

## Spring Mounted Sensor Bracket SHX42

for single-sided sheet thickness measurement in destackers and centering stations

- Decompressed condition: very stiff, for lateral acceleration up to 2 g, 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. 1 cm
- 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

### THE ROLAND PLUS

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



## Technical Data:

SHX42	
Applicable sensors	P42GS, P42AGS, PW42GS, PW42AGS
Diameter of suction cup	110 mm
Spring travel	approx. 70 mm
Total height	approx. 120 mm
Pressure force at 1/2 spring travel	approx. 25 N (Pressure force and selfweight with sensor)
Weight	850 g without sensor, 1200 g with sensor P42AGS
Mounting of holder	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

## Mounting:

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. An adapter with 25 mm shank for swivel arm is available. Other adapters may be ordered by request. These allow an all-side orientation parallel to the sheet's surface.

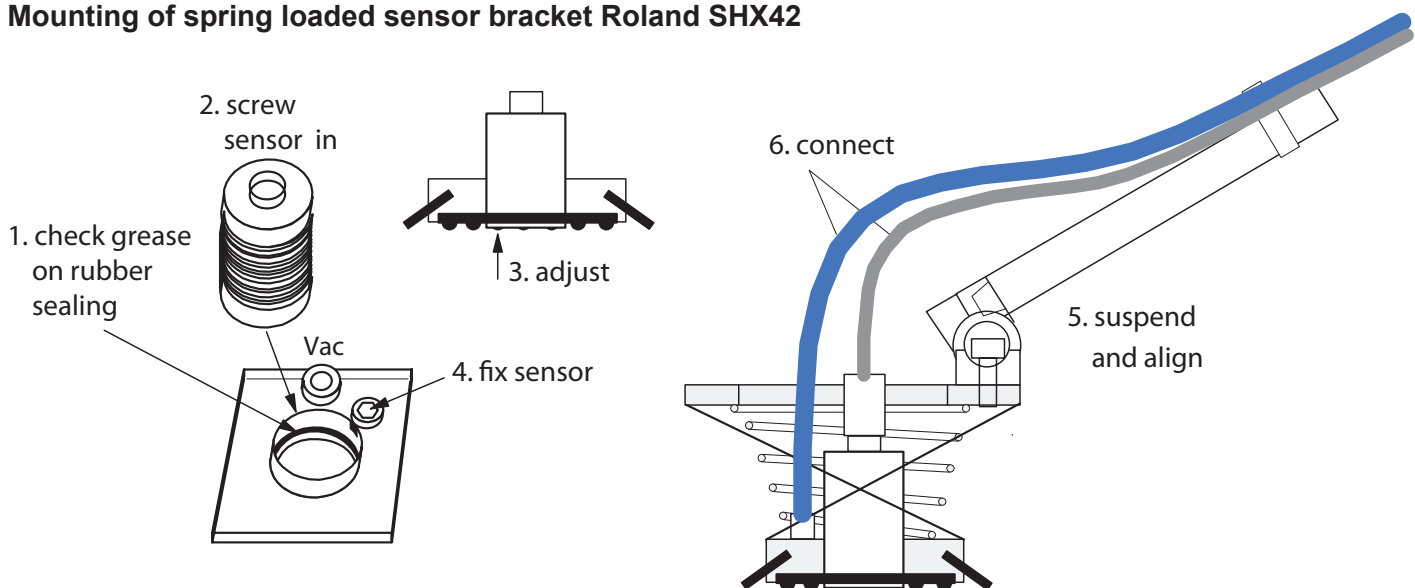
Before fitting the sensor please grease the sealing ring in the M42 thread lightly. Screw in the sensor from above until the sensor face is positioned almost at the top of the rubber naps. The sensor should be easily screwed in. If stiffy you must use a glove to avoid physical injury caused by sharp thread crests.

Finally secure the sensor by tightening of the clamping screw C (hexagon socket screw size 5, placed near the vacuum hose B).

