



The locomotives are available in the range of 5 to 50 tons.

Technical features

- High speed
- High traction force
- Easy to customize
- Can easily be prepared for tandem operation
- Easy to service and maintain
- The chassis and cabin are made of heavy-duty plate joined together with continuous welds for maximum fatigue strength.
- The end plates consist of thick plate adaptable to most occurring couple variants.
- The hood plates are made of thick bent plate.
- The loco has a solid carrying axle with center mounted conical bevel gear. The gear steps are precision milled and lapped gear wheels in pairs. The gear housing is in cast steel with solid conical roller bearings.
- The wheel axle is carried in spherical roller bearings in the axle boxes. The bearing is tightened with labyrinth and sleeve cover.
- The axle suspension is a service free rubber element of "Chevron" type mounted directly on the axle box.
- The wheels are of "solid wheel type" with rolled steel design and shrinkage fit between wheel and axle.
- The loco has a pneumatic brake system with fiber brake shoes acting directly on all wheels. Depending on tonnage one or two brake shoes per wheel. The spring suspended parking/emergency brake of safety type is automatically applied when the air pressure falls.
- The locos have pin couplers as standard.
- The cabin has a sliding door. The front window of the cabin is supplied with a windscreen wiper and washer. There is one portable fire extinguisher located in the cabin.
- The driver's seat is in front driving position.
- The operating system is the Plus1 Danfoss system.
- Fogmaker fire system, camera with monitor and sanding device is standard.

Standard

CE mark according to European standards.

Options

- Wagon brakes.
- Willson couplers or similar.
- Climate system.
- Tandem drive.
- Camera/light box for rolling stock.

Other options and dimensions on request.

Technical data

Types	H - N	H	H	H
Weight / ton	5 - 20	12 - 20	20 - 35	30 - 50
Width	1000 - 1200	1400 - 1500	1400 - 1500	1550 - 1650
Gauge	600 - 750	600 - 1000	750 - 1000	750 - 1000
Length	3200 - 6000	5900	7270	7270
Height	1500 - 2200	1760 - 2200	1800 - 2200	2030 - 2450
Axle dist.	1000 - 2200	2200	2700	2600
Diesel / kW (H)	30 - 100	105 - 160	160 - 210	160 - 250

N	Narrow
H	Dieselhydraulic

Diesel type

Powered by DEUTZ or VOLVO water cooler engine including silencer and catalytic purifier.

Standard electric system

Voltage	24 V
Battery capacity	2 x 180 Ah
Generator capacity	55 A
Loud-tone horn	1x24 V 335 Hz

Lamps, 4 white and 2 red (changing when driving in rear direction)

Speed forward/reverse

H - N	100 - 250 kW
Low gear	0 - 22 km/h
High gear	0 - 30 km/h

Volume Data-service

Fuel tank	230 dm ³
Axle gear/each	14 dm ³

Other types

These dimensions are also available in battery version.

Functional data

Brake area	500 cm ² /wheel
B.P, brake $\mu = 0,16$	approx. 16 kH (1600 kp) - 72 kH (7200 kp)
B.P, parking/emergency brake $\mu = 0,16$	approx. 13 kH (1300 kp) - 58 kH (5800 kp)

Powertrain

The hydrostatic transmission is made by Danfoss, type H1 series, variable axial piston pump and motor. Speed reduction via Dromos transfer case, air shifting Hi/Low, including manually actuated neutral for towing. Prop shafts connecting to the axle gears. This solution for smooth and well controlled speed regulation. Prop shafts connecting to the axle gears.

To adjust the weight of the loco for future coming projects the ballast can easily be removed or added. The ballast can be supplied by GIA or by the end user out from supplied drawings from GIA.

Contact us for further information.

GIA - Grängesberg Industry AB
Kopparbergsvägen 37
SE-772 30 Grängesberg
Sweden

Phone: +46 (0)73 421 9544
Email: contact@giaindustry.se
Web: www.giaindustry.se

GIA Locomotives 5 - 50 ton