

CONTCHAMP DRD450

TECHNICAL INFORMATION CONTAINER & INTERMODAL HANDLER



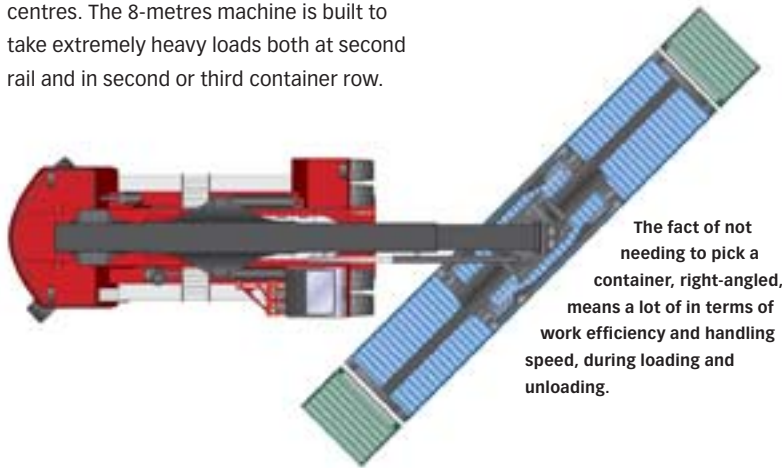


Flexible Container Handling

Dedicated for handling laden containers and trailers

DRD450-80 with a lift capacity of 45 tonnes is a complement to the range of Kalmar Reachstackers when it comes to handling laden containers or trailers at long load centres. The 8-metres machine is built to take extremely heavy loads both at second rail and in second or third container row.

The extensive freedom allowed by the lifting equipment, gives that drivers can improve the work efficiency by using the machines advantages.



The fact of not needing to pick a container, right-angled, means a lot of in terms of work efficiency and handling speed, during loading and unloading.



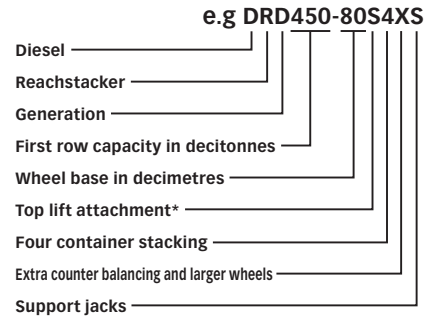
Containers can be lifted lengthwise making it possible to deliver the container into and trough workshop doors, port shed gates, etc in then low, longitudinal position.

Chassis

The chassis is built of fully welded steel profiles, which gives a rigid construction with extremely strong mounting points for the axles and lift equipment. Certain machines are equipped with support jacks for increased capacity in the third container row and at second rail.



Clarification of model designation



*C = Combi attachment

Boom

The telescopic boom is constructed of high tensile steel and is of a very sturdy design. The rotator consists of an upper and lower yoke, which rotate by double hydraulic motors.

Attachment

Top lift attachment constructed of welded steel profiles that run within each other on plastic sliding plates with twist locks adjustable for 20'-40' loaded containers. Side shifting (± 800) is achieved with two hydraulic cylinders and mechanical pile slope (hydraulic on combi) is allowed with $\pm 5^\circ$. Combi attachment has two pairs of trailer legs for the bottom lift handling of trailers. Electronic locking of the twist-locks makes the loading and unloading process secure and all vital functions are monitored via a lamp panel on the boom.

Hydraulic system

Six different pumps feed the hydraulic system and it's sub-system:

- Two double variable piston pumps feed the working hydraulics, the electro hydraulic servo and the steering system. A priority valve ensures that there is always hydraulic pressure for the steering system.
- Two fixed, wing type pump of which one feeds the attachment hydraulics and one the brake system via an accumulator charge valve.

Drive train

DRD450-80 is equipped with Volvo's TWD 1231 VE, a turbo-charged straight 6-cylinder diesel engine with intercooler that gives high torque at low revs. The Cummins engine fulfils the requirements of 97/68 EC stage 2, USA EPA Tier 2. The well-proven Spicer off Highways 15.7HR 40432 hydrodynamic gearbox has a built in torque con-

verter. It has 4 gears in each direction and is manual. The Kessler D111 drive axle shifts gear down in two stages, differential and hub-reduction. The engine only achieves maximum torque at the drive wheels, which spares the transmission.



Volvo TWD 1231VE with water cooled intercooler and Spicer off Highways 15,7HR 40432 gear box.

