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Head Office—Dongguan
- 生产基地——东莞、无锡
Production Base—Dongguan, Wuxi
- 地区性服务中心——印度、土耳其、美国
Regional Service Centre—India, Turkey, USA
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Sales & Service Office
- 研究中心——东莞
R&D Centre—Dongguan

DEKUMA

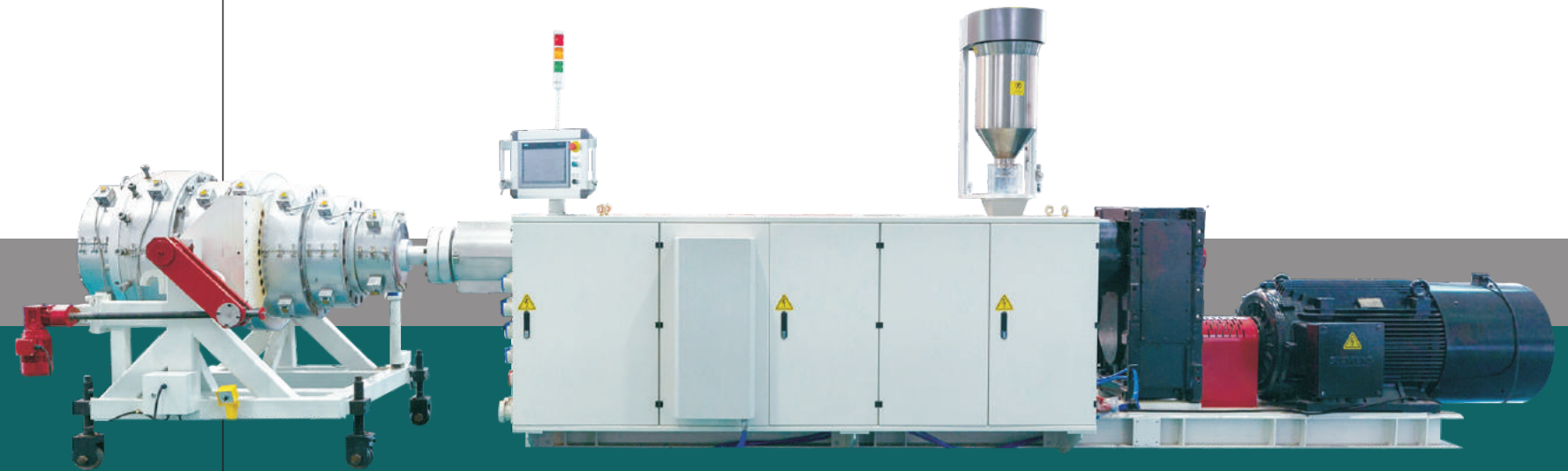
中国高端橡塑机械行业领导者

德国基因, 中国智造

German Technology, Chinese Creation

管材挤出生产线

EXTRUSION LINES



德科摩橡塑科技(东莞)有限公司

DEKUMA RUBBER AND PLASTIC TECHNOLOGY(DONGGUAN)LTD.
(大同机械有限公司成员 Member of Cosmos Machinery Ltd.)

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荣获ISO 9001认证
An ISO 9001 certified company

Version NO: DKME120 E

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PE/PPR 管
PE/PPR PIPE

- 超大PE管，最大管材直径2800mm
Large size PE pipe, up to ϕ 2800mm
- PE/PPR 给水管、热水管、燃气管等
PE/PPR pipe for water and gas
- 各种多层PE/PPR管
Multi-layer PE/PPR pipe



PVC 管
PVC PIPE

- UPVC 给水管、排水管、电线管
UPVC pipe, for portable water, drainage, wire
- CPVC 管
CPVC pipe
- 多层CPVC/UPVC管
Multi-layer CPVC/UPVC pipe



汽车油管
AUTOMOTIVE NYLON TUBING

- 单层/多层尼龙汽车油管
Single/Multi layer nylon tube
- 单层/多层尼龙波纹管
Single/Multi layer corrugated nylon tube



其它管材
OTHER PIPE SOLUTIONS

- PE-RT/PE-X 单层/多层地暖管
Single/Multi layer PE-RT/PE-X floor heating pipe
- 医疗管材
Medical tubing
- 光纤吹装套管
Telecommunication cable microduct.

项目介绍 Project Introduction

德科摩产品秉承欧洲标准，主要部件均由德国工程师主导设计，且所有原材料的选用及加工流程都严格遵循德国标准，从而使德科摩的产品均具有极高的优良性和可靠性。经过20年的发展及经验积累，德科摩已具有一支研发管材挤出生产线的专业团队，40多项国家专利，可提供包括最大为2800mm外径的管材挤出生产线。

目前德科摩的产品已遍布欧美、拉美、中东、东南亚等20多个国家，并在巴西、印度、俄罗斯、哥伦比亚、埃及设有代理，为客户提供售前、售中及售后全方位服务。

DEKUMA products are in compliance with European standard. The design of main components are directed by German engineers, and all materials and manufacturing processes are strictly controlled under the German procedures and quality standards. Thus DEKUMA products are world-wide recognized for their high quality and high reliability. After 20 years of development and experience accumulation, DEKUMA has possessed a professional team for extrusion line R&D, and gained more than 40 patents, it can provide full series products including the biggest dia pipe extrusion line up to 2800mm,

DEKUMA becomes a worldwide famous provider of extrusion line, so far, DEKUMA's products have spread over 20 countries in America, Europe, Latin America, Middle-East, Southeast Asia. DEKUMA already has agents in Brazil, India, Russia, Columbia, Egypt, to supply comprehensive services to customers in the pre-sales, in-sales, and after-sales.



