2-Stage Brake Control BCS 050

for spring activated - hydraulically released brakes
compact, integratable hydraulic extension

RINGSPANN®

10-1

Description

The braking system „2-Stage Brake Control BCS 050" controls the effective braking force of spring-operated, hydraulically released brakes. It allows a fast bypassing of the air gap between the brake pad and the brake disc, followed by a braking process with a reduced braking force for an adjustable period of time. After the stopping process the system provides the full force of the brake for a safe holding of the load.

The compact design makes the system fully retrofittable. It can be used independently of the hydraulic power unit in operation. Retrofitting is possible at any time. Even with existing braking systems, the braking process can be adjusted as required in order to avoid undesirable shock loads caused by the brake.

Technical data

Brake opening pressure	min. 50 bar max. 250 bar
Maximum system pressure	250 bar
Adjustable starting force [1]	20 … 80 %
Pressure holding time [2]	5 … 20 s
Maximum oil volume [3]	270 cm^3
Viscosity range	10 … 500 mm^2/s
Weight	ca. 5 kg

[1] Time until the maximum force of the brake is reached
[2] Based on the maximum force of the brake
[3] Volume for opening all connected brakes

Working conditions

• Ambient temperature -10 ℃ / + 50 ℃

• Air humidity < 90 %

Notes

• Fastening:
 - 2 x M8 through hole for screw (L = 78 mm)
 - 2 x M10 Floor screw connection (L = 15 mm)

Options

• Pressure monitoring memory via manometer (switch-on point monitoring)

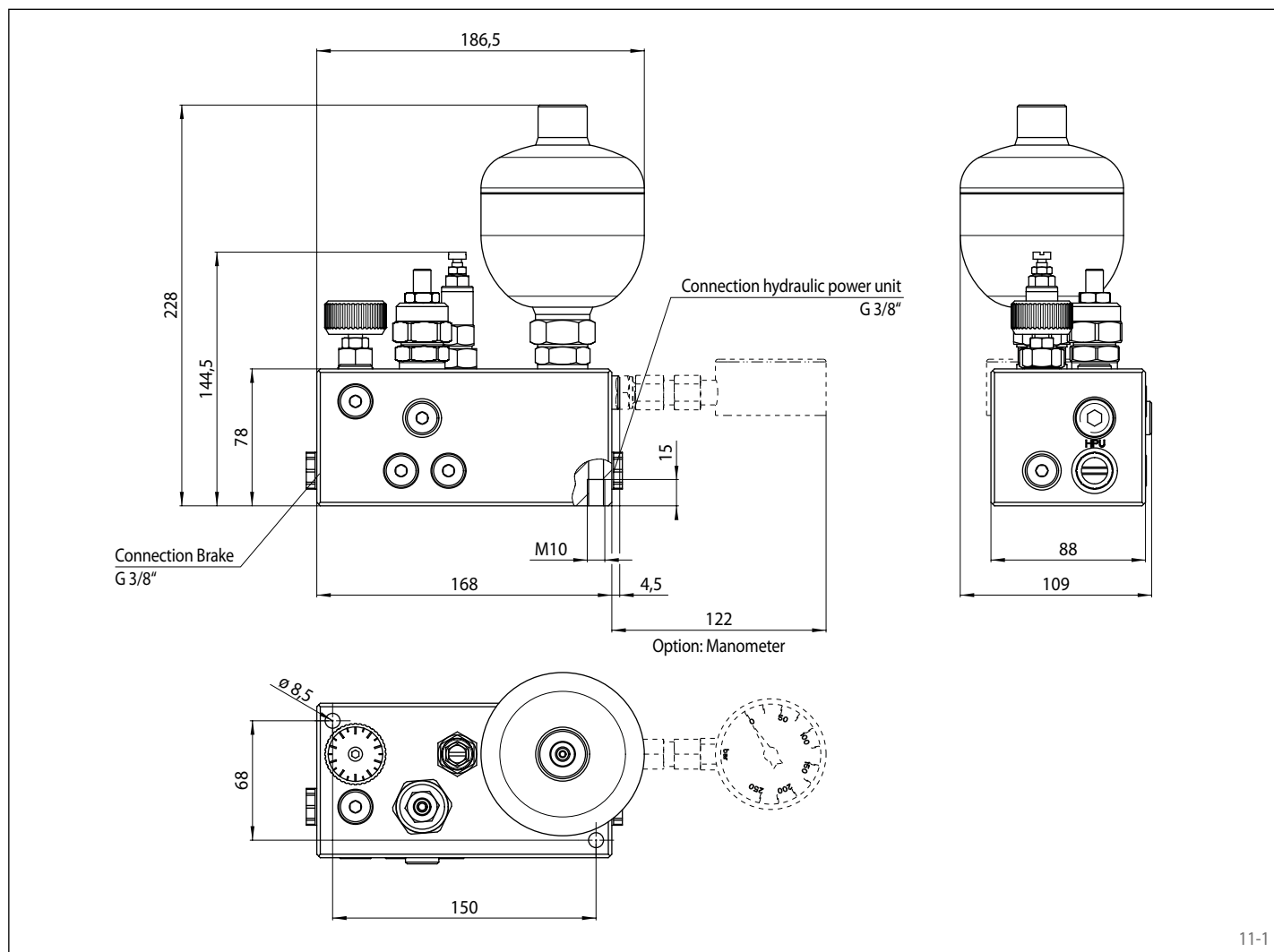• Mounting with brake on bracket (only possible with selected brake sizes)

