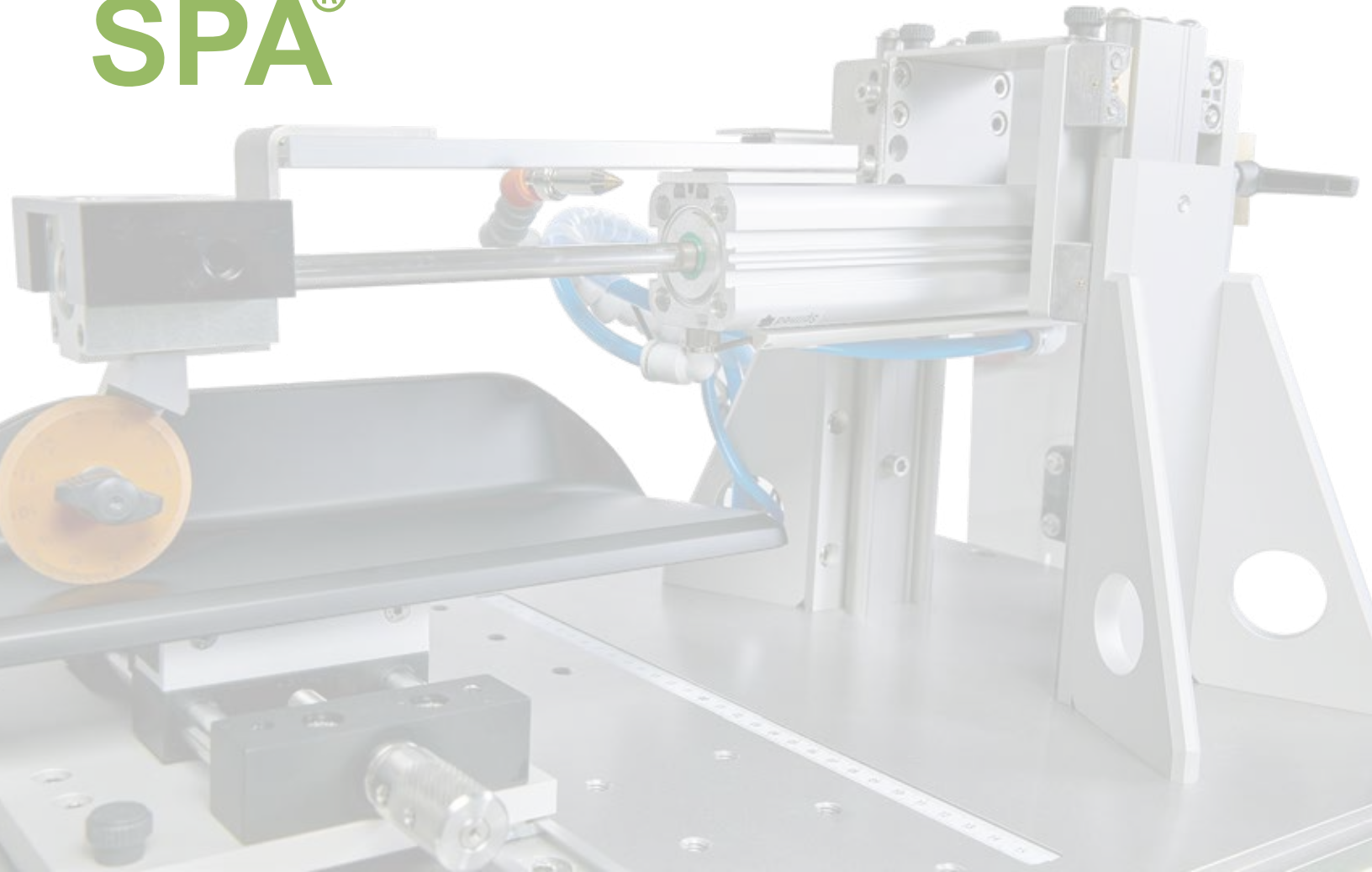
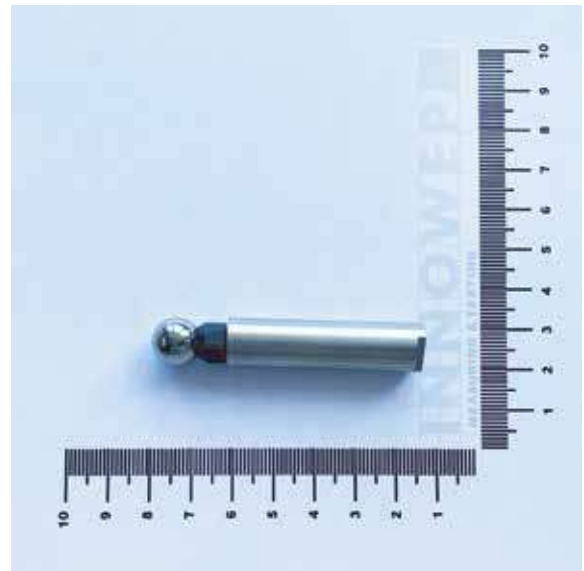
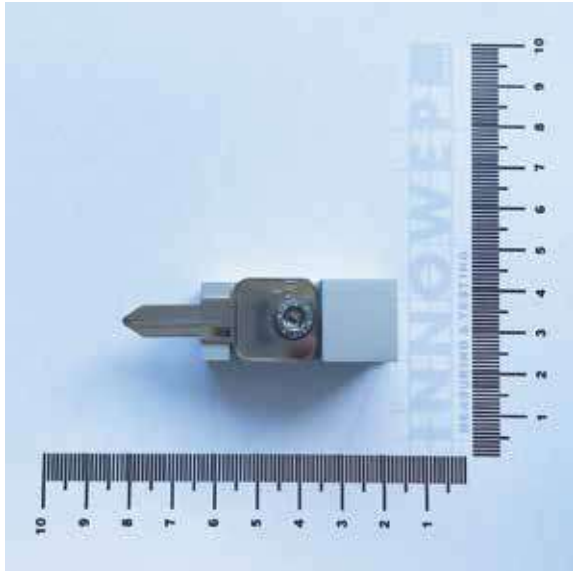


