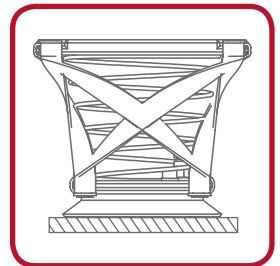


Spring Mounted Sensor Bracket SHX42

for single-sided double sheet control in
destackers and centering stations

THE ROLAND PLUS

- ▶ High flexibility
- ▶ Minimal wear
- ▶ Low weight



- Decompressed condition: very stiff, for lateral acceleration up to 2g, precise putting on the sheet without canting, also on fanned sheets or tilted TWB stacks
- Compressed condition: very elastic and movable into all directions
- Compensation also of lateral motions up to approx. 1cm
- Minimal wear due to absence of lateral forces
- Fast suction and release of the sheets due to small air volume below the suction cup
- Same rubber lips and rubber pressure pad as in use with Roland SHS42GS
- Good access to the sensor from above, no counter-nuts required



SENSOR BRACKET SHX42

Mounting of the sensor bracket:

The mounting plate has a total of 10 M8 tap holes at distances of 50 and 100 mm. At least 2 of them must be used for mounting. Adapters with Ø 19 and 25 mm stud for swivel arm are available. Other adapters may be ordered by request. Item 1 - 4 describes the mounting of the sensor into the sensor bracket and item 5 - 8 describes the mounting of the sensor bracket.



Risk of injury!
Please use gloves
while screwing in the sensor

HINT: Compress the sensor bracket
for better handling.
Eventual pull off the
vacuum hose.



Screw in the sensor by hand!

1. Lightly
grease
sealing

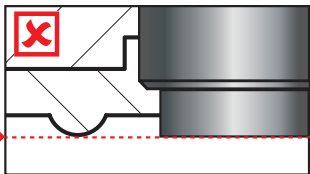
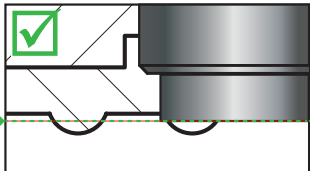
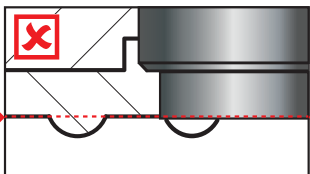
2. Screw in
sensor



Vacuum connection
Fixing screw
for sensor

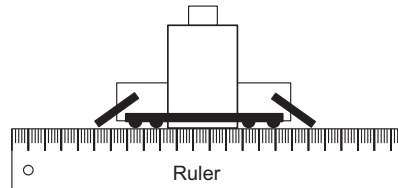
Hexagon socket
screw size 5

Important note on
sensor adjustment!



3a. Adjustment without vacuum with a ruler:

- Screw in the sensor in the bracket until the sensor face is on the same level as the rubber base. (see note on sensor adjustment)
- Now screw the sensor by a ¼ turn over the rubber base.



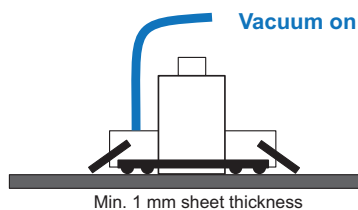
+



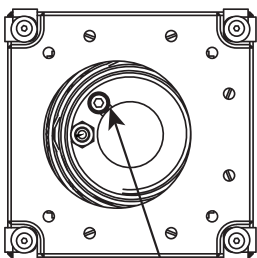
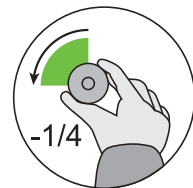
3a or 3b

3b. Adjustment with vacuum and a sheet:

- Screw in the sensor in the bracket until the sensor face is on the same level to the rubber base. (see note on sensor adjustment)
- Activate vacuum for suction of sheet. (min. 1 mm thickness)
- Screw in the sensor by hand against the sheet until it stops turning.
- Turn vacuum off.
- Turn back the sensor by a ¼ turn



+



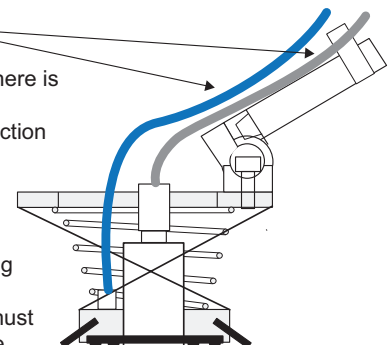
4. Fix sensor



Hexagon
socket
screw size 5

5. Connect sensor cable and vacuum hose
6. Suspend and align
7. Direct the hose towards the sensor. Make sure there is free play on the vacuum hose and cable.
8. Adjust the bracket to a position lower than the suction cups carrying the sheet.

When the sensor is put on the sheet, the bracket must compress so much that (after being lifted) it remains pressed for at least 10 mm, thus providing the necessary freedom for the belts. Only then the required mobility is achieved. The sensor bracket must not carry loads. Only small, lightweight parts can be directly transported with the sensor bracket.

