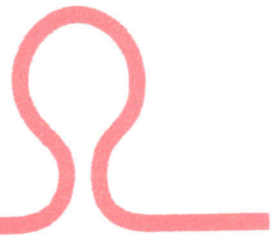


NEW LOCATION:
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D-72417 JUNGINGEN
Tel: +49-7477-1523885


BARTH-TEX Instruments GmbH+Co
Herdweg 2
D- 72411 Bodelshausen
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BARTH-TEX INSTRUMENTS GMBH+CO • HERDWEG 2 • D-72411 BODELSHAUSEN

e-mail: info@barth-tex.de
Internet: www.barth-tex.de

CERTIFICATE OF CALIBRATION

Measurement-Instrument: YLM-Yarn-Length-Meter
Serial-No. 1324.....
Verification in Accordance with EN 10204 (DIN 50049)
Distance to next calibration: 1 year
Material for BARTH-TEX Standardlength: Thread 120 DTEX
71 % Triacetat
29 % Nylon
Temperature: 20 Degreed Celsius
Tension: 3 cN fix
Speed of thread between: 1 and 6 Meter/Second
Measurement of 50 Meter Yarnlength: Average true Length 4958 CM
Calibration Yarnlength-Tolerance: 4953 CM until 4963 CM
Adjusted Lengthfactor: Lf = 1,032.....
Yarnlength compair to average 4958 CM: 4960.....
CALIBRATER:  MONTH / YEAR: Oct. 2016

NEW LOCATION:
BARTH-TEX INSTRUMENTS
IM BINDER 22
72417 JUNGINGEN / GERMANY
Phone: +49-7477-1523885

Geschäftsführer Ing. Peter Barth
Sitz Jungingen AG STGT HRA 381194
Pers. haft. Ges. BARTH-TEX GMBH
Sitz Jungingen AG STGT HRB 381010

Commerzbank Balingen IBAN: DE 43 6534 1204 0123 4822 00
BLZ: 653 412 04 / A.C. NO: 1234822 BIC: COBA DE 33 555
Sparkasse Zollernalb Balingen IBAN: DE 84 6535 1260 0079 1945 76
BLZ: 653 512 60 / A.C. NO: 79194576 BIC: SOI ADF 51 BAI

YLM- Short Instructions:

You received YLM-Handy with turns-sensor for large knitting machines, or with Santoni-cable for Santoni and SanGiacomo machines. YLM is adjusted for measure: CM / REV.

1.press = ON, 2.press = ON illuminated, 3.press = OFF

Turns incoming from **turns-sensor**:

1. Set the red magnet on iron-place of the clothwinder.
2. Set the turns-sensor with blue bracket on a place of the machine-housing, so that he is near touching the red magnet.

The red magnet can near touch the turns-sensor at his circumstance or at his front-side. Switch ON and see constant machinespeed "turns per minute".

This is important, machinespeed rpm must be constant, otherwise the magnet slips and result is wrong.

Turns incoming from **SANTONI-cable**:

3. Connect the machine turns-output and the YLM, switch ON and see constant machinespeed "turns per minute".

4. Now touch the yarn as showed in instructions (turn YLM 180 degreed) look the monitor.

You see every turn of machine the new result YARNLENGTH PER TURN.

After seen 2 or 3 turns constant result, measurement can be finished for the group of same MPF or MER.

5. Switch OFF, otherwise YLM switch automatic OFF after 2 minutes not touched the yarn.

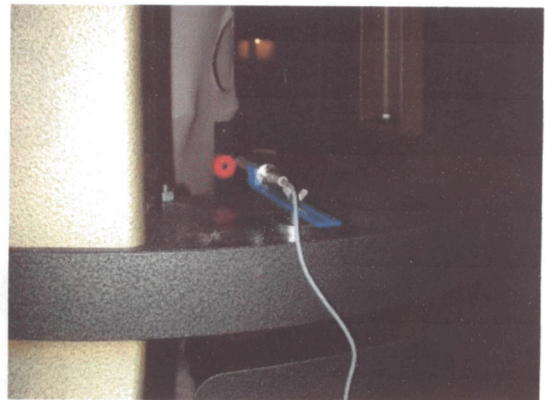
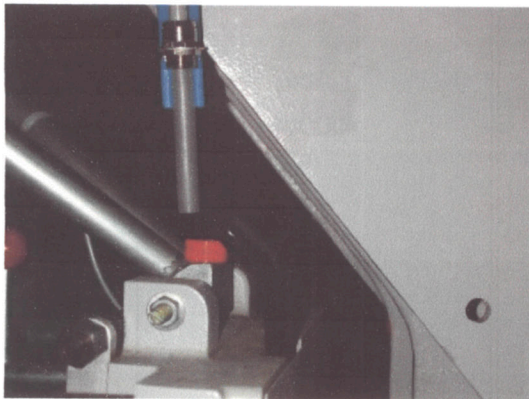
6. For change parameters CM / INCH, Number of turns and CM / INCH per Second (yarnspeed), Lf, see instructions:
FOR AUTHORIZED PERSONS ONLY

