

# VIBSCANNER® smartSCANNER™

Machine diagnostics Data collection Field balancing Shaft alignment

# Catalog



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# Chapter 1 **VIBSCANNER**





## VIBSCANNER - Signal analyzer and FFT data collector

1

2





Vibration velocity / acceleration / displacement acc. to ISO 10816-3



**Bearing condition** 



Temperature



Rotational speed



**Pump cavitation** 



**Process parameters** 



Windows PC software



Location recognition



Intrinsic safety (option)

## Smart data collection with the joystick

VIBSCANNER (VIB 5.400) is a vibration analyzer and data collector for machine condition monitoring. With its comprehensive measurement and analysis functions and convenient joystick navigation, this handy instrument is ideal for daily measurement and inspection rounds.

Together with the OMNITREND PC software, VIBSCANNER provides an important contribution in avoiding unplanned machine standstills and expensive loss of production within the framework of a foresighted maintenance program.

#### What can the VIBSCANNER do?

VIBSCANNER measures the most important variables of machine conditions:

- Vibration velocity / displacement / acceleration (according to ISO 10816-3 and also for low-speed machines from 2 Hz\*)
- Shock pulse (bearing condition)
- Cavitation (e.g. in pumps)
- Temperature
- Rotational speed RPM.

Further process variables can be entered manually via user-defined tasks or recorded as extra-low voltages/currents (DC/AC).

#### **Balance, FFT & signal analysis (option)**

If required, the VIBSCANNER can also be upgraded to an FFT or signal analyzer or balancing instrument. Simply enter the password - and the appropriate measuring functions are activated in the firmware, e.g. Time waveform and spectrum analysis, phase measurements.

#### **Inspection data**

VIBSCANNER processes the input of events (e.g. "oil loss") and process parameters (e.g. pressure).

## One for all

Inputs and outputs for analog signals are provided on the top of the VIBSCANNER: An universal input for almost every type of transducer (current, voltage, CLD, ICP\*\*,...) also processes extra-low voltage and DC signals. A head-set or an analyzer can be connected to the analog output.

## Thresholds according to the ISO norm

After measurement, 3 LEDs on the display indicate whether the results lie in the valid, justifiable or invalid range.

#### **VIBCODE-compatible**

The patented VIBCODE transducer is the standard transducer for all PRUFTECHNIK measurement devices. VIBCODE recognizes coded measurement locations reliably and ensures reproducible results with its stable coupling.

## **Machine scan**

The collection of machine data is more than simplified with the new and patented user guidance: In the "Machine scanning" mode the measuring locations are graphically depicted in a machine image and sequentially scanned.

#### **Abbreviations**

PCS: Process control system CMS: Condition Monitoring System

CMS: Condition Monitoring System ICP: Integrated Circuit Piezoelectric (sensor w/ voltage output)

CLD: Current Line Drive (sensor w/ current output)

<sup>\*</sup> only with suitable external sensors

<sup>\*\*</sup> ICP-type transducers may not be operated with VIBSCANNER EX

VIB 5.400 EX

**PARAMETER** 

VIB 5.400

## **Technical data**

Interfaces	Analog meas. channel	Vibration transducer (CLD, ICP) Temperature probe (Pt100, NiCrNi) Transducer & instrument output: AC (± 30 V; 0 - 20 mA) DC (± 30 V; 0 - 20 mA)	Vibration transducer (CLD) Temperature probe (NiCrNi)		
Inte	Digital meas. channel	Laser trigger (VIB 6.631); 5V TTL (optical or inductive sensor)			
	Output	RS 232 (PC connection); Headset; Analog signal (4 V <sub>pp</sub> ; R <sub>out</sub> = 200 Ohm)			
	Vibration / Shock pulse	Tandem piezo accelerometer			
ors	Frequency range ±10%	10 Hz 10 kHz (in cone sinking)			
sensors	Resonance frequency	36 kHz (in cone sinking)			
Internal	Noise, from 10 Hz	0.1 mm/s effective; 2 μm effective (Instrument + Sensor); <	0.1 mm/s effective; 2 $\mu$ m effective (Instrument + Sensor); < 0 dB $_{sv}$ , peak value		
Inte	RPM	IR sensor with pointer for adjustment			
	Temperature	NiCrNi temperature probe			
g	Meas. quantities / Methods	r.m.s., 0-p, p-p, max/carpet, envelope, rectification			
processing	High pass filter	2 Hz / 10 Hz; 1 kHz / 5 kHz			
proc	Low pass filter	1/5/10/40 kHz	1/5/40 kHz (10 kHz as an option)		
Signal	Sampling frequency	up to 64 kHz (depends on the meas. range)			
S	Integrator	Two stages switchable			
	Vibration	The following applies to the internal sensor and external ser and to external measuring instruments (1mV/ms <sup>-2</sup> ):	nsors (CLD: 1µA/ms <sup>-2</sup> ; ICP: 100mV/g)		
	Acceleration	< 961 m/s² (p-p) / 1% (internal sensor) < 6000 m/s² (p-p) / 1% (external sensors)			
	Velocity	< 9000 mm/s (p-p) / 1%			
	Displacement	< 9000 μm (p-p) / 1%			
ıracy	Shock pulse	< 81 dB <sub>sv</sub> / ± 3 dB			
Accı	RPM	60 60000 min <sup>-1</sup> / 0.1‰			
nge /	Temperature Pt 100	-50 +600°C / 1°+ Sensor%	n/a		
Meas. range / Accuracy	NiCrNi (int.)	-50 +100°C / 0.5° + 3%			
Mea	NiCrNi (ext.)	-50 +100°C / 0.5° + Sensor% +100 +1000°C / 1° + Sensor%			
	Extra-low voltage (AC/DC)	-9 +9 V / 2% (R <sub>i</sub> = 30 kOhm, w/ cable VIB 5.440) -30 +30 V / 2% (R <sub>i</sub> = 100 kOhm, w/ cable VIB 5.433)	n/a		
	Extra-low current (AC/DC)	-20 +20 mA; 420 mA / 2% (R <sub>i</sub> = 100 kOhm, w/ cable VIB 5.433)	n/a		
	Fulfilled standards	Frequency response according to ISO 2954 – other parameters and measured variables according to DIN	45662 class 1		
ay	Туре	Graphic pixel display w/ background illumination			
Display	Dimensions	54 x 27 mm / 128 x 64 px			
	Contrast & Illumination	adjustable			
	Туре	NiMH battery pack (7.2 V / 1.5 Ah)	I		
) S	Charging duration	< 6 hours	< 10 hours		
Power supply	Operating duration	> 10 hours of intermittent use > 6 hours of continuous use with illumination			
owe	Charge display	2 LEDs (green, red)			
"	Charging temperature	+10°C +40°C			
	Sleep mode	adjustable			
	Operating elements	1 joystick & 2 function keys			
	Status display	4 LEDs for instrument status and signal evaluation			
	Data storage	512 MB	4 MB		
ers	Case material	ABS, reinforced with steel fibre			
parameters	Relative humidity	10 90%			
	Environmental protection	IP 65			
General	Operation temperature	0°C + 60°C	0°C + 45°C		
Ů	Storage temperature	-20°C + 80°C	0°C + 45°C		
	Weight	approx. 690 g			
	Intrinsic safety	n/a	(a) Il 2 G Ex ib IIC T4 U.S. equivalent NEC 505: Class I, Zone 1, AEx em ib IIC, T4		

## Dimensions





VIBSCANNER / smartSCANNER Chapter 1: VIBSCANNER

## **VIBSCANNER firmware structure**

## VIBSCANNER Standard

The functionality of the modular VIBSCANNER firmware can be expanded as required by a password. The basic firmware (VIB 5.480) can be upgraded with the following firmware modules:

- FFT analysis (VIB 5.485-FM)
- Balancing (VIB 5.486-FM)
- Signal analysis (VIB 5.488-FM)

## **VIBSCANNER Balancer**

In addition to the basic version, VIBSCANNER is available as a pure balancing instrument in one of the two Balancing packages (VIB 5.460-B1P or VIB 5.460-B2P respectively). The appropriate firmware, 'Balance limited' (VIB 5.489) has a limited functionality. In addition to the balancing function, it features the measurement tasks required for diagnosing an imbalance, such as spectra or characteristic overall values. An upgrade to the basic version is possible with the upgrade package VIB 5.480-UG at any time.

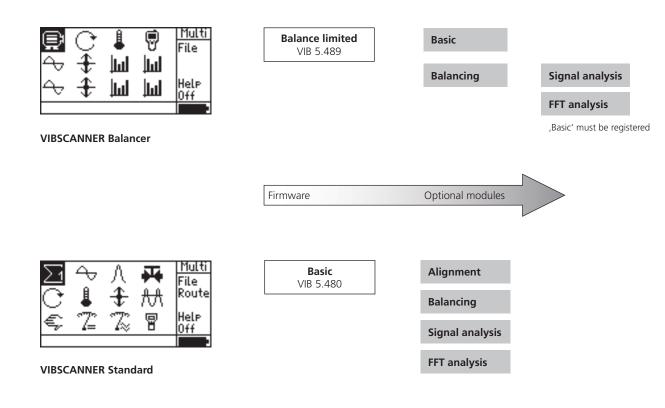
## ,Balance limited' firmware features:

- Balancing in one or two planes
- Overall vibration velocity (2/10Hz 1kHz)
- Overall vibration displacement (2/10Hz 1kHz)
- Evaluation according to ISO 10816-3
- Temperature / RPM with internal sensor only
- Balancing with external trigger only
- Multimode import in OMNITREND
- Spectra (2/10Hz 1kHz) with  $F_{max}$ : 400 Hz and 1600 lines,

F<sub>max.</sub>: 200 Hz and 800 lines

## Applies to all measurements:

- Measurement setups and transducers are permanently adjusted and cannot be edited.
- Balance reports can be printed out on a standard printer with a printer driver provided free of charge on the Condition Monitoring CD.



