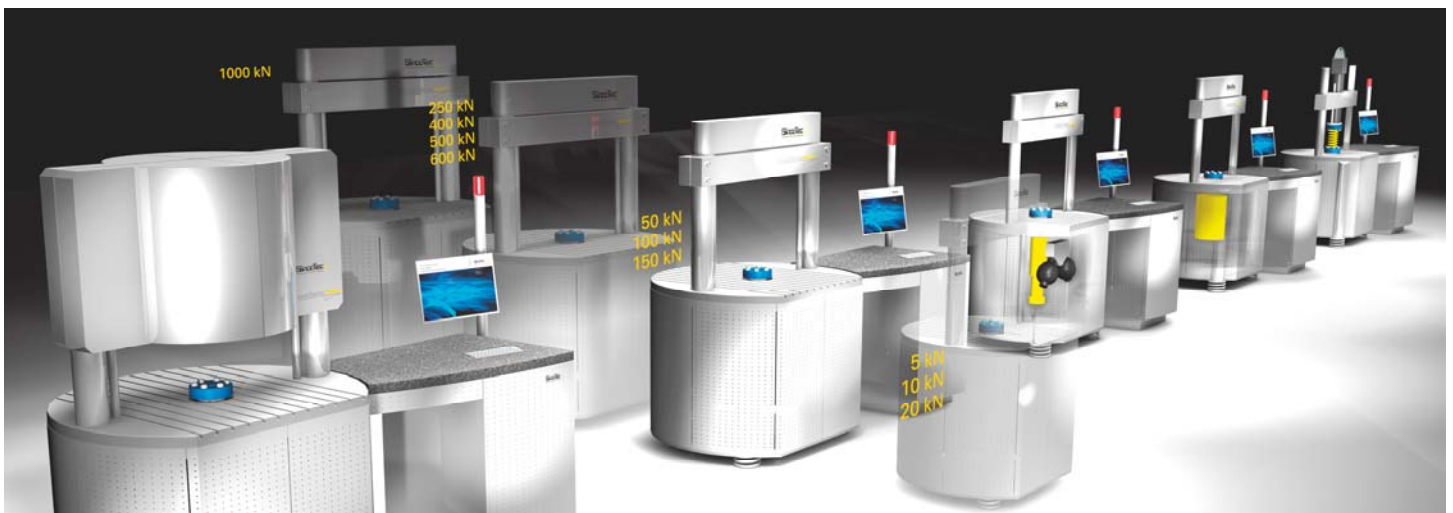


Product Overview

Test systems



High-Tech in Test Technology

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Universal Test Systems

POWER SWING MOT

- motoric high frequency pulsar
- resonance



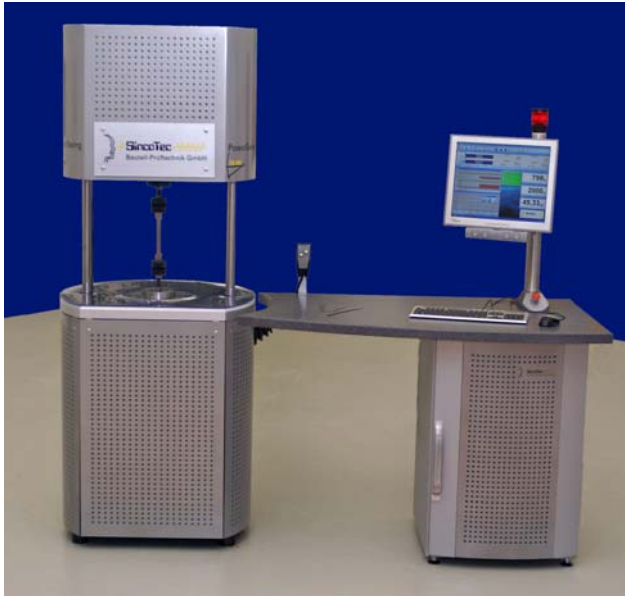
Nominal Load [kN]	20	50	100	150	250	400	500	600	1,000
Static Load [kN]	± 20	± 50	± 100	± 150	± 250	± 400	± 500	± 600	± 1,000
Max. dyn. Force Amplitude [kN]	± 10	± 25	± 50	± 75	± 125	± 200	± 250	± 300	± 500
Max. dynamic Stroke* [mm]	12	12	12	12	12	12	12	12	10
Frequency Range [Hz]	25 - 130	25 - 130	30 - 130	30 - 130	30 - 120	30 - 120	30 - 100	30 - 100	30 - 90
Height [mm]	2,500	2,500	2,500	2,500	3,060	3,060	3,400	3,400	3,800
Width [mm]	1,200	1,200	1,200	1,200	1,700	1,700	1,900	1,900	1,900
Depth [mm]	1,050	1,050	1,050	1,050	1,480	1,480	1,680	1,680	2,000
Free Column Passage [mm]	750	750	750	750	1,030	1,030	1,030	1,030	1,560
Max. Length of Sample [mm]	800	800	800	800	900	900	900	900	1,200
Total Weight [kg]	2,300	2,300	2,300	2,300	7,500	9,500	11,500	11,500	17,500
Order Number	102020	102050	1020100	1020150	1020250	1020400	1020500	1020600	1021000

* further strokes on request



POWER SWINGLY

- motoric high frequency pulsar
- resonance



Nominal Load [kN]	5	10	20
Static Load [kN]	± 5	± 10	± 20
Max. dyn. Force Amplitude [kN]	± 2.5	± 5	± 10
Max. dynamic Stroke* [mm]	10	10	10
Frequency Range [Hz]	20 - 110	20 - 110	20 - 110
Min. Height [mm]	1,700	1,700	1,700
Max. Height [mm]	2,180	2,180	2,180
Width [mm]	800	800	800
Depth [mm]	680	680	680
Free Column Passage [mm]	550	550	550
Max. Length of Sample [mm]	670	670	670
Total Weight [kg]	350	450	500
Order Number	10105	101010	101020

* further strokes on request

POWER SWING MOT Big Table

- motoric high frequency pulsar
- resonance

Nominal Load* [kN]	50	100	400
Static Load [kN]	± 50	± 100	± 400
Max. dyn. Force Amplitude [kN]	± 25	± 50	± 200
Max. dyn. Stroke [mm]	12	12	12
Frequency Range [Hz]	25 - 130	25 - 130	30 - 120
Height [mm]	1,200	1,200	1,400
Width [mm]	2,000	2,000	2,000
Depth [mm]	1,200	1,200	2,000
Total Weight [kg]	4,000	4,000	7,500
Order Number	102050 OL	1020100 OL	1020400OL

* further loads on request

Also with column assembling deliverable (movable as option)



POWER SWING MAG

- magnetic high frequency pulsar
- resonance



Nominal Load [kN]	20	50	100	150	250	400	550
Static Load [kN]	± 20	± 50	± 100	± 150	± 250	± 400	± 550
Max. dyn. Force Amplitude [kN]	± 10	± 25	± 50	± 75	± 125	± 200	± 275
Max. dynamic Stroke* [mm]	4 / 6	4 / 6	4 / 6	4 / 6	4 / 6	4 / 6	4 / 6
Frequency Range [Hz]	40 - 300	40 - 300	40 - 300	40 - 300	40 - 300	40 - 300	40 - 300
Height [mm]	2,560	3,100	3,100	3,100	3,150	3,150	3,150
Width [mm]	900	1,200	1,200	1,200	1,200	1,200	1,200
Depth [mm]	750	1,050	1,050	1,050	1,050	1,050	1,050
Free Column Passage [mm]	530	820	820	820	600	600	600
Max. Length of Sample** [mm]	610	750	750	750	900	900	900
Total Weight [kg]	1,500	2,300	2,300	2,300	6,500	7,200	7,400
Order Number "EXCELLENCE" [Fig. above]	103020	103050	1030100	1030150	1030250	1030400	1030550
Order Number "PROFESSIONELL" [Fig. below]	103020P	103050P	1030100P	1030150P	1030250P	1030400P	1030550P

* further strokes on request
** further lengths* on request



POWER STATIC

Nominal Load* [kN]	± 20	± 50	± 100
Static Load* [kN]	± 20	± 50	± 100
Min. Height [mm]	2,300	2,300	2,300
Max. Height [mm]	3,000	3,000	3,000
Width [mm]	800	800	800
Depth [mm]	800	800	800
Free Column Passage [mm]	550	550	550
Max. Length of Sample** [mm]	650	650	650
Total Weight [kg]	1,500	1,500	2,000
Order Number	1510120	1510150	1510110