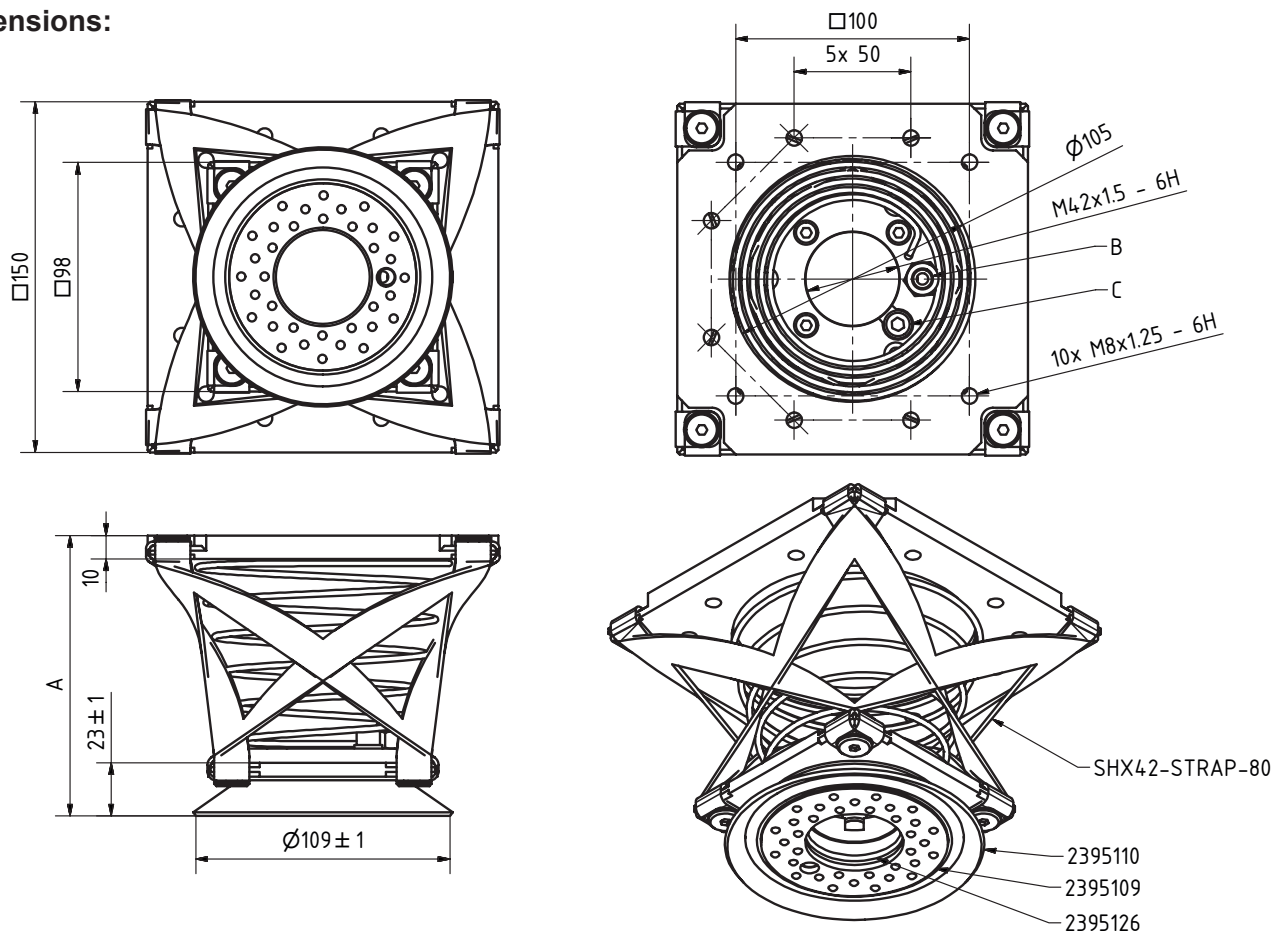


SENSOR BRACKET SHX42

Technical Data:

SHX42	
Applicable sensors	P42GS, P42AGS, PW42GS, PW42AGS
Diameter of suction cup	115mm
Spring travel	approx. 70mm
Total height	approx. 120mm
Pressure force at 1/2 spring travel	approx. 25N (Pressure force and self-weight with sensor)
Weight	850g without sensor, 1200g with sensor P42AGS
Mounting of bracket	M8 tap holes in the mounting plate, use at least 2 of them for mounting
Mounting of sensor	Thread M42×1.5 clamping by screw and NBR pressure pad
Vacuum feed for suction cup	Plug fitting for outside calibrated hose 8 mm

Dimensions:



Exchange of the wearing parts:

Pull the rubber lips (**order no. 2395110**) over the lower edge. Both sides can be used. Pay attention for undamaged sealing lips at the inner and outer edge as well as for uniform projection of the sealing edge. The rubber pressure pad (**order no. 2395109**) is bonded permanently in the suction area with Cyanoacrylate. When replacing the strap set (**order no. SHX42-STRAP-80**) the screws must be tightened with **5Nm**.