## **VIBSCANNER firmware features**

ВА	SIC	VIB 5.480
t	Meas. quantities	Velocity / displacement / acceleration as machine-specific measurement tasks Shock pulse (Bearing condition) Cavitation Temperature RPM
Measurement	Process parameters	Manual input of parameter values, Extra-low voltage / current (AC/DC: ±30 V; -20+20 mA) as user-defined measurement tasks
Meas	Averaging	Free-running, linear, exponential, peak hold, time synchronous (signal analysis module)
	Averaging number & time	Adjustable
	Meas. time	Adjustable
	Amplitude range	autorange
o & Evaluation	Meas. setups	Predefined, knowledge-based meas. settings for machine, bearing and gear diagnosis Freely selectable meas. functions
	Data processing	Evaluation functions for characteristic overall values Bearing diagnosis with shock pulse measurement Machine condition evaluation according to ISO standards (vibration according to ISO 10816-3) Data collection function for characteristic overall values and for machine inspection
Setup	Units	ISO and US units, selectable
	Comments	User-defined events with comments
Operation	User interface	Icons for measurement tasks; Graphic route guidance using machine graphics (machine scan) Integrated help function
Op	Languages	English, German, French, Italian, Spanish, Polish, Swedish

FFT	T ANALYSIS	VIB 5.485-FM
	Meas. quantities	Velocity / displacement / acceleration as machine-specific measurement tasks
_ ⊑	Signal processing	Amplitude and Envelope spectra
Spectrum	Frequency range	5 ranges: 0,1 / 0,2 / 0,4 / 1 / 5 / 10 kHz (10 kHz is an option for VIBSCANNER EX)
Sp	Number of lines	400 to 6400 lines
	Line width	> 0,03 Hz
	Display	Linear axis in the frequency range
ation	Zoom	X/ Y axis, continuously scalable
Evaluation	Envelope	For bearing, gear and machine diagnosis
	Meas. setups	Optimized setups for various machine types

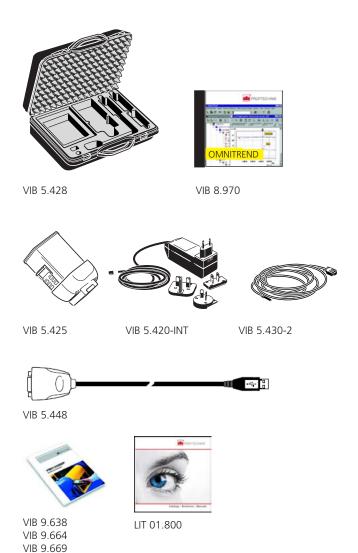
ВА	LANCING	VIB 5.486-FM
	Meas. quantities	Velocity / displacement / acceleration
lancing	Types of balancing	1-plane balancing Sequential 2-plane balancing
Bala	Types of correction	Free, fixed location, fixed weight, tape measure
	Operation	Graphical operator guidance with machine images and instructive text

SIG	INAL ANALYSIS	VIB 5.488-FM
rm	f <sub>max.</sub>	200/ 500/ 1000/ 2000/ 5000 Hz
avefc	Meas. time	[125 - 4000] [7.8 - 250] ms
Time waveform	Additional averaging	time synchronous
Ξ	Meas. types	Time waveform, Phase, Orbit (sequential)
	Start delay	adjustable
ding	Repetitions	adjustable (limited by memory capacity)
Recording	Pause	adjustable
	Meas. types	can be activated for overall values and spectra

## VIB 5.460 : VIBSCANNER Maintenance package

1

2





VIB 5.400



## **Description**

The 'Maintenance' package contains the basic components for data collection and machine diagnosis with VIB-SCANNER.

The Software CD (VIB 8.970) contains a demo version of the OMNITREND PC software as well as tools and firmware for VIBSCANNER. The Documentation CD (LIT 01.800) provides latest catalogs, brochures and service magazines in PDF format.

## Scope of supply

VIB 5.400 VIBSCANNER instrument (w/o battery)
VIB 5.420-INT Battery charger
VIB 5.425 Rechargeable battery
VIB 5.428 Case
VIB 5.430-2 PC cable, serial
VIB 5.448 Adapter cable, serial to USB
VIB 8.970 Condition Monitoring CD-ROM

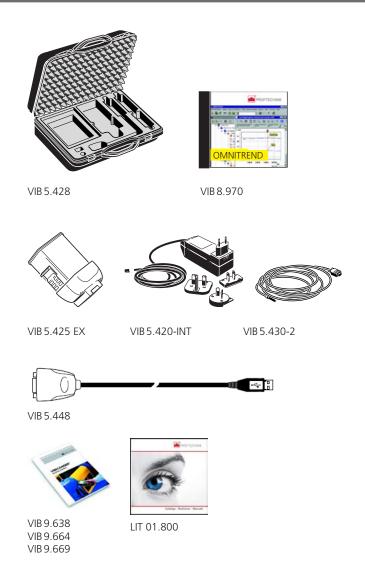
VIB 9.638.G VIBSCANNER operating instructions
VIB 9.664.G VIBSCANNER operating instructions 'Balancing, FFT & signal analysis'
VIB 9.669.G VIBSCANNER short instructions
LIT 01.800 CD ROM, Condition Monitoring catalogs, brochures, magazines

Not shown
VIB 5.480 VIBSCANNER basic firmware
VIB 5.480-L Basic firmware license
VIB 5.485-FM VIBSCANNER firmware FFT

## **Applies to the U.S. market:**

The VIB 5.460 LUD package includes U.S. versions of: VIB 5.420-INT Battery charger VIB 8.970 US Condition Monitoring CD-ROM, U.S.

## VIB 5.460 EX: Maintenance package with intrinsic safety





VIB 5.400 EX



## Description

The 'Maintenance' package contains the basic components for data collection and machine diagnosis with VIB-SCANNER EX.

The Software CD (VIB 8.970) contains a demo version of the OMNITREND PC software as well as tools and firmware for VIBSCANNER EX. The Documentation CD (LIT 01.800) provides latest catalogs, brochures and service magazines in PDF format.

## **Scope of supply**

VIB 5.400 EX VIBSCANNER EX instrument (w/o battery)

VIB 5.420-INT Battery charger

VIB 5.425 EX Rechargeable battery, EX version

VIB 5.428 Case

PC cable, serial VIB 5.430-2

VIB 5.448 Adapter cable, serial to USB VIB 8.970 Condition Monitoring CD-ROM VIBSCANNER operating instructions VIB 9.638.G VIB 9.664.G VIBSCANNER operating instructions 'Bal-

ancing, FFT & signal analysis'

VIB 9.669.G VIBSCANNER short instructions

LIT 01.800 CD ROM, Condition Monitoring catalogs,

brochures, magazines

Not shown

VIBSCANNER basic firmware VIB 5.480 VIB 5.480-L Basic firmware license

VIB 5.485-FM VIBSCANNER firmware FFT

## Applies to the U.S. market:

The VIB 5.460 XLUD package includes U.S. versions of:

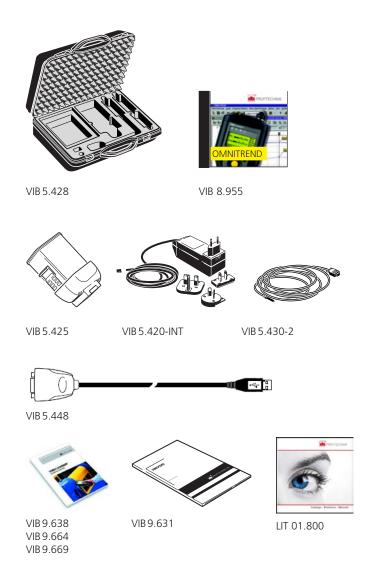
VIB 5.420-INT Battery charger

VIB 8.970 US Condition Monitoring CD-ROM, U.S.

## VIB 5.464: VIBSCANNER Trending package

1

2





VIB 5.400



## **Description**

The 'Trending' package contains the full version of the OMNITREND PC software. This enables measurement data to be transferred to a PC and archived there for evaluation.

## Note

A basic licence for PC communication (VIB 5.480-P) is contained in OMNITREND. Each additional VIBSCANNER instrument requires another licence.

#### Scope of supply

VIB 5.400 VIBSCANNER instrument (w/o battery)
VIB 5.420-INT Battery charger
VIB 5.425 Rechargeable battery
VIB 5.428 Case
VIB 5.430-2 PC cable, serial
VIB 5.448 Adapter cable, serial to USB

OMNITREND for VIBSCANNER

VIB 9.631 G OMNITREND, Getting started
VIB 9.638 G VIBSCANNER instructions
VIB 9.664.G VIBSCANNER operating instructions 'Balancing, FFT & signal analysis'
VIB 9.669 G VIBSCANNER short instructions
LIT 01.800 CD ROM, Condition Monitoring catalogs, brochures, magazines

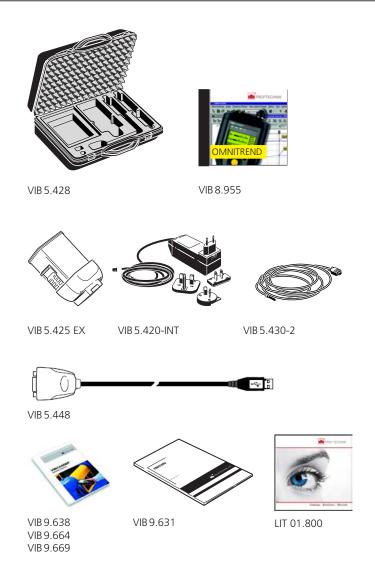
Not shown
VIB 5.480
VIBSCANNER basic firmware
VIB 5.480-L
VIB 5.480-P
VIB 5.485-FM
VIBSCANNER firmware FFT

## **Applies to the U.S. market:**

The VIB 5.464 LUD package includes U.S. versions of: VIB 5.420-INT Battery charger VIB 8.955 US OMNITREND for VIBSCANNER, U.S.

VIB 8.955

## VIB 5.464 EX: VIBSCANNER Trending package with intrinsic safety







## **Description**

The 'Trending' package contains the full version of the OMNITREND PC software. This enables measurement data to be transferred to a PC and archived there for evaluation.

## Note

A basic licence for PC communication (VIB 5.480-P) is contained in OMNITREND. Each additional VIBSCANNER instrument requires another licence.

#### Scope of supply

VIB 5.400 EX VIBSCANNER EX instrument (w/o battery)

VIB 5.420-INT Battery charger

VIB 5.425 EX Rechargeable battery, EX version

VIB 5.428 Case

VIB 5.430-2 PC cable, serial

VIB 5.448 Adapter cable, serial to USB
VIB 8.955 OMNITREND for VIBSCANNER

VIB 9.631 G OMNITREND, Getting started VIB 9.638.G VIBSCANNER instructions

VIB 9.664.G VIBSCANNER operating instructions 'Bal-

ancing, FFT & signal analysis'

VIB 9.669.G VIBSCANNER short instructions

LIT 01.800 CD ROM, Condition Monitoring catalogs,

brochures, magazines

Not shown

VIB 5.480 VIBSCANNER basic firmware

VIB 5.480-L Basic firmware license

VIB 5.480-P PC license

VIB 5.485-FM VIBSCANNER firmware FFT

## Applies to the U.S. market:

The VIB 5.464 XLUD package includes U.S. versions of:

VIB 5.420-INT Battery charger

VIB 8.955 US OMNITREND for VIBSCANNER, U.S.

## 1

## 22



**VIB 5.466 : VIBSCANNER VIBCODE package** 

VIB 5.428

VIB 8.660 VS

VIB 8.955



VIB 5.425

VIB 5.420-INT

VIB 5.430-2



VIB 5.448



VIB 9.638 VIB 9.664 VIB 9.669

VIB 9.834



VIB 9.631



LIT 01.800



VIB 5.400



#### **Description**

The VIBCODE package allows quick and reliable data collection with the VIBCODE transducer system and a comprehensive evaluation and archiving with the OMNITREND PC software. The VIBCODE transducer recognizes measurement locations uniquely from their coding. Its bayonet socket ensures a reproducible coupling for the reliable and accurate replication of measurement results.

#### Note

A basic licence for PC communication (VIB 5.480-P) is contained in OMNITREND. Each additional VIBSCANNER instrument requires another licence.

