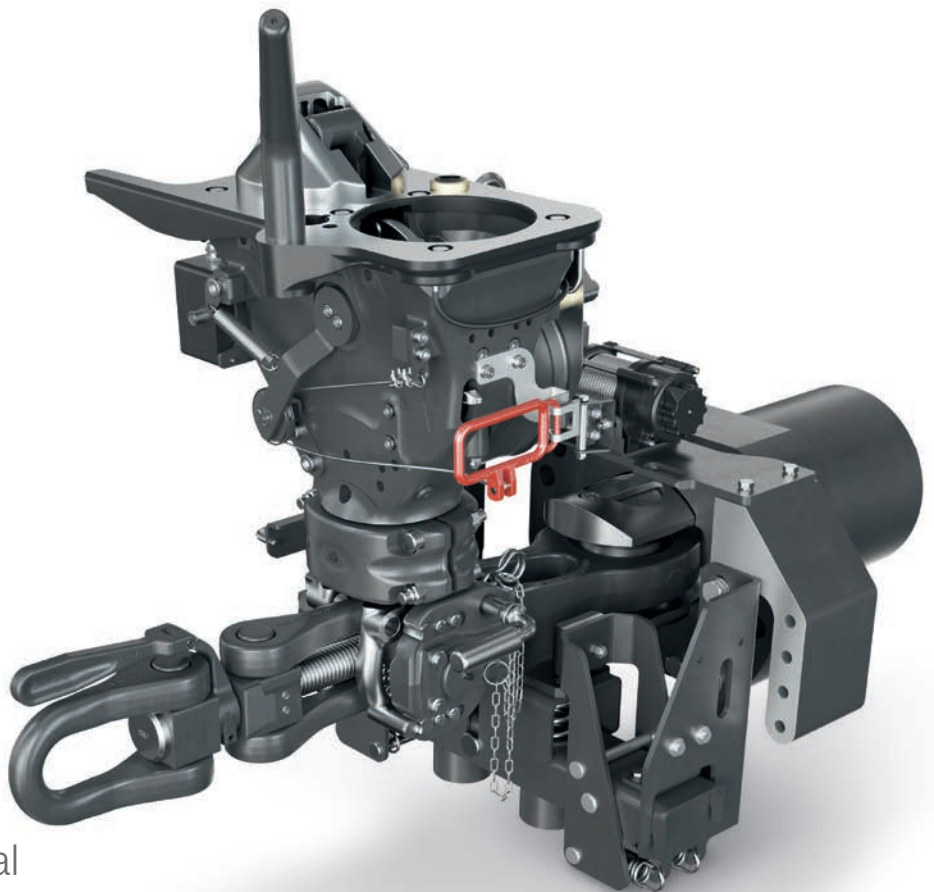


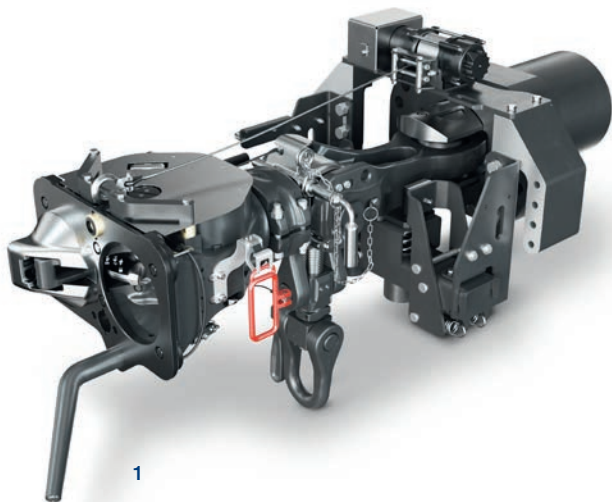
CargoFlex Hybrid

Technical data



Benefits

- + Proven in commercial operation since 2019
- + TSI compatible for easy admission
- + Maintenance friendly
- + Collision-ready in compliance with DIN EN 15227
- + Future oriented
- + Interoperability



1



2

Technical Data

Characteristics	Value	Reference to standard	Remarks
Admissible force, tension	1 000 kN (yield strength) / >1 500 kN (rupture load)	EN 12663, UIC 522	
Admissible force, pressure	2 000 kN (yield strength)	EN 12663, UIC 522	
Deflection angle, horizontal	±21°		
Deflection angle, vertical	±8°		
Min. coupling speed	0.6 km/h		
Max. coupling speed	8 km/h reversible		E.g. 85 t locomotive against a train of four braked wagons
Interfaces	According to interface draftgear for locomotives	E.g. similar to draftgears F227, F231, F235, F237, F240 (series F Ringf.)	Different design options
Articulation length	1 000 mm		Pivot to coupler face
Gathering range, horizontal	+275 mm / -370 mm	EN 16019 / TSI HGV, UIC 522	Interoperability requirements
Gathering range, vertical	±140 mm	EN 16019 / TSI HGV, UIC 522	
Coupling on/driving through curved tracks, marshaling humps, ferry ramps	Acc. to UIC 522 chapter 3 requirements	UIC 522	
Minimum curve radius	R75 m		For nearly all standard vehicles
Coupler head	Based on Scharfenberg coupler	EN 16019 / TSI HGV, UIC 522	Standard throughout Europe
Heating (front plate)	4x 80 W / 230 V		Optional equipment
Thermostat	24 VDC / <0,5 A		Optional equipment
Mixed coupler device	Integrated in coupler		Screw-type coupler
Pressure	Through buffers on vehicle		
Rupture load	850 kN	Based on EN 15566-2016; vehicle specific integration and compatibility	Endurance strength acc. to 1.0 MN system described in EN15566-2016
Relevant dimensions/data	Defined variants to connect screw coupler and draw hook		
Reversible stroke (pressure)	Through buffers on vehicle		

1 Hybrid coupler in automatic position**2 Hybrid coupler in manual position
(coupling with drawhook)**

Characteristics	Value	Reference to standard	Remarks
Uncouple device	Manual and pneumatic	UIC 522, 2.1a , 3.2b	Manal uncoupling from vehicle side; pre-condition for automatic uncoupling through the locomotive
Coupler joint	Steel spherical bearing		
Electric hoisting winch	24 VDC/100A (00A initial current, max. 40 A for 20s)		Vertical pivoting of the coupler head for switching from automatic to manual coupling mode; control unit to be prepared from the vehicle side
Weight	Approx. 580 kg coupler weight, 625 kg incl. support for fitting the winch		Depending on coupler equipment
Color	RAL 7021	Voith standard	
Stroke on draft	40 mm		
Stroke on buff	60 mm		
Energy absorption, dynamic (reversible)	50 kJ	EN 15227	EN 15227: optional enhancement to get a crash proof system
Crash energy absorption (irreversible)	In preparation		
Diameter of brake pipe	1 1/4"		
Pressure in brake pipe	5 bar	EN 16019	
Environmental conditions	-40°C to +70°C	EN 50125-1 , Klasse T1, UIC 523	
Fire protection class	HL2	EN 45545	
Options and additional modules	Irreversible energy absorption, main reservoir pipe (MRP), sensor for monitoring the coupling state, data/energy transmission facilities, protective covers	EN 15227, EN 16019, TSI, UIC 522	

Voith Group
St. Poeltener Str. 43
89522 Heidenheim
Germany

www.voith.com/cargoflex

Contact:
Phone +49 5341 21-5916
cargoflex@voith.com



VOITH