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YLM-Handy yarnratemeter for standard- and elastic yarns consumption, measurement:

1. **Machinespeed** in turns per min (Magnetswitch, turnimpulse needed)
2. **Yarnlength** in cm/inch per 1.....10 machineturns (Magnetswitch, turnimpulse needed)
3. **Yarnspeed** in cm/inch per sec. (Magnetswitch, turnimpulse not needed)

MAGNETSWITCH (TURN IMPULS) SETTING



1. STOP THE TURNING KNITTINGMACHINE.
2. Set the red magnet on iron surface of the clothwinder.
3. Set the magnetswitch (grey finger with cable) on the machinehousing. The distance must be **2 to 10 M/M between the red magnet and the magnetswitch's frontpoint or side.**
4. Make sure the first machineturn is slow, do not risk a crash and hold the cable far from turning and moving parts for your own safety!
5. Let the machine run. YLT show machinespeed in turns per minute. Make sure the YLT shows a constant speed, if not, magnet or magnetswitch is not properly fixed.
6. Now you can measure: Touch yarn by turning YLT 180 degrees like turning a key.

BATTERY CHANGING



1. Turn out flatheadscrew M 3 and take care for not loosing the screw.
2. Hold YLM as shown and open the cover as a book. Look at the housinghook on left side.
3. After changing the battery **close the cover: carefully** set its left side into the hook as shown in the middle picture. Close the cover without pressure.
4. Turn back in the flatheadscrew.

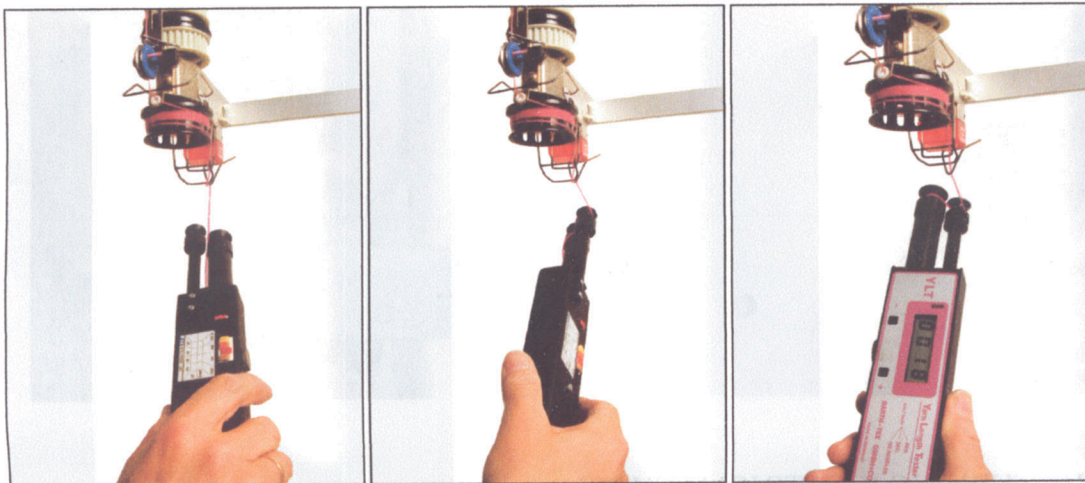
BARTH-TEX GMBH+CO. JUNGINGEN / GERMANY

YLM-Handy Yarnratemeter for **standard-and elastic yarns consumption**

Consumption cm/inch per turn - **yarnspeed** cm/inch per sec - **m/c-speed** turns per min

See pictures how to hold YLM by using for standard-yarns:

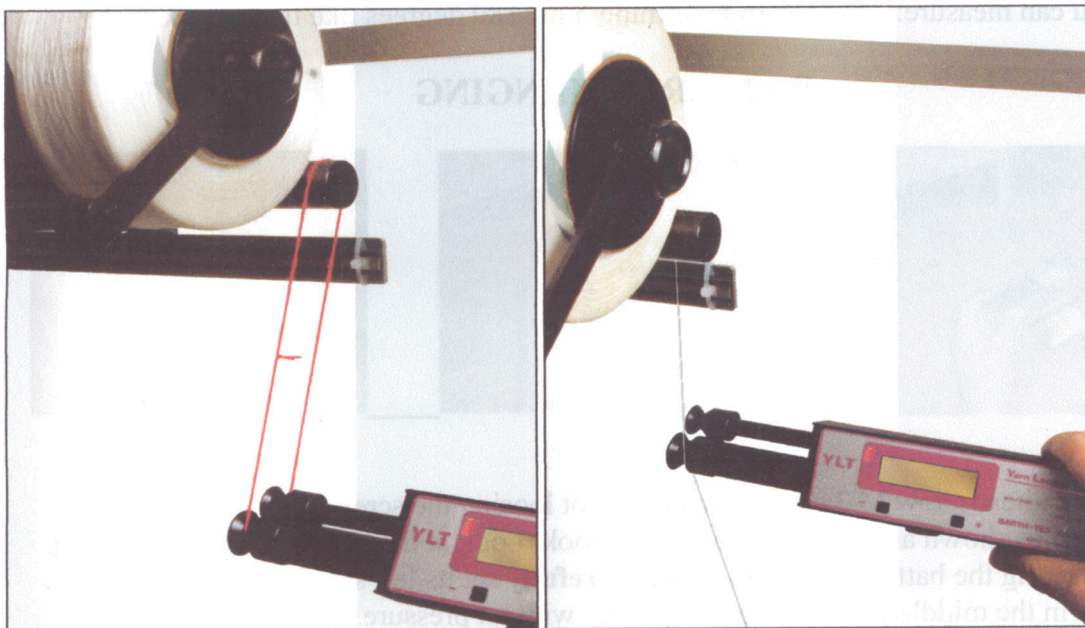
1. Place yarn between both rollers
2. Turn YLT around 180 Grd.
3. Hold calmly during the measurement



See pictures how to hold YLM by using for elastic-yarns:

1. Lycra consumption cm/inch per turn

2. Lycra elongated length before the needles



Example for fabric calculation with 3 yarns.									
Beispiel für die Bestimmung der prozentualen Gewichtsanteile und der ELASTAN-Dehnung mit dem YLM-HANDY Hand-Messgerät für: Fadenlänge pro Maschinenumdrehung (cm/ Umdrehung), Fadengeschwindigkeit (cm/s) und Elastandehnung									
All results are based by measurement values from YLT-Handy. Yarn length per turn in the first row.									
YLM-length measurement	Yarn counts	Weight (1 syst.)	Number of system	Weight all systems	Weight - %				
YLM-Längenmessung	Garnfeinheit	Masse (1 system)	System-anzahl	Masse (alle Systeme)	Masse - %				
M/C-speed									
Yarn 1	Nm 50	50m = 1g	48	5,76	5,76 · 100% =	50,89%			
		6,0m = 0,12g			11,32				
		0,12							
Yarn 2	Nm 40	40m = 1g	48	5,40	5,40 · 100% =	47,71%			
		4,5m = 0,1125g			11,32				
		0,1125							
Yarn 3	44 dtex	10.000m = 44g	24	0,16	0,16 · 100% =	1,40%			
Rollershafft measurement		1,5m = 0,0066g			11,32				
Elastan an der Abrollwalze		0,0066							
				11,32		100,00%			
						Rollengewicht/weight of fabric roll			
						Number of turns per roll:			
Yarn 3						Anzahl der Umdrehungen pro Rolle/turns			
needle input						Weight of roll in kg:			
Elastan before						Rollengewicht in kg:			
Needles						Performance (100%)			
						KILO PER HOUR			
						E = $\frac{l_1 - l_0}{l_0} \cdot 100\% = 113\%$			
						E = $\frac{320-150}{150} \cdot 100\% = 113\%$			

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red = YLM-measurement-results by yarn-touch and runing machine

green values = yarn and corresponding knitting-systems of machine

blue values = calculated results

Adjusting YLM-Lengthfactor Lf

CALIBRATION

FOR AUTHORIZED PERSONS ONLY

1. YLM is a measurement instrument and it should be controlled one time a year.

2. The first calibration-value Lf is showed inside the housing, p.e. 1,033.

3. The function:

During the measurement roll is turning, little magnets give impulses to the counter-sensor in the measurement head. But this is not the real length in cm. Lf is the multiplication factor, to monitoring the real cm or inch, or the translation between number of counted impulses and real yarnlength in cm/inch.

When YLM show too short length, you should increase Lf, otherwise decrease Lf.

4. How to control Lf:

A) You send return the YLM, we calibrate new F.O.C. and we only calculate transport costs.

