

# KARL MAYER

WE CARE ABOUT YOUR FUTURE



WARP KNITTING  
经编机

**HKS 4-M**

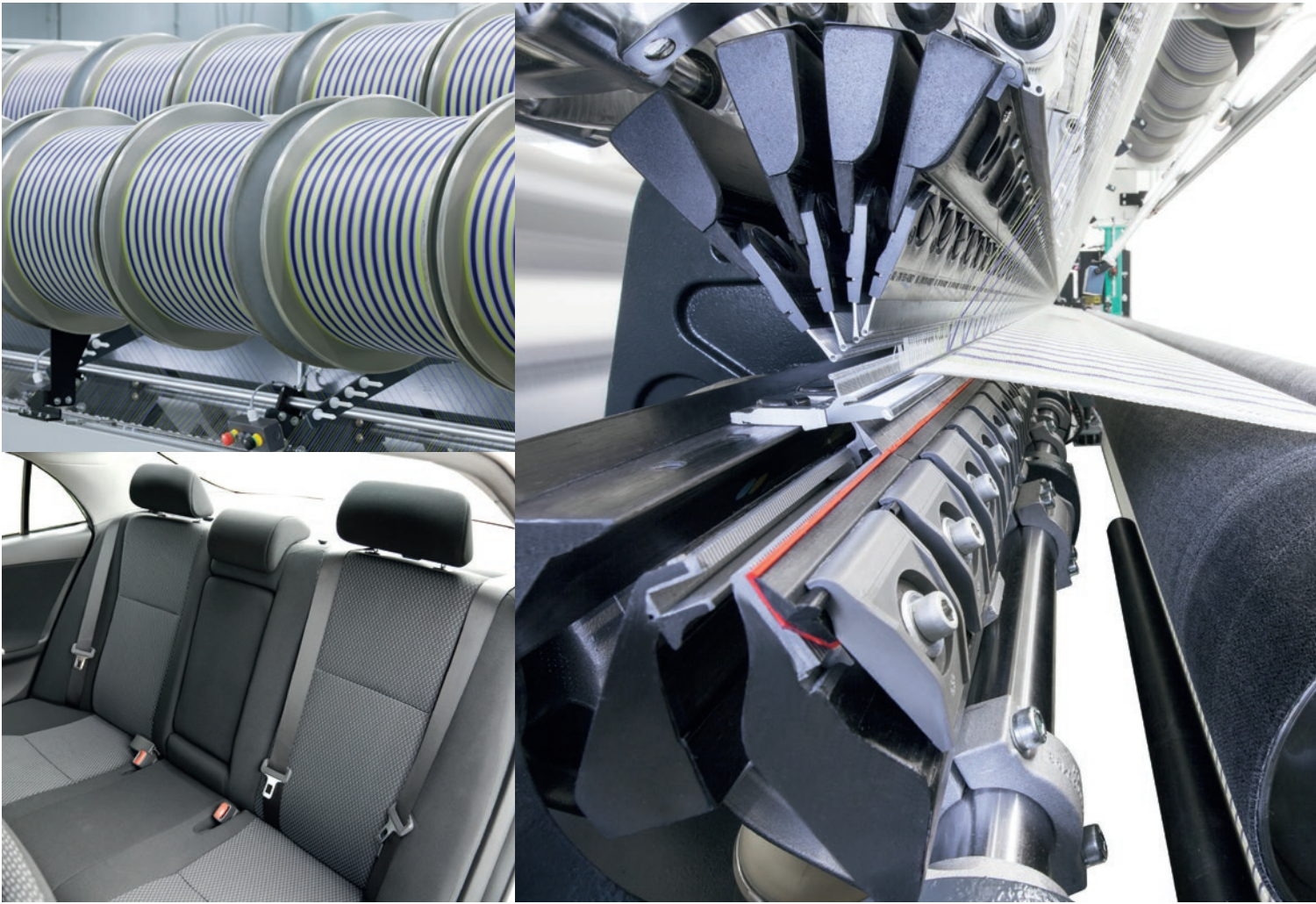
**HKS 4-M EL**

**HKS 4-M-P**

**HKS 4-M-P EL**

The most flexible tricot machine series  
最灵活的特里科经编机系列





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**MAXIMUM FLEXIBILITY COMBINED  
WITH HIGHEST PRODUCTIVITY**

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**兼具最大的灵活性和最高的生产力**

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## Your Benefit – Our Solution