* further loads on request

** further lengths' on request

Heating and cooling systems also available



Servo-hydraulic Test Systems

POWER FLOW



Nominal Load* [kN]	± 100	± 250	± 400
Frequency range [Hz]	0.5 - 100	0.5 - 100	0.5 - 100
Height [mm]	1,800	2,800	2,800
Width [mm]	950	1,250	1,250
Depth [mm]	950	1,250	1,250
Free Column Passage [mm]	530	630	630
Max. Length of Sample** [mm]	750	950	950
Total Weight [kg]	approx. 1,800	approx. 2,300	approx. 3,000
Order Number	3030100	3030250	3030400

* further loads on request

** further lengths' on request

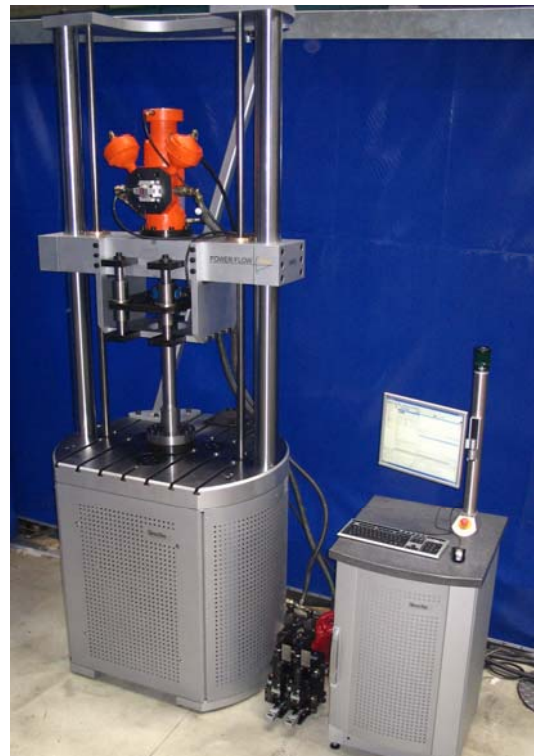
POWER FLOW Biaxle (Tension/Compression-Torsion)

- servo-hydraulic

Nominal Load Tension* [kN]	± 100
Nominal Load Torsion* [Nm]	± 2,000
Height [mm]	3,400
Width [mm]	1,250
Depth [mm]	1,100
Free Column Passage [mm]	750
Max. Length of Sample** [mm]	1,500
Total Weight [kg]	approx. 3,000
Order Number	301002000

* further loads on request

** further lengths' on request



Control System EXCITING FLOW

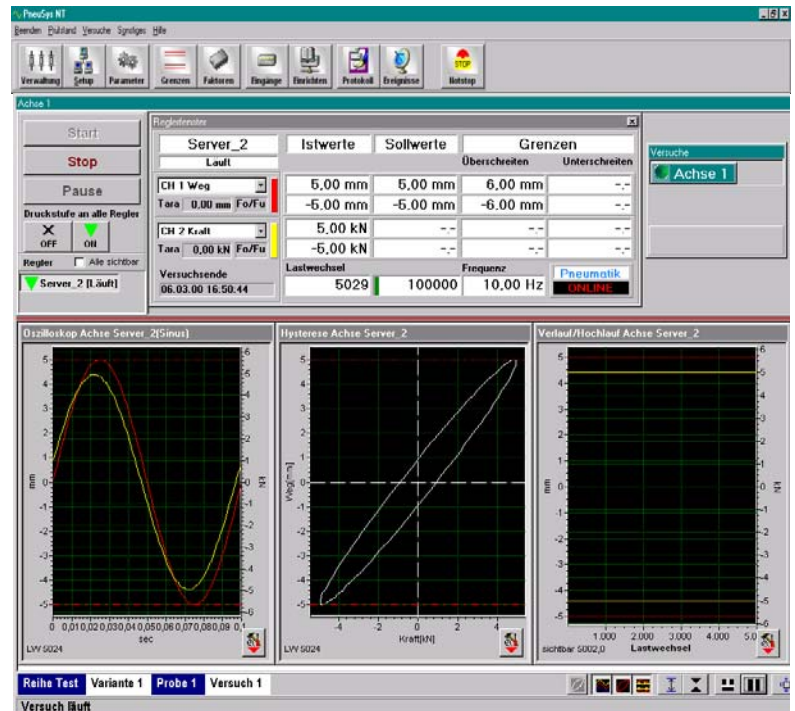
Controlling	digital
Number Channels	4, all channels completely adjustable
Frequency [Hz]	0.001 - 100
Type of Signal	Sinus, right angle, triangle, saw tooth, user defined, real time signal
Sample rate	2 kHz
Input / Output	1 analogue IN/Channel 1 analogue OUT/Channel 7 Digital IN 7 Digital Out
Communication PC	Ethernet 10 MBit, TCP/IP
Display	¼ VGA-Display, Oscilloscope- and Hysteresis
External set value default	Yes (optional)
Operation	Graphic Menu
Order Number	30301



Software FLOW MOTION

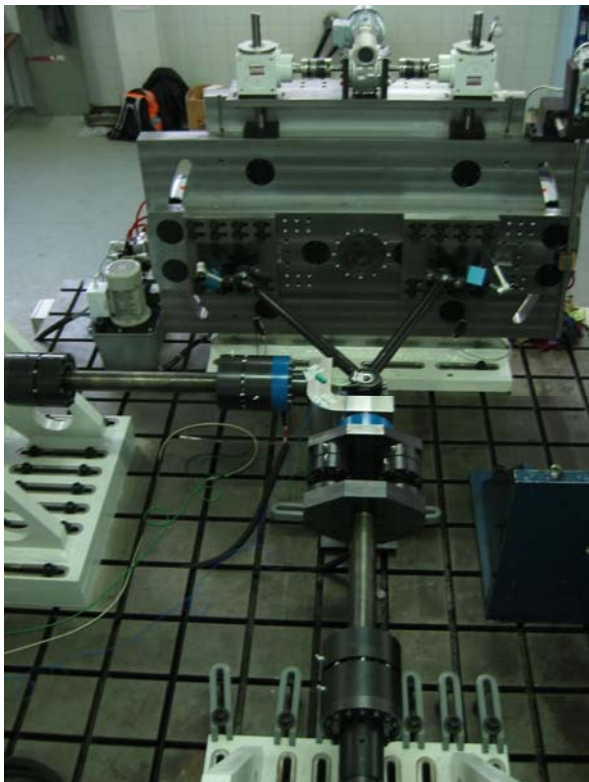
The Software FLOW MOTION (Order Number: 703000) is an expansion of the operation and data acquisition of the controller EXCITING FLOW. The Software is characterized by the following functions:

- Synchronizes up to five EXCITING FLOW-controller for multi-axial testing or multi-station testing
- Intuitive operation, WINDOWS XP Interface
- Manual control of the piston rod with force or displacement control
- Performance, monitoring and limit controlling of constant amplitude tests
- Recording of test data, e. g. amplitude, events, min, and max, values
- Calculation of material properties from recorded stress-strain-curves
- Waveform-Editor for defining various signals
- Four level administration of protocols for handling and storing data on the PC
- Large illustration facilities, e.g. oscilloscope function, signal graph for the measured signals
- Export function of protocols and force-displacement hysteresis as ASCII file and as Windows bitmap file



Multiaxial servo-hydraulic Test Systems, custom build

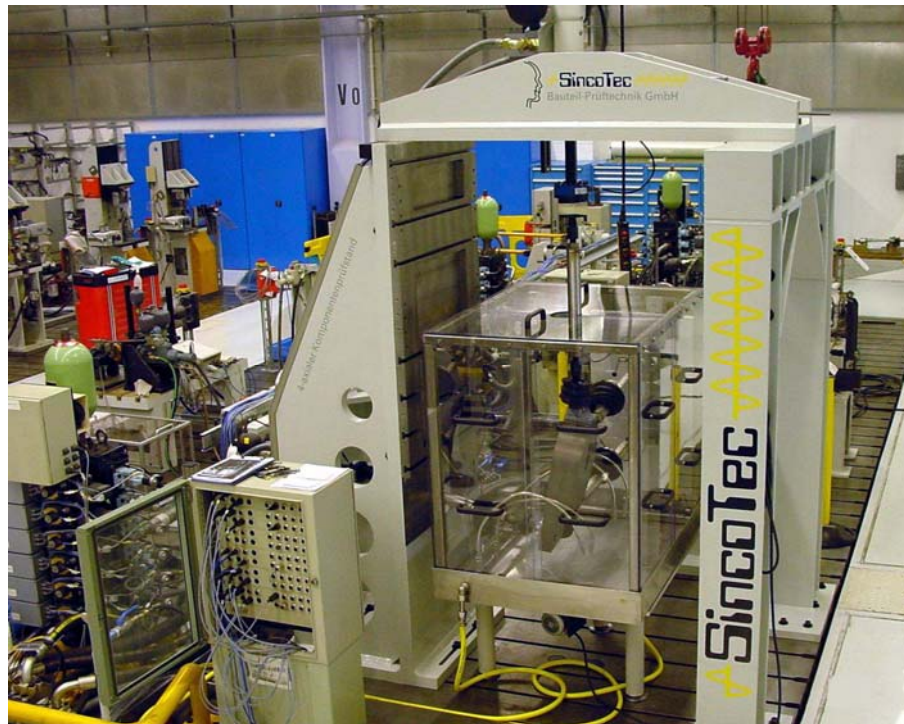
Biaxial



Triaxial



4-Axle (with corrosion chamber)



