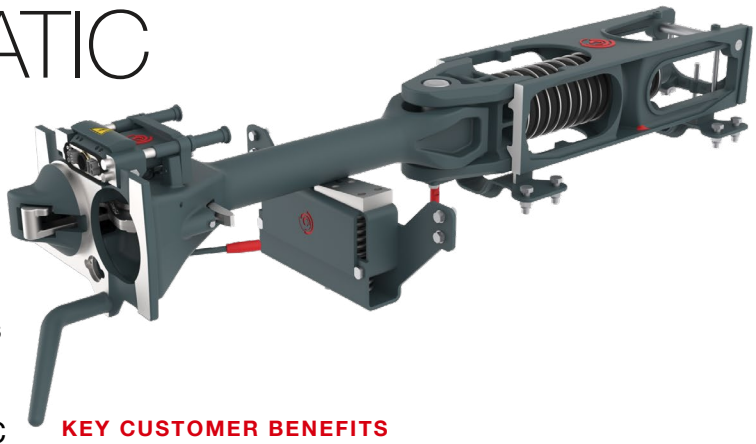
Wabtec CORPORATION

DIGITAL AUTOMATIC **COUPLER**

Key enabler of full digital rail freight operations



Designed for superior train availability and includes reliable, self-cleaning electric contacts and a protected pneumatic brake pipe.

This advanced automatic coupler for European UIC freight operation (locomotives and freight cars) is designed for new builds or upgrades. It has the ability to transmit loads of 2,000 kN in buff and 1 000 kN in draw directions (yield strength).

It features a light weight and easy-to-install draft gear system with proven elastomer pads, including a shear-off visual indicator, a rugged Type 10 technology coupler head, a unique mechanically actuated electric coupler with male/female contacts for increased reliability in operation, protected pneumatic brake pipe, and remote uncoupling hardware equipment (Type 5 ready).

Options also include a high-energy absorption module, crash module, main reservoir pipe, buffer position, and automatic greasing module.

REFERENCE

- REX from Type 10 couplers on Transit applications.
- Draft gear energy absorption system (elastomer pads) implemented on SBB/5L, VTG/BMVI demo trains and DAC4EU phase 1 tests.
- Elastomer pads on thousands of cushion bars.

NORMS/VALIDATION

Complies with EDDP/ERJU statu quo specifications.

KEY CUSTOMER BENEFITS

Top Performance

- Reliable, state-of-the-art railway male/female contacts, optimized for power and data transmission.
- Brake pipe protection.

Adaptable, Upgradable and Modular

- DAC4 easily upgradable to DAC5.
- For new builds and retrofits.
- Category A, C, L & AX energy absorption for all types of freight Rolling Stock.
- Second air pipe.

Simple Installation

Draft gear assembly in less than 20 minutes with standard tools and lifting device.

KEY FUNCTIONS

Mechanical, electrical and data automatic coupling, and remote uncoupling of freight Rolling Stocks.

SPECIFICATIONS AND FEATURES

CHARACTERISTIC	DAC5	STANDARD REFERENCE / COMMENTS
Standard		
Weight	385 kg	Similar weight as current screw coupler & buffers
Length pivot point to contact surface	1000 mm	Equal to current screw coupler and buffers
Draw force	≥1000 kN (yield strength) ≥1500 kN (rupture)	EN 12663 Cat F-I, UIC522
Buff force	≥2000 kN (yield strength)	EN 12663 Cat F-I, UIC522
Draw energy absorption	20 kJ @ 1000 kN	UIC 530, EN 15566
Stroke on draft	50 mm	
Buff energy absorption (reversible)	90 kJ @ 2000 kN	Cat. A, UIC 530, EN 15551
Stroke on buff	110 mm	
Vertical deflection angle	±6°	
Horizontal deflection angle	Stroke dependent	
Gathering range horizontal	+275 / -370 mm	
Gathering range vertical	± 140 mm	
Brake pipe minimum diameter	1 1/4” (32 mm)	UIC 540, EN 14198
Brake pipe interface	G 1 1/4”	Mechanically protected when not coupled
Coupler head	Adaptable latch Type 10	EN16019
Electric coupler contacts	Male/female type	4 contacts for power transmission 4 contacts for data communication
Electric coupler IP	IP 55/54	EDDP specification
Manual deflection & self-centering function	Yes	
Upgradability to DAC5	Yes	
Climate conditions	-40°C / +70°C	
Fire & smoke class	HL2	EN45545
Color	RAL 7016 (standard)	Adaptable to customer requirements
Other modules/features/options		
Remote control for DAC5	In development	
Higher energy absorption modules (reversible)	Similar Cat. C and L for buffers In development	EN 15551
Crash energy absorption module (irreversible)	Similar crash buffer (up to 800 kJ) In development	EN 15551, EN 15227
Second air pipe	1” (25 mm)	EDDP specification
Marshalling yard operation “buffer position”	In development	

CONTACT

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