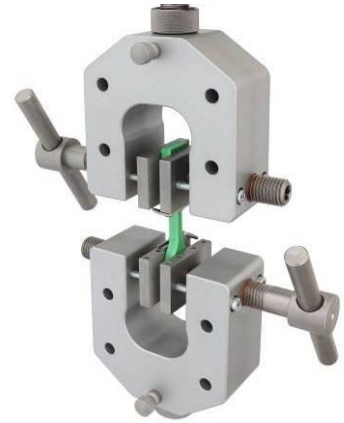


SREW ACTION GRIPS, 10 kN & 20 kN

Provide a simple and effective method to hold specimens.
Dual-acting design, also for asymmetrical samples.

Jaws articulate and provide self-alignment and cause a self-tightening effect.

SP154 are supplied in pairs, but can also be ordered as a single grip (0.5 pair).
Grips and jaws need to be ordered separately.



Item no.:	SP154-10	SP154-20	SP154-20-S50	SP154-20-S100
Tensile force:	10 kN	20 kN	20 kN	20 kN
Clamping force:	40 kN at 80 Nm torque	80 kN at 160 Nm torque	80 kN at 160 Nm torque	80 kN at 160 Nm torque
Max. jaw opening:	32 mm	32 mm	50 mm	100 mm
Temperature range:	0°C ... +180°C	0°C ... +350°C*		
Body:	Aluminum, anodized	Steel, nickel-plated		
Weight per grip without jaws:	2.36 kg	5.04 kg	5.6 kg	6.2 kg
Scope of delivery:	1 pair of grips without jaws			

*-70°C ... +350°C temperature range possible (item no.: SP154-20-T-70+350)