## Scope of supply

VIB 5.400 VIBSCANNER instrument (w/o battery)

VIB 5.420-INT Battery charger
VIB 5.425 Rechargeable battery

VIB 5.428 Case

VIB 5.430-2 PC cable, serial

VIB 5.448 Adapter cable, serial to USB VIB 8.660 VS VIBCODE transducer incl. cable

VIB 8.955	OMNITREND for VIBSCANNER
VIB 9.631.G	OMNITREND, Getting started
VIB 9.638.G	VIBSCANNER operating instructions

VIB 9.664.G VIBSCANNER operating instructions 'Balanaira, FFT 8 signal analysis'

ancing, FFT & signal analysis'
VIB 9.669.G VIBSCANNER short instructions

VIB 9.834.G VIBCODE operating instructions
LIT 01.800 CD ROM, Condition Monitoring catalogs,

brochures, magazines

Not shown

VIB 5.480 VIBSCANNER basic firmware VIB 5.480-L Basic firmware license

VIB 5.480-P PC license

VIB 5.485-FM VIBSCANNER firmware FFT

## **Applies to the U.S. market:**

The VIB 5.466 LUD package includes U.S. versions of:

VIB 5.420-INT Battery charger

VIB 8.955 US OMNITREND for VIBSCANNER, U.S.

## VIB 5.466 EX: VIBSCANNER VIBCODE package with intrinsic safety



#### **Description**

The VIBCODE package allows quick and reliable data collection in hazardous areas with the VIBCODE transducer system and a comprehensive evaluation and archiving with the OMNITREND PC software. The VIBCODE transducer recognizes measurement locations uniquely from their coding. Its bayonet socket ensures a reproducible coupling for the reliable and accurate replication of measurement results.

#### Note

A basic licence for PC communication (VIB 5.480-P) is contained in OMNITREND. Each additional VIBSCANNER instrument requires another licence.

## Scope of supply

VIB 5.400 EX VIBSCANNER EX instrument (w/o battery)

VIB 5.420-INT Battery charger

VIB 5.425 Rechargeable battery

VIB 5.428 Case

VIB 5.430-2 PC cable, serial

VIB 5.448 Adapter cable, serial to USB VIB 8.660 XVS VIBCODE EX transducer incl. cable

VIB 8.955 OMNITREND for VIBSCANNER
VIB 9.631.G OMNITREND, Getting started
VIB 9.638.G VIBSCANNER operating instructions
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VIB 9.669.G VIBSCANNER short instructions
VIB 9.834.G VIBCODE operating instructions
LIT 01.800 CD ROM, Condition Monitoring catalogs,

brochures, magazines

Not shown

VIB 5.480 VIBSCANNER basic firmware

VIB 5.480-L Basic firmware license

VIB 5.480-P PC license

VIB 5.485-FM VIBSCANNER firmware FFT

#### **Applies to the U.S. market:**

The VIB 5.466 XLUD package includes U.S. versions of:

VIB 5.420-INT Battery charger

VIB 8.955 US OMNITREND for VIBSCANNER, U.S.

## VIB 5.465 : Additional VIBCODE package for VIBSCANNER













LIT 01.800



VIB 5.400



## **Description**

VIB 9.664 VIB 9.669 VIB 9.834

This additional VIBCODE package includes all components of the VIBCODE package (VIB 5.466) except the OMNITREND full version.

## Scope of supply

VIB 5.400	VIBSCANNER instrument (w/o battery)
VIB 5.420-INT	Battery charger
VIB 5.425	Rechargeable battery
VIB 5.428	Case
VIB 5.430-2	PC cable, serial
VIB 5.448	Adapter cable, serial to USB
VIB 8.660 VS	VIBCODE transducer incl. cable
VIB 8.970	Condition Monitoring CD-ROM
VIB 9.631.G	OMNITREND, Getting started
VIB 9.638.G	VIBSCANNER operating instructions
VIB 9.664.G	VIBSCANNER operating instructions 'Bal-
	ancing, FFT & signal analysis'

VIB 9.669.G	VIBSCANNER short instructions
VIB 9.834.G	VIBCODE operating instructions
LIT 01.800	CD ROM, Condition Monitoring catalogs
	brochures, magazines

Not shown	
VIB 5.480	VIBSCANNER basic firmware
VIB 5.480-L	Basic firmware license
VIB 5.480-P	PC license
VIB 5.485-FM	VIBSCANNER firmware FFT

## **Applies to the U.S. market:**

The VIB 5.465 LUD package includes U.S. versions of: VIB 5.420-INT Battery charger VIB 8.970 US Condition Monitoring CD-ROM, U.S.

## VIB 5.465 EX: Additional VIBCODE package for VIBSCANNER with intrinsic safety







VIB 5.425 EX

VIB 5.420-INT

VIB 5.430-2



VIB 5.448



VIB 9.664

VIB 9.631

LIT 01.800



VIB 5.400 EX





## **Description**

VIB 9.669 VIB 9.834

This additional VIBCODE package includes all components of the VIBCODE package with intrinsic safety (VIB 5.466 EX) except the OMNITREND full version.

## Scope of supply

VIB 5.400 EX VIBSCANNER EX instrument (w/o battery) VIB 5.420-INT Battery charger Rechargeable battery VIB 5.425

VIB 5.428 Case

VIB 5.430-2 PC cable, serial Adapter cable, serial to USB VIB 5.448 VIB 8.660 XVS VIBCODE EX transducer incl. cable Condition Monitoring CD-ROM VIB 8.970 OMNITREND, Getting started VIB 9.631.G VIBSCANNER operating instructions VIB 9.638.G VIB 9.664.G VIBSCANNER operating instructions 'Bal-

ancing, FFT & signal analysis'

VIB 9.669.G VIBSCANNER short instructions VIB 9.834.G VIBCODE operating instructions

LIT 01.800 CD ROM, Condition Monitoring catalogs,

brochures, magazines

Not shown

VIBSCANNER basic firmware VIB 5.480 Basic firmware license VIB 5.480-L

VIB 5.480-P PC license

VIB 5.485-FM VIBSCANNER firmware FFT

#### **Applies to the U.S. market:**

The VIB 5.465 XLUD package includes U.S. versions of:

VIB 5.420-INT Battery charger

VIB 8.970 US Condition Monitoring CD-ROM, U.S.

www.pruftechnik.com - 12.2013

## VIB 5.460-B1P: VIBSCANNER balancing package with one measuring channel

1

2



## **Description**

This package is used for 1-plane balancing and includes the required equipment for one measuring channel. VIB-SCANNER, featuring the firmware 'Balance limited' (VIB 5.489), can be upgraded to the basic firmware as shown on page 8.

## Scope of supply

Scope of sup	оріу
VIB 3.306	Reflective tape, 10 mm
VIB 3.420	Magnetic holder for curved mounting
	surfaces
VIB 5.400	VIBSCANNER instrument (w/o battery)
VIB 5.420-INT	Battery charger
VIB 5.425	Rechargeable battery
VIB 5.429	Accessory case
VIB 5.430-2	PC cable, serial
VIB 5.432-2,9	Trigger cable, 2.9 m
VIB 5.437-2,9	Cable for Current line-drive transducer,
	2.9 m

VIB 6.147	Accelerometer for low-speed machines
VIB 6.631	Laser Trigger Sensor
VIB 6.632	Trigger stand
VIB 8.970	Condition Monitoring CD
VIB 9.638.G	Operating instructions
VIB 9.664.G	Operating instructions 'Balancing, FFT &
	signal analysis'
VIB 9.669.G	Short instructions
LIT 01.800	CD ROM, Condition Monitoring catalogs,
	brochures, magazines
NI I	
	VIBSCANNER firmware FFT
VIB 5.486-B	Password certificate 'Balancing'
	VIB 6.631 VIB 6.632 VIB 8.970 VIB 9.638.G VIB 9.664.G VIB 9.669.G LIT 01.800

Firmware 'Balance limited'

Adapter cable, serial to USB

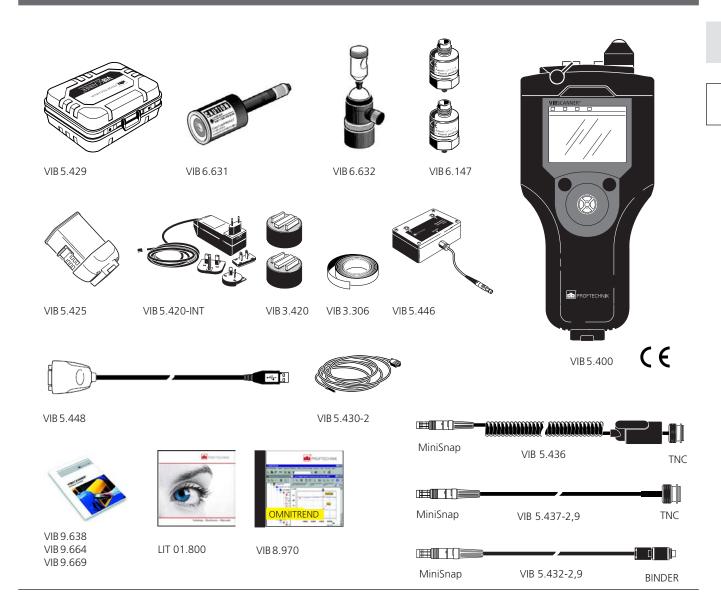
## Accessory

VIB 5.489

VIB 5.448

VIB 5.480-UG Firmware upgrade to ,Basic'

## VIB 5.460-B2P: VIBSCANNER balancing package with two measuring channels



## **Description**

This package is used for 1- and 2-plane balancing and includes the required equipment for two measuring channels. VIBSCANNER, featuring the firmware 'Balance limited' (VIB 5.489), can be upgraded to the basic firmware as shown on page 8.

## Scope of supply

scope or sup	phia
VIB 3.306	Reflective tape, 10 mm
VIB 3.420	Magnetic holder for curved mounting
	surfaces, 2x
VIB 5.400	VIBSCANNER instrument (w/o battery)
VIB 5.420-INT	Battery charger
VIB 5.425	Rechargeable battery
VIB 5.429	Accessory case
VIB 5.430-2	PC cable, serial
VIB 5.432-2,9	Trigger cable, 2.9 m
VIB 5.436	Spiral cable for Current line-drive trans-
	ducers
VIB 5.446	Automatic switch for 2-plane balancing
VIB 5.437-2,9	Cable for Current line-drive transducer,

2.9 m

VIB 5.448

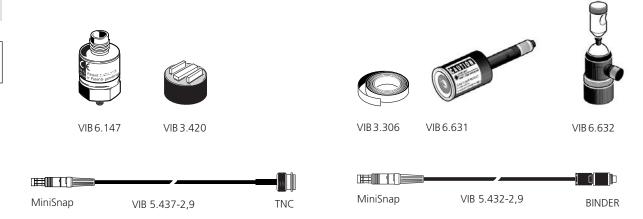
VIB 6.147	Accelerometer for low-speed mach., 2x
VIB 6.631	Laser Trigger Sensor
VIB 6.632	Trigger stand
VIB 8.970	Condition Monitoring CD
VIB 9.638.G	Operating instructions
VIB 9.664.G	Operating instructions 'Balancing, FFT & signal analysis'
VIB 9.669.G	Short instructions
LIT 01.800	CD ROM, Condition Monitoring catalogs, brochures, magazines
Not shown VIB 5.485-FM VIB 5.486-B VIB 5.489	VIBSCANNER firmware FFT Password certificate 'Balancing' Firmware 'Balance limited'
Accessory	
VIB 5.480-UG	Firmware upgrade to ,Basic'

Adapter cable, serial to USB

## VIB 5.486-HW: VIBSCANNER transducer set for 1-plane balancing

1

2



## **Description**

This transducer set includes the required measurement equipment for balancing with VIBSCANNER in one plane.

