

Technical Data

■ General

4 different evaluation methods, 8 windows per setpoint record available
Evaluates force vs displacement of cycle
Classification: force (load), pressure, displacement
Evaluates torque vs angle
 32 different measuring programs (setpoint records), selected by PLC
 UP- and DOWNLOAD of setpoint records by PC
 Access authorization using adjustable USER codes
 Sampling rate > 4 kHz
 Digitalization 12 bit
 Display LCD with background illumination, 1/4 VGA

 Operating temperature range 5 - 50 °C
 Storage temperature range 0 - 60 °C
 Mains connection 115 VAC - 230 VAC, 25 VA, 50/60 Hz
 Weight 2,1 kg (front panel installation unit)

■ Sensors

Y-Channel strain gage (0,5 - 2,5 mV/V)
 X-Channel incremental, resistive
 Torque-angle transducer d/s 0160, 0170

■ Control lines

PLC 16 input line port (0Volt / 24VDC)
 PLC 16 output line port (0Volt / 24VDC)
 PLC Profibus L2-DP, Option
 PLC Interbus -S, Option

■ Housing variation

Front panel installation, IP 40 (weight 2.3kg) 175 x 111x 130 mm (W x H x D)
 Table top housing, IP 40 (weight 3.0kg) 34 TE x 3 HE x 200 mm (W x H x D)
 Wall housing, IP 54 (weight 3.1kg) 34 TE x 180 x 160 mm (W x H x D)

Staiger Mohilo provides with every system

- Monitoring system, manual, 50 pol. SUBD mating connector (PLC port), power-line cable

Furthermore: Sensors, installation assistance, training

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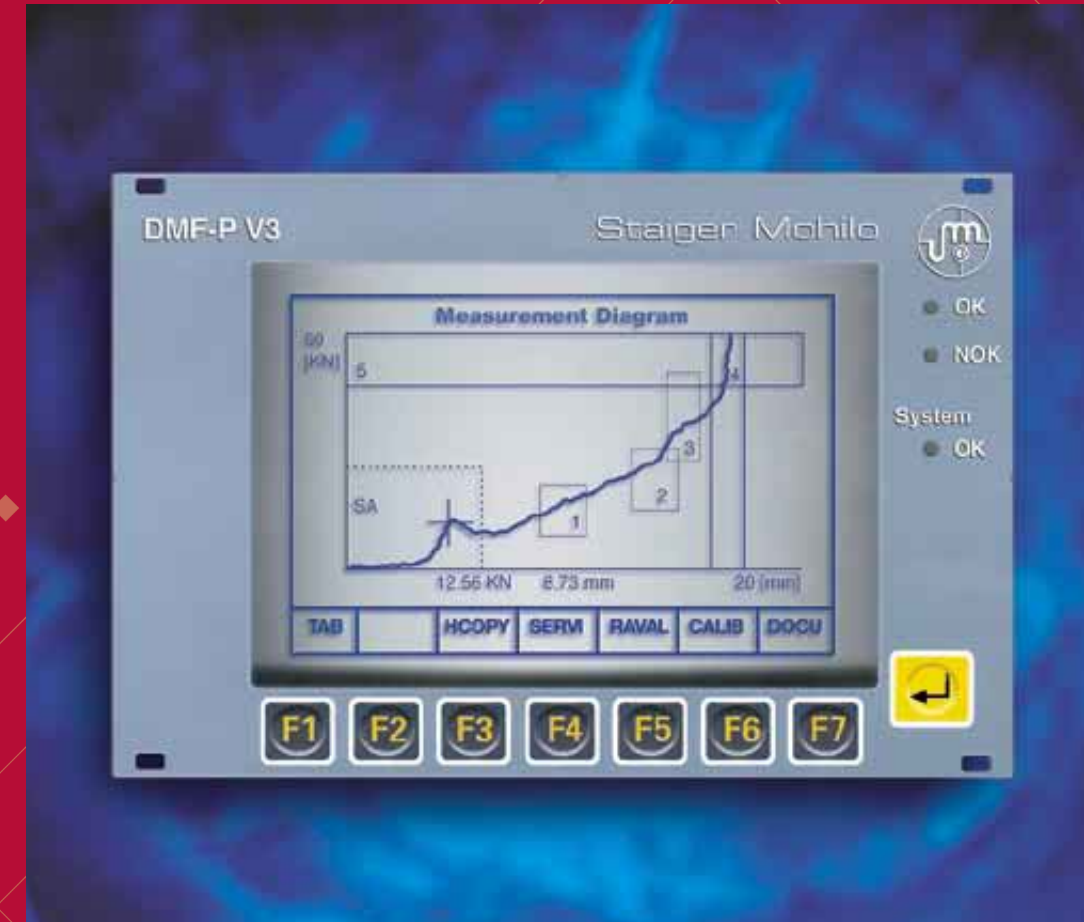
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E-04/00-1000 - PARMA & SEILER WERBEAGENTUR GMBH - NEUHAUSEN



