



Revolution for Industrial Brake Services

Innovation, Safety, and Smart Technology

Presentated by Mr. Daiel Hoffmans

www.dellnerbubenzer.com

EVOLUTION STARTS WITH A PIONEER

INTRODUCING THE SB 28.5 DISC BRAKE



www.dellnerbubenzner.com

Sustainability

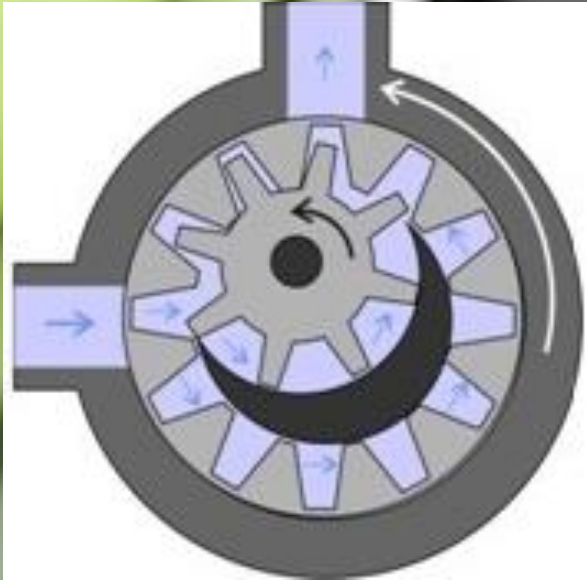
SB 28.5

▶ BUEL® Thruster &
Reduced Energy Costs

▶ Reduced Fluid Volume

▶ Eco-friendly
Biodegradable Oil

MAIN FEATURES



Sustainability

SB 28.5

▶ BUEL® Thruster &
Reduced Energy Costs

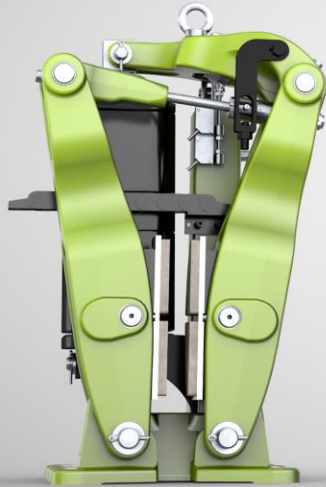
▶ Reduced Fluid Volume

▶ Eco-friendly
Biodegradable Oil

PIONEERS OF BRAKE INNOVATION



SB 16
Up to 890 Nm



SB 23.3
Up to 5.165 Nm



SB 28.5
Up to 23.400 Nm



SB 30
Up to 28.800 Nm

SB SERIES BRAKE

IS YOUR CRANE SAFE ENOUGH?

ENSURE YOUR CRANE SAFETY SNAG PREVENTION



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BOSS® BRAKE ONLY SNAG SYSTEM



IS YOUR CRANE SAFE ENOUGH?

INITIAL SITUATION



INCREASED FREQUENCY OF SNAGS
DUE TO

LARGER SHIPS

BIGGER CRANES

HIGHER VOLUME OF DISCHARGES

PORT AUTOMATION

CONVENTIONAL HYDRAULIC SNAG PROTECTION SYSTEMS

▶ Long-stroke hydraulic cylinders for controlled relief of the main hoist ropes

▶ Delayed reaction time

▶ Personal reset of hydraulic cylinders, inspection of system for leaks, and assessment of any damage

▶ Possible that the reaction time exceeds the actual time of snag event, which could not completely exclude damage and high maintenance effort



**DELLNER
BUBENZER**

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DELLNER BUBENZER BRAKE ONLY SNAG SYSTEM ®

▶ Two-channel load pins are detecting an overload on each corner individually

▶ BOSS® PLC will cut off power for BUEL® H thrusters, service brakes and BUEL® G for emergency brakes and hoist motors

▶ The electrical reaction time is only 20ms until the brakes are switched off

▶ The load on the crane is prevented in advance

▶ The total stopping time from snag detection to stand still is between 100 and 276ms