## Scope of supply

VIB 3.306 Reflective tape, 10 mm

VIB 3.420 Magnetic holder for curved mounting

surfaces

**V**IB 5.432-2,9 Trigger cable, 2.9 m

VIB 5.437-2,9 Cable for Current line-drive transducer,

2.9 m

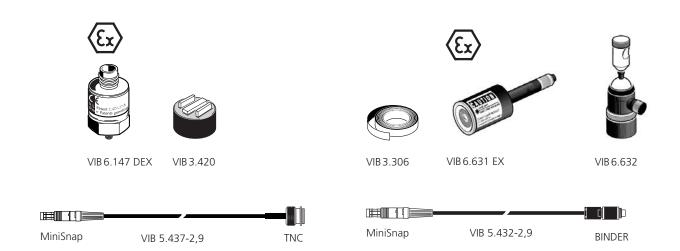
VIB 6.147 Accelerometer for low-speed machines

VIB 6.631 Laser Trigger Sensor VIB 6.632 Trigger stand

#### Note

The balancing firmware module VIB 5.486-FM is not included in the transducer set.

## VIB 5.486-XHW: VIBSCANNER transducer set for 1-plane balancing with intrinsic safety



## **Description**

This transducer set includes the required measurement equipment for balancing with VIBSCANNER in one plane in hazardous areas.

## **Scope of supply**

VIB 3.306 Reflective tape, 10 mm

VIB 3.420 Magnetic holder for curved mounting

surfaces

**V**IB 5.432-2,9 Trigger cable, 2.9 m

VIB 5.437-2,9 Cable for Current line-drive transducer,

2.9 m

VIB 6.147 DEX Accelerometer for low-speed machines,

intrinsically safe

VIB 6.631 EX Laser Trigger Sensor, intrinsically safe

VIB 6.632 Trigger stand

#### Note

The balancing firmware module VIB 5.486-FM is not included in the transducer set.

VIBSCANNER / smartSCANNER

Chapter 1: VIBSCANNER

## VIB 5.487-HW: VIBSCANNER transducer set for 2-plane balancing

1





## **Description**

This transducer set includes the required measurement equipment for balancing with VIBSCANNER in two planes.

## Scope of supply

VIB 3.306 Reflective tape, 10 mm

VIB 3.420 Magnetic holder for curved mounting

surfaces, 2x

**V**IB 5.432-2,9 Trigger cable, 2.9 m

VIB 5.436 Spiral cable for Current line-drive trans-

ducers

VIB 5.437-2,9 Cable for Current line-drive transducer,

2.9 m

VIB 5.446 Automatic switch for 2-plane balancing VIB 6.147 Accelerometer for low-speed machines,2x

VIB 6.631 Laser Trigger Sensor VIB 6.632 Trigger stand

#### **Note**

The balancing firmware module VIB 5.486-FM is not included in the transducer set.

## **VIB 6.142 RSET: Transducer set for vibration measurements**







VIB 6.142 R

VIB 3.420

VIB 5.436

## **Description**

This transducer set includes the required measurement equipment for vibrations measurements with an external accelerometer.

## **Scope of supply**

VIB 3.420 Magnetic holder for curved mounting

surfaces

Spiral cable for Current line-drive trans-VIB 5.436

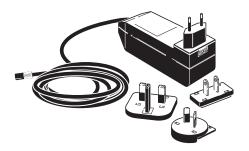
ducers

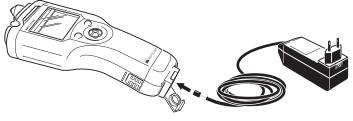
VIB 6.142 R Accelerometer for standard machines

## **VIB 5.420-INT: VIBSCANNER battery charger**

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VIB 5.420-INT



## **Description**

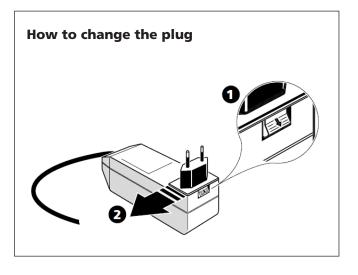
The VIBSCANNER battery (VIB 5.425 / VIB 5.425 EX) is recharged with the charger VIB 5.420-INT when the VIB-SCANNER instrument is switched off.

The VIBSCANNER battery charger VIB 5.320-INT has several interchangeable AC plugs for the most international plug types.

After charging, the charger switches automatically to trickle-mode in order to protect the rechargeable battery.

## **ATTENTION!**

Rechargeable batteries must not be charged in hazardous areas!

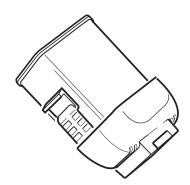


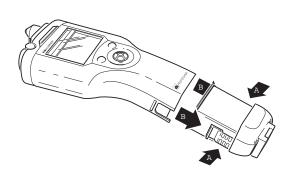
PARAMETER		VIB 5.420-INT
	Primary voltage	100 - 240 VAC; 50 - 60 Hz; 620 mA
Electrical	Secondary voltage	12.1 VDC / 250 mA
Elec	Charging duration	< 5 hours, depends on battery charge condition
	Environmental protection	IP 20
_	Temperature range, operation	-5°C +40°C
General	Temperature range, storage	-30°C+80°C
0	Dimensions (WxHxL)	42 x 42 x 105 mm
	Cable length	approx. 1.5 m

## **VIBSCANNER** rechargeable battery

VIB 5.425 : Rechargeable battery for VIBSCANNER

VIB 5.425 EX: Rechargeable battery for VIBSCANNER EX





## Description

The VIBSCANNER rechargeable battery is built into the handle of the instrument. The practical spring catch enables the battery to be easily removed and re-inserted again in a single action.

The battery is recharged using the VIBSCANNER charger VIB 5.420. 'Charge level' and 'Battery status' are indicated by two LEDs on the battery.

## **ATTENTION!**

Rechargeable batteries must not be charged in hazardous areas!

PARAMETER		VIB 5.425	VIB 5.425 EX	
	Туре	NiMH		
	Nominal voltage	7,2 V		
rical	Nominal capacity	1,5 Ah		
Electrical	Operating duration	> 10 hours in intermittent operation > 6 hours in continuous operation with illumi- nation		
	Charging duration	< 6 hours	< 10 hours	
	Charging temp.	+10°C +40°C		
General	Status display	2 LEDs (red/ green) for charging and batt. status		
Gen	Weight	approx. 260 g		
	Dimensions	approx. 9 x 6.5 x 4 cm		

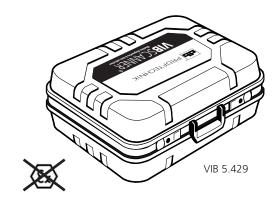
## **VIBSCANNER** cases

VIB 5.428: Standard case for VIBSCANNER

VIB 5.429 : Accessory case for VIBSCANNER

2





## **Description**

The handy size, compact standard case VIB 5.428 is included with the Standard packages. It is durable and protects the measuring equipment in a harsh industrial environment.

The lockable accessory cases VIB 5.429 is included with the Balancing packages. Its sturdy shells (ABS) and shockabsorbing foam inserts provide protection for of all major components and all accessories for balancing. The case is drop tested up to 2 meters.

## **ATTENTION!**

The cases are not allowed in hazardous areas!

PARAMETER		VIB 5.428	VIB 5.429
	Material	Polypropylene (PP)	ABS plastic
General	Dimensions (W x D x H)	390 x 340 x 90 mm	470 x 400 x 195 mm
	Empty weight	1 kg	3 kg

## VIB 5.454 : VIBSCANNER pouch





## Description

This practical and robust leather pouch lets you carry the VIBSCANNER data collector safely and comfortably on your daily inspection rounds. The pouch has an adjustable belt that is attached by snap hooks and has a side pocket for the VIBCODE transducers.

## VIB 6.670 : Headphones

2





## Description

The headphones can be used to listen to the machines and, in particular, roller bearings for the characteristic noises that indicate damage. The buffered transducer signal is picked up with the headphones at the analog output (yellow socket).

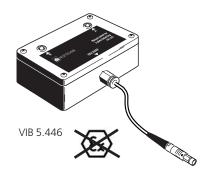
PARAMETER		VIB 6.670
_	Impedance	450 Ohm
Electrical	Frequency range	125 - 8000 Hz
Elec	Volume limit (0.5 V / 1 kHz)	81 dB (A)
General	Connection	1 spiral cable for VIBSCANNER (MiniSnap)
Ger	Weight	арргох. 360 g

## VIBSCANNER channel switches

VIB 5.445: Manual channel switch for 2-plane balancing with VIBSCANNER

VIB 5.446: Automatic channel switch for 2-plane balancing with VIBSCANNER





## **Application and function**

The channel switch provides two inputs for accelerometers, which are merged into one output channel. The channel switching is done either via a toggle switch (VIB 5.445) or automatically controlled by the VIBSCANNER application program (VIB 5.446).

This simplifies e.g. the (sequential) balancing in two planes, because the accelerometers do not have to be unplugged when changing the balancing plane.

## **Connection**

With the manual channel switch VIB 5.445, the accelerometers are connected each with a coaxial cable with TNC connector (VIB 311221-L). The channel switch itself

is plugged in VIBSCANNER with the connection cable for line-drive accelerometers VIB 5.436.

The automatic channel switch VIB 5.446 is connected directly to VIBSCANNER. For each sensor, a connection cable for line-drive accelerometers (VIB 5.436) is required.

#### Note

The automatic switch cannot be operated with VIBSCANNER EX!

## **Accessories**

VIB 5.436 Conn. cable for line-drive accelerometers VIB 311221-L Coaxial cable, TNC (2x), L= cable length

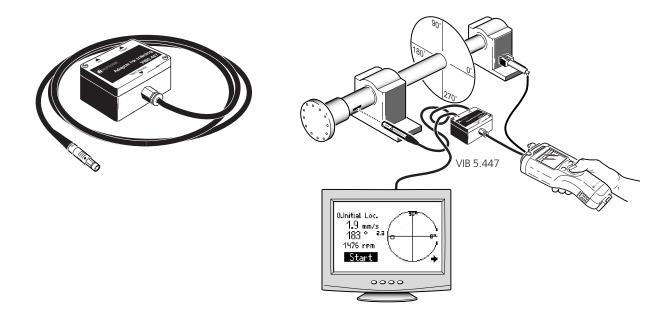
PARAMETER		VIB 5.445	VIB 5.445
	Case material	Aluminium	
anical	Connections	1x TNC socket, 2x TNC socket	1x Cable with MiniSnap plug 2x MiniSnap sockets
Mechanical	Dimensions L x B x H	97 x 63 x 35 mm	
	Weight	approx. 230 g	



## VIB 5.447 : PC adapter for the VIBSCANNER training tool

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## Description

The VIBSCANNER training tool can be used to show the VIBSCANNER display on a PC monitor for demonstrations and training courses. The digital input on the VIBSCANNER (yellow socket) is used to make the connection to the PC.