STAMOSENS®

Assembly
Monitoring
System

Tightening and press-fit system

**100% In-Process
inspection of
assembled parts**

■ Integrated Quality Assurance with the DMF-P V3

There are plenty of reasons to integrate quality control into the manufacturing process: product liability, functional reliability and manufacturing economy are doubtless at the top of the list. Integrated quality control is essential when the quality of the process step can only be gauged during the process itself, i.e. in the case with insert joints, monitoring caulking, monitoring riveting, monitoring torque/angle control. DMF-P V3 is the ideal monitoring instrument achieving for certifiable quality control.

■ Solution for Assembly Processes

The assembly profile is monitored with adjustable windows. This allows the user to define critical part of assembly cycle.

The system monitors:

- Start position
- Seating position
- Overload
- Variable windows

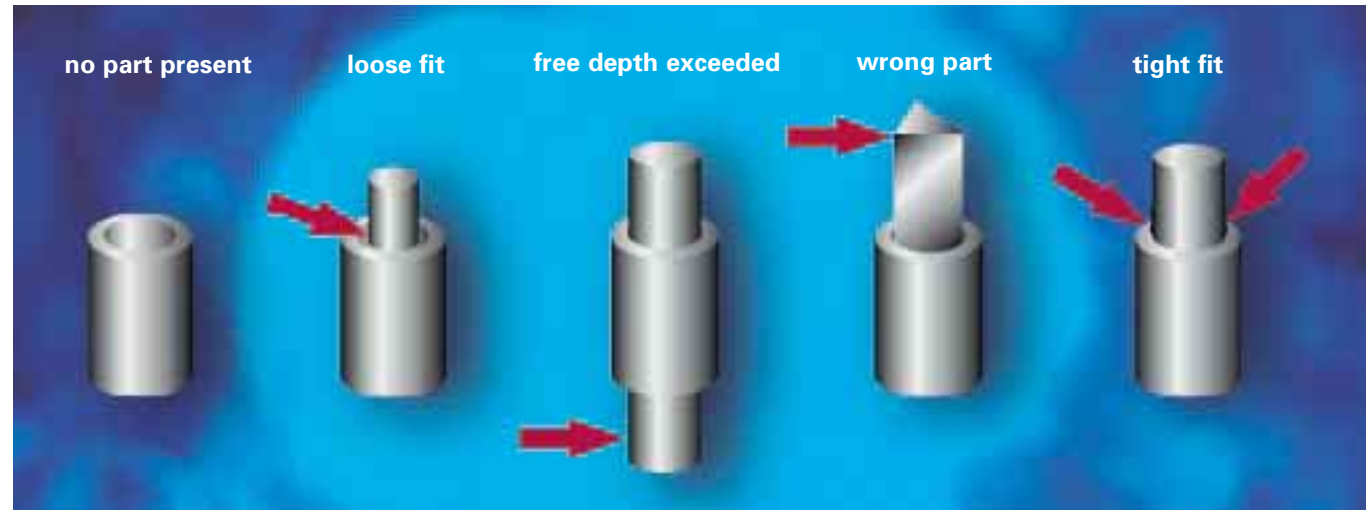
Even velocity of process can be checked and evaluated.