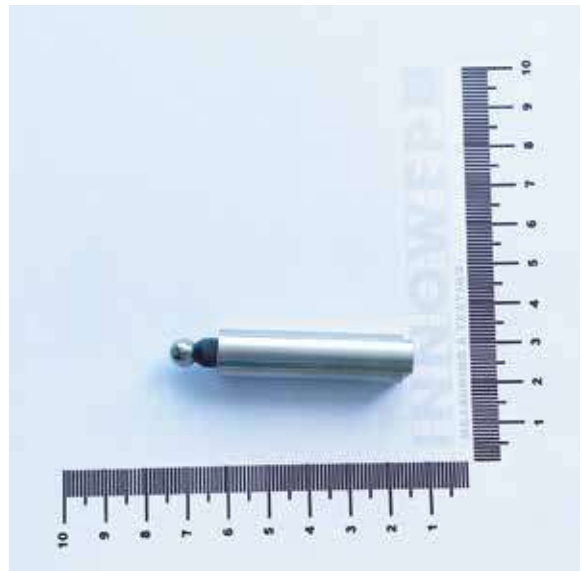
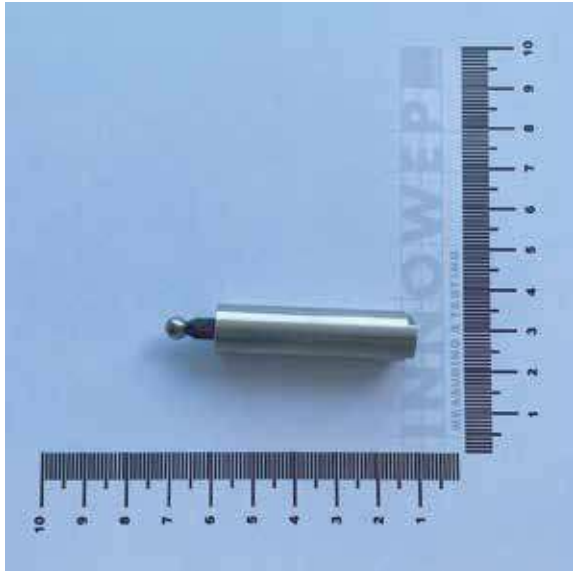
Dyna- SPA®