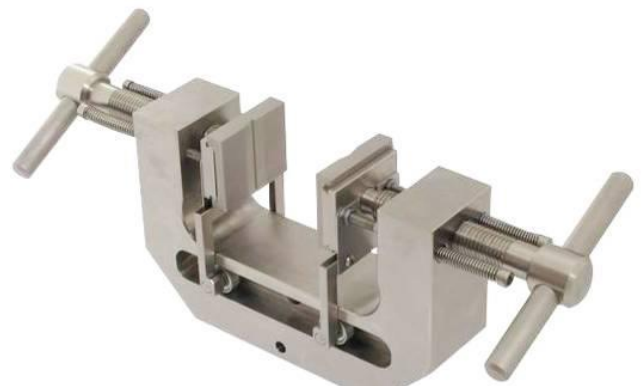
SP154-10



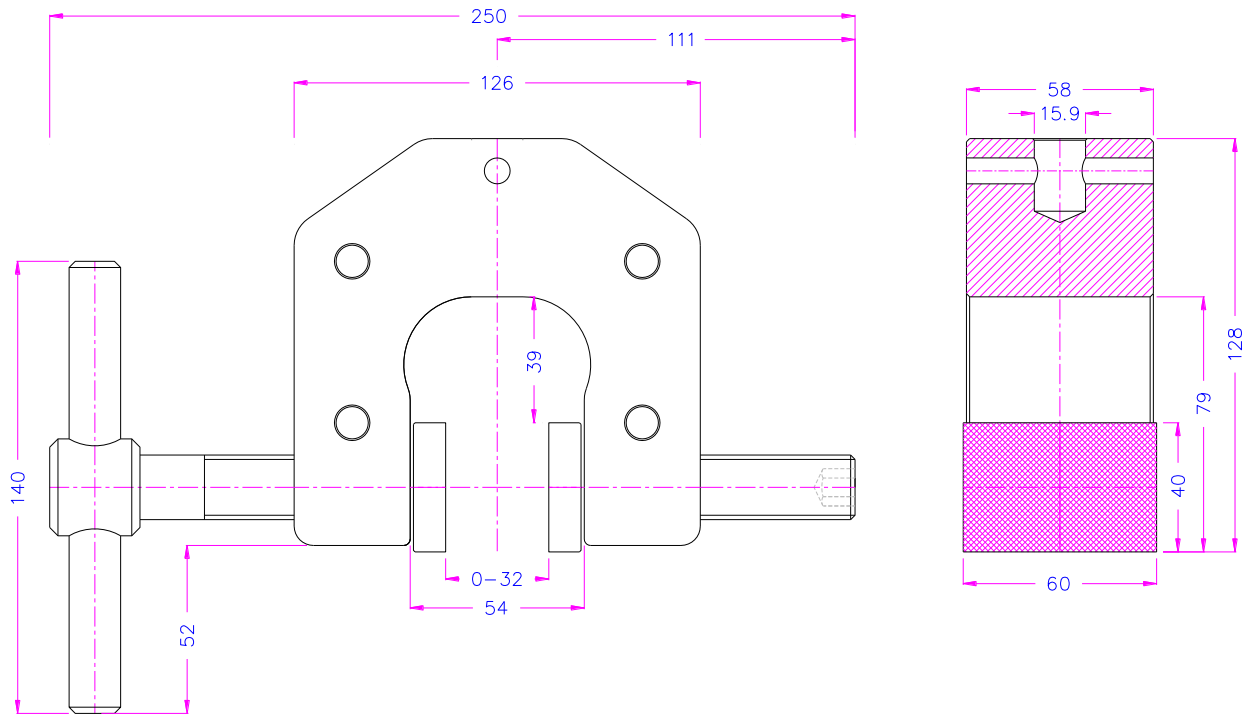
SP154-20



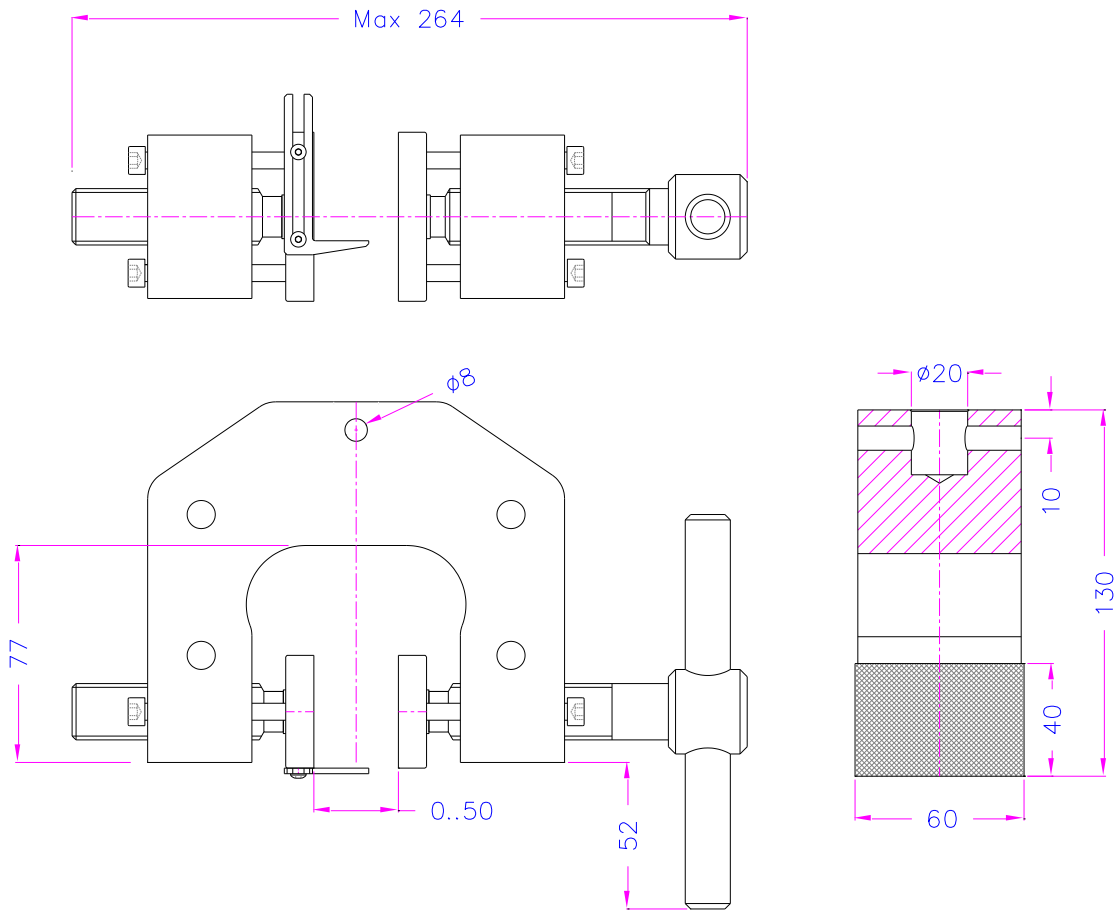
SP154-20-S50



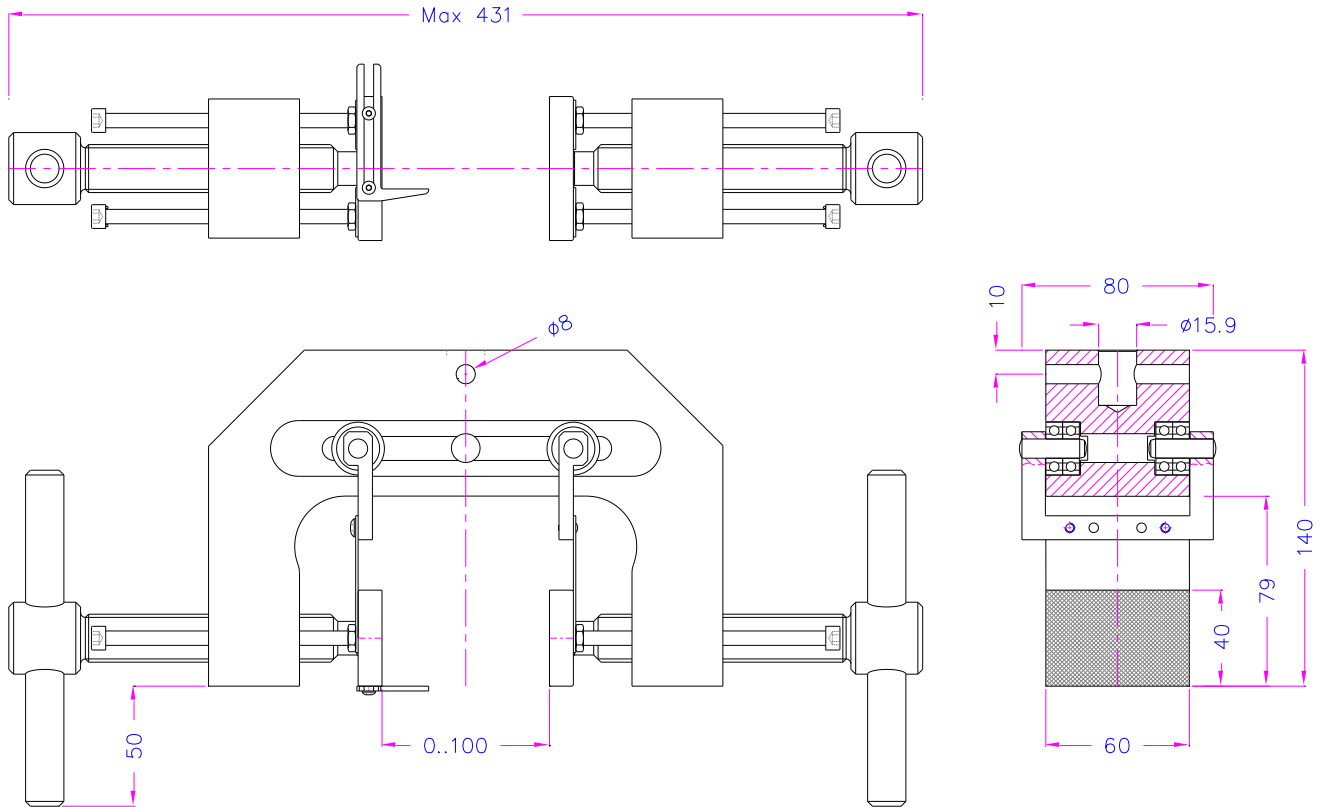
SP154-20-S100



SP154-10, SP154-20



SP154-20-S50



SP154-20-S100

Jaws for SP154

Scope of delivery: 1 set = 4 jaws

Item no.	Surface	Clamping surface H x W	Opening for SP154-10 / -20	Opening for SP154-20-S50	Opening for SP154-20-S100	Weight per pair
SP154-B	Blank jaws	40 x 60 mm	0 – 32 mm	0 – 50 mm	0 – 100 mm	0.35 kg
SP154-BG	Rubber jaws	40 x 60 mm	0 – 30 mm	0 – 50 mm	0 – 100 mm	0.36 kg
SP154-BP	Pyramid jaws	40 x 60 mm	0 – 32 mm	0 – 50 mm	0 – 100 mm	0.33 kg
SP154-BV3*	V jaws	Clamping height 40 mm	3 – 32 mm Ø	3 – 50 mm Ø	3 – 100 mm Ø	0.35 kg
SP154-BV6*	V jaws	Clamping height 40 mm	6 – 32 mm Ø	6 – 50 mm Ø	6 – 100 mm Ø	0.32 kg