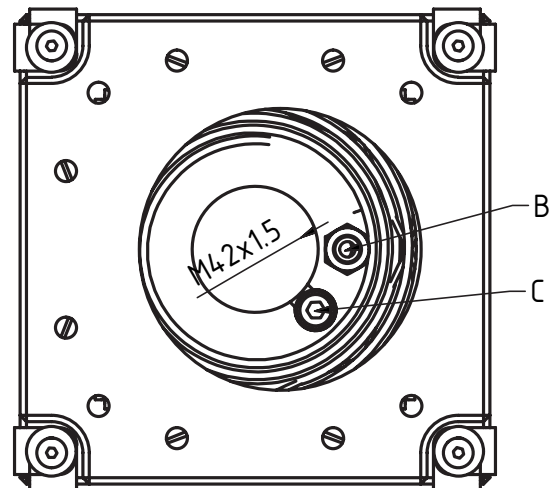
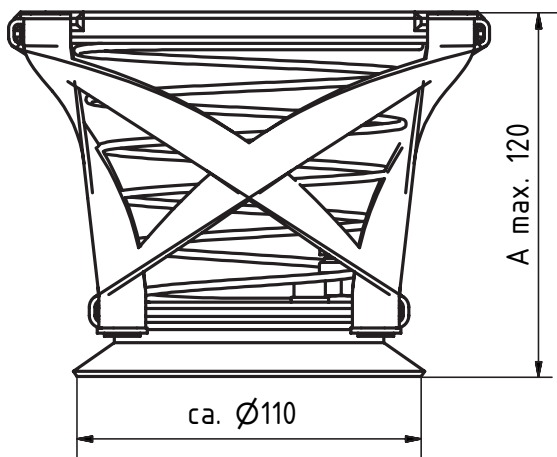
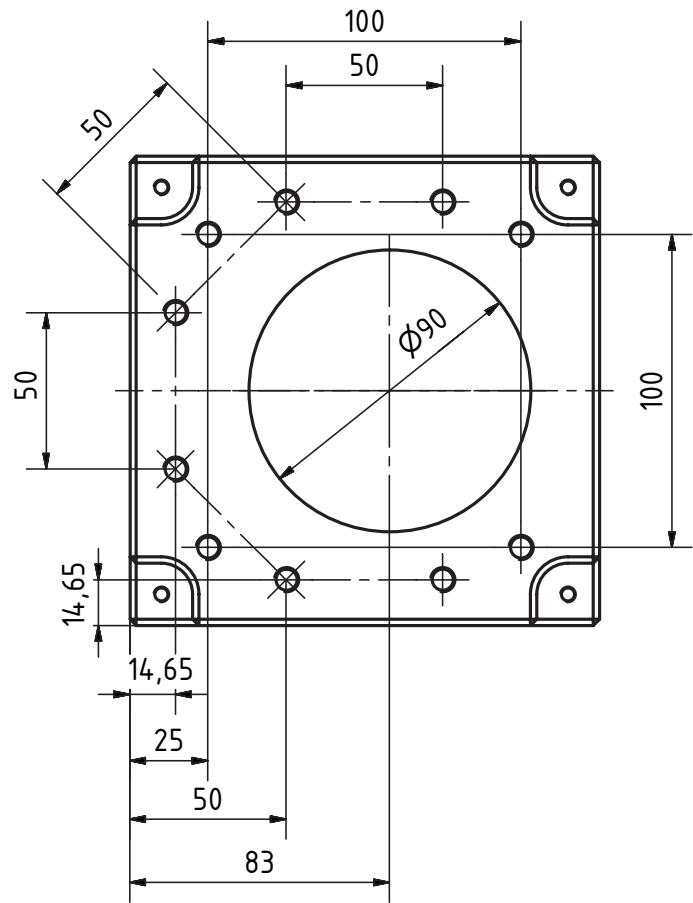
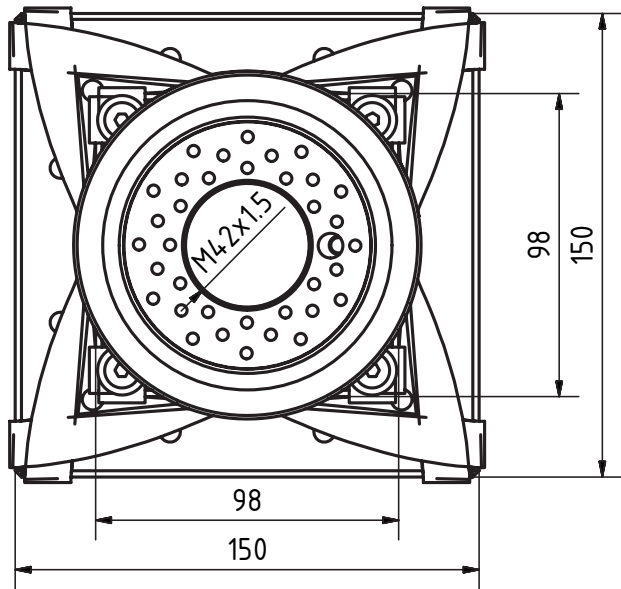
Connect the sensor cable and vacuum hose, direct the hose towards the sensor. Care for good mobility of vacuum hose and cable. Adjust the bracket to a position lower than the suction cups carrying the sheet. When the sensor is put on the sheet the bracket must compress so much that (after being lifted) it remains pressed for at least 10mm, thus providing the necessary freedom for the belts.