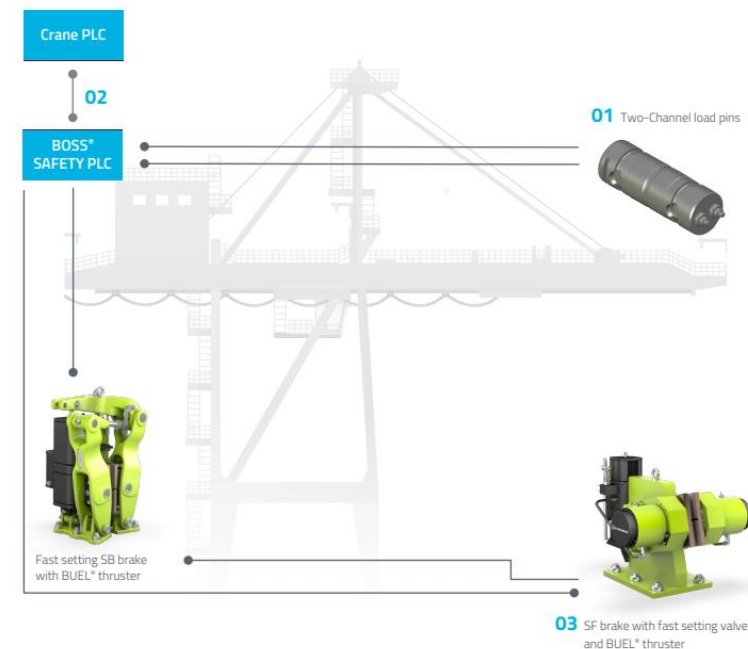
▶ Maintenance free

▶ Reduced stand still time

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BRAKE ONLY SNAG SYSTEM[®]

How the BOSS system works:



LOAD PINS

Load pins are detecting an overload on one or more corners.

BOSS® PLC

BOSS® PLC will cut off power for BUEL® H thrusters, service brakes and BUEL® G for emergency brakes and hoist motors. The electrical reaction time is only 20ms until the brakes are switched off.

SERVICE BRAKE

Service brakes apply full braking torque within **36ms** after power off.