SP154-BW	Wave jaws	40 x 60 mm	0 – 32 mm	0 – 50 mm	0 – 100 mm	0.32 kg
SP154-BD	Diamond jaws	40 x 60 mm	0 – 32 mm	0 – 50 mm	0 – 100 mm	0.35 kg
SP154-BWC	Jaws for bitumen	40 x 60 mm	0 – 14 mm	0 – 34 mm	0 – 84 mm	0.63 kg
SP154-B100	Blank jaws	40 x 100 mm	0 – 28 mm	0 – 48 mm	0 – 98 mm	0.72 kg
SP154-BG100	Rubber jaws	40 x 100 mm	0 – 26 mm	0 – 46 mm	0 – 96 mm	0.74 kg
SP154-BP100	Pyramid jaws	40 x 100 mm	0 – 28 mm	0 – 48 mm	0 – 98 mm	0.69 kg
SP154-BW100	Wave jaws	40 x 100 mm	0 – 28 mm	0 – 48 mm	0 – 98 mm	0.66 kg
SP154-BD100	Diamond jaws	40 x 100 mm	0 – 28 mm	0 – 48 mm	0 – 98 mm	0.72 kg
SP154-BP200	Pyramid jaws	60 x 200 mm	0 – 20 mm	0 – 40 mm	0 – 90 mm	3.00 kg
SP154-BG200	Rubber jaws	60 x 200 mm	0 – 18 mm	0 – 38 mm	0 – 88 mm	3.06 kg
SP154-BW200	Wave jaws	60 x 200 mm	0 – 20 mm	0 – 40 mm	0 – 90 mm	3.00 kg



Blank jaws

- Suitable for own further treatments
- Steel blanks without coating



Rubber jaws

- 1 mm rubber coating (NBR)
- Nickel-plated



Pyramid jaws

- Pyramids 1.2x45
- Hardened steel 58HRC
- Nickel-plated



V-jaws

- For all round samples
- Tooth pitch 1.2 mm
- Hardened steel 58HRC
- Nickel-plated



Wave jaws

- For flexible materials
- Wave 5 mm
- Hardened steel 58HRC
- Nickel-plated



Diamond jaws

- Clamping surface coated with synthetic diamonds
- Nickel-plated

*We recommend BV6 jaws for samples of a larger diameter:



SP154-BV4



SP154-BV6

Insert jaws for SP154

Quick change system of jaw surfaces without any additional tools.

Insert jaws require carriers (SP154-GT for 60 mm wide jaws and SP154-GT100 for 100 mm wide jaws).

