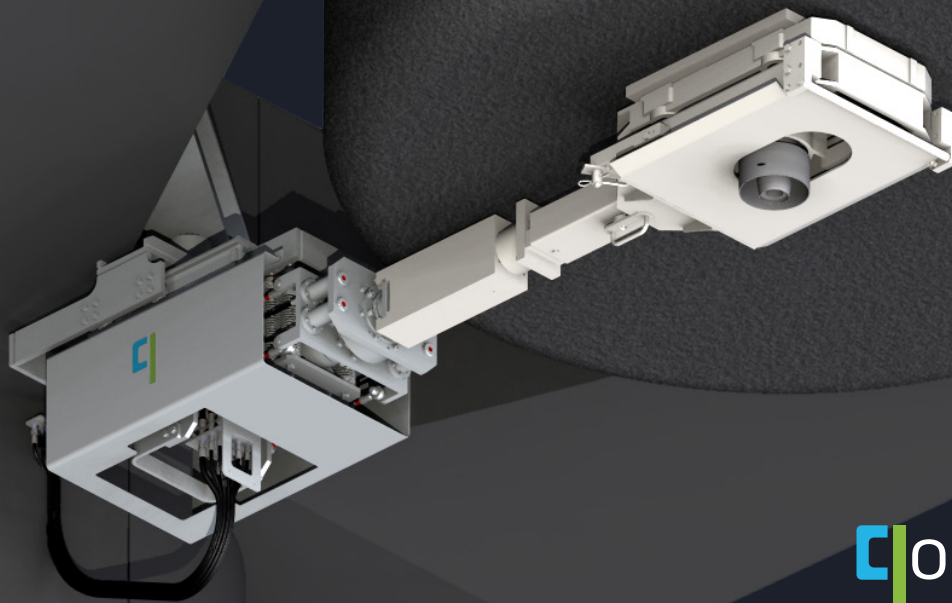


D


coupler

Automatic slide gate coupling system



 coupler

ready for safety?

A steel mill worker in a hard hat and protective gear is walking past a glowing molten metal ladle. The scene is dimly lit, with the primary light source being the intense orange and yellow glow of the molten metal, which creates a strong silhouette of the worker and illuminates the surrounding environment.

Our latest breakthrough, **qoupler D**, is a cutting-edge multimedia slide gate coupling system. It enables seamless, fully automatic coupling of the ladle slide cylinder.

qoupler D features the **automatic** and **safe coupling** of a hydraulic cylinder to a ladle slide gate, ensuring controlled pouring of steel without requiring manual work or complicated robotics. This process is currently performed manually in most steel plants worldwide, posing life-threatening hazards to operators.

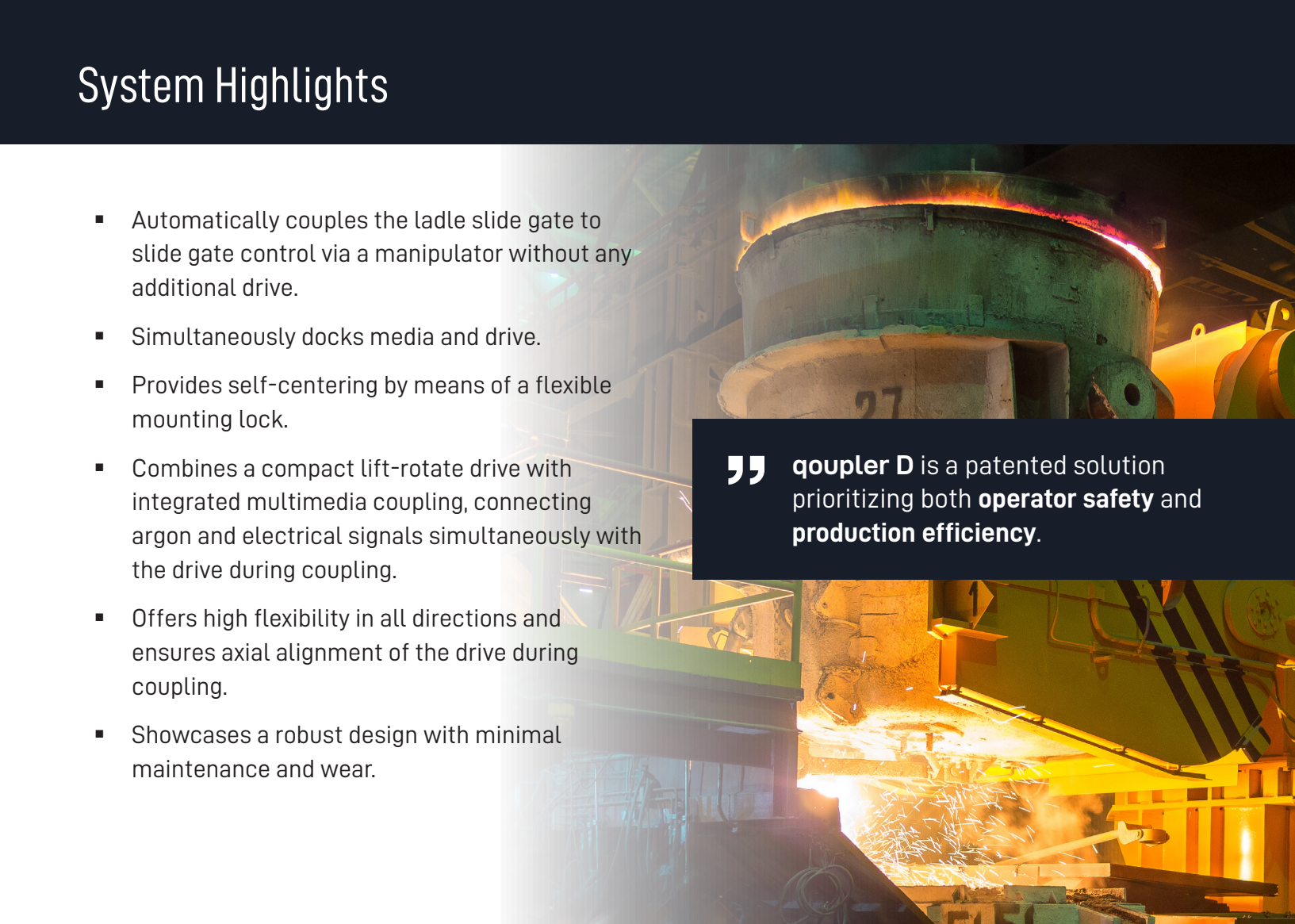
At **qoncept**, our motivation to innovate new solutions stems from our vision to optimize processes across various industries, ensuring the highest level of operator protection.