11-Axle (with corrosion chamber)

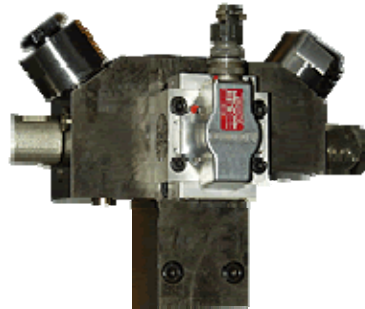


- All actuators with hydrostatic bearing
- number of axels, nominal loads and strokes on request
- Corrosion Chamber, blowers for drying, hydraulic power supplies and other features are also available

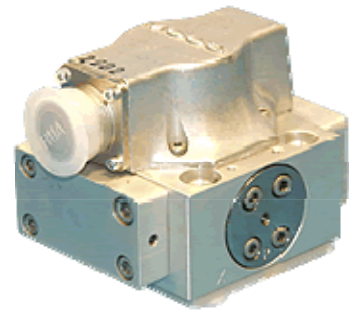
Servo-hydraulic Modular System



Actuator units



Valve Connecting Plates



Valves



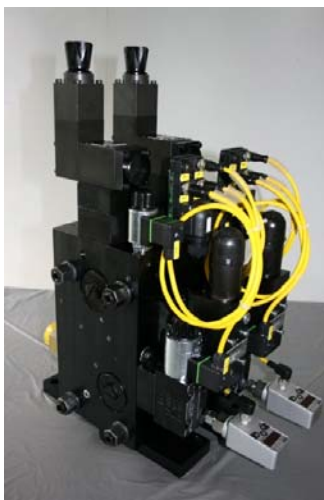
Accumulators



Ball-and-Socket Joints



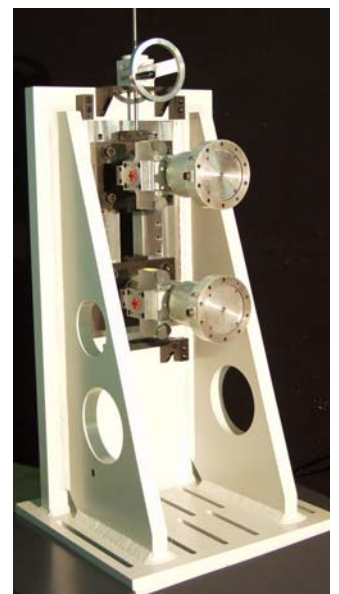
Hoses



Service Manifolds



Hydraulic Power Supplies



Mounting Angles etc,

Spans, leak oil drain pumps, Filtration units and the like on request available

Servo-pneumatic Test Systems

POWER AIR (Complete System)

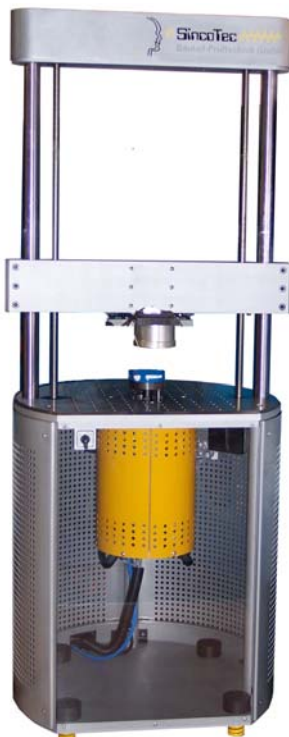


Nominal Load [kN]	± 1 - 25
Control System	EXCITING AIR (AIR OTION)
Max. Stroke [mm]	Depended on stroke of cylinder
Height [mm]	2,094
Width [mm]	850
Depth [mm]	850
Free Column Passage [mm]	532
Max. Length of Sample* [mm]	750
Total Weight [kg]	300 - 800
Order Number	80200x

* further lengths' on request

POWER AIR

- Load frame, to collect with pneumatic or electromotive actuator



POWER AIR
Actuator built in machine table



POWER AIR Flex
Connection plate for actuator is rotatable in 2 axes

Control System EXCITING AIR

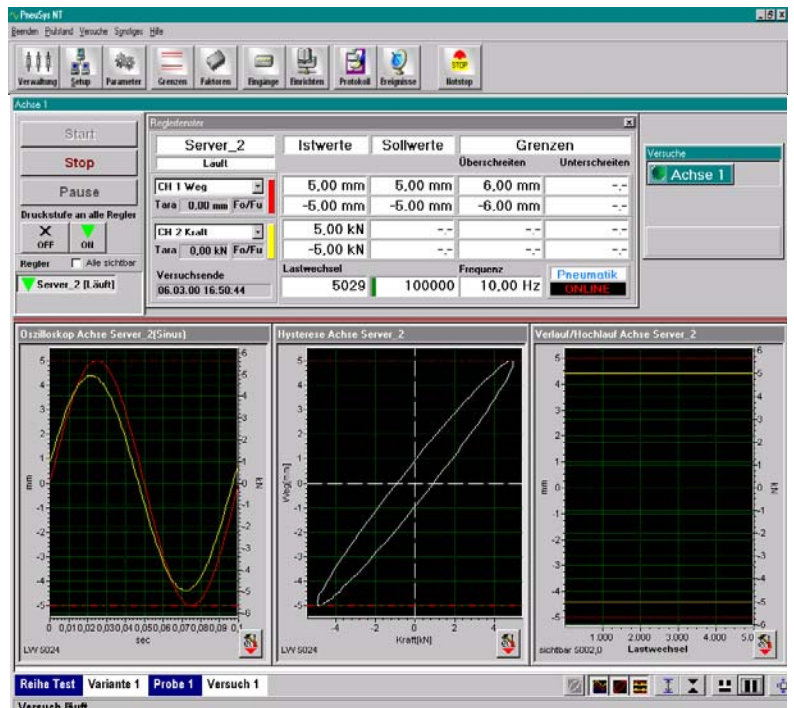


Controlling	digital
Number Channels	4, all channels completely adjustable
Frequency [Hz]	0.001 - 50
Type of Signal	Sinus, right angle, triangle, saw tooth, user defined, real time signal
Sample rate	2 kHz
Input / Output	1 analogue IN/Channel 1 analogue OUT/Channel 7 Digital IN 7 Digital Out
Communication PC	Ethernet 10 MBit, TCP/IP
Display	¼ VGA-Display, Oscilloscope- and Hysteresis
External set value default	Yes (optional)
Operation	Graphic Menu
Order Number	20201

Software AIR MOTION

The Software AIR MOTION (Order Number: 702000) is an expansion of the operation and data acquisition of the controller EXCITING AIR. The Software is characterized by the following functions:

- Synchronizes up to five EXCITING AIR-controller for multi-axial testing or multi-station testing
- Intuitive operation, WINDOWS XP Interface
- Manual control of the piston rod with force or displacement control
- Performance, monitoring and limit controlling of constant amplitude tests
- Recording of test data, e. g. amplitude, events, min, and max, values
- Calculation of material properties from recorded stress-strain-curves
- Waveform-Editor for defining various signals
- Four level administration of protocols for handling and storing data on the PC
- Large illustration facilities, e.g. oscilloscope function, signal graph for the measured signals
- Export function of protocols and force-displacement hysteresis as ASCII file and as Windows bitmap file



Servo-pneumatic Actuator Units

Diaphragm Cylinder		
Nominal Load on 6 bar [kN]	± 5	± 10
Max. lateral Force [N]	800	800
Max. Stroke [mm]	40	40
Frequency Range [Hz]	0 - 50	0 - 50
Nominal System Pressure [bar]	2 - 8	2 - 8
Medium	Filtered air without oil	
Order Number	13205	132010



Double-acting Cylinder						
Nominal Load [kN]	± 1	± 1.5	± 2	± 4	± 6.5	± 10
Max. Force on 6 bar [N]	1,000	1,650	2,700	4,200	6,600	10,900
Diameter of the Piston [mm]	50	63	80	100	125	160
Dyn. Load [N]	200 - 750	350 – 1,200	500 – 1,900	800 – 2,800	1,300 – 4,600	2,000 - 8,000
Stroke* [mm]	0 - 250	0 - 250	0 - 250	0 - 150	0 - 150	0 - 100
Order Number	122050	122063	122080	1220100	1220125	1220160