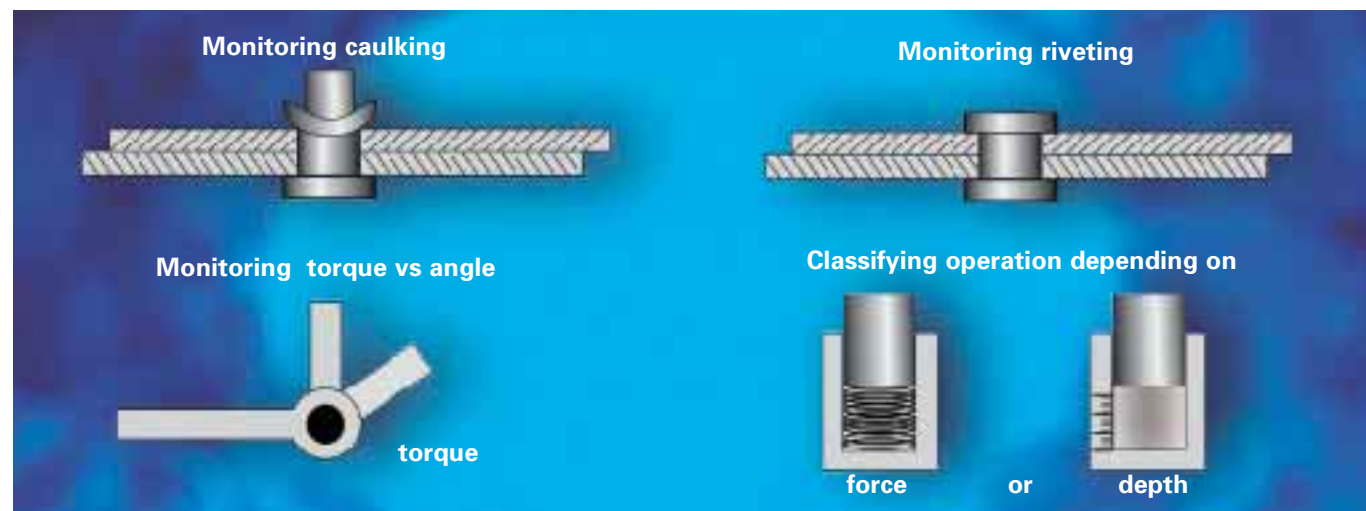
■ Features and Benefits

- Easy configuration and setup
- Sensor interfaces on board
- Allows precise in-process evaluation requirements
- Flexible system, up to 32 different workpieces to be operated
- Built-in self test routine for electronic and sensors
- Useful diagnostic tools
- Serial communication
 - Remote control system
 - Field-bus interface
- Printer interface
- Different housings available
- All connections are plugged
- Low maintenance
- Retrofittable to existing machines

■ The problem at press fit



■ Other control operations



Methods of evaluation

■ Methods of evaluation

The DMF-P V3 records the load curve as a function of travel and then evaluates the stored curve on the basis of freely programmable criteria. Four standard evaluation methods are available. Monitoring of full depth of press in reference to touchpoint.

■ Menu control

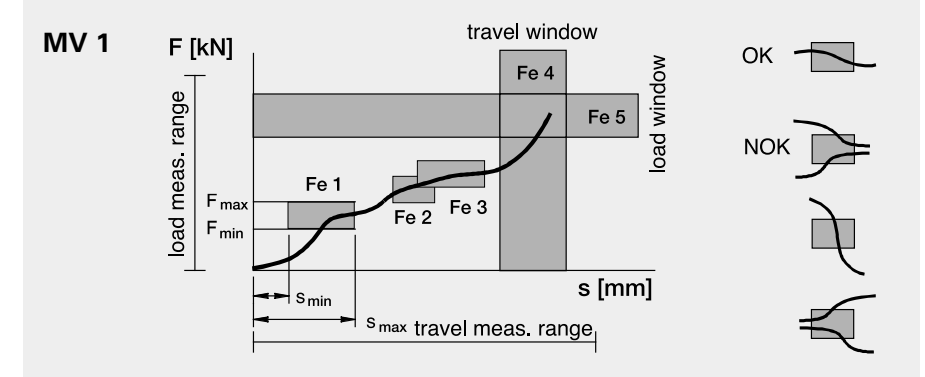
User friendly menu driven software. Three different languages are inherent (German, English and French).