Scope of delivery: 1 set = 4 jaws

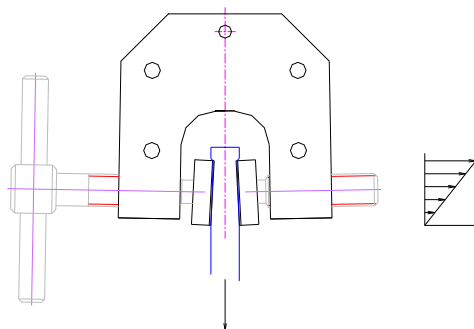
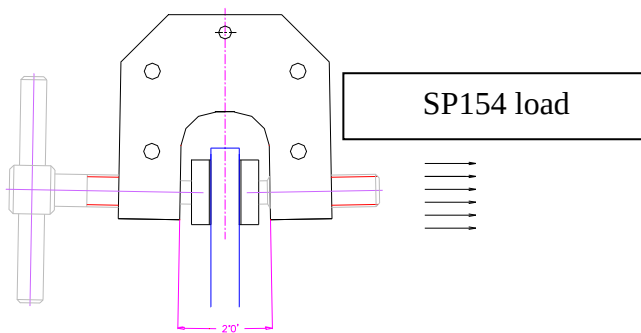
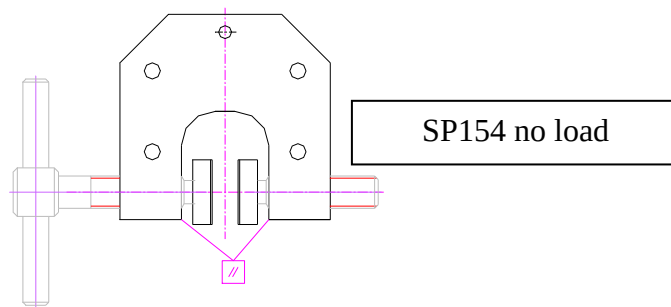
Item no.	Surface	Clamping surface H x W	Opening for SP154-10 / -20	Opening for SP154-20-S50	Opening for SP154-20-S100	Weight per pair
SP154-GT	Carrier	-	-	-	-	0.33 kg
SP154-EB	Blank insert jaws	50 x 60 mm	0 – 24 mm	0 – 42 mm	0 – 92 mm	0.29 kg
SP154-EBG	Rubber insert jaws	50 x 60 mm	0 – 22 mm	0 – 42 mm	0 – 92 mm	0.30 kg
SP154-EBP	Pyramid insert jaws	50 x 60 mm	0 – 24 mm	0 – 42 mm	0 – 92 mm	0.28 kg
SP154-EBV4	V insert jaws	Clamping height 50 mm	4 – 24 mm Ø	4 – 42 mm Ø	4 – 92 mm Ø	0.29 kg
SP154-EBW	Wave insert jaws	50 x 60 mm	0 – 24 mm	0 – 42 mm	0 – 92 mm	0.26 kg
SP154-EBD	Diamond insert jaws	50 x 60 mm	0 – 24 mm	0 – 42 mm	0 – 92 mm	0.29 kg
SP154-GT100	Carrier	-	-	-	-	0.69 kg
SP154-EB100	Blank insert jaws	50 x 100 mm	0 – 16 mm	0 – 36 mm	0 – 86 mm	0.63 kg
SP154-EBG100	Rubber insert jaws	50 x 100 mm	0 – 14 mm	0 – 34 mm	0 – 84 mm	0.65 kg
SP154-EBP100	Pyramid insert jaws	50 x 100 mm	0 – 16 mm	0 – 36 mm	0 – 86 mm	0.60 kg
SP154-EBW100	Wave insert jaws	50 x 100 mm	0 – 16 mm	0 – 36 mm	0 – 86 mm	0.57 kg
SP154-EBD100	Diamond insert jaws	50 x 100 mm	0 – 16 mm	0 – 36 mm	0 – 86 mm	0.63 kg



SP154-GT carrier with SP154-EBG rubber-faced insert jaw

Jaws with other dimensions and surface coatings on request

U-shape deformation of the grip and rotation of the jaws during tensile test help to avoid excessive load at the lower end of the jaws that might damage the sample

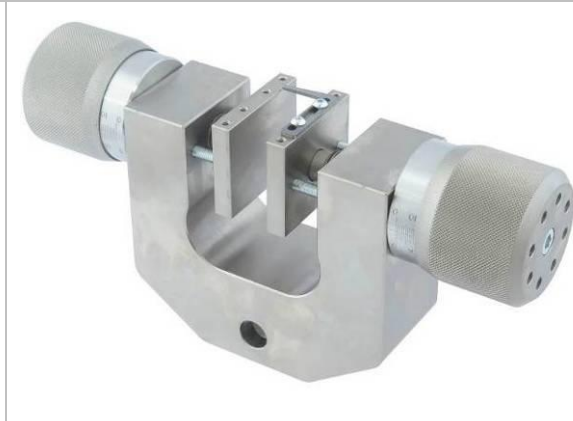
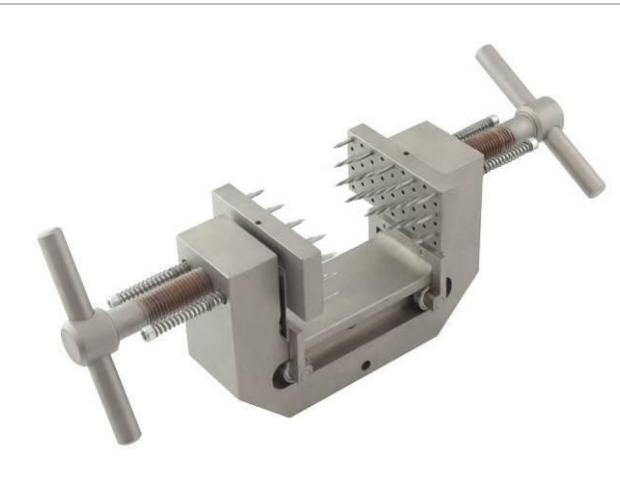