* further strokes on request

Walking simulator

- Test System for artificial foets and shoes



Max. Force Amplitude [kN]	± 3.5
Control System	EXCITING AIR
Height [mm]	2,070
Width [mm]	1,400
Depth [mm]	850
Total Weight [kg]	approx. 1,250
Order Number	152000

POWER DRIVE

- electromotive actuator

Nominal Load* [kN]	5 - 20
Nominal stroke* [mm]	200
Speed [m/s]	0.5 - 1.5
Height [mm]	2,100
Width [mm]	850
Depth [mm]	850
Total Weight [kg]	approx. 500
Order Number	15103EX

* further sizes on request



Test Systems for Motor Components

POWER TORQUE

- resonance



Nominal Load* [Nm]	± 6,000	± 10,000	± 30,000	± 35,000
Frequency Range [Hz]	20 - 110	20 - 110	20 - 110	20 - 110
Height [mm] without sample	900	900	1,550	1,550
Width [mm]	1,000	1,000	1,800	1,800
Depth [mm]	1,000	1,000	1,800	1,800
Total Weight [kg]	800	800	7,500	7,500
Order Number	105060	1050100	1050300	1050350

* further loads on request

POWER BENDING

- resonance



Nominal Load* [Nm]	± 3,000	± 6,000	± 10,000
Frequency Range [Hz]	20 - 70	20 - 70	20 - 70
Height [mm]	800	800	800
Width [mm]	1,000	1,000	1,000
Depth [mm]	450	450	450
Total Weight [kg]	200	300	330
Order Number	104030	104060	104100

* further loads on request

HOT-WARM-SHAKE Test System for catalytic converters and particulate filters

Max. Acceleration Amplitude	100 g
Frequency Range [Hz]	140-240
Burner capacity [kW]	25 - 100
Max. Temperature [°C]	1,400
Max. Mass flow rate [kg/h]	500
Max. Length of Sample [mm]	500
Order Number	109000

Water quench on request available



Exhaust System Test System

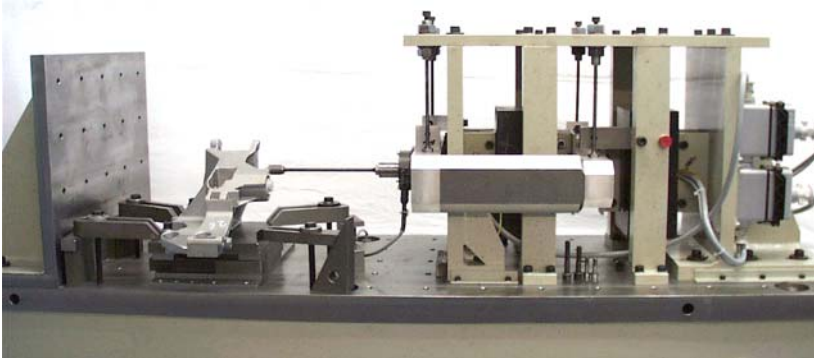


Max. Force Amplitude [kN]	35 - 60
Max. Acceleration [g]	175 - 300
Height [mm]	2,500
Width [mm]	2,500
Depth [mm]	2,500
Total Weight [kg] without plate	approx. 5,000
Order Number	15100

Hot gas generator on request available

Module Support Test System

- resonance



Nominal Load [kN]	± 20
Frequency Range [Hz]	10 - 400
Height [mm]	1,500
Width [mm]	1,800
Depth [mm]	500
Total Weight [kg]	1,000
Order Number	1011000

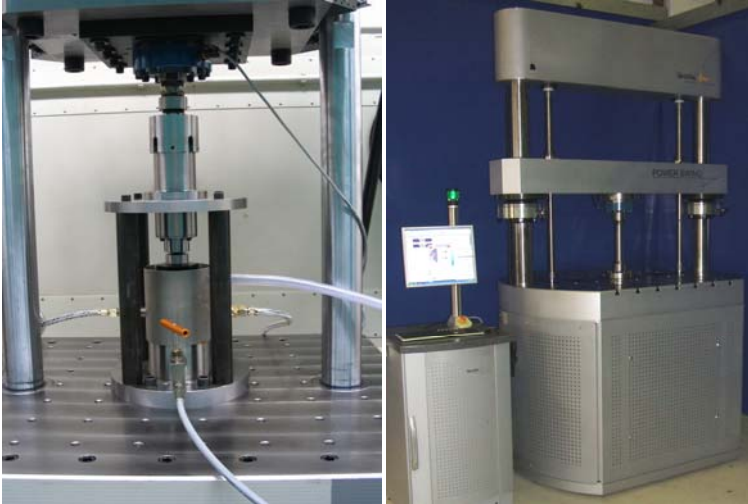
Clutch Test System

Max. speed [rpm]	3,000 - 8,000
Mass moment of inertia [kgm ²]	0.6 - 4
Max. Load [Nm]	400
Height [mm]	1,500
Width [mm]	2,650
Depth [mm]	600
Total Weight [kg]	approx. 2,700
Order Number	1516500



● HIGH IMPRESSION (Test System for Internal Pressure tests)

- resonance, based on POWER SWING MOT



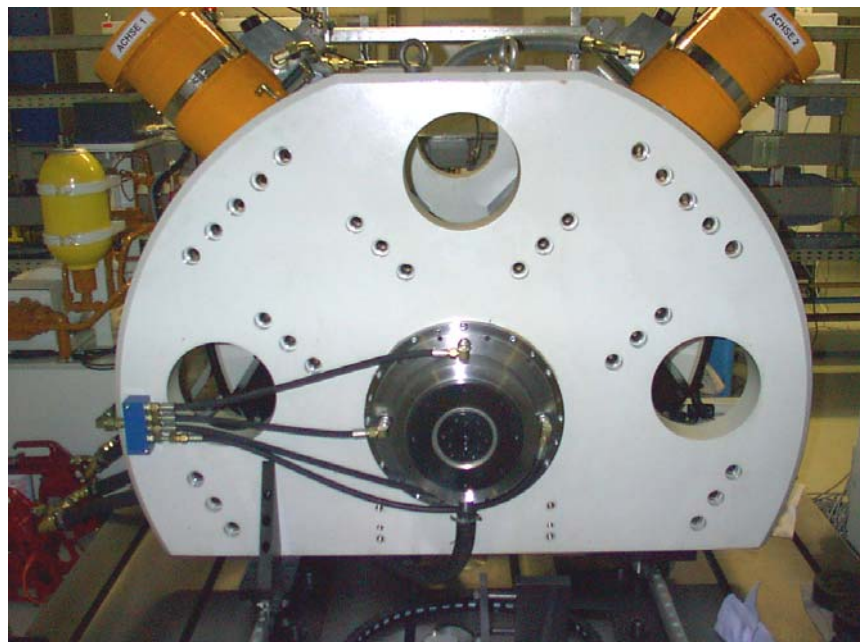
Max. High Pressure [bar]	500/1.500	3.000
Max. Test Frequency [Hz]	50	40
Nominal Load [kN]	100	400
Height [mm]	2,500	3,060
Width [mm]	1,200	1,700
Depth [mm]	1,050	1,480
Total Weight [kg]	2,300	9,500
Order Number	4010500	40103000

● Test System for slide bearings

- servo-hydraulic

Nominal Load static* [kN]	± 200
Nominal Load dynamic* [kN]	± 160
Max. Speed [rpm]	6,000
Max. Test bearing diameter [mm]	50
Height [mm]	1,800
Width [mm]	2,000
Depth [mm]	3,000
Total Weight [kg]	10,000
Order Number	15104

* further loads on request



Spring Test Systems

POWER SPRING

- resonance



Frequency Range [Hz]	5 - 20
Force per Spring [kN]	8
Number of samples	2 - 8
Max. dynamic Test Stroke [mm]	± 150
Height [mm]	2,700
Width [mm]	1,100
Depth [mm]	1,300
Total Weight [kg]	6,500
Order Number	1012000



Spring Test System

- resonance, based on POWER SWING MOT



Nominal Load [kN]	25	42
Max. Test Frequency [Hz]	45	45
Number of components	6 - 24	6 - 24
Force per Spring [kN]	4.1 - 1	7 - 1.75
Max. Stroke* [mm]	40	40
Max. Length of the Spring [mm]	80	80
Max. outer diameter [mm]	50	50
Height [mm]	2,900	3,100
Width [mm]	1,300	1,850
Depth [mm]	1,050	1,910
Total Weight [kg]	4,000	10,500
Order Number	1012002	1012003

* further strokes on request

Spring Test System with eccentric drive

Max. Force Amplitude [kN]	3.5
Max. Test Frequency [Hz]	30
Number of components	12
Max. Test Temperature [°C]	180
Max. Stroke [mm]	50
Height [mm]	2,900
Width [mm]	1,900
Depth [mm]	1,900
Total Weight [kg]	1,500
Order Number	15101