S-1	ml n_I	max_I	ml n_S	max_S	
F-1	17.12	19.27	10.00	25.00	kN
F-2		34.87	30.00	40.00	kN
F-3		8.99	8.00	10.00	mm
F-4					
F-5					
F-6					
F-7					
F-8					

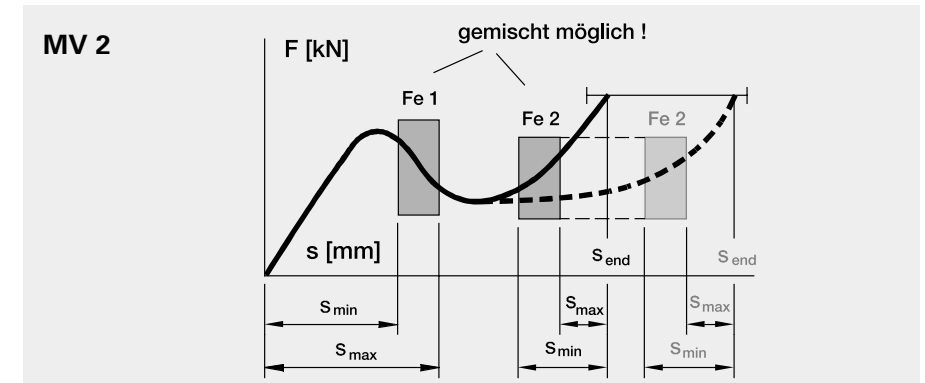
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F1 **F2** **F3** **F4** **F5** **F6** **F7**

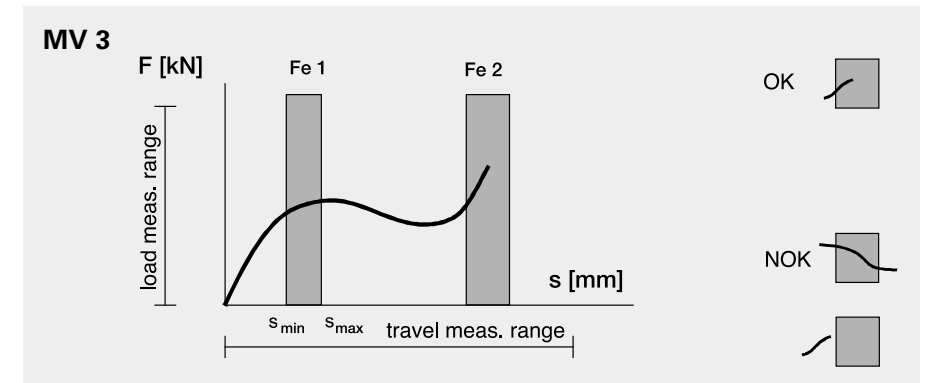
■ Tolerance window method (8 tolerance window, overlapping)



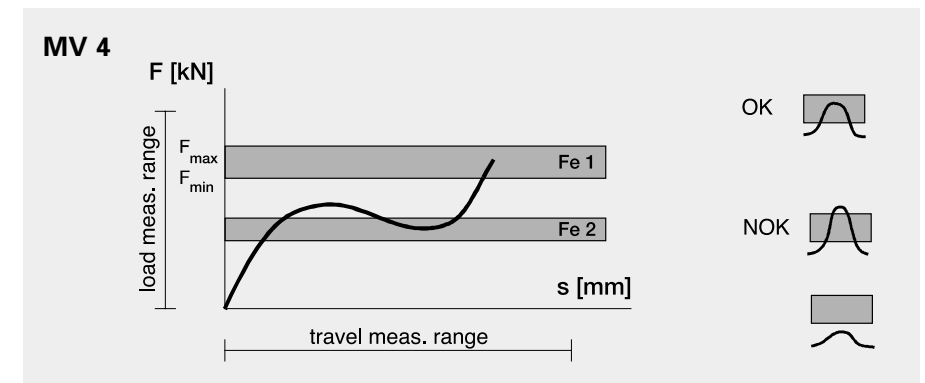
■ Dynamic measuring window



■ Travel classification (8 travel sections, overlapping)