Since this interface is also used for RPM measurements, the PC adapter VIB 5.447, providing two inputs, must be used for the demonstration of the corresponding measurement tasks (e.g. balancing, RPM measurement).

PARAMETER		VIB 5.447	
General	Connections	1 cable for VIBSCANNER 2 sockets for trigger and PC cable	
	Dimensions (L x W x H)	approx. 65 x 50 x 35 mm	
Gen	Cable length	2.9 m	
	Weight	approx. 130 g	
	Case material	Macrolon	

## OMNITREND for VIBSCANNER

VIB 8.955: OMNITREND for VIBSCANNER, Software package

VIB 8.956: OMNITREND, View' for VIBSCANNER, Software package

VIB 5.481: VIBSCANNER device driver for OMNITREND

VIB 5.480-P: PC licence for VIBSCANNER





## **Description**

The OMNITREND software package **VIB 8.955** contains the CD ROM and the following items:

VIB 5.480-P PC licence

(Communication password for one VIB-

SCANNER instrument)

VIB 5.480-OMT Password certificate

(Registration of the OMNITREND full version; will only be sent out after the request for the registration password ('Return fax') has been received.

OMNITREND, Getting started VIB 9.631.G

With the OMNITREND View software package **VIB 8.956** only multimode measurement can be imported in the database (no route data). The VIB 8.956 package contains the CD ROM and the following items:

VIB 5.480-P PC licence

(Communication password for one VIB-

SCANNER instrument)

VIB 8.956-OMT Password certificate

(Registration of the OMNITREND full version; will only be sent out after the request for the registration password ('Return fax') has been received.

VIB 9.631.G OMNITREND, Getting started The device driver **VIB 5.481** is required to operate the OMNITREND software already available with the VIB-SCANNER. VIB 5.481 contains:

VIB 5.480-P PC licence

(Communication password for one VIB-

SCANNER instrument)

VIB 5.480-OMT Password certificate

(Registration of the OMNITREND full version; will only be sent out after the request for the registration password ('Return fax') has been received.

OMNITREND, Getting started

Each further VIBSCANNER is registered with a separate VIB 5.480-P PC license.

## **Order information**

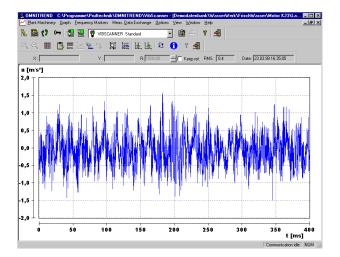
VIB 9.631.G

To simplify the order processing, please fax any existing registration certificates when ordering.

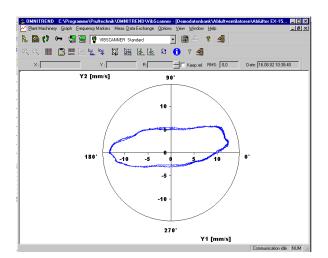
## VIB 8.962 : OMNITREND Signal Analysis module

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Zeitsignal



Orbit-Diagramm

## **Description**

The OMNITREND Signal Analysis module is available as an upgrade for an already registered OMNITREND installation. This software module enables the display and evaluation of the following measured data, which were recorded with the VIBSCANNER:.

If OMNITREND for VIBSCANNER **VIB 8.955** is registered, then

- Time waveform (Multimode & Route)
- Orbit (Multimode)

can be evaluated.

if OMNITREND 'View' for VIBSCANNER **VIB 8.956** is registered, then

Recording data

can be evaluated.

The registration of the Signal Analysis module also activates the gear editor VIB 8.961.

## **Order information**

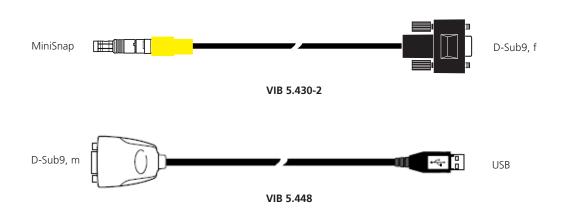
The 'Signal analysis' module is only available if an OMNI-TREND version is ordered at the same time, or is already registered. Therefore, please also fax us the existing OM-NITREND registration certificate when ordering an upgrade.

2

## Serial PC cables for VIBSCANNER

VIB 5.430-2 :Serial PC cable

VIB 5.448: Adapter cable, serial to USB



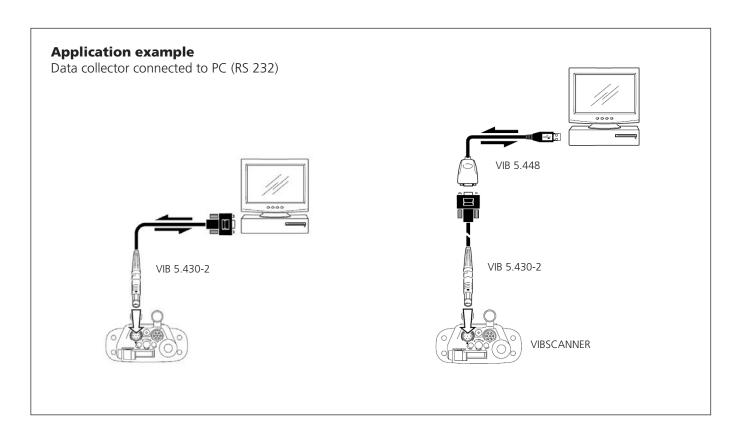
## **Application**

These cables are used for data transmission via the serial interface.

The adapter cable VIB 5.448 is additionally required if the PC or the laptop only has a USB port.

Cable lengths

VIB 5.430-2 approx. 2 m VIB 5.448 approx. 0.2 m



## VIB 5.431: Cable for analog signal output

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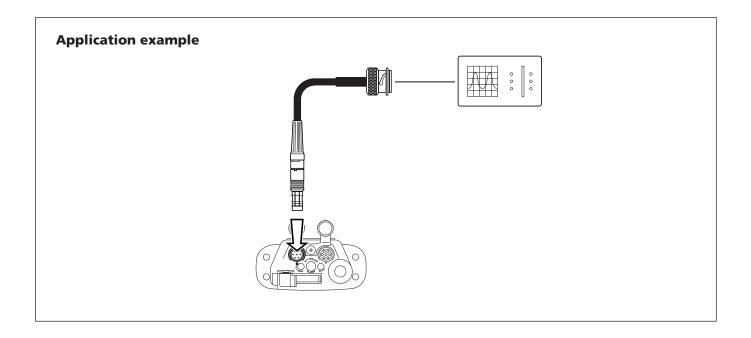


## **Application**

In order to analyze the measured analog signal, a headset (> 450 Ohm) or an analytical instrument (e.g. oscilloscope) can be connected with this cable to the following data collectors:

- VIBXPERT II
- VIBXPERT I
- VIBXPERT EX
- VIBSCANNER
- VIBSCANNER EX

Cable length: 0.7 to 1.8 meters



## -

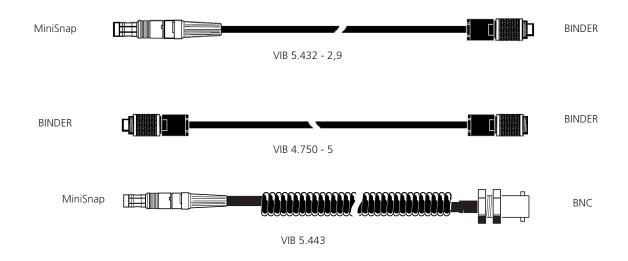
2

## **Connection cables for RPM sensors and trigger sensors**

VIB 5.432-2,9: Connection cable for RPM sensors

VIB 4.750-5: Cable extension for VIB 5.432-2,9

VIB 5.443 : Connection cable for TTL trigger sensors



## **Application**

The VIB 5.432-2,9 cable is used to connect the PRÜFTECH-NIK RPM sensors VIB 6.631 or VIB 6.631 EX to the following data collectors:

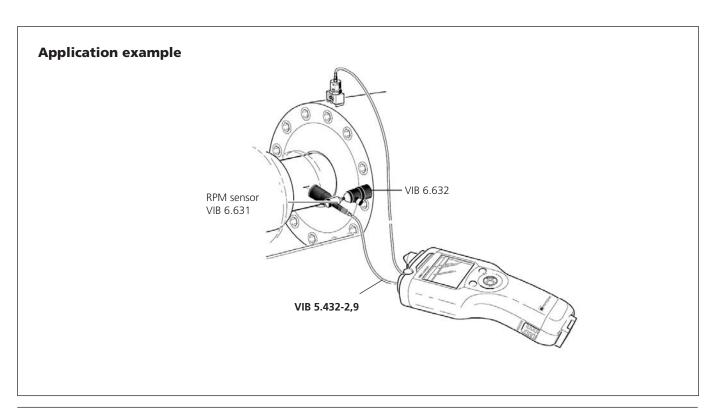
- VIBXPERT II
- VIBXPERT I
- VIBXPERT EX
- VIBSCANNER
- VIBSCANNER EX

The VIB 5.443 cable is used to connect a trigger sensor from other manufacturers.

Cable lengths

VIB 5.432-2,9 2.5 m VIB 4.750-5 5.0 m

VIB 5.443 0.45 - 1.6 m

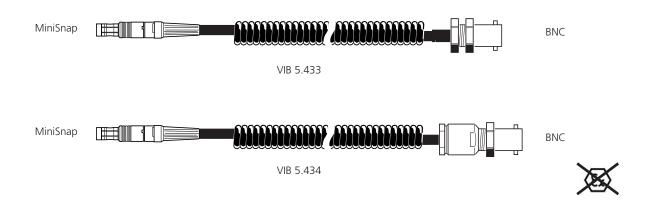


## Cable adapters for the measurement of signal-low voltage / current with VIBSCANNER

VIB 5.433 : Cable adapter for the measurement of signal-low voltage with VIBSCANNER

VIB 5.434: Cable adapter for the measurement of signal-low current with VIBSCANNER

2



#### **Application**

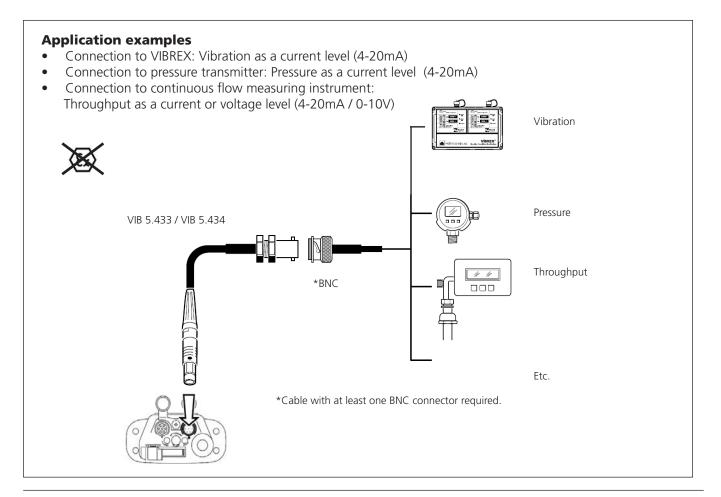
These cable adapters are used to measure signal-low voltage (AC: 0-30V) or signal levels (DC: 0-30V; 0-30 mA) provided by other measuring instruments.

