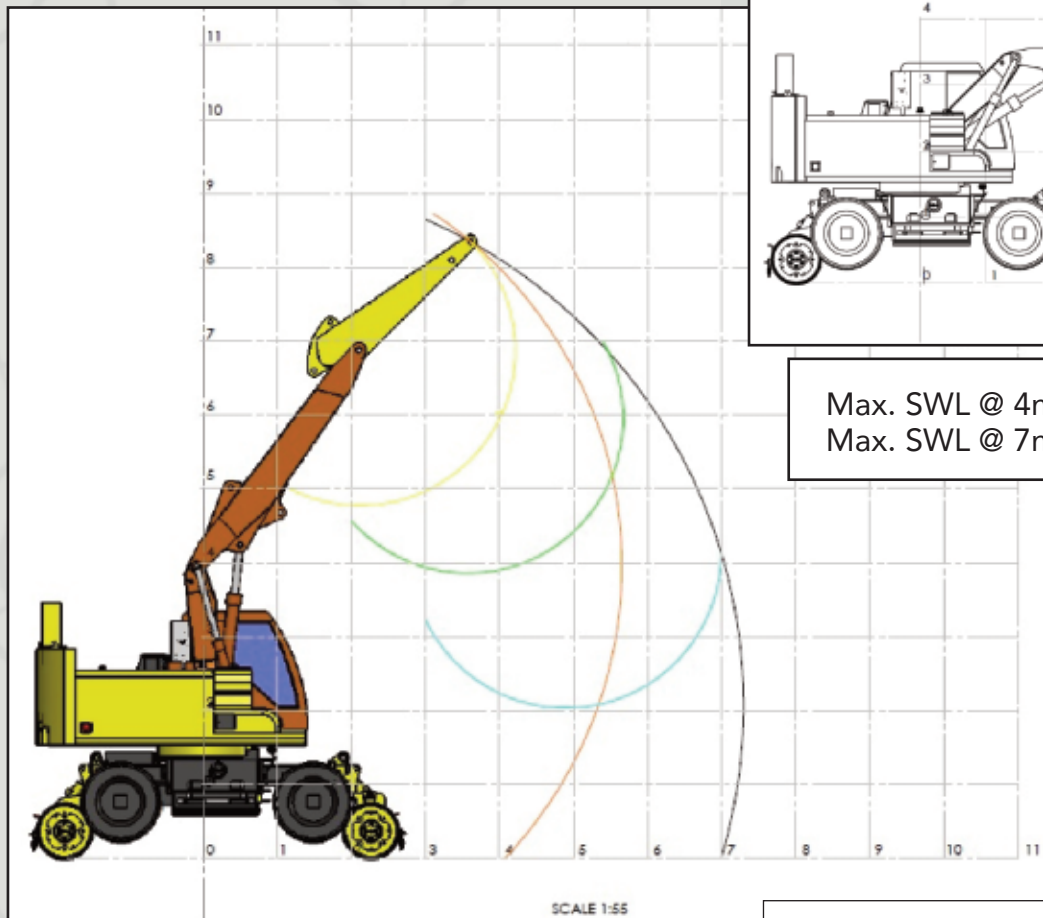
Currently, 4 main variants are available:

- DX170SH Ultimate 250/270 - Standard machine. NO drop down stabilisers
- DX170 HS Ultimate 270 - WITH drop down stabilisers, for increased lift capacity and enhanced machine stability
- DX170 SH Ultimate 270 SL (Self Levelling) - Standard machine, NO drop down stabilisers
- DX170 HS Ultimate 270 SL (Self Levelling) - WITH drop down stabilisers, for increased lift capacity and enhanced machine stability.

## OPERATIONAL TASKS

Suitably equipped, here's just a few examples of the variety of tasks that this versatile machine can undertake:

- Track tamping
- Rail brushing
- Site layout and preparation work
- Sleeper changing
- MOVAX vibro pile driving
- Tilt rotator use
- Grading and formation building
- Lifting fork fitment for pallet handling
- Suction ballast excavation unit
- Long rail handling/thimbling
- Long and "super long" boom capability
- Pile hammer use
- Gantry and OLE installation
- Mulching/flailing
- Multiple standard bucket use
- Multiple attachment use with quick hitch for log grabbing, bag lifting, hammer/breaker etc.



Max. SWL @ 4m reach - 11.5 tonnes  
Max. SWL @ 7m reach - 6.7 tonnes

Please scan the QR code for further information



**BOOM REPRESENTATION TABLE**

| BOOM COLOUR       | MAX STUB ANGLE | CANT CONDITIONS      | SLEW CONDITIONS                    |
|-------------------|----------------|----------------------|------------------------------------|
| ORANGE AND YELLOW | 96°            | ROAD/LEVEL/DOWN CANT | PIVOT END / 35°<br>FIXED END / 15° |
| GREEN             | 77°            | <2°(180MM)/UP CANT   | 35° - 165°                         |
| BLUE              | 82°            | >2°(180MM)/UP CANT   | 195° - 325°                        |

FURTHER NOTE:  
- ANGLES WILL HAVE 14° EXTRA WITH >400KG LOAD