### 您的优势 – 我们的解决方案

## The most flexible tricot machine series

### 最灵活的特里科经编机系列

The huge variety of modern textiles involves the necessity to focus attention on different aspects and certain specific conditions during production. For multiple end uses KARL MAYER offers the most flexible tricot machines: **HKS 4-M and HKS 4-M EL or HKS 4-M-P and HKS 4-M-P EL**. Now we have made the best four-bar tricot machine even better:

- High-performance warp knitting machine to produce all kinds of tricot fabrics
- Most flexible in patterning for multiple end uses
- Twenty-five per cent higher productivity compared to previous model
- Less power consumption thanks to LEO® (Low Energy Option)
- KAMCOS® comes with basic functionality of KARL MAYER CONNECT – the new service app
- Highest operational reliability
- Long service life

现代纺织品的种类繁多, 在生产过程中必须根据产品种类和终端应用制定不同的生产工艺。为了满足多样化终端用途的需求, 卡尔迈耶提供最灵活的特里科经编机系列: **HKS 4-M和HKS 4-M EL, HKS 4-M-P和HKS 4-M-P EL**。我们推出最先进的四梳特里科经编机:

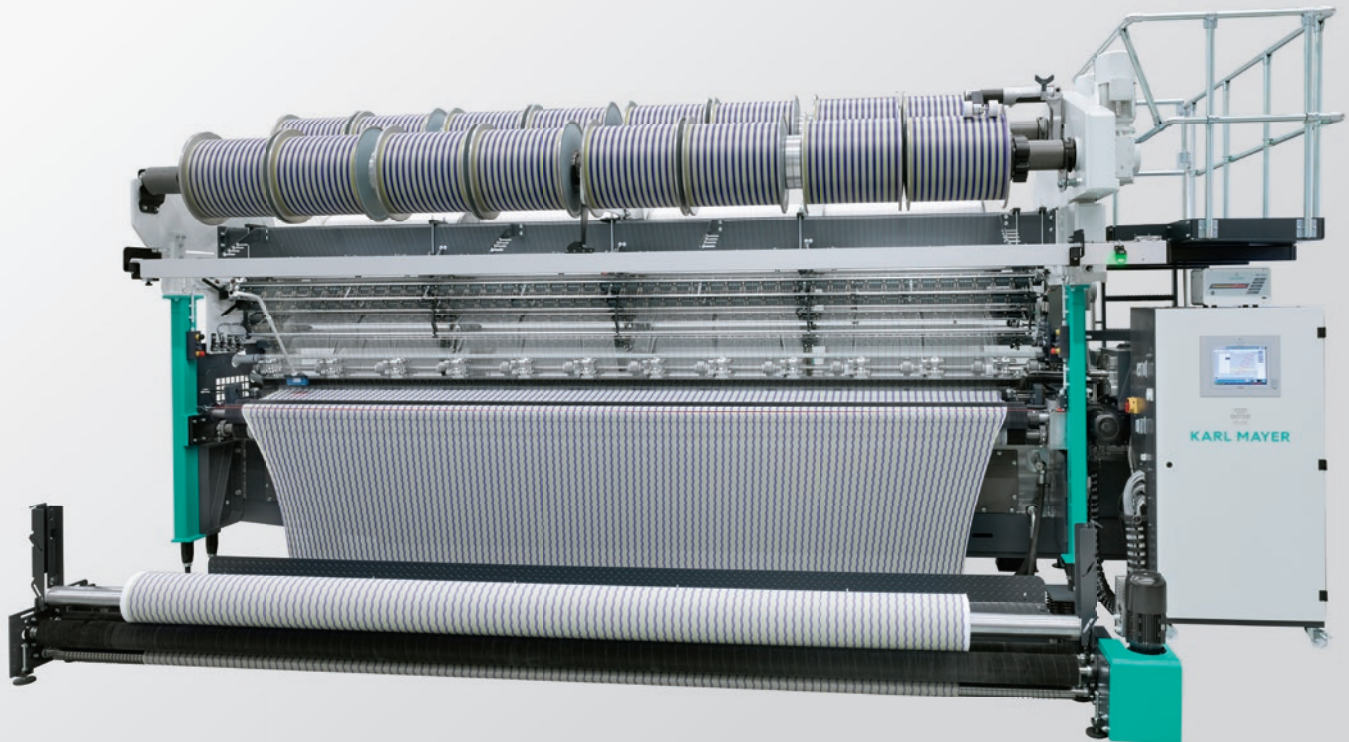
- 高性能经编机可适应所有的特里科面料
- 灵活的产品变换能力, 满足多种终端用途的需求
- 面料产量比旧机型提高了25%
- 历欧®(低能耗) 技术降低了能源损耗
- 卡迈酷斯®包含了卡尔迈耶连线的基本功能 – 移动设备APP
- 优异的操作稳定性
- 较长的使用年限