EMERGENCY BRAKE

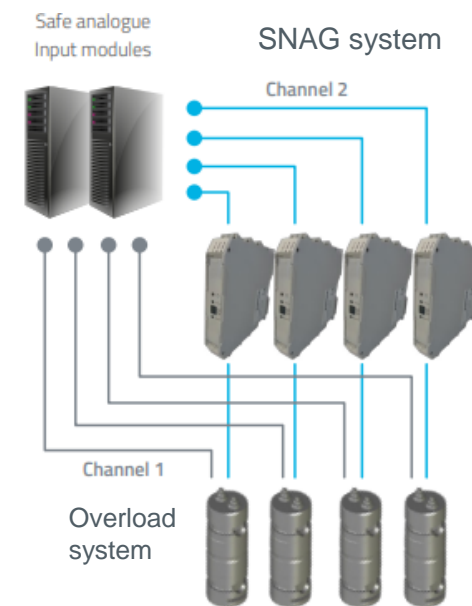
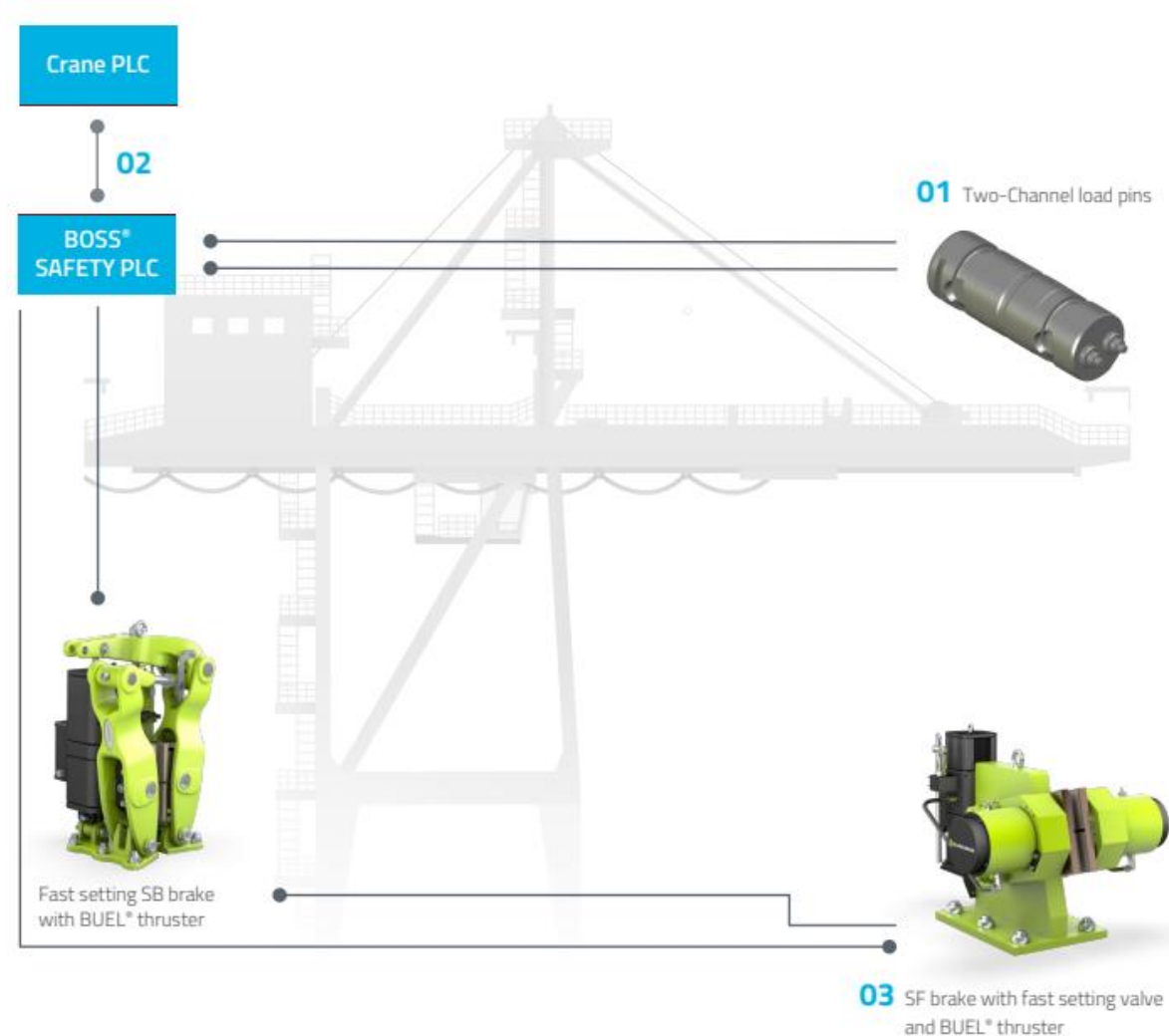
Emergency brakes apply full braking torque within **70ms** after power off.

HOIST MOTION

Hoist motion will be stopped after **up to 110ms**. The total stopping time from snag detection to stand still is between 100 and 276ms*.