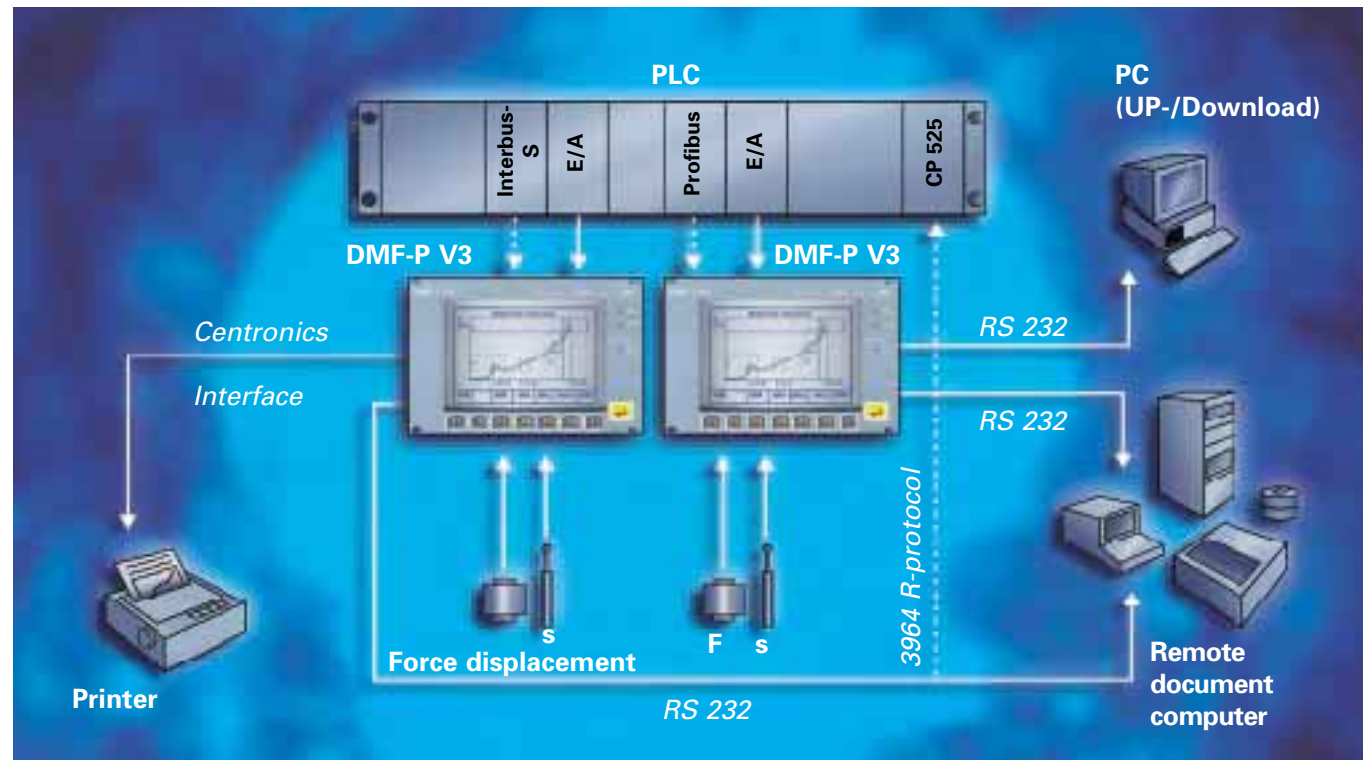


■ Load classification (8 load sections, overlapping)