## HKS 4-M; HKS 4-M EL; HKS 4-M-P; HKS 4-M-P EL

### Machine details and overview

### 机器详情和预览



#### HKS 4-M; HKS 4-M EL

##### The most flexible machine for multiple end uses

- High production output
- High flexibility
- LEO® Low Energy Option
- Easy patterning by EL-drive

#### HKS 4-M; HKS 4-M EL

##### 适应多种终端用途的灵活型经编机

- 较高的面料产量
- 较大的灵活性
- 历欧®低能耗
- EL电子横移让花型变换更简单

#### HKS 4-M-P; HKS 4-M-P EL

##### The flexible version for all sorts of articles including pile fabrics

- Flexible machine for special applications such as pile or very high lapping
- LEO® Low Energy Option
- Easy patterning by EL-drive

#### HKS 4-M-P; HKS 4-M-P EL

##### 能生产各种面料的灵活型经编机，包括毛圈织物

- 满足特殊需求的灵活型经编机，例如生产毛圈织物或实现较大针背横移。
- 历欧®低能耗
- EL电子横移让花型变换更简单



Wide range of applications allows quick reactions to the demands of the market

适合多种应用领域, 能对市场需求作出迅速反应

End uses 终端应用	HKS 4-M (EL)	HKS 4-M-P (EL)
automotive textiles 汽车用纺织品	× <sup>1</sup>	×
upholstery fabrics 内饰织物	× <sup>1</sup>	×
lingerie 内衣	×	×
sportswear 运动装	×	×
shoe fabrics 鞋材	×	×
outerwear 外套	×	×
cleaning textiles 清洁面料	× <sup>1</sup>	×

<sup>1</sup> No pile, only flat fabrics <sup>1</sup>不能形成毛圈, 仅形成平面织物

# HKS 4-M (EL)

## Technical data

### 技术参数

#### Working width / Gauge

3302 mm = 130" (136")\*  
E 18, E 24, E 28, E 32  
4572 mm = 180" (186")\*  
E 18, E 24, E 28, E 32  
5334 mm = 210" (218")\*  
E 18, E 24, E 28, E 32  
\* other gauges on demand

#### Bars / knitting elements

Individual needle bar with compound needles, slider bar with plate slider units (1/2"), sinker bar with compound sinker units, four guide bars with guide units. All bars are made of carbon-fibre-reinforced plastic.

#### LEO®

Low Energy Option

#### KAMCOS®

(KARL MAYER COMMAND SYSTEM)

Operator interface to configure, control and adjust the electronic functionality of the machine

#### Integrated monitoring systems

– Integrated Laserstop

#### Warp beam support

4 × 812 mm (32") (free-standing)  
Option: 4 × 1016 mm (40") (free-standing)

#### Yarn let-off device

Electronically controlled, driven by geared motor  
Sequential let-off device as option

#### Pattern drive

HKS 4-M: N-drive with four pattern disks (two tempi) incl. integrated tempi change gear  
HKS 4-M EL: EL-drive with four electronically controlled motors

#### Take-up device

Electronically controlled, four-roller system in continuous execution, driven by geared motor

#### Batching device

No. 6  
Option: No. 34 A, B

#### Electrical equipment

Speed-regulated main drive incl. inching motion function, power-failure-safe, total connected load  
HKS 4-M: 25 kVA  
HKS 4-M EL: 47 kVA

#### Oil supply

Heating and cooling by means of air heat exchanger, pressure lubrication for crankshaft, oil filter with dirt-monitoring system  
Option: Oil/water heat exchanger

#### 工作门幅/机号

3302 mm=130英寸 (136英寸)\*  
E 18, E 24, E 28, E 32  
4572 mm = 180英寸(186英寸)\*  
E 18, E 24, E 28, E 32  
5334 mm = 210英寸(218英寸)\*  
E 18, E 24, E 28, E 32  
\*其他机号根据实际需求提供

#### 床体/成圈机件

装有复合针的嵌入式针床, 装有针芯块(1/2")的针芯床, 装有复合沉降片的沉降片床, 装有导纱针块的四把梳栉。所有床体均由碳纤维增强塑料制成。

#### 历欧®

低能耗

#### 卡迈酷斯® (卡尔迈耶控制系统)

操作界面, 用于设置、控制和调节机器的电控部分功能

#### 监控系统

– 激光自停装置

#### 经轴架

4 × 812 mm (32英寸) (独立式)  
选配: 4 × 1016 mm (40英寸) (独立式)

