

RoeTest – Computer Tube Tester / Tube Measuring System

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Bar code scanner (starting with Software Version 7.6.0.0)

Nowadays bar codes can be found everywhere, e.g. at the supermarket. They are used for rapid data entry. Instead of entering a string with the keyboard it is simply scanned by a bar code reader.

Technically scanning works the same way as entering data with the keyboard. The scanned characters are sent to the keyboard buffer of the PC. You could enter the characters manually using the keyboard (what takes a longer time and is error prone). The RoeTest software can also use bar codes

There are generally two classes of bar codes:

1D Codes stripe codes, e.g. code 93		Can be read using simple scanners (available for less than 20 €) only small amounts of data
2 D Codes e.g.. QR-Code, Datamatrix code		High grade scanners are required, larger amount of data possible, code uses less space

Recommendation for usage with the RoeTest: If there is enough space available and only a few data have to be stored: use 1D-Code, **code93**. With Code93 all characters including the German umlauts can be represented. If more data must be encoded use the Datamatrix code (e.g. if measured data like percentages, transadmittance , manufacturer,... shall be stored in the bar code).



To use bar codes with the RoeTest software the stored data must have the following format:

Tube name hash key ID

(following that there might be any other data present)

Example: **EF80#231**

With the RoeTest software bar codes can be generated as follows:

  Print to measuring protocols and paper rolls (code93):
To use that please check the following boxes in the print mask

Barcode auf Prüfprotokoll (code 93)

Röhrenname

#ID



With label printer:

The ZPL printers are able to generate the bar code direct from the data and print it → see information for the label printers. The labels can then be attached to the tube boxes.

In the RoeTest software the bar codes can be used as follows:

Tube stock data base:

The screenshot shows the 'tubestock.dbf' window in the RoeTest software. The search bar is highlighted with a red box, and the search criteria 'suche Name od. #ID:' is visible. The table below lists the tube stock data.

Index	ID	Röhrenbezeichnung	Hersteller	Zustand	1	System 1 %	2	System 2 %	3	System 3 %	4	System 4 %	Lagerort	Kategi	markie	Bild	Daten
0	291	12AL5			D	100	D	102		0		0			ja	nein	ja
1	290	12AL5			D	103	D	103		0		0			ja	nein	ja
2	688	12C8			D	590	D	493	P	106		0			ja	nein	ja
3	249	12SG7			P	97		0		0		0			ja	nein	ja
4	243	12SK7			P	103		0		0		0			ja	nein	ja
5	242	12SK7			P	104		0		0		0			ja	nein	ja
6	241	12SR7			D	166	D	156	T	123		0			ja	nein	ja
7	343	2E24	Val		P	100		0		0		0			ja	nein	ja
8	391	4DT6			P	190		0		0		0			ja	nein	ja
9	852	5591			P	140		0		0		0			ja	nein	ja
10	848	5654			P	81		0		0		0			ja	nein	ja
11	849	5654			P	126		0		0		0			ja	nein	ja
12	490	5687			T	117	T	117		0		0			ja	nein	ja
13	491	5687			T	119	T	113		0		0			ja	nein	ja
14	492	5687			T	93	T	100		0		0			ja	nein	ja
15	561	5963			T	94	T	89		0		0			ja	nein	ja
16	198	5U4GA	CSF	nos	D	179	D	178		0		0			ja	ja	ja
17	326	6AS6			P	69		0		0		0			ja	nein	ja
18	207	6AS7G			T	117	T	135		0		0			ja	nein	ja
19	850	6CS6			H	85		0		0		0			ja	nein	ja
20	581	6DG6GT			P	116		0		0		0			ja	nein	ja
21	583	6DG6GT			P	111		0		0		0			ja	nein	ja
22	585	6DG6GT			P	102		0		0		0			ja	nein	ja

Position the cursor to the input field and scan the bar code (or enter the character string with the keyboard)

➔ The data set of the tube with the respective #ID will be selected automatically from the tube stock data base

Tube data database

Abfrage (selektieren/sortieren) gespeicherte Abfrage: RoeTest alle.dba suche Vergleichsröhren K

suche Name:

Index	Röhrenbezeichnung	siehe Vergleichstyp	Bemerkung	getestet	Jahr
0	0,06 - Metal	A409		nein	
1	0,06D - Metal	A415		nein	
2	0,06DG - Metal	A441N		nein	
3	0,1 - USA	01A		nein	
4	0,1A - USA	01A		nein	
5	0,1AA - USA	01A		nein	
6	0.06	RE084		nein	
7	0.06D	RE084		nein	
8	0.06DG	RE074d		nein	
9	00			nein	
10	00A		= F-12A, CE200, UX200A, UX200, H, F12A, 412A, 412, 200A, 200,	nein	192x
11	01			nein	
12	012A - USA	12A		nein	
13	01307	CK1		nein	
14	015/400	RE614		nein	
15	01A	UX201A		nein	192x
16	01AA			nein	
17	01B			nein	
18	0202	KK2		nein	
19	0406	AK2		nein	
20	0407	AK2		nein	
21	0433 - Indiatron	1201		nein	
22	054			nein	

Datensatz: 0 15192 von 15192

neuer Datensatz DS löschen bearbeiten OK

Position the cursor to the input field and scan the bar code (or enter the character string with the keyboard)

➔ A search for the data set of the tube with the respective name is started

Measuring software – Main screen:

The screenshot displays the main interface of the 'RoeTest - professional tube-testing-system' software. The top section features a grid of eight analog-style gauges with digital readouts below them, showing measurements for H-Spannung, A-Spannung, Spannung, G1-Spannung, H-Strom, A-Strom, Strom, and another Spannung. Below the gauges, there are control buttons for 'Stromüberwachung', 'Durchga', 'Heizung nachregeln', and 'Anod'. The 'Röhrendaten:' section shows 'Röhrenname: 12AX7' and '12AX7'. Further down, there are settings for 'Heizspannung [V]: 12,6', 'Heizstrom [A]: 0,15', 'Heizart: indirekt intern DC', and 'Socket: Noval B9A'. A table at the bottom shows 'System' and 'Röhrenart' with checkboxes. A dialog box is overlaid in the center, titled 'lade Messdaten aus tubestock.dbf nach #ID', with an input field for '#ID:' and a 'return' button. A yellow box on the right contains the text '863 = nächste freie ID in Bestandsdatenbank'.

When pressing the **F2**-key an input field will show up. Scan the bar code (or enter the character string with the keyboard)

→ The measured data from the appendix of the tube stock database will be loaded (respective #ID)

Measuring software – Interpretation of characteristic curves – Easy-Match II

Daten individuell hinzufügen | easy-match | **easy-match II** | Ausgabe | Klirrfaktor

Messdaten für Kennlinienaufnahme:

System	1	2	3
UG1-Kennlinien:	UG1/IA		
1: UA [V]	250		
1: UG1 [V] variabel ab	-6,6		
1: UG2 [V]	140		
1: UG3 [V]	0		
2: UA [V]	188		
2: UG1 [V] variabel ab	-6,6		

Hinweis: In die easy-match-Tabelle können nur Röhren mit denselben Messdaten aufgenommen werden.

mehrere Messdaten aus Dateien in easy-match-Tabelle laden

aus Messdatenverzeichnis:

Röhrenbezeichnung: ID ab #: ID bis #:

aus Anlagen der Bestandsdatenbank:

einzel über ID aus Bestandsdatenbank:

#ID:

Scan the bar code (or enter character string with the keyboard)

➔ The measured data from the appendix of the tube stock database will be loaded (respective #ID) and transferred to the Easy-Match-Table (only tubes of the same type can be added for matching – only this action is meaningful here). See also the hints for interpreting characteristic curves – easy-match.

The bar codes generated by the RoeTest software can of course be used by other applications. For example tube suppliers could use them with an inventory management program.

Notes regarding bar code scanners:

Following a picture of a high grade industrial scanner that can read all 1D- and 2D- codes:



There are many different types of scanners available. Brand new 1D-scanners are cheap. Industrial type scanners that can also read 2D- codes often cost several 100€. Sometimes these scanners are available low priced as used parts.

The very old types are often connected between the keyboard and the computer. For those ones no special driver is needed.

Modern types have USB connectors and will be recognized automatically as input devices by Windows. In most cases there are also no special drivers needed.

The most problematic case is the connection of scanners using the serial interface. Modern PCs very often no longer have a serial interface connector. In this case a USB to RS232 adapter must be used and installed first. Then the scanner is connected. As there is no power supply available from the RS232 interface those scanners have a separate power supply unit. To store the scanned codes to the PC's keyboard buffer a special software is needed. For example the freeware software PCWedge (google for it). It is best to install this software so that it will be started automatically when the PC is started.