10-2

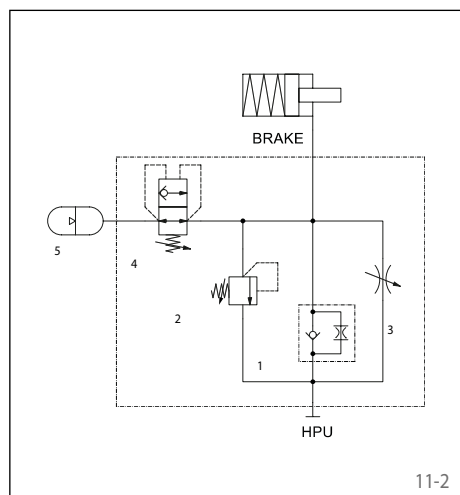Example: Mounting with brake on bracket

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Connection hydraulic power unit
G 3/8"

Connection Brake
G 3/8"

186,5

228

144,5

78

15

M10

168

4,5

122

Option: Manometer

88

109

ø 8,5

68

150

HPU

11-1

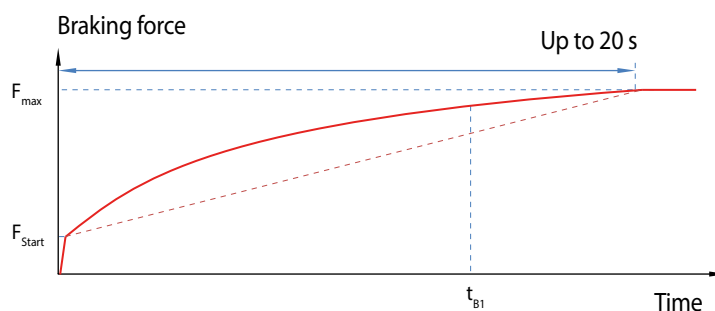## Hydraulic circuit diagram

1   Check valve with orifice

2   Pressure relief valve

3   Throttle

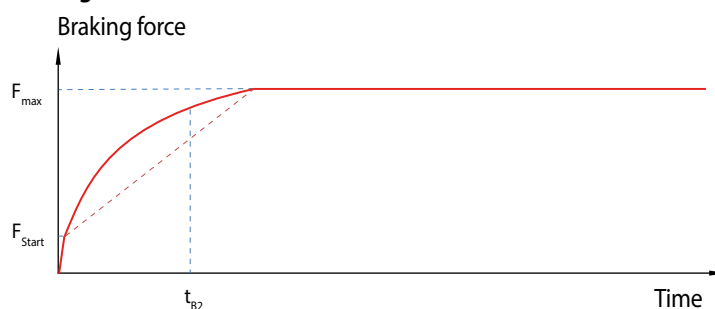4   Pressure controlled shut-off valve

5   Pressure accumulator

BRAKE

HPU

11-2

Functional principle

Throttle setting 1

Braking force

Up to 20 s

F_{max}

F_{Start}

t_{B1}

Time

Throttle setting 2

Braking force

F_{max}

F_{Start}

t_{B2}

Time

11-3