Test System for Dual Mass Flywheel Springs

- resonance



Nominal Load [Nm]	± 3,000
Frequency Range [Hz]	5 - 50
Angle	± 20°
Height [mm]	1,700
Width [mm]	3,200
Depth [mm]	1,000
Total Weight [kg]	3,000
Order Number	1012001

Test System for Stabiliser

- resonance

Max. Stroke* [mm]	200
Frequency Range [Hz]	5 - 20
Height [mm]	1,500
Width [mm]	2,000
Depth [mm]	1,000
Total Weight [kg]	1,800
Order Number	805000

* depends on stiffness of the component

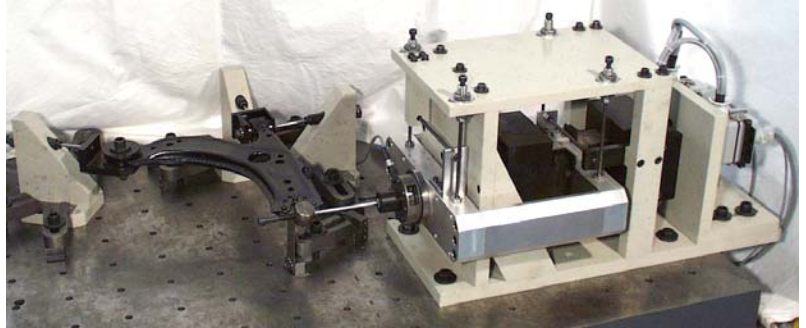


Test Systems for drive line and chassis components

Test System for Control Arms

- resonance

Nominal Load [kN]	± 25
Frequency Range [Hz]	30 - 200
Height [mm]	700
Width [mm]	2,500
Depth [mm]	1,000
Total Weight [kg]	1,500
Order Number	106000



Rear Axial Torsion Test System

- resonance



Max. Stroke* [mm]	150
Frequency Range [Hz]	5 - 20
Height [mm]	1,500
Width [mm]	2,000
Depth [mm]	1,000
Total Weight [kg]	1,800
Order Number	108000

* other strokes on request

Rear Axial Bending Test System

- resonance

Nominal Load [Nm]	± 2,000
Frequency Range [Hz]	5 - 50
Height [mm]	1,200
Width [mm]	2,000
Depth [mm]	1,000
Total Weight [kg]	1,800
Order Number	107000



Stabiliser Torsion Test System with Corrosion Chamber

Type of Stress	Torsion, alternating load
Frequency Range [Hz]	0,5 - 3
Nominal Load [kN]	50 (at 2 Hz)
Weight [kg]	approx. 3,000
Dimensions [W×H×D] [mm]	2,200 × 1,600 × 2,300
Controller	Adjustable eccentric drive, abort at break by force monitoring. Optional: Recording of the force signal and other parameters, e.g. conductivity of the water.
Order Number	15102



Drive Shaft Test System

- resonance



Max. dynamic Load [Nm]	± 2,000	± 3,000	± 6,000
Max. static Load [Nm]	± 2,000	± 6,000	± 6,000
Max. Test Frequency [Hz]	40	40	40
Height [mm]	1,300	1,300	1,300
Width [mm]	2,100	2,800	2,800
Depth [mm]	700	1,600	1,600
Total Weight [kg]	2,000	4,100	4,500
Order Number	1011330	101136030	101136060

Rotating Bending Test Systems

POWER ROTATING BENDING (for wheel bearings and hubs)

- resonance

Nominal Load [Nm]	5,000	10,000
Frequency Range [Hz]	10 - 60	10 - 60
Height [mm]	2,100	2,100
Width [mm]	1,680	1,680
Depth [mm]	1,680	1,680
Total Weight [kg]	4,600	4,600
Order Number	101005	1010010



Test System for wheelset axle's and truck wheel hubs

- resonance

Nominal Load [Nm]	80,000 - 250,000
Frequency Range [Hz]	5 - 80
Height [mm]	5,700
Width [mm]	4,500
Depth [mm]	4,500
Total Weight [t]	50 - 100
Order Number	10100xxx



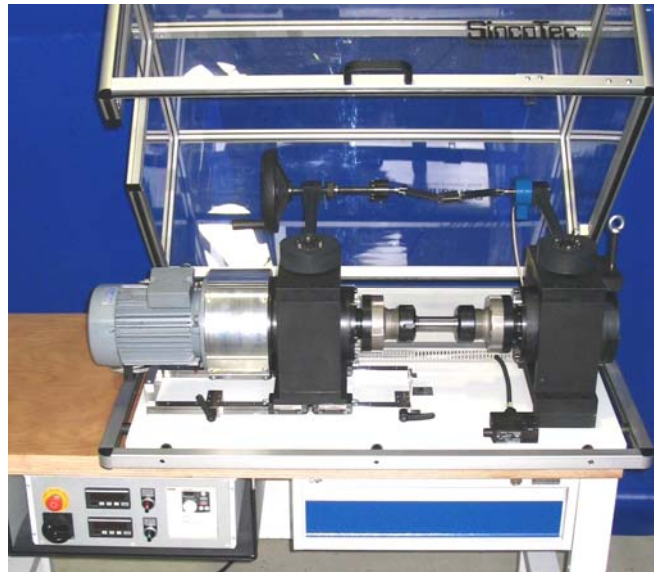
POWER ROTATING BENDING (variable, for components)



Nominal Load [Nm]	100 – 1,000
Frequency Range [Hz]	20 - 100
Height [mm]	3,000
Width [mm]	1,200
Depth [mm]	1,000
Total Weight [kg]	2,000
Special Features	- with Brake - variable reference plane of bending moment
Order Number	101001100

POWER ROTABEND

- 4-Point-bending Test System for components and samples



Nominal Load [Nm]	20 / 100 / 400
Max. Speed [min ⁻¹]	3,000 (6,000)
Total Weight [kg]	approx. 120 kg
W x H x D [mm]	750 x 340 x 600
Special Features	- Design with clamping devices for varying sizes - Design as tabletop unit - Revolution speed continuously adjustable and controllable over frequency converter - Switching off device through monitoring the force respectively bending moment - Design with double bearing over heavy cylindrical roller bearings and a massive table plate - Load cycle counting
Options	- corrosion chamber - furnaces up to 1,100°C - Counting of operating hours - table top
Order Number 20 / 100 / 400 Nm	16020 / 16100 / 16400

Test System for 3-Point-Bending

- loaded with mass



Nominal Load [Nm]	4,000
Frequency Range [Hz]	20
Height [mm]	1,450
Width [mm]	1,050
Depth [mm]	1,850
Total Weight [kg]	1,250
Order Number	1634000

Dynamic Wheel Hub Test System for simulated life time



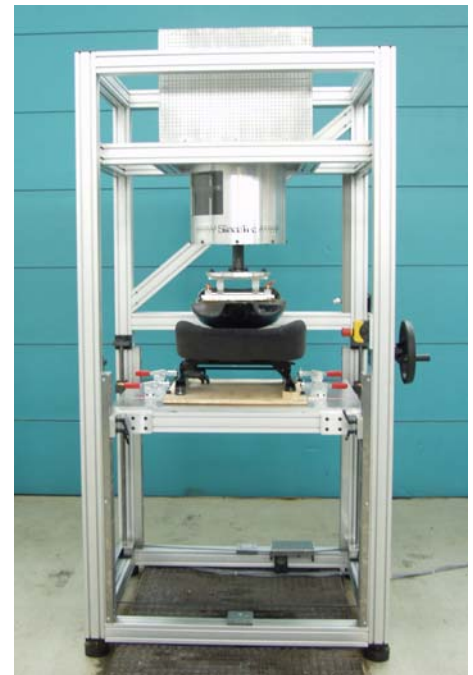
Max. Wheel Contact Force F_z [kN]	± 25
Max. Side Load F_v [kN]	± 25
Max. speed	2,000 min ⁻¹
Controlling	LabView-Software with Control System EXCITING AIR or EXCITING FLOW
Height [mm]	1,340
Width [mm]	3,255
Depth [mm]	3,895
Options	- corrosion chamber - temperature device - inductive brake disk heating device
Total Weight [kg]	approx. 2,700 (without span)
Order Number	153050

Test Systems for other automotive components

Seat Test System

- servo-pneumatic

Nominal Load [kN]	5
Frequency Range [Hz]	0 - 20
Height [mm]	2,338
Width [mm]	1,385
Depth [mm]	1,000
Control System	EXCITING AIR
Total Weight [kg]	455
Order Number	802008



Steering Test Systems

- servo-hydraulic



Max. Force amplitude* [kN]	± 15
Max. Displacement* [mm]	± 125
Max. Load* [Nm]	± 100
Height [mm]	2,500
Width [mm]	5,000
Depth [mm]	2,500
Total Weight [kg]	approx. 9,000
Order Number	303015

* further sizes on request



Clamping devices

The **Sincotec** pool of clamping devices contains more than 100 different clamping devices. Ask us for special quotation. Here some examples:



Material specimens



Bolts



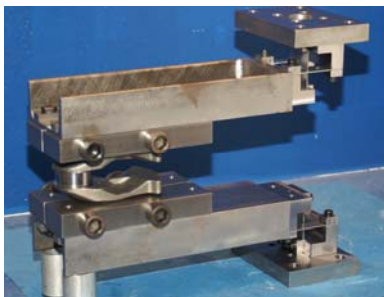
Connecting rods



Gear sets



Crankshaft Torsion



Crankshaft Bending



3-Point Bending



4-Point Bending



Knuckles



Reinforcing Steel Specimen



CT-Specimen



Pistons with Temperature

Other Products

Mobile Corrosion Unit SALT LAKE 190



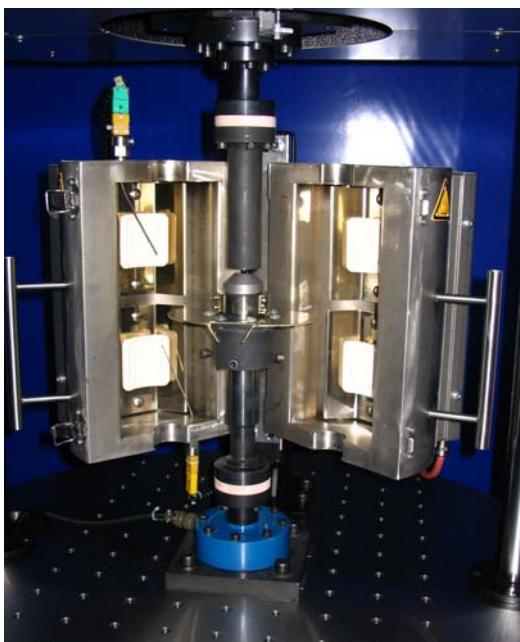
Description	For a close-to-reality fatigue strength test also environmental conditions are increasingly simulated. For chassis parts a corrosive medium is sprayed on the samples. In order to execute the test under reproducible conditions with corrosion influence, water with a defined, very low conductance is necessary for the supply of the corrosive medium.
Special Features	- use of demineralised water for reaching constant corrosion conditions - drying processes and sprinkling times are freely programmable - regulation of the salt concentration by measurement of the conductance - large mixing tanks (190 l) - use of high-quality pumps and components - several filters for high working reliability - coupling of the function with external devices possible - optional: Heating of the saltwater up to +40°C
Order Number	801002

Mobile Hotwind Generator

Max. Air Temperature [°C]	900
Max. Air Volume at 900 °C [dm³/min]	800
Stat. Pressure [Pa]	25,000
Two-Point Controller with free positionable control and measuring points for individual temperature controlling, incl. digital feedback and command display at the cabinet.	
Order Number	80900



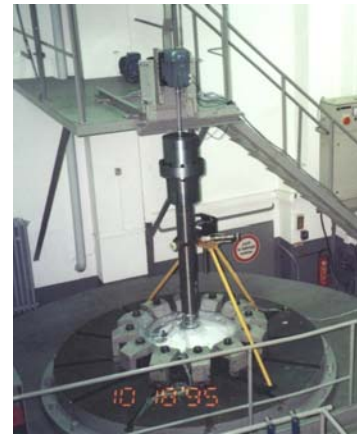
2-section Furnace HOT TUBE



Max, Air Temperature* [°C]	50 - 350
Heating capacity [kW]	1
Two Controller's independently adjustable	
Order Number	801002

* further temperatures on request

Modernization of Resonance Test Systems



Reliable Mechanics with Modern High-Tech Electronics

Sincotec GmbH modernizes resonance test machines. These are among other things:

Magnetic resonance test systems

- with and without mean load drive
- standard high frequency pulsating machines of different manufacturers
- crank-shaft test systems
- axle test systems
- custom-built test systems

Motoric-drive resonance test systems

- SCHENCK resonance test machines, all series, e.g. PVH and PVQ
- wheel test stands (rotating bending)
- crank-shaft test systems
- custom-built test systems

The modernization contains the replacement of the control unit against a **Sincotec** control unit of the type EXCITING MOT (unbalanced-mass-drive resonance test systems) or EXCITING MAG (electromagnetic resonance test systems).

EMOTION II - Control Software for Resonance Test Systems

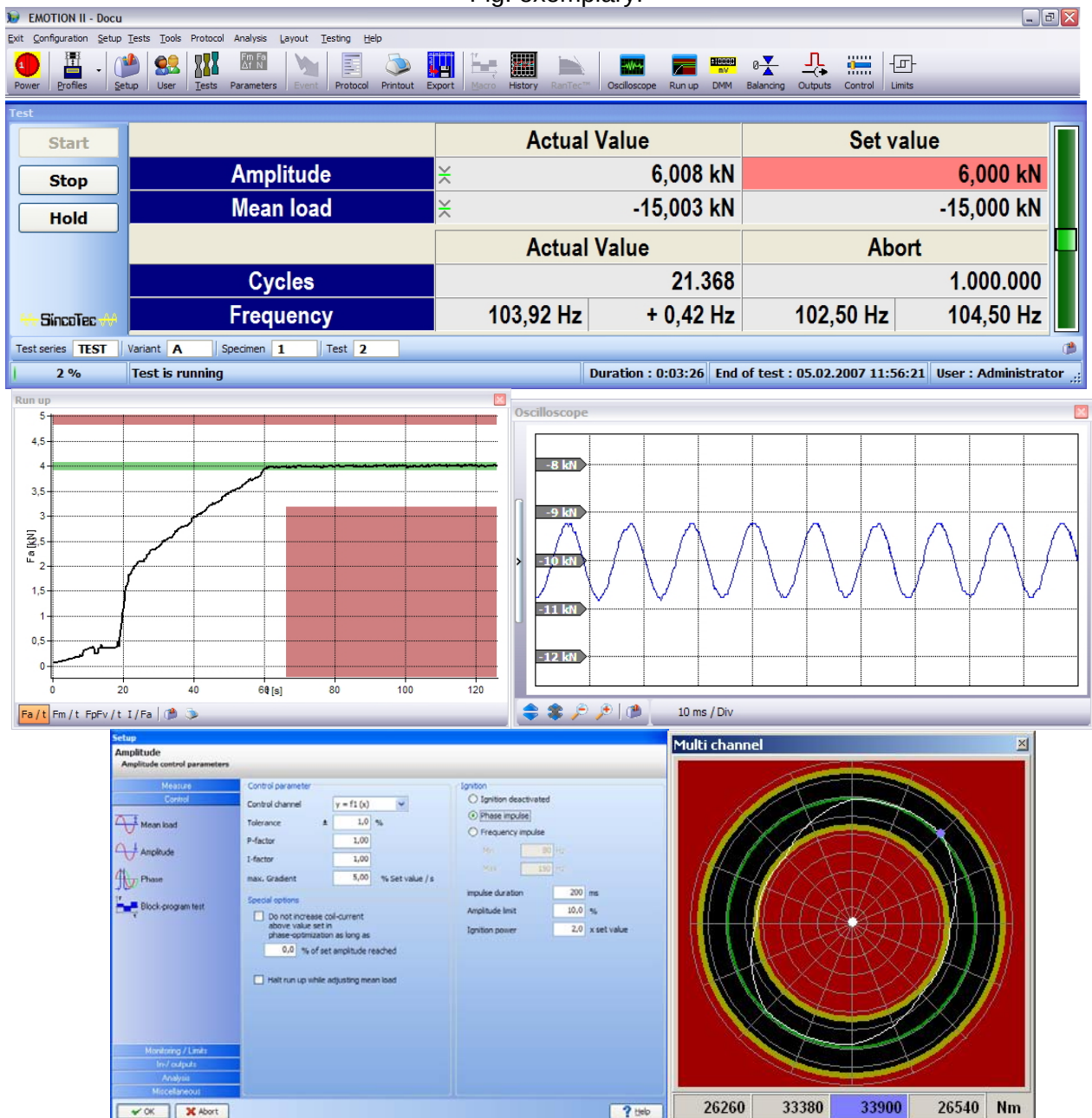
EMOTION II (Order Number: 7010100) is the user system for controlling resonance testing machines. It works in conjunction with WINDOWS XP. The standard-version offers all functions to operate a resonance testing-machine, e.g. measuring and controlling channels and two extern inputs for limit switches (dynamic and static). For advanced testing tasks further options are available, e.g.

the Graphic tool

This software package includes several additional functions to display the measured signal on the desktop. This package includes among other things:

- Usage of formulas to convert signals, e.g.: force into voltage, acceleration into displacement,...
- Oscilloscope function
- Display of signal runs
- Display of run-up
- Status of the digital in- and outputs signals
- Digital multimeter

Fig. exemplary:

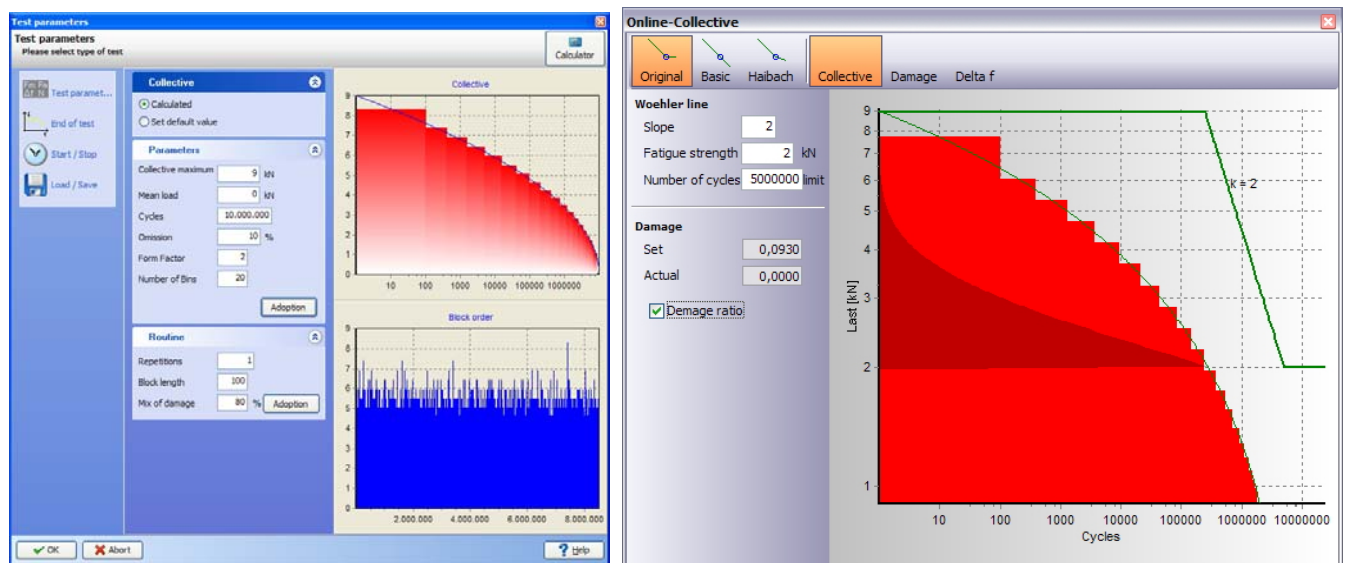


Available Options for EMOTION II Software

• RANTEC-Module, Service load test simulation (Order Number: 7010107)

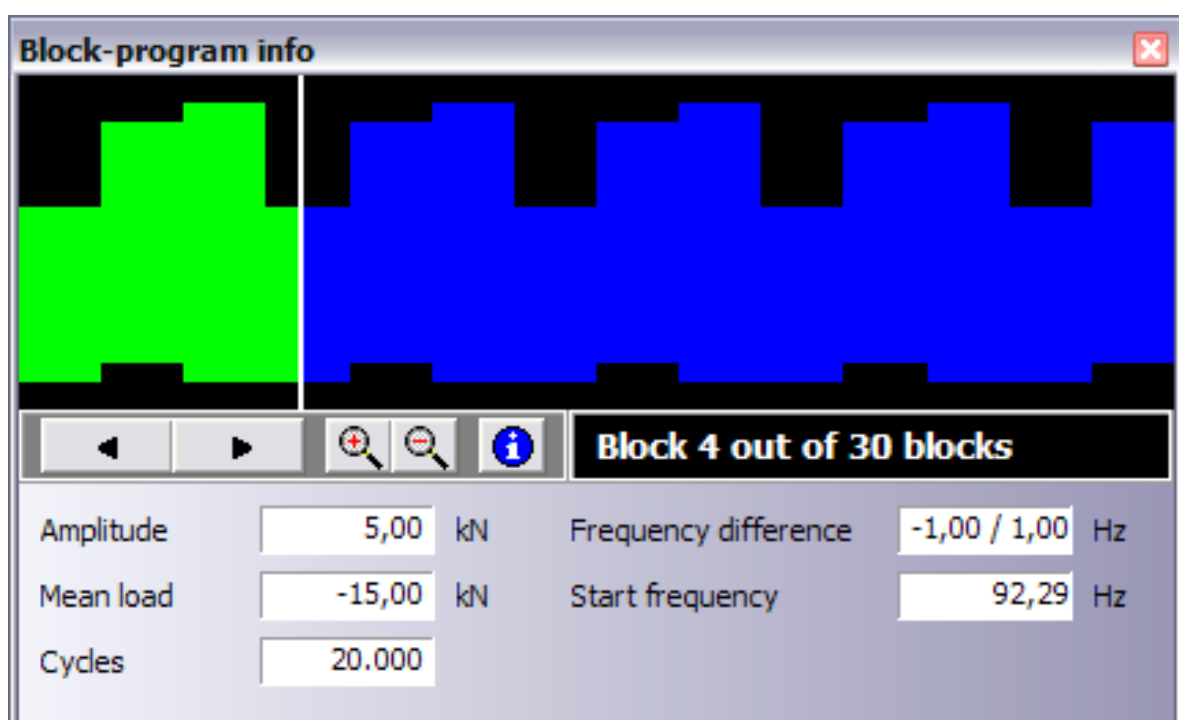
With this software module service load tests with different alternating amplitudes can be simulated. Therefore you need a load collective respectively a Rainflow matrix. The software reconstructs automatically a synthetic stress-time function which then starts and runs randomized. At the same time the actual values will be monitored and classified online.

Results of the latest research have testified that the life-times of road data tests and the reconstructed service load tests are identical. By using the RANTEC-Technology very complex and cost-intensive tests with servo hydraulic test machines can be replaced. The savings of the financial side is round about 100 times and the time saving is about 2 ... 6 times better.



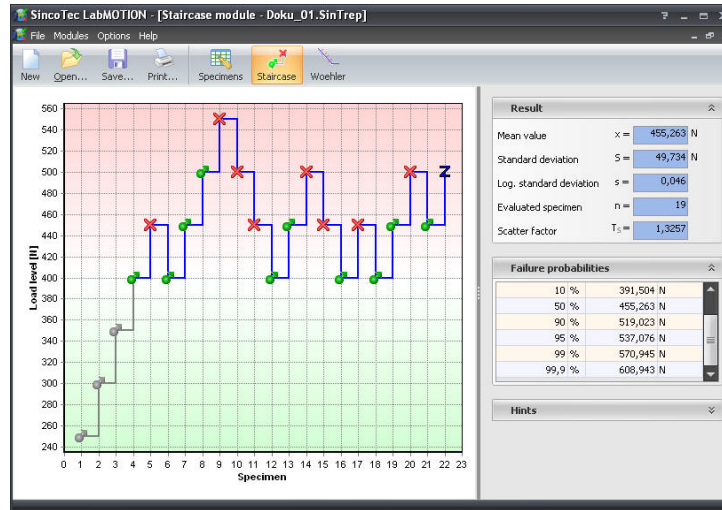
• Block Program (Order Number: 7010105)

Software module to build block program sequences. The module makes it possible to select the mean-load and amplitude block-by-block. Thus e.g. the well-known 8 steps block program tests or load increasing tests can be run automated. The number of load steps is unlimited.



• LabMOTION (Order Number: 7010122)

The evaluation of the staircase method test requires much time and so it is very helpful to use the evaluation software LabMOTION. This program is very comfortable to evaluate the tests results because of using the import function from EMOTION to LabMOTION. For the evaluation it is possible to display and to print the results. With the extensive export function you will be able to export the data in a PDF, WORD or EXCEL file. With the software tool LabMOTION it is possible to do the statistical evaluation of the fatigue tests using the staircase method or S/N curves. It calculates the mean value and the standard deviation of the fatigue limit as well as the fatigue limit for the free configurable failure probability. The calculated data will be illustrated on the display.