		Standard	Optional
Engine	Manufacturer Model	Volvo TWD 1231VE with water cooled intercooler	Cummins QSM11 with air cooled intercooler
	Power	275 kW at 2100 rpm	280 kW at 2100 rpm
	Peak torque	1753 Nm at 1200 rpm	1898 Nm at 1100-1400 rpm
Transmission		Spicer off Highways 15.7HR 40432	Spicer off Highways 15.7HR 40432
Driving axle		Kessler D111	Kessler D111

Brake system

The drive axle is fitted with hydraulic brake system of wet disc type. The parking brake system consists of a dry disc, which is applied by means of a powerful spring and is released by means of hydraulic pressure from the parking brake valve in the cab.



Drivers environment

Spirit Delta cabin offers an efficient and secure workplace. Visibility is superb and controls and instruments are logically grouped. Steering wheel, seat and joystick are adjustable for best individual driving position. The climate control unit ensures a comfortable cab temperature.



Steering system

The steering system is completely hydraulic and is fed from one of the load sensing pumps via a priority valve. The steering axle is an extremely robust construction with double acting cylinders. The minimal number of parts ensures operational reliability, a minimum of service points and easy maintenance.



Electric- and control system

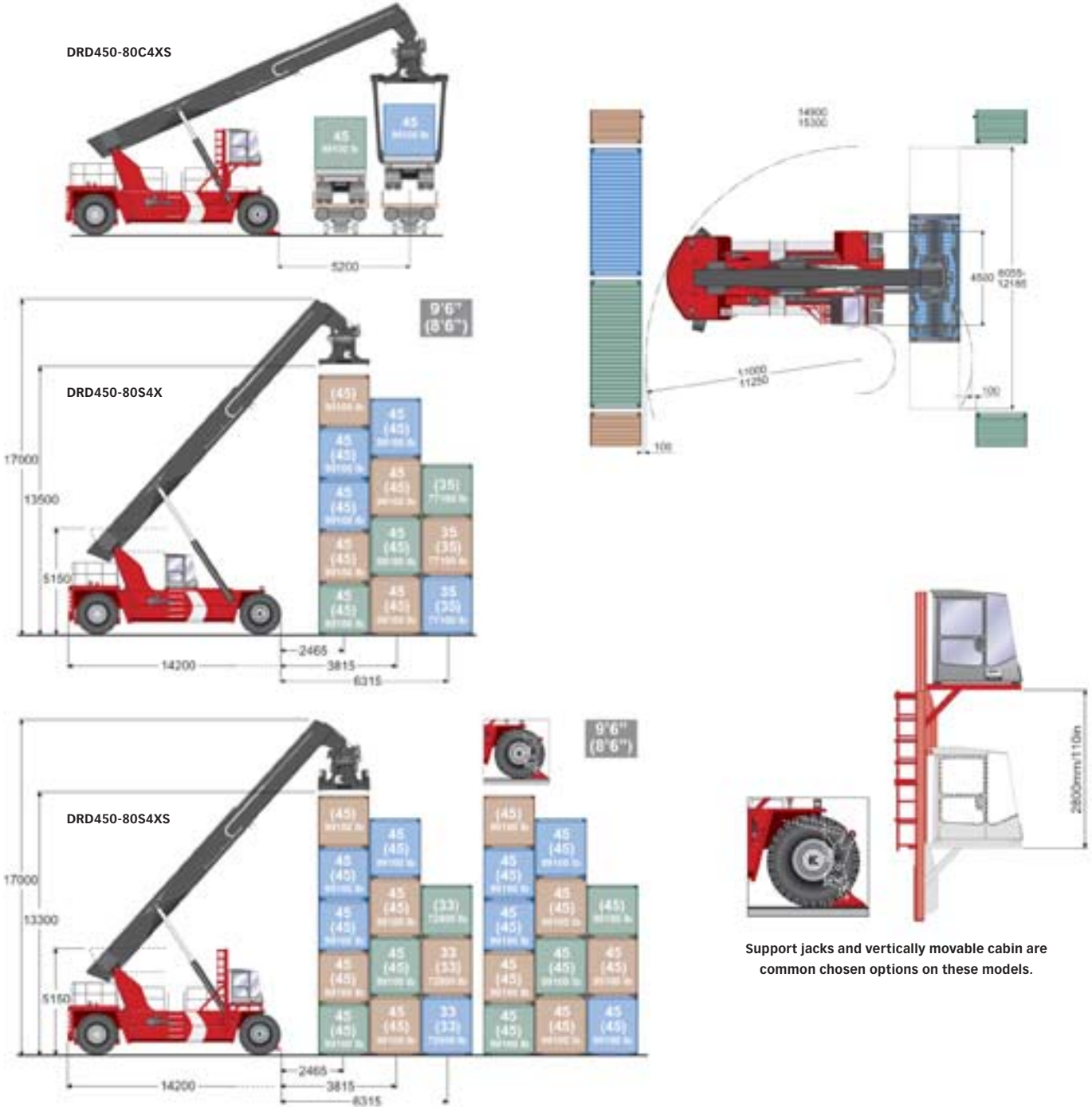
The electrical system is logically structured and well proven. The system is supplied by two 12 V batteries connected in series charged by an alternator.