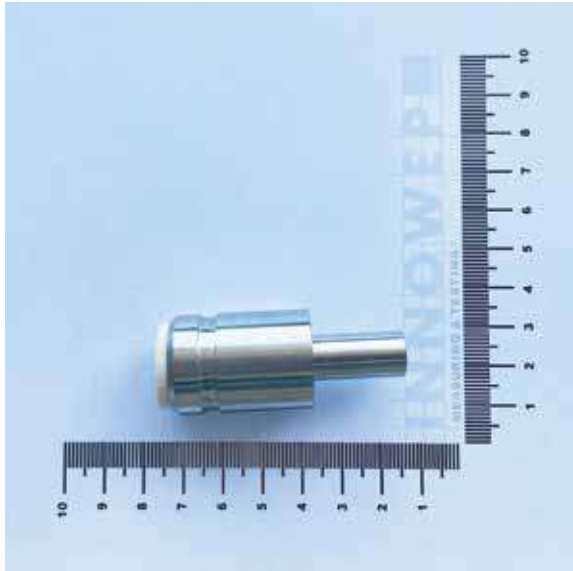


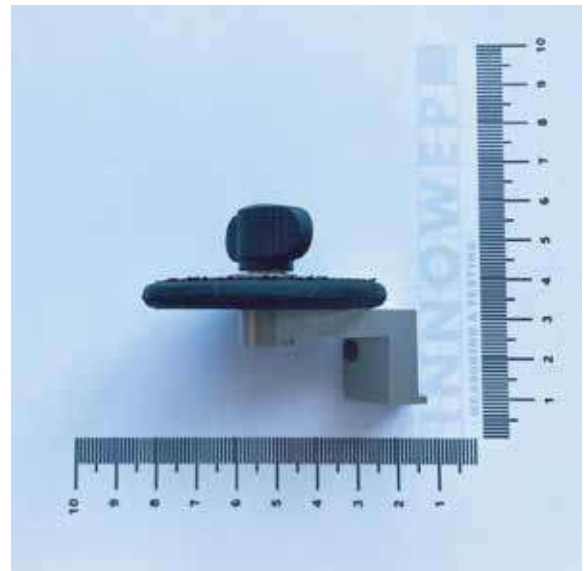
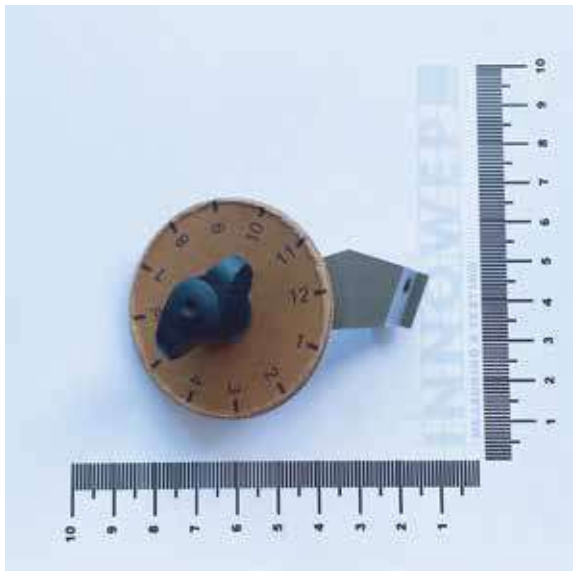
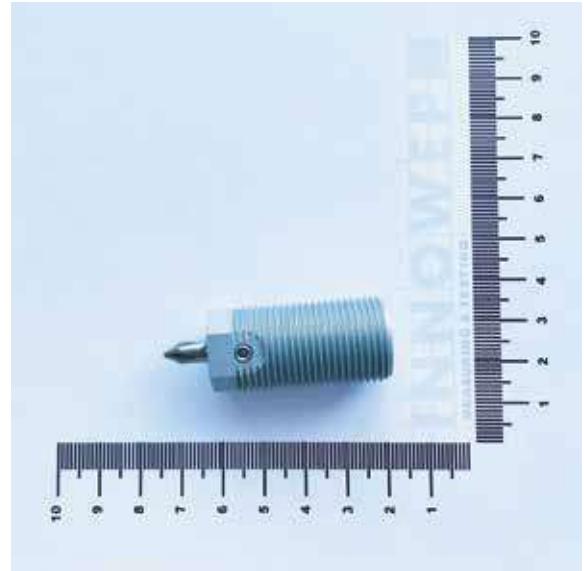
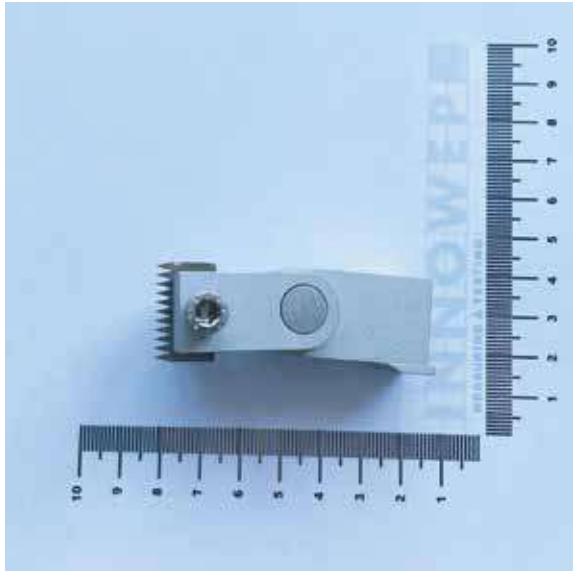
Highest Dynamic Speed with
Longest Stroke for Simulation of:

- Universal Abrasion • Universal Scratch
- Universal Punch
- and many more









KEY SCRATCH ADAPTER



- Standardised key scratch tip;
- Can be used for simulation of scratch/abrasion resistance of the magnetic stripe of the credit card.