B) You have more than one YLM. Use one fresh calibrated YLM as your MASTER YLM.

You can compare everytime the difference. 1% difference must be allowed.

C) **First of all the measurement roll must run free.** When you turn it with a needle, you can see, the roll stops immediately or run free some cm/inch more. When the roll do not run free, the axle and bearings must be changed in our factory or try to adjust axial-play.

When your YLM show too short length, the surface can be dirty. You can open the measurement head (1,5 mm key M3 screw). Take care not to loose the measurement roll and clean the rubber surface with the finger. When not OK, new calibration necessary.

When your YLM show too much, the rubber surface has a groove from the yarns. New rubber and new calibration or only new calibration necessary.

5. Change Lf and Save

A) –open the rearside cover, take care not to loose M3 Flatheadscrew.

B) –hold YLM that you see the monitor, touch both keys and hold the battery with a finger.

C) – **YLM is ON, now press both keys 2 sec and you see all adjusted parameters.**

D) - Monitor show [+ / -] for the LEFT KEY and [**OK→**] go ahead for the RIGHT KEY.

E) – Now you go with right key to your parameter and change with left key.

F) – **After changed parameters, press both keys 2 sec for save.**

G) - Monitor shows **OK** and return to normal measurement position.

H) – Otherwise the former parameters are not changed.

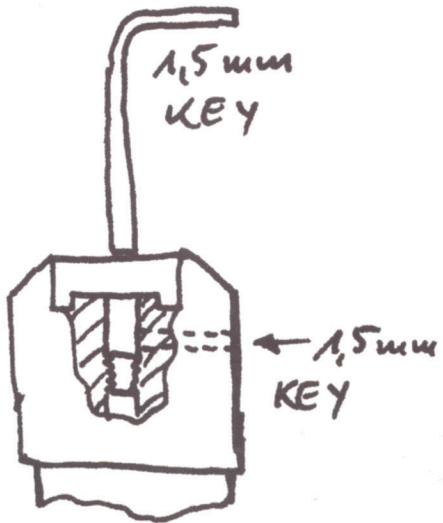
I) - Control and when necessary, change Lf or other parameters and save again.

6. PLEASE NOTE:

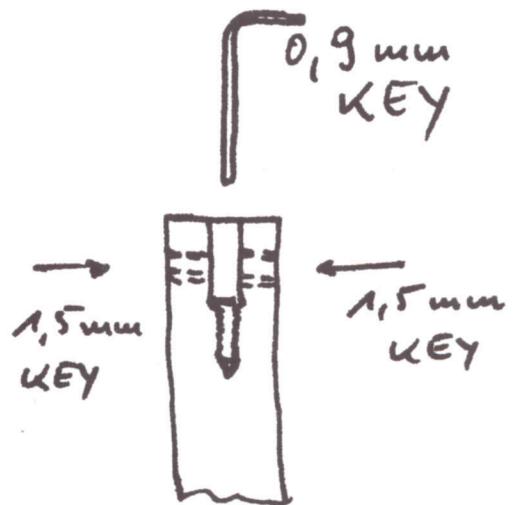
BARTH-TEX GMBH+CO give warranty exclusively for the YLM instrument. We do not responsible for any consequences and damages for disadjusted knitting machine and wrong manufactured fabrics.

Adjust axial play

Measurement roll

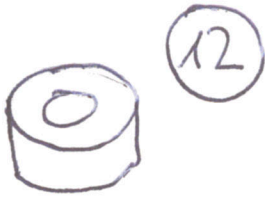


Guide roll



- ① OPEN SIDE SCREW, REMOVE AXLE & ROLL
- ② ADJUST AXIAL SCREW, TURN LEFT → MORE PLAY
TURN RIGHT → REDUCE PLAY

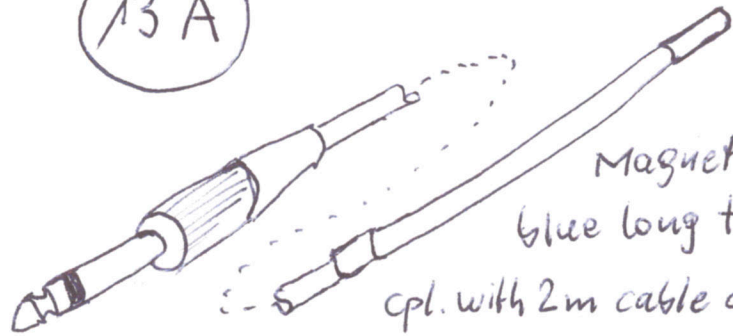
YLM spares



red magnet



Screw M4 brass



Magnetswitch
blue long type $\varnothing 8\text{mm}$

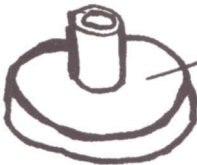
cpl. with 2m cable and plug

UP SER. # 1245 PLUG DIAM. 6,35mm!

