

Disc brakes

Technical data and dimensions

Calipers SHS1 and SHC1

Emergency brake

Fail to safe

Spring application

Hydraulic release

Holding tool for maintenance operation

Manual wear centering and compensation

Possible association possible with discs thickness: 12,7 to 30 mm.

Lining pads type **US2-1** or **ES3-7**

Lining pads with full wear indicators

Protection : Caliper **SHS1** : C5-M MHPP **CE1L** : C4 M

Operating conditions:

- Ambient temperature:

Caliper **SHS1**:

Dynamic braking : -30°C to +70°C

Brake applied (parking): -40°C to +70°C

HPP **CE1L** : -20°C to +70°C

- Relative humidity: ≤ 70%
- Dust in atmosphere ≥ 65µm

Other conditions: consult us.

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**)
- Lining temperature sensor (**T**)
- SHS1L - SHC1L** : caliper with no need of manual wear compensation:
 - braking force before lining wear = +10% maxi.
 - braking force after lining wear = -10% maxi.
- CE1L** HPP options : see "Installation and maintenance" leaflet quoted below.

SHS1 = **SH1** caliper with integral support**SHC1** = **SH1** caliper with integral **CE1L** hydraulic power pack.

L = Linings :

Thickness of new lining 8 mm

Thickness to wear 6 mm

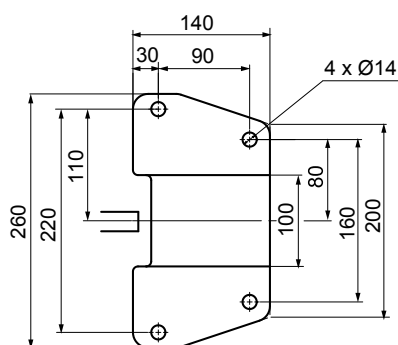
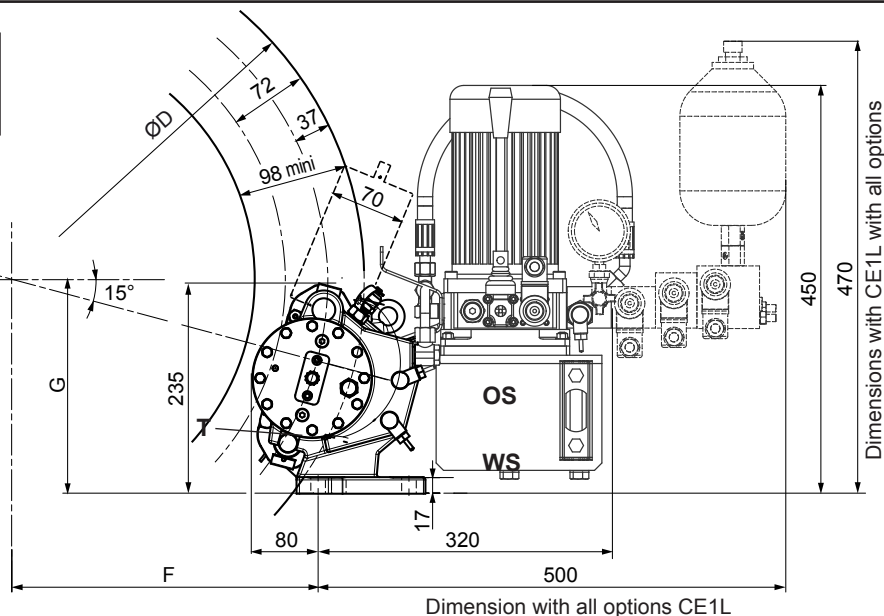
Each 1 mm of wear on each side: manual centering and compensation

OS = Opening proving switch (option)**WS** = Wear proving switch (option)**P** = Oil ports 1/4"G

Bleeder screws delivered separately

T = PT100 sensors (option)**ØD** : from 300 to 1000 mm**e** = disc thickness

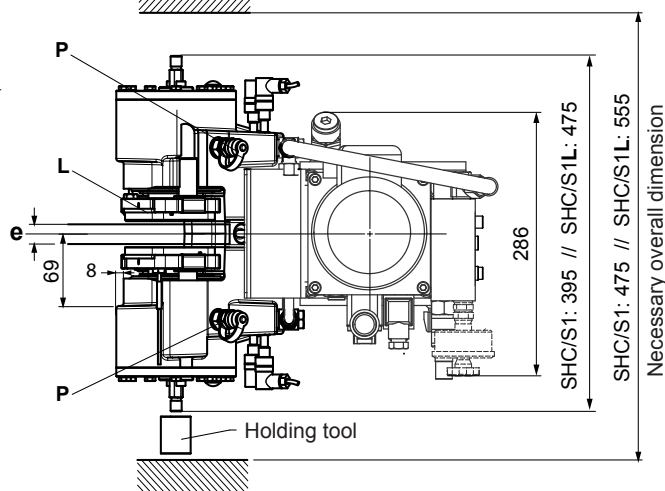
Dimensions in mm

Weight : **SHC1** = 61 kg **SHC1L** = 68 kg**SHS1** = 39 kg **SHS1L** = 46 kg

Calipers fastening :