With **qoupler D**, the road to safety on the casting floor is paved. **Buckle up and we'll take you there.**

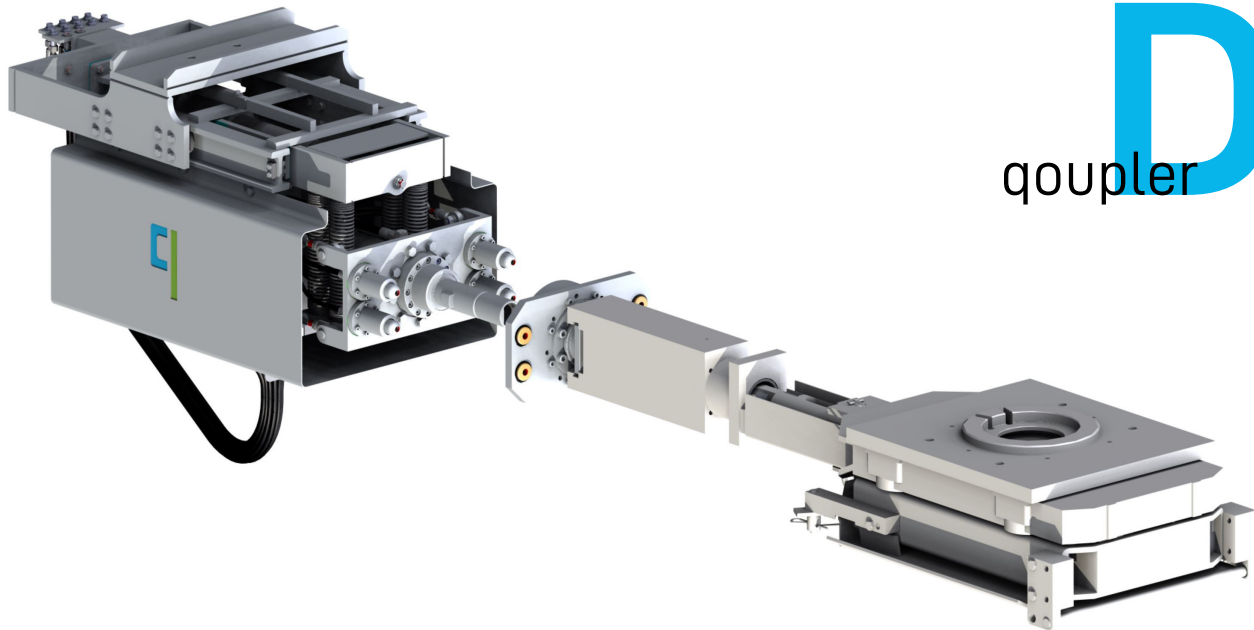
System Highlights

- Automatically couples the ladle slide gate to slide gate control via a manipulator without any additional drive.
- Simultaneously docks media and drive.
- Provides self-centering by means of a flexible mounting lock.
- Combines a compact lift-rotate drive with integrated multimedia coupling, connecting argon and electrical signals simultaneously with the drive during coupling.
- Offers high flexibility in all directions and ensures axial alignment of the drive during coupling.
- Showcases a robust design with minimal maintenance and wear.



” **coupler D** is a patented solution prioritizing both **operator safety** and **production efficiency**.

Main System Components



1

ensures maximum workplace safety on the casting floor

2

increased efficiency due to quick and simultaneous coupling of drive and media

3

easy adaption and installation in existing facilities

Technical Data

PARAMETER	DESCRIPTION
Flexibility	Deviation of ladle position up to 100 mm ($\pm 4''$)
Temperature	Ambient temperature up to 100 °C (200 °F), dustproof
Slide Gate Driving Force	Max. 240 kN
Locking Torque	1 200 Nm
Coupling Media	Hydraulic drive, signals (e.g. AMEPA), gas

coupler D is float-mounted inside a manipulator, which is attached to the ladle transport device (ladle turret or ladle car). It automatically couples and uncouples the slide gate drive during casting.

The manipulator guides the actuator to the ladle with the aid of a flexible mounted centring pin, which ensures axial insertion into the receiving cone of the slide gate cylinder. This provides automatic compensation for potential misalignments. The subsequent locking process simultaneously connects and locks the device to the ladle slide gate.



PATENTED TECHNOLOGY



www.qoncept.at

www.qoncept.us

sales@qoncept.at

© 2025