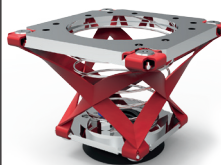
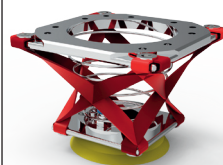
Important! After approx. one week, re-tighten the screws with the required tightening torque.

Ordering information:

Order number	Description
SHX42	Sensor bracket (complete)
SHX42-STRAP-80	Strap Set
SHX-AZ2-25	Adaptor (Shank) 25mm
SHX-AZ-BILSING	Adaptor (Quick change coupling)
SHX-AZQ-19	Adaptor Ø 19mm stud for swivel arm
SHX-AZQ-25	Adaptor Ø 25mm stud for swivel arm
2395109	Rubber pressure pad
2395110	Rubber lips
2395126	Thread sealing ring

PRODUCT PROGRAM SENSOR BRACKETS

(Complete overview see separate data sheet)

Type	SH42GS	SHS42GS	SHS42G-FB	SHX42-85F	SHX42-DL
					
Description	Spring loaded sensor bracket	Spring loaded sensor bracket with flat suction cup	Spring loaded sensor bracket with bellows suction cup	Spring loaded sensor brackets with rubber lip respectively double lip. Read the <i>NOTE</i> at the bottom for SHX42-DL!	
Fits to	P42GS P42AGS PW42GS PW42AGS				
Sensor mounting	Ø 43mm	Thread M42 x 1.5	Thread M42 x 1.5	Thread M42 x 1.5	Thread M42 x 1.5
Total height*	98mm plus sensor excess length	141mm	128mm	120mm	120mm
Spring travel	approx. 26 mm	approx. 26 mm	approx. 34 mm	approx. 70mm	approx. 70mm
Weight	approx. 0.75kg (1.65lbs)	approx. 1.25kg (2.75lbs)	approx. 1.2kg (2.64lbs) approx. 0.75 kg (1.65 lbs) (SHS42G-FB80)	approx. 0.85kg (1.87lbs)	approx. 0.85kg (1.87lbs)
Pressure force at 1/2 spring travel	approx. 48N	approx. 48N	approx. 60N	approx. 25N	approx. 25N
Suction cup diameter	n.a.	115mm 85mm (SHS42GS-85**)	105mm 80mm (SHS42G-FB80)	85mm	105mm
Vacuum feed	n.a.	Hose 8mm OD	Hose 8mm OD	Hose 8mm OD	Hose 8mm OD
Spare parts	Spring Kit 2395117	Spring Kit 2395117 Rubber lips (black) 2395110 2395168** Rubber pressure pad 2395109	Bellows suction cup 105 mm (red) 2395045 Bellows suction cup 80 mm (red) 2395100 (SHS42G-FB80)	Strap set SHX42-STRAP-80 Rubber lips (black) 2395168 Rubber pressure pad 2395167	Strap set SHX42-STRAP-80 Bellows suction cup 105 mm (yellow) 2395218
Accessories	SHK Bracket clamp for mounting of sensor brackets to destacking tools			Adaptors: SHX-AZ2-25, SHX-AZ-BILSING, SHX-AZQ-19, SHX-AZQ-25	
Application properties					
For vertical destackers	+	+	+	+	+
For Robot-Loader and high-speed linear destackers	--	—	+	+	+
For inclined sheet stacks	—	o	+	+	++
Suction delay time***	none	0.1s	0.5s	0.1s	0.1s
Notes	For narrow sheets and applications where weight is critical	Strong hold on even sheets due to suction cup.	Suited for utmost sensor contact on inclined or undulated sheet stacks.	Highest tilt flexibility, highest spring travel. Rigid during approach. For high lateral acceleration (up to 2g), minimal wear.	
* total height <i>unloaded</i> ** spare parts for SHS42GS-85					
*** <i>heavily dependent on vacuum strength, tube resistance, contact angle and contact pressure to sheet</i>					
Never use sensor bracket as a lifting suction cup! (except sheet is smaller than area of 3 suction cups)					
NOTE: The colors of the suction cup points to different hardnesses: Red – 45 shore; Yellow – 55 shore; Black – 60 shore					
NOTE: The sensor bracket SHX42-DL is suited only for sheet thickness >0.5mm (aluminum) and >0.3mm (steel)					

Revision 1.9, January 2021 - Subject to technical modification and error

ROLAND ELECTRONIC GmbH

Otto-Maurer-Straße 17 75210 Keltern / Germany
phone: +49 7236 9392-0 fax: +49 7236 9392-33
info@roland-electronic.com www.roland-electronic.com