4 bolts M12 class 10-9 (not provided)

Tightening torque = 77 Nm ± 30%



Due to continuous development and improvement, all dimensions and characteristics are subject to change without notice.

Installation and maintenance

- SH1 caliper

- CE1L HPP

Leaflet No. M10097-01

No. M10107-01

Spare parts - SHS1 caliper

- CE1L HPP

Safety data sheets - US2-1

- ES3-7

No. S10097-01

No. S10107-01

No. FDS00015-01

No. FDS00028-01

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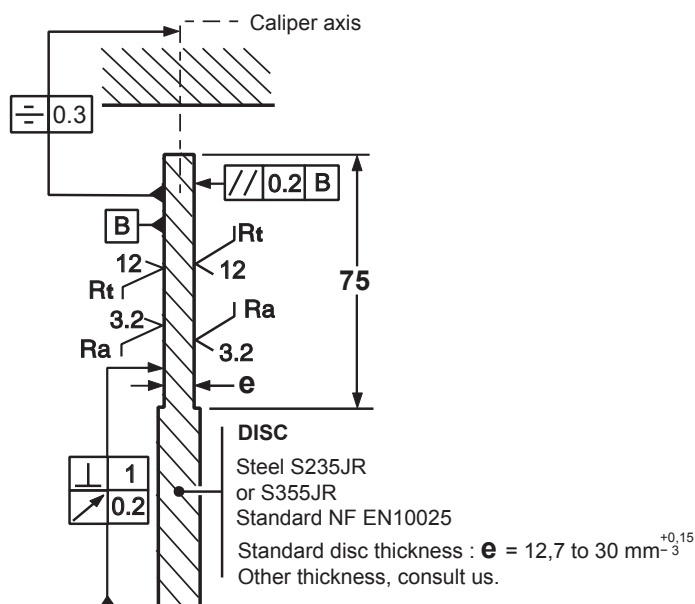
T10099-01-F

Disc brakes

Technical data and dimensions

Calipers SHS1 and SHC1

Installation instructions :



Electrical data:

Opening and wear inductive switches (options)

3 wires PNP NO
 12 to 24 VDC 200mA
 with connector M12 / 5 positions
 according to standard IEC61076-2-101 / code A

Sensor PT100 (option)

Detection of the temperature threshold : $100^{\circ}\text{C} \pm 5$
 - R = 136,6 Ω at 95°C
 - R = 138,5 Ω at 100°C
 - R = 140,4 Ω at 105°C
 Cable length = 2,5 meters
 2 wires red/yellow

Torque and effort values are subject to a variation of $\pm 10\%$ - Closing time at nominal torque $\leq 0.3\text{s}$

Designation	Caliper SHS1-SHC1-		5	4	3	2	1	5	4	3	2	1
	Lining *		US2-1					ES3-7				
Braking force BF for air gap disc/lining of 2x1mm	Dynamic	N	11 000	8 000	6 000	4 000	3 000	11 000	8 000	6 000	4 000	2 000
	Static	N	9 680	7 040	5 280	3 520	2 640	9 900	7 200	5 400	3 600	1 800
Linear speed of the disc ▲		m/s	≤ 10					≤ 50				
Dynamic braking torque BT (m.N) for 1 caliper and disc ØD (mm) 300 ≤ D ≤ 1000 mm		N.m	BT = BF (D/2000-0,037)									
Regulation pressure	Minimum	bar						150				
	Maximum	bar						170				
Setting pressure limit valve of hydraulic unit		bar	190									
F G			F = (0.483 x D) - 14 G = (0.129 x D) + 118									

* ES3-7: disc temperature during one braking $\leq 600^{\circ}\text{C}$

US2-1: disc temperature during one braking $\leq 100^{\circ}\text{C}$

▲ For higher speed, consult us.

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Installation and maintenance

- SH1 caliper
 - CE1L HPP

Leaflet No. M10097-01
 No. M10107-01

Spare parts - SHS1 caliper

- CE1L HPP

Safety data sheets - US2-1
 - ES3-7

No. S10097-01

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