

# STROMAG SH1

## HYDRAULIC DISC BRAKES

### THE MOST COMPACT EMERGENCY BRAKE OF OUR SH RANGE

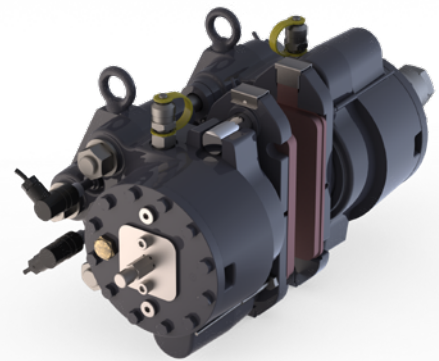
This emergency brake is the smallest and most compact of our SH range, it can be associated with disc diameter from 300 to 1000 mm and is adapted to handling equipments such as cranes, conveyors or winches in steel industry, mining and quarries, mass transport, port and offshore applications.

Robust construction and simplicity of operation bring to this caliper a high reliability. It allows an easy mounting and maintenance, and insures maximum efficiency in the most severe environmental conditions.

The modular design of the SH1 caliper enables standardisation on multiple installations: availability in a large range of torque and association with different types of lining pads according to the application.

#### Benefits include

- Fail-safe braking - hydraulic release
- Symmetrical, compact and lightweight design
- Direct acting caliper / few components
- Designed for 200,000 cycles
- Pads fastening by clips: easy and quick replacement
- Strain absorbing system with column
- Low force loss per additional air gap millimeter
- Low temperature materials and marine protection
- Options: indicators of opening, lining wear and temperature



#### Applications

- Tower Cranes
- Offshore Winches
- Mining and Steel
- Port Applications
- Mass Transpor



# SH1 CALIPER

## TECHNICAL DATA / DIMENSIONS

Revision number: T10097-01-I Revision date: 15.09.2021

### Caliper SH1

- Fail-safe braking
- Spring application / Hydraulic release
- Holding tool for maintenance operation
- Lining wear detectors
- Manual wear centering & compensation
- Ass. discs th.: 12,7, 15, 20 & 30 mm
- Protection C5-M M