An additional cable with at least one BNC plug is required to connect the adapter cable to the signal-measuring instrument.

The length of the spiral cable is 0.7 to 1.8 meters.

## **Safety note**

The cable adapters may not be used in hazardous areas!



# oltage with

# VIB 5.433-X: Cable adapter for the measurement of signal-low voltage with VIBSCANNER EX





### **Application**

This cable adapter is used to measure signal-low voltage (AC/DC: 0-30V) provided by other measuring instruments.

An additional cable with at least one BNC plug is required to connect the adapter cable to the signal-measuring instrument.

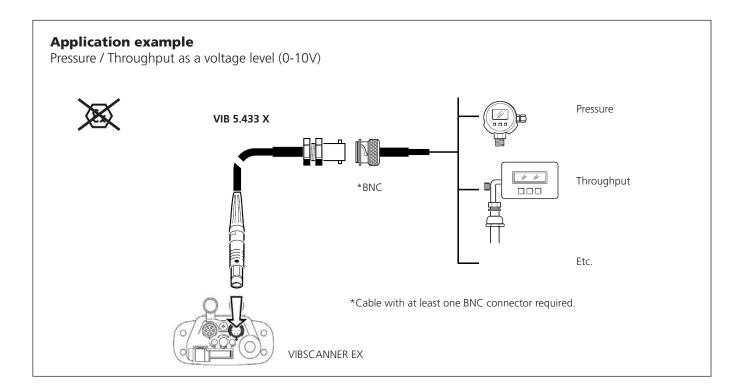
### **Safety notes**

The cable adapter may not be used in hazardous areas!

The cable adapter protects the analog port of the data collector (VIBSCANNER EX) against surges. The adapter must be connected with the data collector only outside the hazardous area to an electrical circuit, whose maximum voltage does not exceed 265  $\rm V_{rms.}$  when a malfunction occurs.

### **Technical data**

PARAMETER		VIB 5.433-X
	Cable length	0.7 1.8 m
General	Temperature range	0°C + 40°C
Gen	Maximum measurement error	-2.0% / +2.7%
	Upper frequency for AC measurements	5 kHz



### VIB 5.332-X: Keyphaser adapter for machine protection systems (VIBSCANNER EX)

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### **Application**

This adapter converts a pulse signal (including the DC level) to a 5V rectangular signal. This makes it possible to connect keyphaser, such as from the Bently Nevada, with measuring devices from PRÜFTECHNIK:

- VIBXPERT EX
- VIBSCANNER EX

### **Connection**

On the device side, the adapter is equipped with an 8-pin binder socket that is connected to trigger cable VIB 5.432-2,9. The signal input side provides a BNC socket.

### **Safety notes**

The cable adapter may not be used in hazardous areas!

The cable adapter protects the digital port of the data collector (VIBXPERT EX or VIBSCANNER EX) against surges. The adapter must be connected with the data collector only outside the hazardous area to an electrical circuit, whose maximum voltage does not exceed 265  $\rm V_{rms.}$  when a malfunction occurs.

Ambient temperature: 0°C to + 40°C.

### **Technical data**

PARAMETER		VIB 5.332-X
	Operating voltage	5.4 V ± 10%
	Power consumption	0,5 mA
	Input signal, Pulse width	> 100 µs
rical	-, Pulse level	> 500 mV <sub>pp</sub>
Electrical	-, DC fraction	+8 V to -30 V
	Output signal	5 V, rectangular signal
	Input resistance	200 kOhm
	Output resistance	1 kOhm
	Housing material	Stainless steel, VA 1.4301
	Length, incl. connectors	130 mm
Mechanical	Diameter	15 mm
Mech	Weight	30 g
	Env. protection class	IP 65
	Temperature range	0°C +40°C
	Input signal	Binder connector, 8 pin, 712 series
Interfaces	-, Pin allocation	2 / 5V, 4 / rectangular signal, 7 / GND
Inte	Output signal	BNC connector
	-, Pin allocation	internal contact / signal, external contact / GND

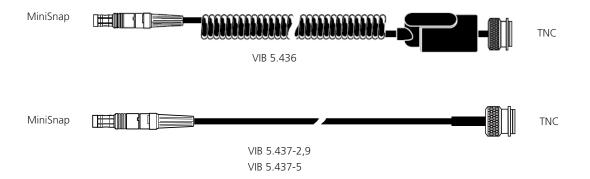
2

### Connection cables for current line-drive accelerometers

VIB 5.436 : Spiral connection cable for current line-drive accelerometer

VIB 5.437-2,9 : Straight connection cable for current line-drive accelerometer, 2.9 meters

VIB 5.437-5: Straight connection cable for current line-drive accelerometer, 5 meters



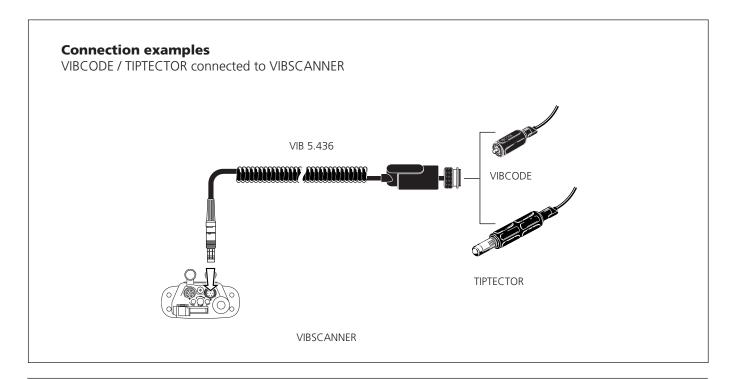
### **Application**

These cables are used to connect mobile industrial accelerometers with current line-drive output to the following PRÜFTECHNIK data collectors:

- VIBXPERT II
- VIBXPERT I
- VIBXPERT EX
- VIBSCANNER
- VIBSCANNER EX

### **Cable lengths**

VIB 5.436 0.7 ... 1.8 m VIB 5.437-2,9 2.9 m VIB 5.437-5 5 m



VIBSCANNER / smartSCANNER Chapter 1: VIBSCANNER

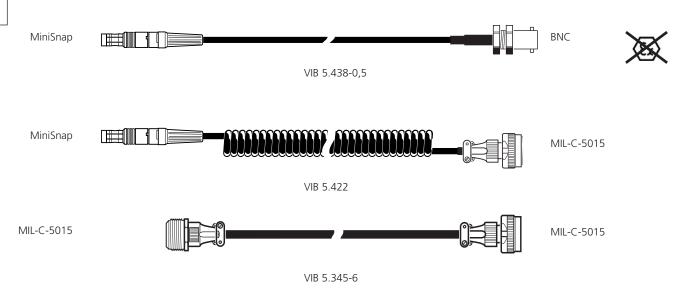
### Connection cables for ICP-type accelerometers

VIB 5.438-0,5: Straight connection cable for ICP-type accelerometer, 0.5 meters, BNC-connector

VIB 5.422 : Spiral connection cable for ICP-type accelerometer, MIL-connector

VIB 5.345-6: Cable extension for VIB 5.422, 6 meters, MIL-connector

2



### Application

Standard sensor cables for connecting an ICP-type accelerometer or a microphone to VIBSCANNER.

### **Cable lengths**

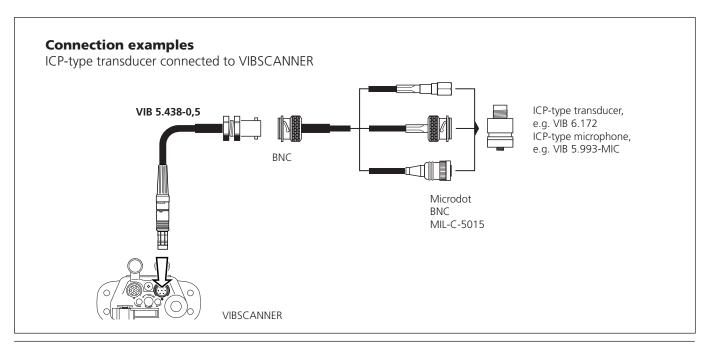
VIB 5.438-0,5 0.5 m VIB 5.422 0.7 ... 1.8 m VIB 5.345-6 6 m

### **Notes**

Applies to cable VIB 5.438-0,5: Depending on which type of connector the accelerometer has (e.g. Microdot, BNC, MIL-C-5015,...), a suitable cable must have at least one BNC connector.

### **ATTENTION:**

ICP-type accelerometers may not be used in hazardous areas.



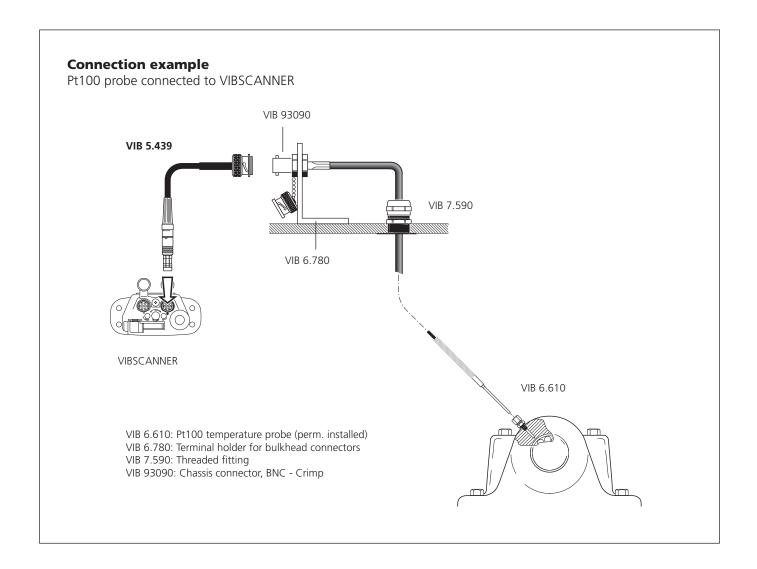


MiniSnap BNC

### **Application**

This cable is used to connect a Pt100 temperature probe to VIBSCANNER for temperature measurements.

Cable length: 0.7 ... 1.8 meters



### VIB 5.444-5: Universal extension for analog sensor cable, 5 meters

1

2



VIB 5.342

### **Application**

This cable is used to extend the analog sensor cable by up to 5 meters.