ECS- Electronic Control System module 60 is standard on DRD450-80 for operational security and overall economy. The system contains an electronic overload protection and a graphic display module 60 for operating information.

Service access

Daily service checks are made easier thanks to well thought out and grouped service points. All standard cabs are moveable horizontally for service access.

Capacity and dimensions



Support jacks and vertically movable cabin are common chosen options on these models.

Model	Lifting speed(m/s)		Lowering speed(m/s)		Driving speed (km/h)		Grade ability (%)			Draw pull(kN)	Service weight (kg)
	unloaded	at 70% of rated load	unloaded	at rated load	unloaded (F/R)	at rated load (F/R)	at 2 km/h, unloaded	at 2 km/h, at rated load	max, unloaded		
DRD450-80S4X	0,40	0,20	0,33	0,31	25/25	20/20	27	19	41	449	102600
DRD450-80S4XS	0,40	0,20	0,33	0,31	25/25	20/20	27	19	41	449	103400
DRD450-80C4X	0,40	0,20	0,33	0,31	25/25	20/20	27	19	41	449	105000
DRD450-80C4XS	0,40	0,20	0,33	0,31	25/25	20/20	27	19	41	449	105800
DRD450-80S5X	Information available on request										
DRD450-80S5XS											
DRD450-80C5X											
DRD450-80C5XS											

Standard equipment

Chassis

- Towing pin
- Support jacks

Body

- Steps with anti slip protection
- Rear view mirrors on each side

Steering axle

- Rear axle: Kalmar
- Double acting steering cylinder

Drive train

- Engine: Volvo TWD 1231 VE
- Transmission: Spicer off Highways 15.7 HR 40432
- Front axle: Kessler D111

Cabin

- Instep handle
- Fixed drivers seat BEGE
- Armrest right hand side
- Wipers/washers on front, rear and roof pane
- Sliding window on left side
- Openable rear pane when hydraulically moving cabin
- Lockable doors (key)
- Inside rear view mirror
- Joystick for boom and attachment functions
- Steering wheel knob
- Horn
- Brake pedal incl. transmission disconnection (declutch)
- Warning buzzer for not activated hand brake, leaving seat

Instrumentation

- Gauges
 - Transmission oil pressure
 - Fuel level
 - Engine coolant level temperature
- Warning/Indication lamps
 - Low charging level
 - Low brake pressure
 - Low engine oil pressure
 - Low engine coolant level
 - High engine coolant temperature
 - Preheater engine
 - Low transmission oil pressure
 - High transmission oil temperature
 - Parking brake
 - High beam
 - Direction indicator
 - Hour meter
- ECS Display Module 60
 - Engine rpm
 - Overload warning
 - System break due to overload

Wheels

- Tyres: 21.00 x 35 / 36

Lifting boom

- C4XS: 4 9"6 containers high
5 8"6 containers high

Hydraulics

- Hydraulic oil cooler
- Pressure filter brakes, 2 pieces (10 micron)
- Load sensing pumps (4 pcs)
- Vane pumps (2 pcs for brakes and cooling)
- Visual level glass hydraulic tank/ brake tank
- Regeneration system (lift and extension boom)
- Most of the boom and attachment functions are damped in the end positions

Electrics

- Electrical system 24 V
- Main power switch
- 2 working lights on attachment
- 2 working lights on boom
- 2 working lights on front edge cabin
- 2 rear lights on fenders activated in reverse
- 2 head lights on front fenders
- 2 position lights on each side
- Lights high/low beam front
- Tail lights, brake lights
- Blinkers front and rear
- Rotating beacon

Attachment

- Top lift 20'-40' (cap. 45 ton)
 - Sideshift ± 800 mm
 - Hydraulic levelling $\pm 5^\circ$ (Combi)
 - Tilt (Combi)
 - Rotation $+195^\circ/-105^\circ$
- Floating ISO twistlocks
- Bottomlift (trailer legs)

Signs and documentation

- Load chart diagram in cabin
- Machine data plate chassi incl. load chart
- Warning stickers
- Information stickers
- Fuse diagram
- Instruction manual
- Technical manual
- Spare parts catalogue

Contact information:

Kalmar global partner

Local presence, globally

Kalmar is a global supplier of heavy materials handling equipment and services for ports, terminals, industry and intermodal handling.

Local presence means that we can support our customers throughout the product's life cycle, wherever they are.

Our products are manufactured in Sweden, Finland, the USA and the Netherlands.



Other reachstacker models



Container Handler ContChamp



Intermodal ContChamp



Container Handler ContMaster

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