14

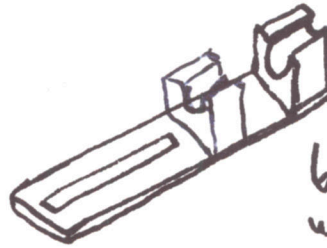


Screw M5
washer



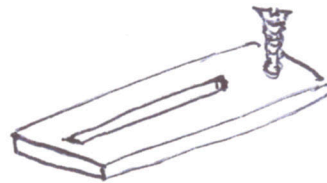
Magnet-
holder

15

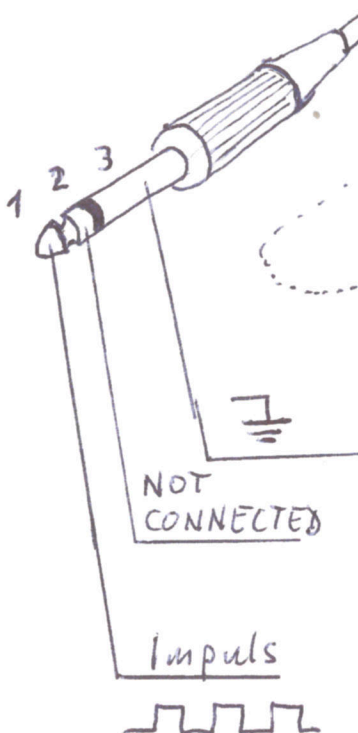


blue bracket cpl.
with plastic & screw

black bracket cpl.
with screw M4 x 16 brass



17



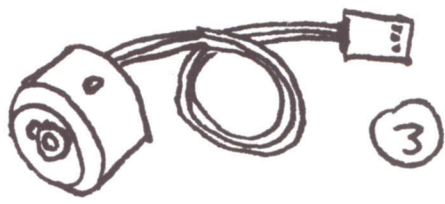

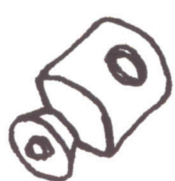
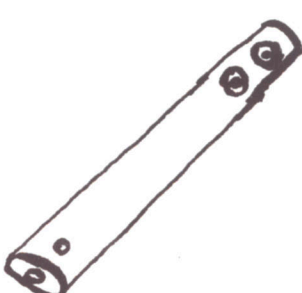
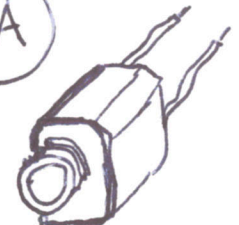
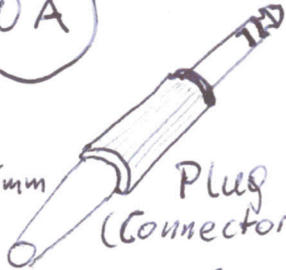
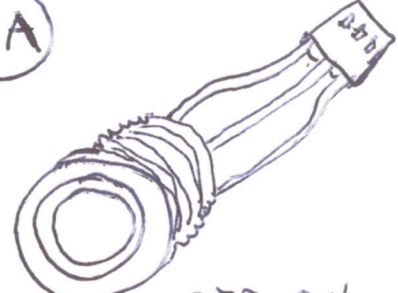



19 A

Santoni-cable cpl.
2m with plugs 6,35mm both sides

YLM SPARES

BARTH-TEX GMBH+CO
GERMANY

<p>①</p>  <p>Measurement-axle cpl.</p>	<p>②</p>  <p>Measurement-wheel cpl. with rubber and bearings and magnets</p>	 <p>③</p> <p>Measurementhead cpl. cpl. with Sensor and screw M3x8 screw M3x4</p>
<p>④</p>  <p>Guideroll-axle cpl.</p>	<p>⑤</p>  <p>Guideroll cpl. with bearings</p>	<p>⑥</p>  <p>Guideroll-support cpl. screw M3x6 (2) screw M3x4 (2) screw M2x8</p>
<p>9A</p>  <p>Socket for turns-impuls $\varnothing 9,35\text{mm}$</p>	<p>10A</p>  <p>9,35mm Plug (connector) for turns-impuls</p>	<p>7A</p>  <p>OFF-ON switch illuminated</p>
 <p>⑪</p> <p>Batterie cable</p>		