#### 送经机构

电子送经, 由电机驱动  
可选配多速送经机构

#### 提花机构

HKS 4-M: 安装4片花盘的N型横移机构(2行程), 包含行程变换齿轮  
HKS 4-M EL: 配备4个电机的EL横移机构

#### 牵拉机构

电子控制, 4罗拉系统连续执行, 由电机驱动

#### 卷取机构

6号卷取机构  
选配: 34 A, 34 B号卷取机构

#### 电子设备

调速主电机, 慢速传动功能, 断电保护, 机器总连接负载

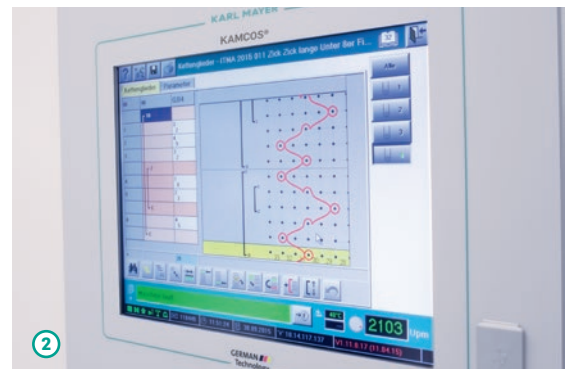
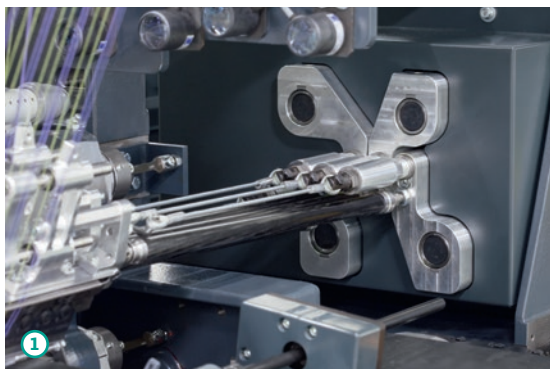
HKS 4-M: 25千伏安  
HKS 4-M EL: 47千伏安

#### 供油

通过空气热交换装置加热和冷却, 曲柄连杆加压润滑, 配备防脏报警过滤器  
选配: 油/水热交换装置

① EL pattern drive  
EL 提花机构

② KAMCOS® with pattern editor  
卡迈酷斯®的垫纱编辑功能





# HKS 4-M-P (EL)

## Technical data

### 技术参数

#### Working width / Gauge

3302 mm = 130" (136")\*

E 28, E 32

4572 mm = 180" (186")\*

E 28

\* Working width extension

#### Bars / knitting elements

Individual needle bar with compound needles, slider bar with plate slider units (1/2"), sinker bar with compound sinker units, pile bar with pile sinkers, four guide bars with guide units. All bars are made of carbon-fibre-reinforced plastic.

#### LEO®

Low Energy Option

#### KAMCOS®

(KARL MAYER COMMAND SYSTEM)

Operator interface to configure, control and adjust the electronic functionality of the machine

#### Integrated monitoring systems

– Integrated Laserstop

#### Warp beam support

4 × 812 mm (32") (free-standing)

Option: 4 × 1016 mm (40")

(free-standing)

#### Yarn let-off device

Electronically controlled, driven by geared motor

Sequential let-off device as

standard

#### Pattern drive

HKS 4-M-P: N-drive with five pattern disks (three tempi) incl. integrated tempi change gear

HKS 4-M-P EL: EL-drive with five electronically controlled motors

#### Take-up device

Electronically controlled, four-roller system in continuous execution, driven by geared motor

#### Batching device

No. 6

Option: No. 34 A, B

#### Electrical equipment

Speed-regulated main drive incl. inching motion function, power-failure-safe, total connected load

HKS 4-M-P: 25 kVA

HKS 4-M-P EL: 47 kVA

#### Oil supply

Heating and cooling by means of air heat exchanger, pressure lubrication for crankshaft, oil filter with dirt-monitoring system

Option: Oil/water heat exchanger

#### 工作门幅/机号

3302 mm=130英寸(136英寸)\*

E 28, E 32

4572 mm = 180英寸(186英寸)\*

E 28

\*加宽的工作门幅

#### 床体/成圈机件

装有复合针的独立针床, 装有针芯块(1/2")的针芯床, 装有复合沉降片的沉降片床, 装有毛圈沉降片的毛圈沉降片床, 装有导纱针块的四把梳栉。所有床体均由碳纤维增强塑料制成。