### **Extendable sensor cables:**

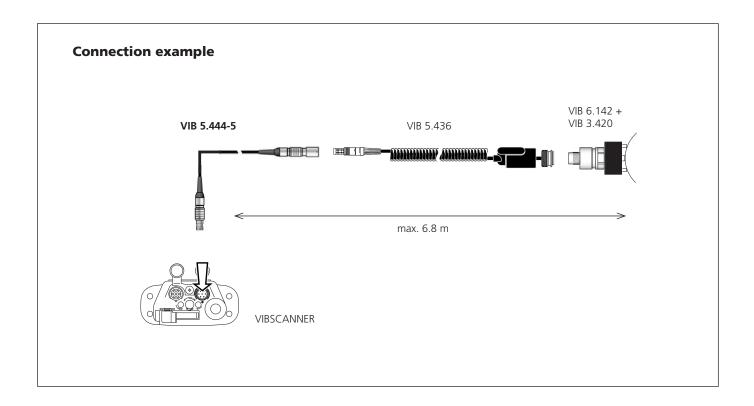
VIB 5.436 Spiral cable for current line-drive transd.
VIB 5.437-2,9 Straight cable, Current line-drive, 2.9 m
VIB 5.437-5 Straight cable, Current line-drive, 5 m
VIB 5.438-0,5 Straight cable, ICP-type, BNC connector
VIB 5.422 Spiral cable, ICP-type, MIL connector

VIB 5.440 VIBREX cable (mV)
VIB 5.433 Signal-low voltage cable adapter
VIB 5.433 X Signal-low voltage cable adapter,
VIBSCANNER EX
VIB 5.434 Signal-low current cable adapter

### **Applies to all cables, except current line-drive:**

Cable for VST 24V adapter

For cable lengths greater than 2.9 meters, the EMC immunity of the signal path can not be guaranteed.







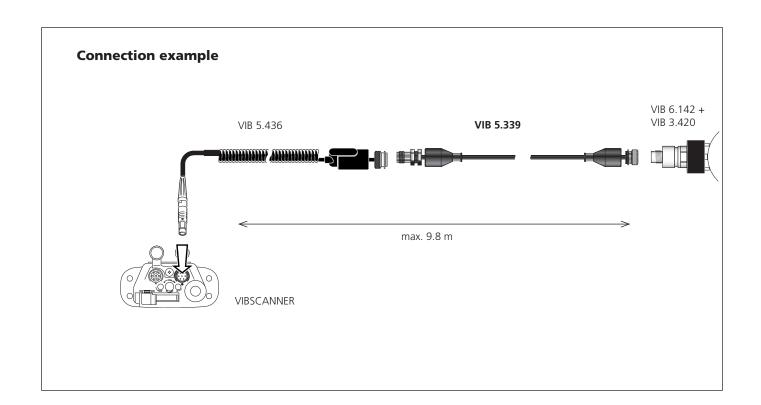
TNC

### **Application**

With this cable, the Current Linedrive sensor cables can be extended by up to eight meters.

### **Extendable sensor cables:**

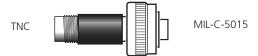
VIB 5.436 Linedrive spiral cable
VIB 5.437-2,9 Linedrive cable, straight, 2.9m
VIB 5.437-5 Linedrive cable, straight, 5m



### VIB 5.449 : Connection adapter for VIB 6.195 accelerometer

1

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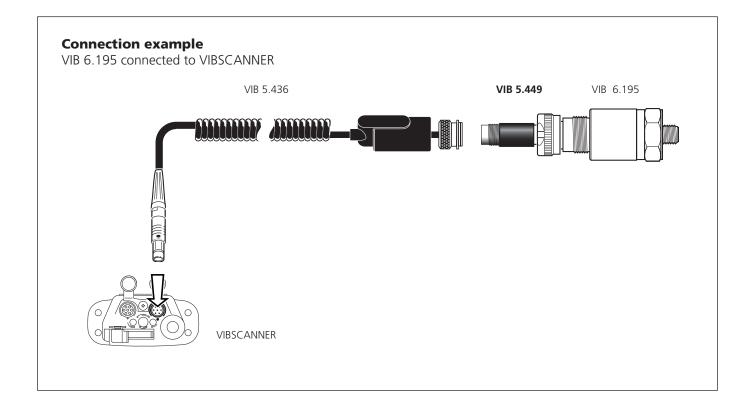


### **Application**

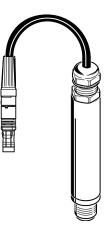
This adapter is used to connect the VIB 6.195 accelerometer to VIBSCANNER.

Connection: TNC socket / MIL-C-5015 plug

Length: 6 cm



### 5





### **Application**

The SPM adapter is used to connect the VIBSCANNER data collector to existing SPM 40000 or TRA 30 measurement sensors by converting the voltage signal to a current signal.

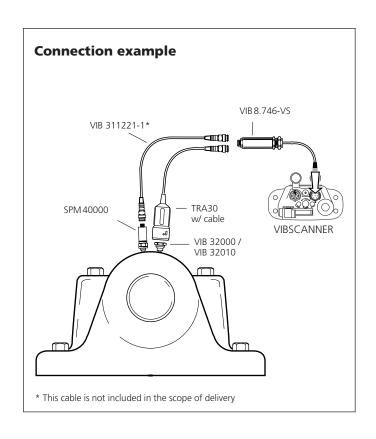
**VIB 8.746-VS: SPM adapter for VIBSCANNER** 

### Note

The SPM adapter may not be used in hazardous areas!

### **Technical data**

PARAMETER		VIB 8.746-VS
	Input	MiniSnap
General	Output	TNC
	Length	approx. 240 mm
	Diameter	16 mm



VIBSCANNER / smartSCANNER

Chapter 1: VIBSCANNER

1

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# Chapter 2 smartSCANNER



VIBSCANNER / smartSCANNER

Chapter 2: smartSCANNER

### smartSCANNER – Smart 3-in-1 solution for vibration analysis, balancing, shaft alignment



2





Vibration analysis



Balancing



Shaft alignment

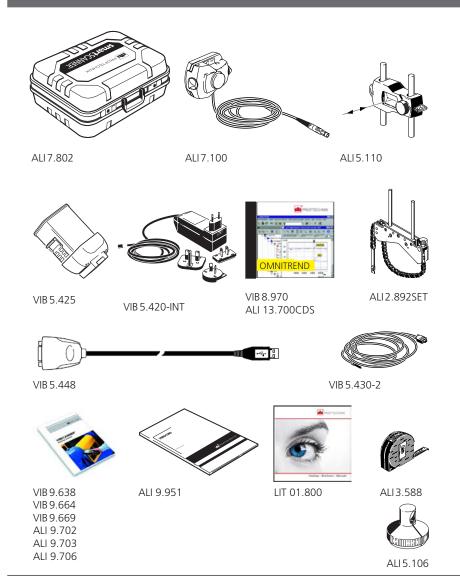
smartSCANNER is a versatile measurement system for machine service and maintenance. It combines the extensive measurement and analysis functions of the triedand-tested VIBSCANNER data collector with the precision alignment options of the smartALIGN laser optical shaft alignment system.

### smartSCANNER features

- Machine vibration analysis
- Roller bearing condition diagnosis
- Gear condition diagnosis
- Machine condition diagnosis
- Pump cavitation diagnosis
- RPM measurement
- Temperature measurement
- Process parameters acquisition
- Data collector capabilities
- Field balancing of rotors
- Alignment of horizontal machines
- Alignment of machine trains
- Alignment of vertical machines
- Soft foot correction

1

### SYS 7.460:smartSCANNER Maintenance package





### **Description**

The 'Maintenance' package contains the basic components for data collection, machine diagnosis and shaft alignment with smartSCANNER.

### **Scope of supply**

2.06.2.2066.7		
VIB 5.400	VIBSCANNER instrument (w/o battery)	
VIB 5.420-INT	Battery charger	
VIB 5.425	Rechargeable battery	
VIB 5.430-2	PC cable, serial	
VIB 5.448	Adapter cable, serial to USB	
VIB 8.970	Condition Monitoring CD-ROM	
VIB 9.638.G	VIBSCANNER operating instructions	
VIB 9.664.G	VIBSCANNER operating instructions 'Bal-	
	ancing, FFT & signal analysis'	
VIB 9.669.G	VIBSCANNER short instructions	
LIT 01.800	CD ROM, Condition Monitoring catalogs,	
	brochures, magazines	

ALI 7.100 smartALIGN transducer, incl. dust cap and connection cable
ALI 5.110 Reflector, incl. dust cap
ALI 2.892 SET Compact chain-type bracket
ALI 7.802 smartSCANNER case

ALI 5.106 Beam deflector
ALI 3.588 Tape measure, mm/inch
ALI 13.700CDS Alignment Center CD set
ALI 9.702.G smartALIGN handbook
ALI 9.703.G smartALIGN pocket quide

ALI 9.706.G Addendum for smartALIGN handbook

ALI 9.951.DG smartALIGN product catalog

Not shown

VIB 5.480 VIBSCANNER basic firmware VIB 5.480-L Basic firmware license VIB 5.485-FM VIBSCANNER firmware FFT ALI 2.905 Lens cleaning cloth

ALI 7.744 Registration card for smart-SCANNER-

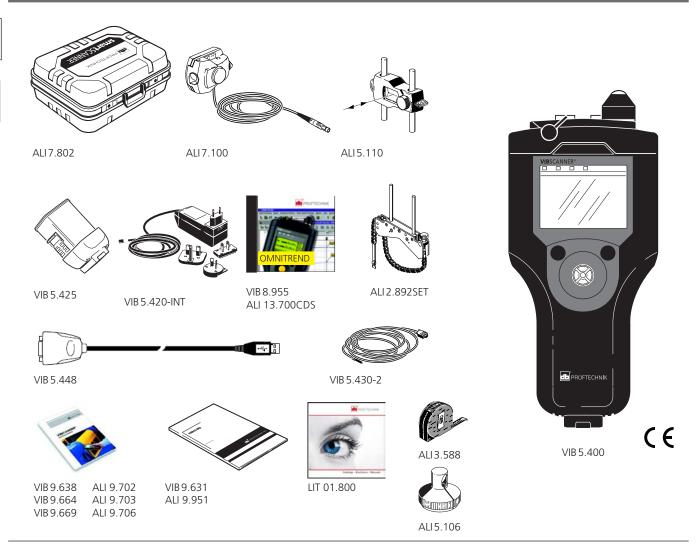
Firmware ,Shaft Alignment'

ALI 7.590-323 smartSCANNER label

### SYS 7.464: smartSCANNER Trending package

1

2



### **Description**

The 'Trending' package contains the full version of the OMNITREND PC software. This enables measurement data to be transferred to a PC and archived there for evaluation.

### Note

In order to administrate alignment data in OMNITREND, the OMNITREND device driver for smartALIGN/ smart-SCANNER (VIB 8.975-DR) is required.

