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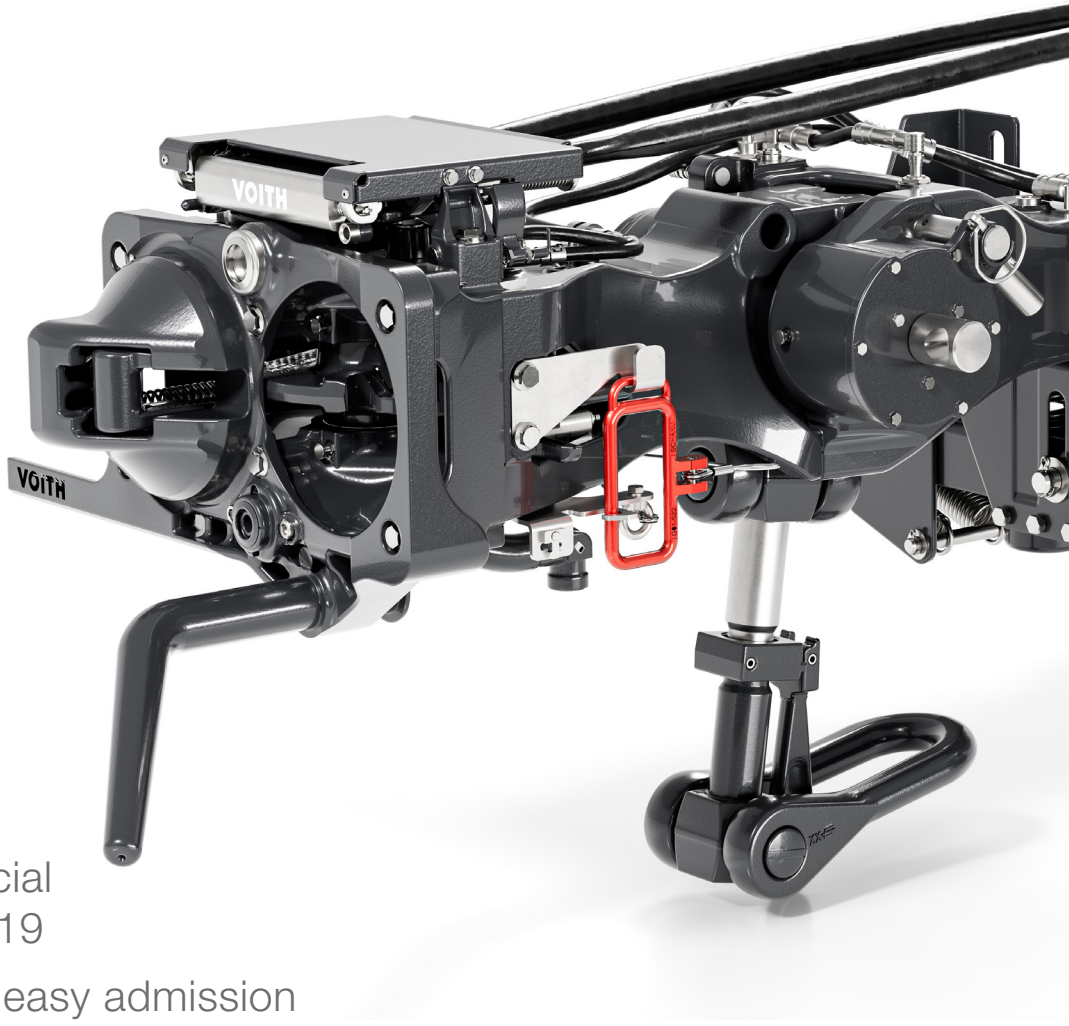
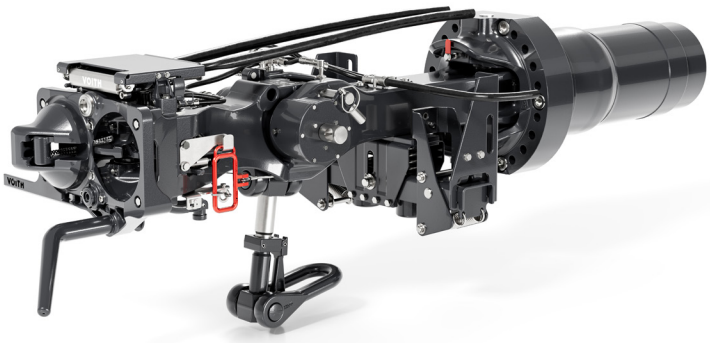
CargoFlex Hybrid
Technical data



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



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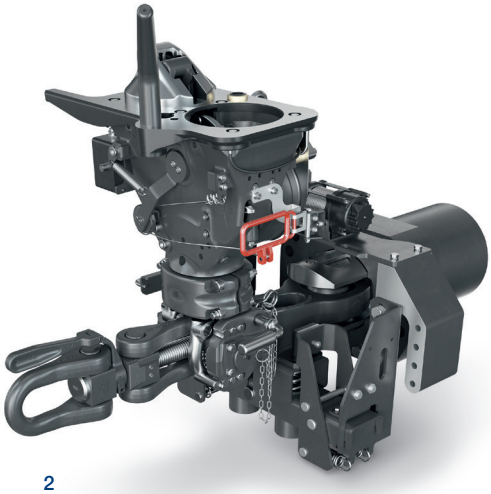

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Technical Data

Characteristics	Value	In compliance with	Remarks
Admissible force, tension	1000 kN (yield strength) / >1500 kN (rupture load)	EN 12663, UIC 522	
Admissible force, pressure	2000 kN (yield strength)	EN 12663, UIC 522	
Deflection angle, horizontal	±21°		Depending on mounting situation
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 of draftgear for locomotives	E.g. similar to draftgears F227, F231, F235, F237, F240 (series F Ringf.)	Depending on type
Articulation length	1000 mm, 1360 mm		Depending on mounting situation, pivot to coupler front plate
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
Mixed coupler device	Integrated in coupler	Following EN 15566-2016	
Pressure	Through buffers on vehicle		
Rupture load	850 kN		
Relevant dimensions/data	Following EN 15566 (with coupler specific max. and min. length)		
Reversible stroke (pressure)	Through buffers on vehicle		

1 Hybrid coupler in automatic position

2 Hybrid coupler in manual position (coupling with drawhook)

Characteristics	Value	In compliance with	Remarks
Uncouple device	Manual and pneumatic	UIC 522, 2.1a , 3.2b	Pre-condition for automatic uncoupling through the locomotive
Coupler joint	Steel spherical bearing, UIC stabilisation joint	UIC 523	Depending on mounting situation
Manual swiveling device			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. 630 kg coupler weight		Depending on coupler equipment
Stroke on draft	40 mm / 110 mm		Depending on type
Stroke on buff	60 mm / 110 mm		Depending on type
Energy absorption, dynamic (reversible)	50 kJ		Optional enhancement to get a crash proof system
Crash energy absorption (irreversible)	Optional	EN 15227	EN 15227
Diameter of brake pipe	1 1/4”	EN 16019	
Pressure in brake pipe	5 bar	EN 16019	
Environmental conditions	-40°C to +50°C	EN 50125-1	
Fire protection class	HL2	EN 45545	
Electric head	Energy backbone (400V AC) & data backbone		Optional, also as retrofit solution
Options and additional modules	Irreversible energy absorption, main reservoir pipe (MRP), sensor for monitoring the coupling state, protective covers	EN 15227, EN 16019, TSI, UIC 522	

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