#### 历欧®

低能耗

#### 卡迈酷斯® (卡尔迈耶控制系统)

操作界面, 用于设置、控制和调节机器的电控部分功能

#### 监控系统

– 激光自停装置

#### 经轴架

4 × 812 mm (32英寸) (独立式)

选配: 4 × 1016 mm (40英寸) (独立式)

#### 送经机构

电子送经, 由电机驱动

标配多速送经机构

#### 提花机构

HKS 4-M-P: 安装5片花盘的N型横移机构(3行程), 包含行程变换齿轮

HKS 4-M-P EL: 配备5个电机的EL横移机构

#### 牵拉机构

电子控制, 4罗拉系统连续执行, 由电机驱动

#### 卷取机构

6号卷取机构

选配: 34 A, 34 B号卷取机构

#### 电子设备

调速主电机, 慢速传动功能, 断电保护, 机器总连接负载

HKS 4-M-P: 25千伏安

HKS 4-M-P EL: 47千伏安

#### 供油

通过空气热交换装置加热和冷却, 曲柄连杆加压润滑, 配备防脏报警过滤器

选配: 油/水热交换装置

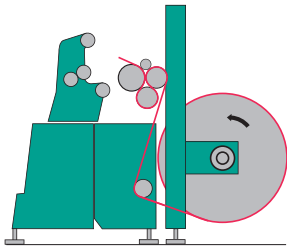
Knitting elements for pile  
含毛圈装置的成圈机件图示



# HKS 4-M (EL); HKS 4-M-P (EL)

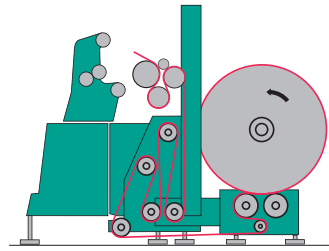
## Batching devices

### 卷取机构



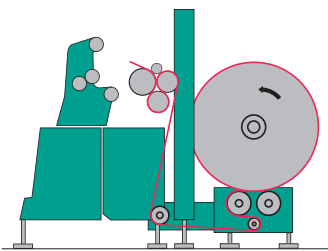
**No. 6**  
Batching device with central drive, with sliding clutch, max. batch diameter of 736 mm (29 inches)

**6号卷取机构**  
轴心传动的卷取机构，带滑动离合器，最大卷装直径为736 mm (29英寸)



**No. 34A**  
Batching device with friction drive, driven by geared motor, regulation to match the stitch courses, relaxation device, spreading roller, fabric edge unrolling appliance, max. batch diameter of 711 mm (28 inches)

**34A号卷取机构**  
摩擦传动的卷取机构，由电机驱动，根据线圈密度大小进行调节，布面松弛装置、扩布辊、防布面卷边装置，最大卷装直径为711mm (28英寸)



**No. 34B / 34E**  
Batching device with friction drive, driven by geared motor, regulation to match the stitch courses

**For 34B:** deflection roller, max. batch diameter of 914 mm (36 inches)

**For 34E:** spreading roller, fabric edge unrolling appliance

**34B, 34E号卷取机构**  
摩擦传动的卷取机构，由电机驱动，根据线圈密度大小进行调节

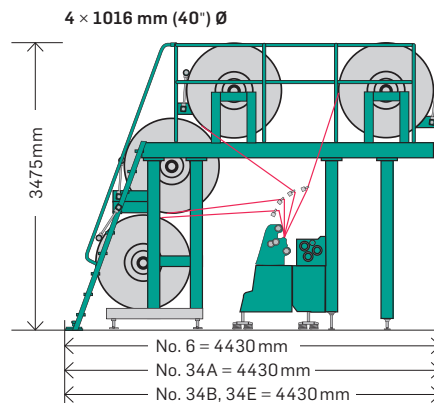
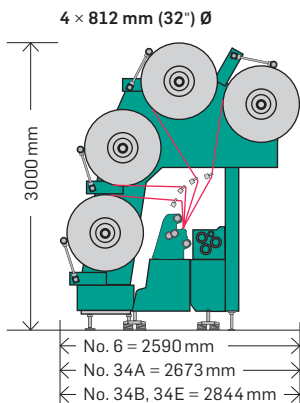
**34B:** 导布辊，最大卷装直径为914mm (36英寸)

**34E:** 扩布辊，防布面卷边装置

## Dimensions and warp beam support

### 尺寸和经轴架

#### Height and depth 高度和纵深



#### Width 宽度

#### Working width 工作门幅

210 inches (218 inches)  
210英寸 (218英寸)

#### Total width without switch cabinet 机器总宽 (不含电柜)

7710 mm

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