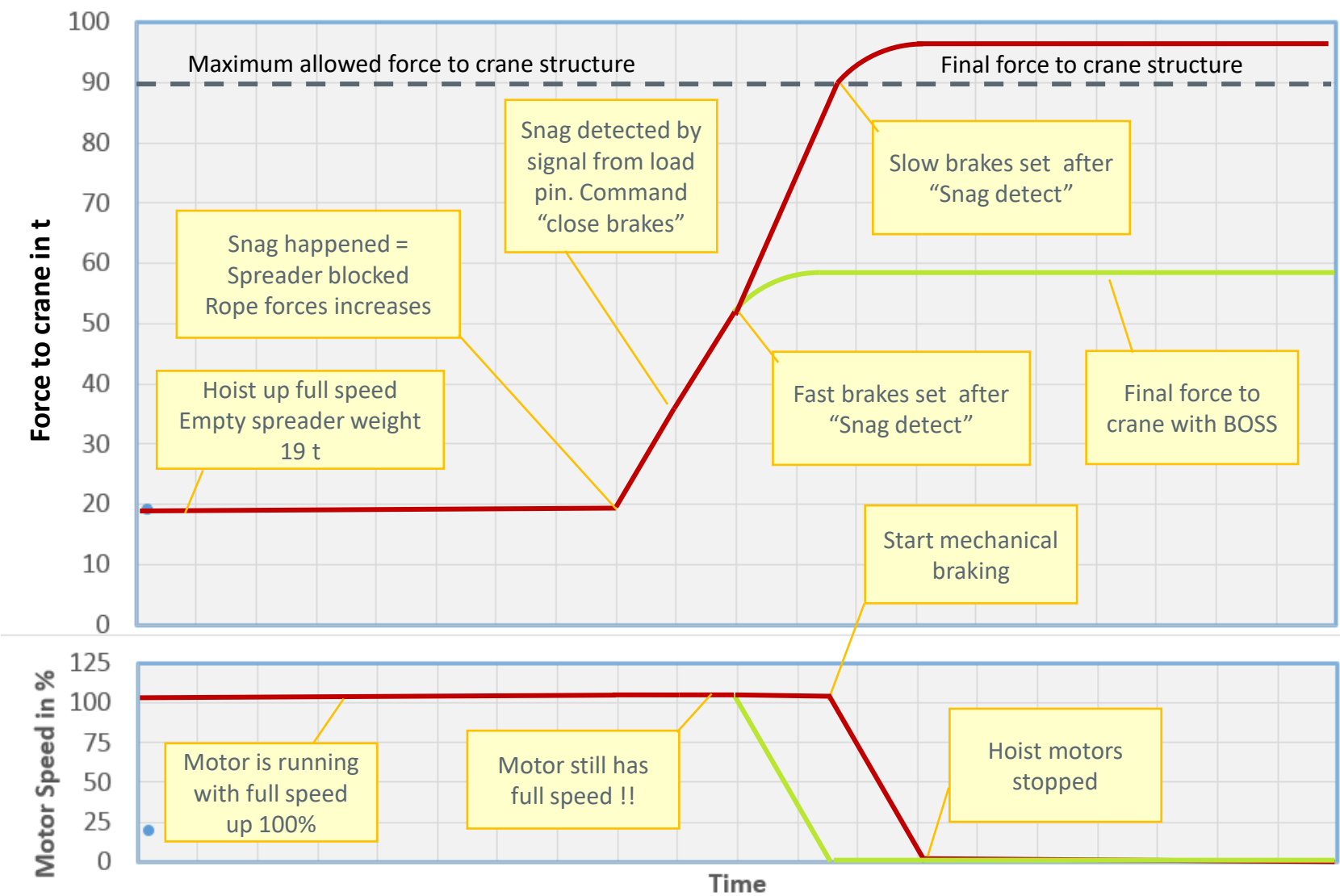
*Can variate per system.

BRAKE ONLY SNAG SYSTEM®





BOSS® timing comparison



Legend:

Other Snag Systems

BOSS

BRAKE ONLY SNAG SYSTEM[®]

YOUR ADVANTAGES

- ✓ Profisafe Interface
- ✓ Fastest reaction time
- ✓ Precise control
- ✓ TÜV certified
- ✓ Cross-check of both channels
- ✓ Simple calibration and set-up
- ✓ Fully integrated
- ✓ Closed wired system
- ✓ Dynamic snag trip point setting depending on corner load and speed
- ✓ No maintenance time required
- ✓ No nuisance tripping after e-stops
- ✓ Easy retrofitable



Thank You For Your Attention!