Only then the required mobility is achieved. The holder must not carry loads. Only small, lightweighted parts can be directly transported with the sensor holder.

## Mounting of spring loaded sensor bracket Roland SHX42



**Dimensions:**



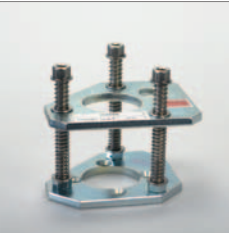



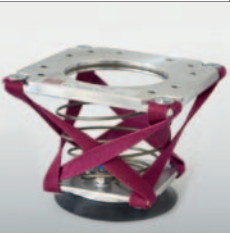
**Replacing the rubber parts:**

Pull the rubber lips (**order Nr. 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 Nr. 2395109**) is bonded permanently in the suction area with Cyanoacrylate.

**Ordering informations:**

Order number	Description
<b>SHX42</b>	Sensor bracket (complete)
<b>SHX42-STRAP-80</b>	Strap Set
<b>SHX-AZ2-25</b>	Adaptor(Shank) 25 mm
<b>2395109</b>	Rubber pressure pad
<b>2395110</b>	Rubber lips
<b>2395126</b>	Thread sealing ring

Type	SH42GS	SHS42GS	SHS42G-FB	SHS42G-FB80	SHX42
					
Description	Spring loaded sensor bracket	Spring loaded sensor bracket with flat suction cup	Spring loaded sensor bracket with bellow suction cup	Spring loaded sensor bracket with bellow suction cup	Spring loaded sensor bracket with flat suction cup and lateral clearance.
Fits to	P42GS P42AGS PW42GS PW42AGS	P42GS P42AGS PW42GS PW42AGS	P42GS P42AGS PW42GS PW42AGS	P42GS P42AGS PW42GS PW42AGS	P42GS P42AGS PW42GS PW42AGS
Sensor mounting	Thread M42 x 1.5	Thread M42 x 1.5	Thread M42 x 1.5	Thread M42 x 1.5	Thread M42 x 1.5
Total height*	69 mm plus sensor excess length	114 mm	128 mm	128 mm	120 mm
Spring travel	approx. 26 mm	approx. 26 mm	approx. 37 mm	approx. 37 mm	approx. 70 mm
Weight	approx. 0.7 kg (1.54 lbs)	approx. 1.2 kg (2.64 lbs)	approx. 1.2 kg (2.64 lbs)	approx. 0.75 kg (1.65 lbs)	approx. 0.85 kg (1.87 lbs)
Pressure force at 1/2 spring travel	approx. 48 N	approx. 48 N	approx. 60 N	approx. 60 N	approx. 25 N
Suction cup diameter	n.a.	110 mm	100 mm	80 mm	110 mm
Vacuum feed	n.a.	Hose 8 mm OD	Hose 8 mm OD	Hose 8 mm OD	Hose 8 mm OD
Spare parts	Spring Kit 2395117	Spring Kit 2395117 Rubber lips 2395110 Rubber pressure pad 2395109	Bellow suction cup 2395045	Bellow suction cup tbd	Strap set SHX42-STRAP-80 Rubber lips 2395110 Rubber pressure pad 2395109
Accessories	SHK Bracket clamp for mounting of sensor brackets to destacking tools	SHK Bracket clamp for mounting of sensor brackets to destacking tools	SHK Bracket clamp for mounting of sensor brackets to destacking tools	SHK Bracket clamp for mounting of sensor brackets to destacking tools	SHX-AZ2-25 Shank / Adaptor for 25 mm Clamp collar / swivel arm
<b>Application properties</b>					
For vertical destackers	+	+	+	+	+
For Robot-Loader and high-speed linear destackers	--	-	+	+	+
For inclined sheet stacks	-	o	+	+	++
Suction delay time**	none	0.1 s	0.5 s	0.5 s	0.1 s
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.	Suited for for utmost sensor contact on inclined or undulated sheet stacks and narrow sheets.	Highest tilt flexibility, highest spring travel. Rigid during approach. For high lateral acceleration (up to 2g), minimal wear.
* unloaded					
** heavily dependent on vacuum strength, tube resistance, contact angle and contact pressure to sheet					
Never use sensor bracket as a lifting suction cup ! (except sheet is smaller than area of 3 suction cups)					