SHOE SOLE SCRATCH ADAPTER

- Standardised shoe sole tip;
- Leather or SBR material:
 - Shore-hardness (95 ± 3) Shore A
 - Spec. weight (1.23 ± 0.20) g/cm³
 - Tensile strength ≥ 10 N/mm²
 - Elongation ≥ 250 %
 - Abrasion ≤ 250 mm³ acc. to DIN ISO 4649



SHOE SOLE ABRASION ADAPTER



- Standardised shoe sole tip;
- Specified shore hardness
- 20mm diameter
- for testing the floor abrasion resistance, car interior carpet abrasion resistance and many more

TIP OPTIONS

A great choice of tips is supplied with each Dyna-SPA® tester along with necessary abrasands and liquid media. Each tip is standardised in many parameters including the size, shape and materials which permits the equivalent result. A detailed tip choice of Dyna-SPA® is described in details upon request.

SAMPLE CLAMP OPTIONS



Universal Sample Clamp for flat and curved samples with various height



Clamp for testing specific area



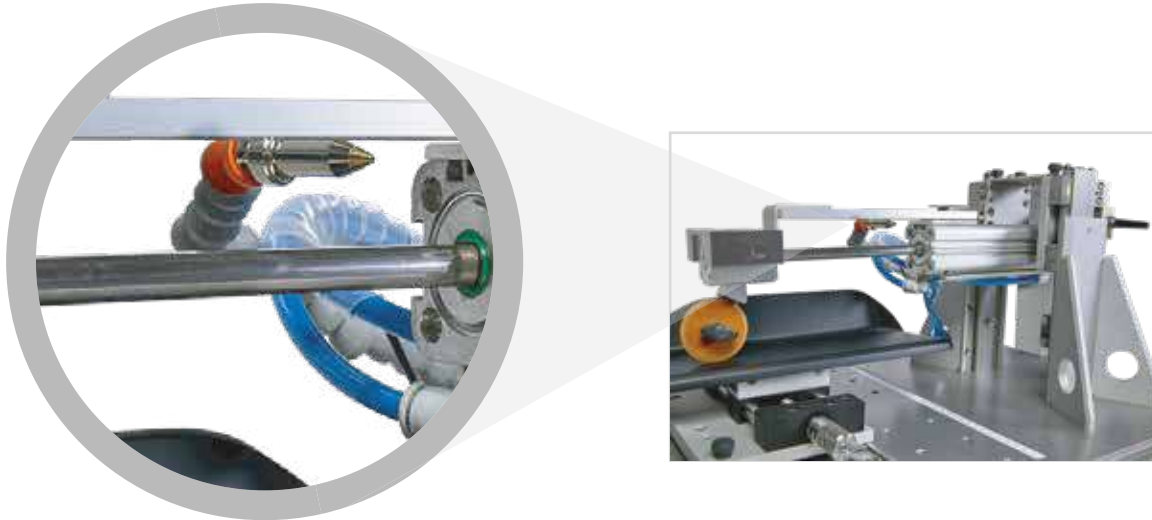
Easy sample clamp with a X-table

OTHER CLAMP CHOICE IS AVAILABLE UPON REQUEST!

OTHER OPTIONS

Pressurized Air Sample Cleaning

Automatically blowing the abrasion/scratch debris generated during the test.



Easy Sample Moving Vice for Punch Test

An additional vice which holds the Dyna-SPA and easily moves the sample for punch test.



TECHNICAL SPECIFICATION

	<i>Dyna</i> -SPA®
Static Load	1-30 N
Stroke Length	max. 120 mm (programmable)
Linear speed	up to 150 cm/s (higher speed upon request)
Cycles	10-1,000,000,000
Features	Scratch Abrasion Punch
Measurement delay (s)	programmable
Speed in & out	programmable
Power supply	230V / 50 Hz ; 110V / 60 Hz
Compressed air	6 bar, external, oil free, water free
Accessories included with the base unit	3 different loads; 2 scratch tips; 1 punch tip (metal) 1 universal clamp for abrasion test 1 set of sample holding plate * All the above accessories will be packed in one box; the base unit will be packed in a wooden box acc. to international shipment.
It is up to the user to determine a suitable adapter, tip or sample clamp appropriate to their products.	

MAINTENANCE AND SERVICES

Dyna -SPA® should be inspected, maintained and calibrated minimum once a year. Some of the spare parts such as abrasants are required to be replaced frequently.