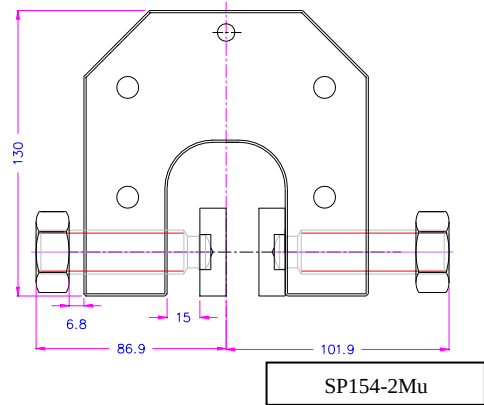
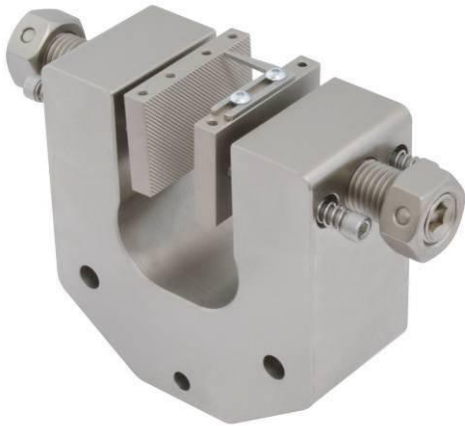
SP154 deformation and rotation of jaws under load

A torque of 10 Nm creates a clamping force of $F_c \sim 5$ kN for an M20 screw

Maximum permissible torque: 40 Nm ($F_c \sim 20$ kN)

Examples for custom solutions:

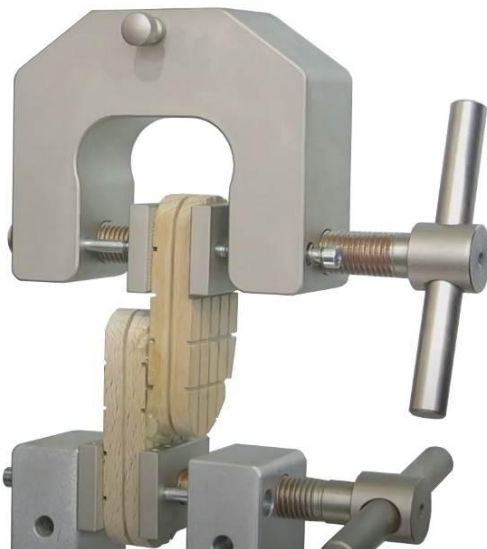
	
SP154-20-T-70+350 Fully nickel-plated version for a temperature range -70°C ... +350°C	SP154-20-S50-DKSK Special version of SP154-20-S50 with scaling knobs
	
SP154-20-S100+BN50x100 with special jaws with needles for testing thick samples, like insulation foam, non-woven insulation, etc.	SP154+EBP100x60 with special serrated insert jaws of different height to perform adhesive joint lap shear strength test
	
SP154-20-S100 with custom jaws in combination with a SP36t T-slotted platen with special inserts to test tensile properties of car batteries	
	
SP154-BWC Custom jaws to test bitumen (with water-cooling) ASTM-D4073 and ASTM-D5147	SP154-BWG Custom rubber-coated wave jaws



for temperature chamber usage
clamp with a wrench



SP154-20+BP200
200 mm wide jaws



SP154-20-S50+BP
Shear test on wood

Similar grips: SP83, SP232, SP240g, SPS90