### Working conditions:

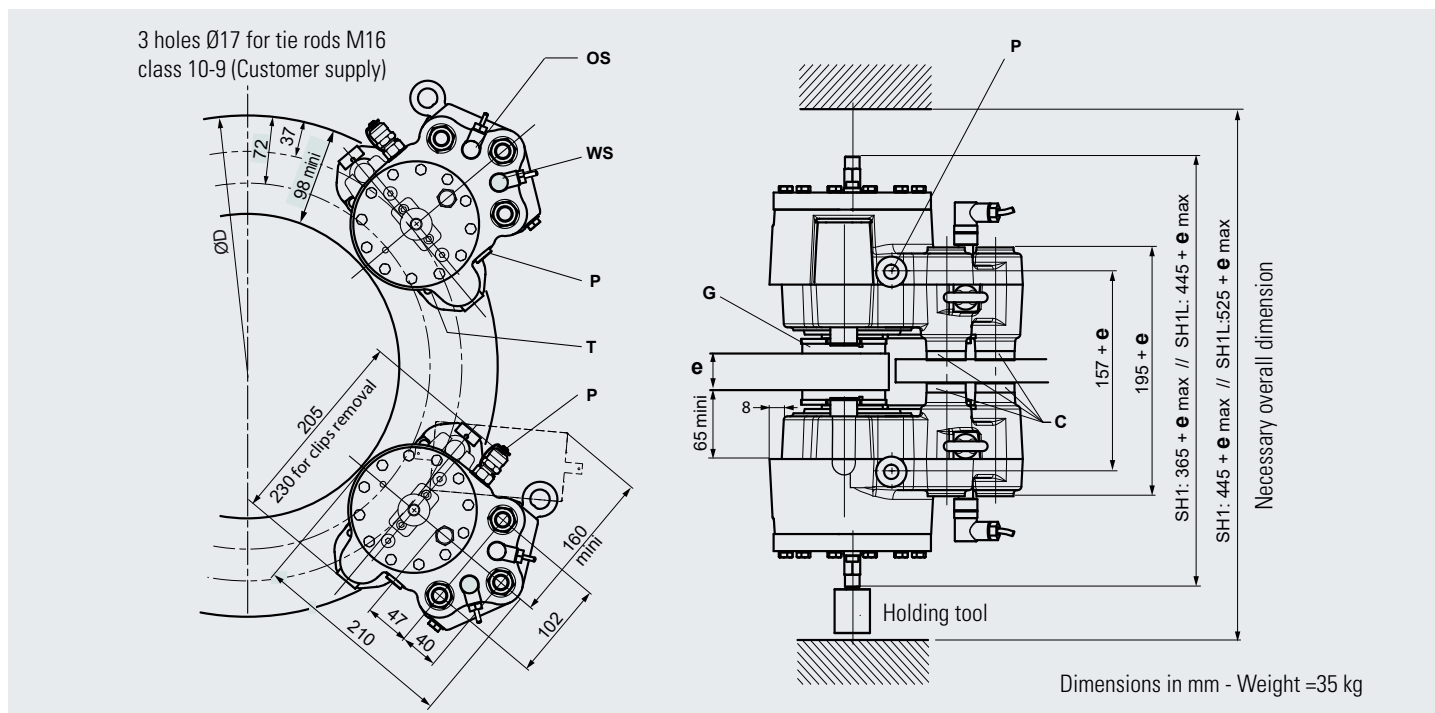
- Ambient temperature:  
Dynamic braking: -30°C to +70°C  
Brake applied (parking): -40°C to +70°C
- Relative humidity  $\leq 70\%$
- Dust in atmosphere  $\geq 65\mu\text{m}$

### Use:

- The brake should be applied only in case of emergency stop, overspeed or shutdown of electric mains. Other use, consult us.

### Options:

- Opening proving switch OS
- Lining wear proving switch WS
- All non-standard disc th. > 12,7mm (1/2")
- Lining temperature sensor T
- Mechanical release tool DM
- SH1L: caliper requiring no manual wear compensation:  
braking force before wear = +10% maxi  
braking force after wear = -10% mini



Designation		Caliper	SH1-5	
		Lining	ES3-7	US2-1
Braking force BF for air gap disc/ lining of 2x1mm		Dynamic	N 11,000	11,000
		Static	N 9,900	9,680
Linear speed of the disc		m/s	$\leq 50$	$\leq 10$
Dynamic braking torque BT (m.N) for 1 caliper and disc ØD (mm)/300 $\leq D \leq 1000$ mm		Nm	BT = BF (D/2,000-0.037)	
Regulation pressure	Minimum	bar	150	
	Maximum	bar	170	
Setting pressure limit valve of hydraulic unit		bar	190	
Total volume of oil displaced for air gap/lining of	2 x 1 mm (nominal opening)	cm <sup>3</sup>	5	
	2 x 3 mm (wear+opening)	cm <sup>3</sup>	13	
	2 x 7mm SH1L (wear+opening)	cm <sup>3</sup>	29	

- C** = Spacers according to disc thickness  
**G** = Linings: Thickness of new lining 8 mm  
 Thickness to wear 6 mm  
 Each 2 mm of wear on each side:  
 manual centering and compensation  
**OS** = Opening switch (option)  
**WS** = Lining wear switch (option)  
**P** = 2 oil ports 1/4"G per half-caliper  
 Pressure taps delivered separately  
**T** = PT100 sensors (option)  
**ØD** = Disc diameter = 300 mm minimum  
**e** = Disc thickness

### ELECTRICAL DATA:

#### Opening and wear switches (options)

3 wires PNP NO - 12 to 24 VDC 200 mA  
 connector M12 - 5 positions - according to  
 standard IEC61076-02-101 /code A

# Stromag™

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