Sincotec LabMOTION - [Staircase module]

File Modules Options Help

New Open... Save... Print... Specimens Staircase Woehler

Parameter

Unit:

Load step:

☐ Logarithmic

Estimated standard dev. %

$T_s \text{ min} =$

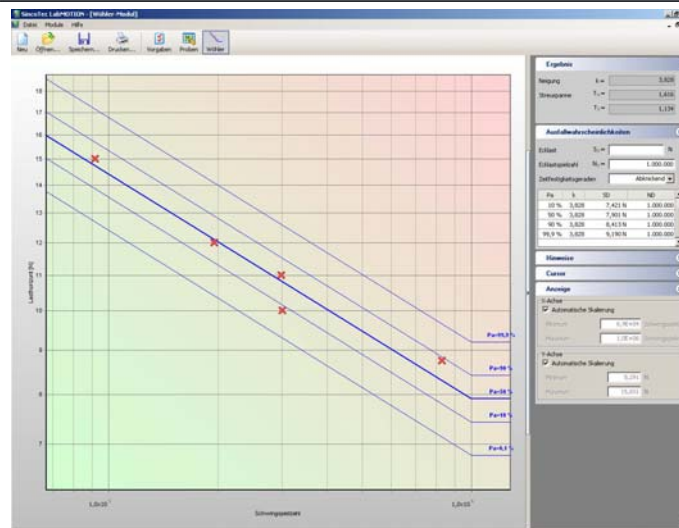
Project information

Failure probabilities

0,1 %
10 %
50 %
90 %
99,9 %

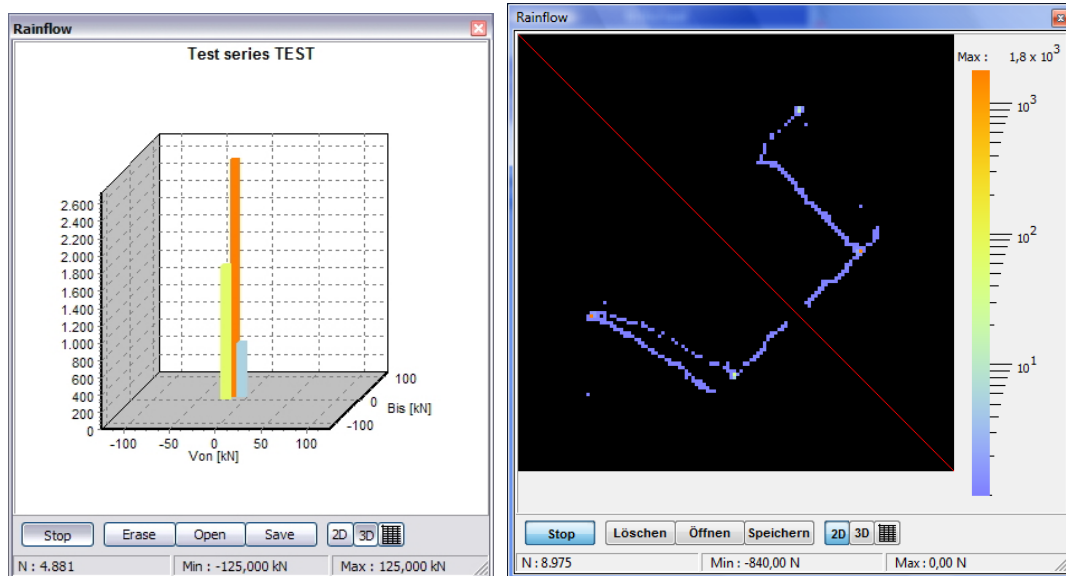
Specim	Test	Load [N]	Cycles	State	Use	Display	Comment
08	1122 S	23.4	2000000	Run-out	☒	☒	
04	1122 S	24.5	143000	Fracture	☒	☒	
10	1122 S	23.4	1798000	Fracture	☒	☒	
09	1122 S	22.3	2000000	Run-out	☒	☒	
19	1122 S	23.4	2000000	Run-out	☒	☒	
03	1122 S	24.5	2000000	Run-out	☒	☒	
07	1122 S	25.6	2000000	Run-out	☒	☒	
18	1122 S	26.7	58900	Fracture	☒	☒	
15	1122 S	25.6	733000	Fracture	☒	☒	
05	1122 S	24.5	564000	Fracture	☒	☒	
11	1122 S	23.4	2000000	Run-out	☒	☒	
06	1122 S	24.5	247000	Fracture	☒	☒	
02	1122 S	23.4	2000000	Run-out	☒	☒	
12	1122 S	24.5	298000	Fracture	☒	☒	
16	1122 S	23.4	2000000	Run-out	☒	☒	

Add Delete up down



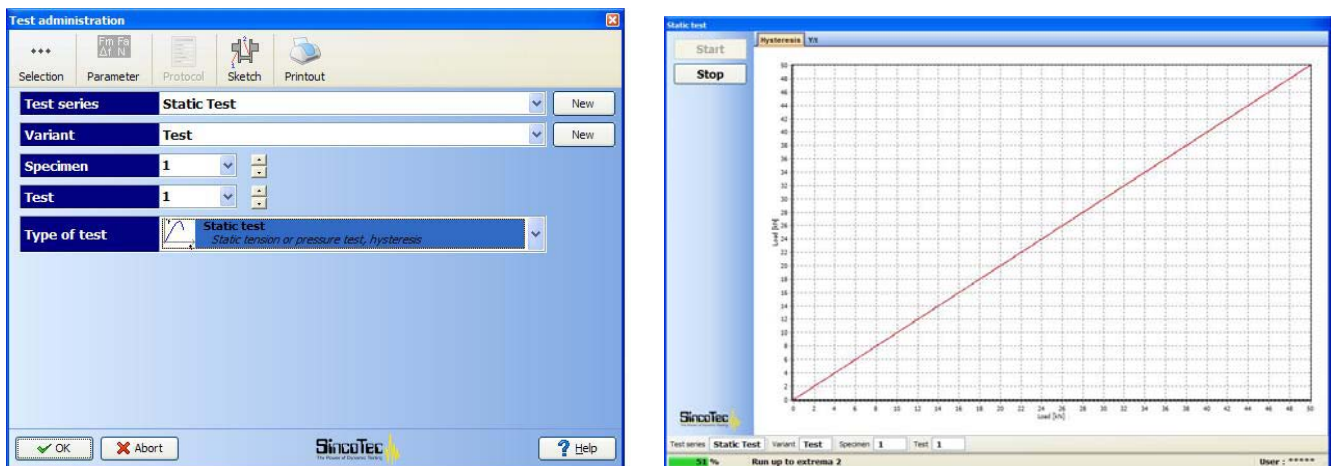
- **Rainflow online classing** (Order Number: 7010104)

Software module to classify the stress-time function according to the Rainflow method.



- **Software option “Static Tests”** (Order Number: 7010123)

For tension and compression tests with recording of force/displacement characteristics.



Further Software Option's:

- Network connection to available office-networks. (Order Number: 7010118)
- Automatically E-Mail or SMS to several addresses at the end of the test. (Order Number: 7010125)
- Profile Manager to manage multiple test rig configuration or load cells. (Order Number: 7010117)
- Expanded monitoring functions for limit value monitoring of several signals. (Order Number: 7010109)
- Configurable ASCII-Export. (Order Number: 7010112)

Sincotec

The Power of Dynamic Testing



Company philosophy

Innovative, qualified, reliable

Sincotec is a worldwide leading developer, supplier and operator of testing technology products. Our close cooperation with the research and development departments of the leading companies in the High-tech industry ensures that our products and services are application-orientated and ready for the future.

The company was originally founded by members of the Technical University Clausthal and is therefore characterized by the constant transformation of the latest developments in science and research into applied testing techniques.

Through the use of comprehensive and innovative testing technology, **Sincotec** is able to offer a solution for almost any test procedure. Test systems are available for complex loads, wear, pressure, temperature and corrosion.

Our customers develop innovative high-performance products. We develop the test procedures and testing systems for them, and recommend measures for optimisation and improvement.

Together we increase the

- **safety**
- **reliability and**
- **fatigue strength**

of the products,

Worldwide, **Sincotec** testing technology is used to test and optimize products. **Sincotec** is a reliable partner and a competent advisor.

Sincotec Bauteil-Prüftechnik GmbH

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E-Mail: info@sincotec.de

Homepage: <http://www.sincotec.de>

Inquiry form: **O Test System** **O Test Service** **O Modernization**

Customer: _____ Function / Sector: _____
Name: _____ Address: _____
Surname: _____
Phone: _____ E-Mail: _____

Test System:

Material or Component to be tested: _____
☐ Resonance Test System: _____
☐ Servohydraulic: _____
☐ Servo pneumatic: _____
☐ Internal pressure Test System: _____
☐ Miscellaneous: _____
Required forces: _____ Required Speed / Frequency: _____
Existing Infrastructure: Power supply: _____ System Pressure hydr. / pneum.: _____
Existing Footprint: _____ Clamping device necessary: ☐ yes ☐ no
Special Environmental conditions: ☐ no ☐ yes: _____
Miscellaneous: _____

Test Service:

Type of load: _____ Material or Component to be tested: _____
Size / mass of sample: _____
Special Environmental conditions: ☐ no ☐ yes: _____
Load cycles: _____ Number of samples: _____
Needed standards': _____
Miscellaneous: _____

Modernization:

Denotation of the Test Systems: _____
Exchange of mechanical components necessary: ☐ no ☐ yes
Miscellaneous: _____

Please forward your inquiry to us per Fax: **+49 53 23 / 82 0 81 or 96 92 125**