### Scope of supply

Scope of supply		
VIB 5.400	VIBSCANNER instrument (w/o battery)	
VIB 5.420-INT	Battery charger	
VIB 5.425	Rechargeable battery	
VIB 5.430-2	PC cable, serial	
VIB 5.448	Adapter cable, serial to USB	
VIB 8.955	OMNITREND for VIBSCANNER	
VIB 9.631.G	OMNITREND, getting started	
VIB 9.638.G	VIBSCANNER operating instructions	
VIB 9.664.G	VIBSCANNER operating instructions 'Bal-	
	ancing, FFT & signal analysis'	
VIB 9.669.G	VIBSCANNER short instructions	
LIT 01.800	CD ROM, Condition Monitoring catalogs,	

### brochures, magazines

ALI 7.100	smartALIGN transducer, incl. dust cap and connection cable
ALI 5.110	Reflector, incl. dust cap
ALI 2.892 SET	·
ALI7.802	smartSCANNER case
ALI 5.106	Beam deflector
ALI 3. 100 ALI 3. 588	Tape measure, mm/inch
	S Alignment Center CD set
ALI 13.700CD3	smartALIGN handbook
ALI 9.703.G	smartALIGN pocket guide
ALI 9.706.G	Addendum for smartALIGN handbook
ALI 9.951.DG	smartALIGN product catalog
Not shown	
ALI 2.905	Lens cleaning cloth
VIB 5.480	VIBSCANNER basic firmware
VIB 5.480-L	Basic firmware license
VIB 5.480-P	VIBSCANNER PC licence
	VIBSCANNER firmware FFT
ALI 7.744	Registration card for smart-SCANNER-
	Firmware ,Shaft Alignment'

ALI 7.590-323 smartSCANNER label

# 1

### SYS 7.466: smartSCANNER VIBCODE package



VIB 9.834.G

### **Description**

The VIBCODE package allows quick and reliable data collection with the VIBCODE transducer system and a comprehensive evaluation and archiving with the OMNITREND PC software. The VIBCODE transducer recognizes measurement locations uniquely from their coding. Its bayonet socket ensures a reproducible coupling for the reliable and accurate replication of measurement results.

### Note

In order to administrate alignment data in OMNITREND, the OMNITREND device driver for smartALIGN/ smart-SCANNER (VIB 8.975-DR) is required.

### Scope of supply

VIB 5.400	VIBSCANNER instrument (w/o battery)
VIB 5.420-INT	Battery charger
VIB 5.425	Rechargeable battery
VIB 5.430-2	PC cable, serial
VIB 5.448	Adapter cable, serial to USB
VIB 8.660 VS	VIBCODE transducer incl. cable
VIB 8.955	OMNITREND for VIBSCANNER
VIB 9.631.G	OMNITREND, getting started
VIB 9.638.G	VIBSCANNER operating instructions
VIB 9.664.G	VIBSCANNER operating instructions 'Bal-
	ancing, FFT & signal analysis'
VIB 9.669.G	VIBSCANNER short instructions

LIT 01.800	CD ROM, Condition Monitoring catalogs, brochures, magazines
ALI 7.100	smartALIGN transducer, incl. dust cap and connection cable
ALI 5.110	Reflector, incl. dust cap
ALI2.892 SET	Compact chain-type bracket
ALI7.802	smartSCANNER case
ALI5.106	Beam deflector
ALI3.588	Tape measure, mm/inch
	Alignment Center CD set
ALI9.702.G	smartALIGN handbook
ALI9.703.G	smartALIGN pocket guide
ALI 9.706.G	Addendum for smartALIGN handbook
ALI 9.951.DG	smartALIGN product catalog
Not shown	
ALI2.905	Lens cleaning cloth
VIB 5.480	VIBSCANNER basic firmware
VIB 5.480-L	Basic firmware license
VIB 5.480-P	VIBSCANNER PC licence
VIB 5.485-FM	VIBSCANNER firmware FFT
ALI 7.744	Registration card for smart-SCANNER- Firmware ,Shaft Alignment'
ALI 7.590-323	smartSCANNER label

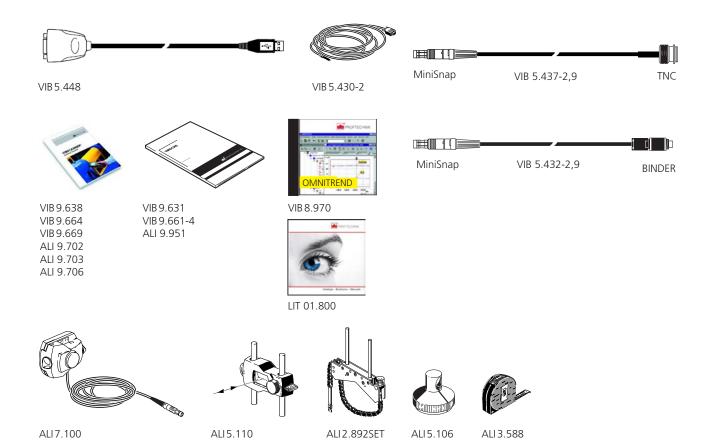
VIBCODE operating instructions

### SYS 7.460-B1P: smartSCANNER balancing package with one measuring channel

1

2





continued on next page ->

### L

SYS 7.460-B1P, continued

### **Description**

This package is used for 1-plane balancing and includes the required equipment for one measuring channel. smartSCANNER, featuring the firmware 'Balance limited' (VIB 5.489), can be upgraded to the basic firmware as shown on page 8.

### Scope of supply

scope of sal	<b></b>
VIB 3.306	Reflective tape, 10 mm
VIB 3.420	Magnetic holder for curved mounting
	surfaces
VIB 5.400	VIBSCANNER instrument (w/o battery)
VIB 5.420-INT	Battery charger
VIB 5.425	Rechargeable battery
VIB 5.430-2	PC cable, serial
VIB 5.432-2,9	Trigger cable, 2.9 m
VIB 5.437-2,9	Cable for Current line-drive transducer,
	2.9 m
VIB 5.448	Adapter cable, serial to USB
VIB 6.147	Accelerometer for low-speed machines
VIB 6.631	Laser Trigger Sensor
VIB 6.632	Trigger stand
VIB 8.970	Condition Monitoring CD-ROM
VIB 9.638.G	VIBSCANNER operating instructions
VIB 9.664.G	VIBSCANNER operating instructions 'Bal-
	ancing, FFT & signal analysis'
VIB 9.669.G	VIBSCANNER short instructions
LIT 01.800	CD ROM, Condition Monitoring catalogs,
	brochures, magazines
	_

ALI 7.100	smartALIGN transducer, incl. dust cap and connection cable
ALI 5.110	Reflector, incl. dust cap
ALI2.892 SET	Compact chain-type bracket
ALI7.802	smartSCANNER case
ALI 5.106	Beam deflector
ALI3.588	Tape measure, mm/inch
ALI 13.700CDS	S Alignment Center CD set
ALI 9.702.G	smartALIGN handbook
ALI9.703.G	smartALIGN pocket guide
ALI 9.706.G	Addendum for smartALIGN handbook
ALI 9.951.DG	smartALIGN product catalog
Not shown	
VIB 5.485-FM	VIBSC ANNER firmware EFT
VIB 5.486-B	Password certificate 'Balancing'
ALI 2.905	Lens cleaning cloth
ALI 7.744	Registration card for smart-SCANNER-
	Firmware ,Shaft Alignment'
ALI 7.590-323	smartSCANNER label

### **Accessory**

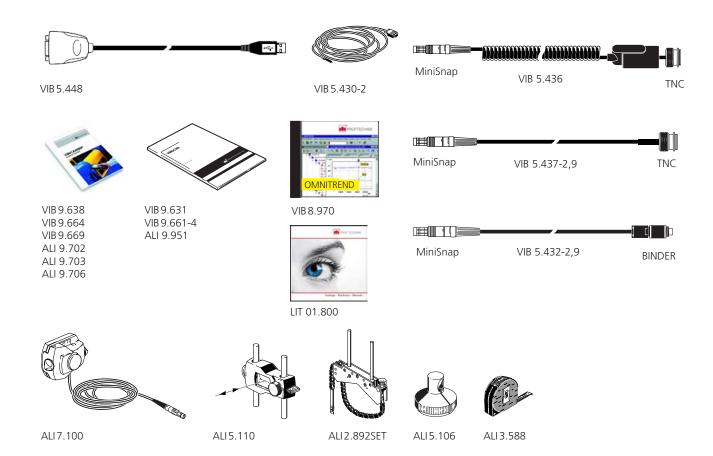
VIB 5.480-UG Firmware upgrade to ,Basic'

## SYS 7.460-B2P: smartSCANNER balancing package with two measuring channels

1

2





continued on next page ->

### SYS 7.460-B2P, continued

### **Description**

This package is used for 2-plane balancing and includes the required equipment for two measuring channels. smartSCANNER, featuring the firmware 'Balance limited' (VIB 5.489), can be upgraded to the basic firmware as shown on page 8.

### **Scope of supply**

24262 21 2016	proper or perbery			
VIB 3.306	Reflective tape, 10 mm			
VIB 3.420	Magnetic holder for curved mounting			
	surfaces, 2x			
VIB 5.400	VIBSCANNER instrument (w/o battery)			
VIB 5.420-INT	Battery charger			
VIB 5.425	Rechargeable battery			
VIB 5.430-2	PC cable, serial			
VIB 5.432-2,9	Trigger cable, 2.9 m			
VIB 5.436	Spiral cable for Current line-drive trans-			
	ducers			
VIB 5.437-2,9	Cable for Current line-drive transducer,			
	2.9 m			
VIB 5.446	Automatic switch for 2-plane balancing			
VIB 5.448	Adapter cable, serial to USB			
VIB 6.147	Accelerometer for low-speed machines,2x			
VIB 6.631	Laser Trigger Sensor			
VIB 6.632	Trigger stand			
VIB 8.970	Condition Monitoring CD-ROM			
VIB 9.638.G	VIBSCANNER operating instructions			
VIB 9.664.G	VIBSCANNER operating instructions 'Bal-			
	ancing, FFT & signal analysis'			
VIB 9.669.G	VIBSCANNER short instructions			
LIT 01.800	CD ROM, Condition Monitoring catalogs,			

brochures, magazines

ALI 7.100	smartALIGN transducer, incl. dust cap ar connection cable
ALI 5.110	Reflector, incl. dust cap
	·
ALI 2.892 SET	Compact chain-type bracket
ALI 7.802	smartSCANNER case
ALI 5.106	Beam deflector
ALI3.588	Tape measure, mm/inch
ALI 13.700CDS	Alignment Center CD set
ALI 9.702.G	smartALIGN handbook
ALI9.703.G	smartALIGN pocket guide
ALI 9.706.G	Addendum for smartALIGN handbook
ALI 9.951.DG	smartALIGN product catalog
Not shown	
VIB 5.485-FM	VIBSCANNER firmware FFT
VIB 5.486-B	Password certificate 'Balancing'
ALI 2.905	Lens cleaning cloth
ALI 7.744	Registration card for smart-SCANNER-
	Firmware ,Shaft Alignment'
ALI 7.590-323	smartSCANNER label

### Accessory

VIB 5.480-UG Firmware upgrade to ,Basic'

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**Productive maintenance technology**