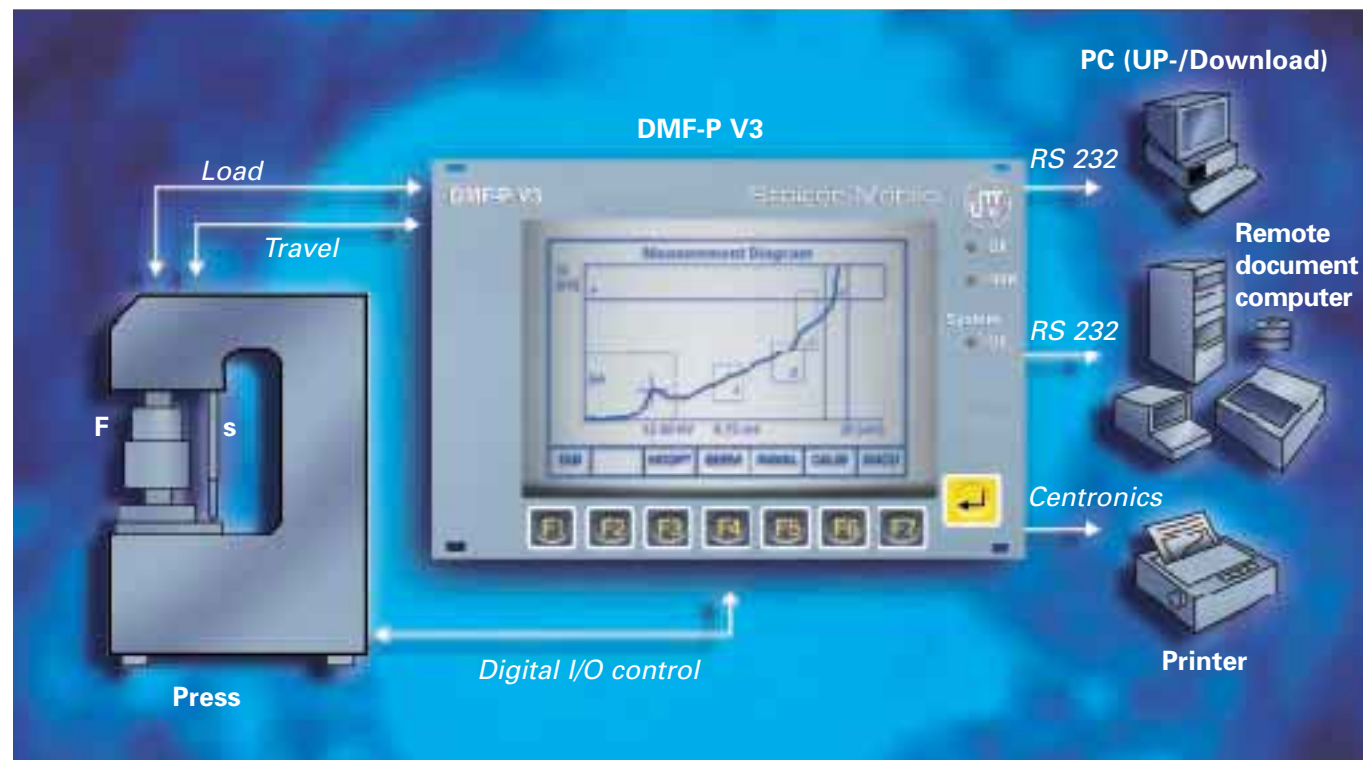


System structure

Multi-channel system, e.g. flexible assembly line



Single-channel system, e.g. Single press



Hardware

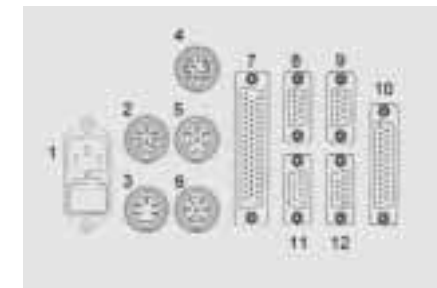
Each measuring controller is an independently operating unit. All connections are available at the

rear of the system. The measuring controllers can be accommodated either in a control cabinet, built into

a table housing or mounted separately near to the machine in a housing with enclosure class IP 54.

Interfaces • Accessories

Rear panel view



1. Main power supply
2. incremental sensor
3. resistive Sensor
4. Torque / angle sensor
5. Strain gauge sensor
6. Service plug (analog output)
7. PLC I/O-lines
8. Serial interface (RS232)
9. Serial interface (RS232)
10. Centronics interface (Printer)
- Options:**
11. Serial interface Interbus-S-IN
Serial interface Profibus
12. Serial interface Interbus-S-OUT

Other inputs

resistive	Analog signals		Digital signals
	strain gauge transducer	analog input $\pm 10V$	incremental
UI / UO	-12 ...+12 mV	-10 ...+10 V	pulses
• travel ohmic	• load • torque • pressure	• torque (friction coefficient)	• rotation angle • travel incremental

Measuring cable

Travel-resistive: Art.Nr: 10641
Load-DMS: Art.Nr: 7186

Force transducer

acc. Data sheet: 1100

Displacement transducer

Data sheet: 3305, 3306, 3307

Torque/angle sensor

acc. Data sheet: 0160DMS, 0170MS

Dimensions