DKM挤出机
Dekuma Extruder **P05-08**

高效率、稳定挤出生产
High efficiency, stable extrusion



控制系统
Control System **P09-10**

整线控制，稳定可靠；可选iSee云监控方案
Stable whole line control, optional iSee cloud



模头
Die Head **P11-12**

多种专利设计，适应不同材料，不同结构的管材生产
Patented design, adaptable for various raw materials



真空定径机
Vacuum Calibration Tank **P13**

快速稳定的真空定径
多种结构，适应从5mm到2800mm的管材生产
Fast and stable vacuum calibration
applicable for 5mm-2800mm pipe diameters



冷却箱
Cooling Tank **P14**

多种结构，适应从5mm到2800mm的管材生产
Applicable for pipe dia. 5mm-2800mm



牵引机
Haul-off Unit **P15**

各履带独立驱动，精确同步，牵引管材稳定生产
Separate drive on each caterpillar
Accurate synchronization, guarantee stable production.

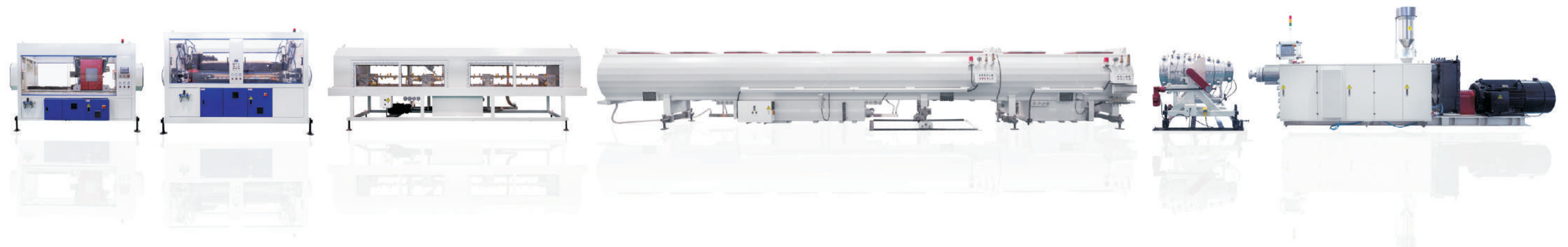


切割机
Cutting Unit **P16**

多种专利设计，
适应不同尺寸不同结构的管材切割。切口光滑平整
Patented design applicable for different structures
smooth cutting



公司简介
Company Profile **P17-18**



单螺杆挤出机 Single Screw Extruder

德科摩所有单螺杆挤出机均采用最新德国DEKUMA挤出技术科技，以保证让它们具有杰出的加工性能。我们每个部件都力求完美以使整机性能更加卓越，DKM单螺杆挤出机螺杆有45、60、75、80、90、100、120及150九种标准直径，有33D/36D两种有效长径比。采用先进的B&R 或SIEMENS模块化控制系统，以实现对整个线的自动化控制和实时数据记录。

优点：

- 产量高，能效高
- 原料适应性广
- 性能持续稳定

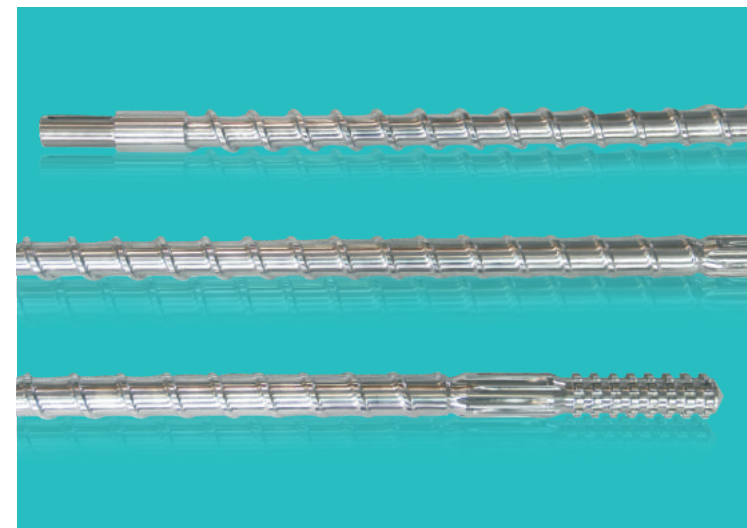
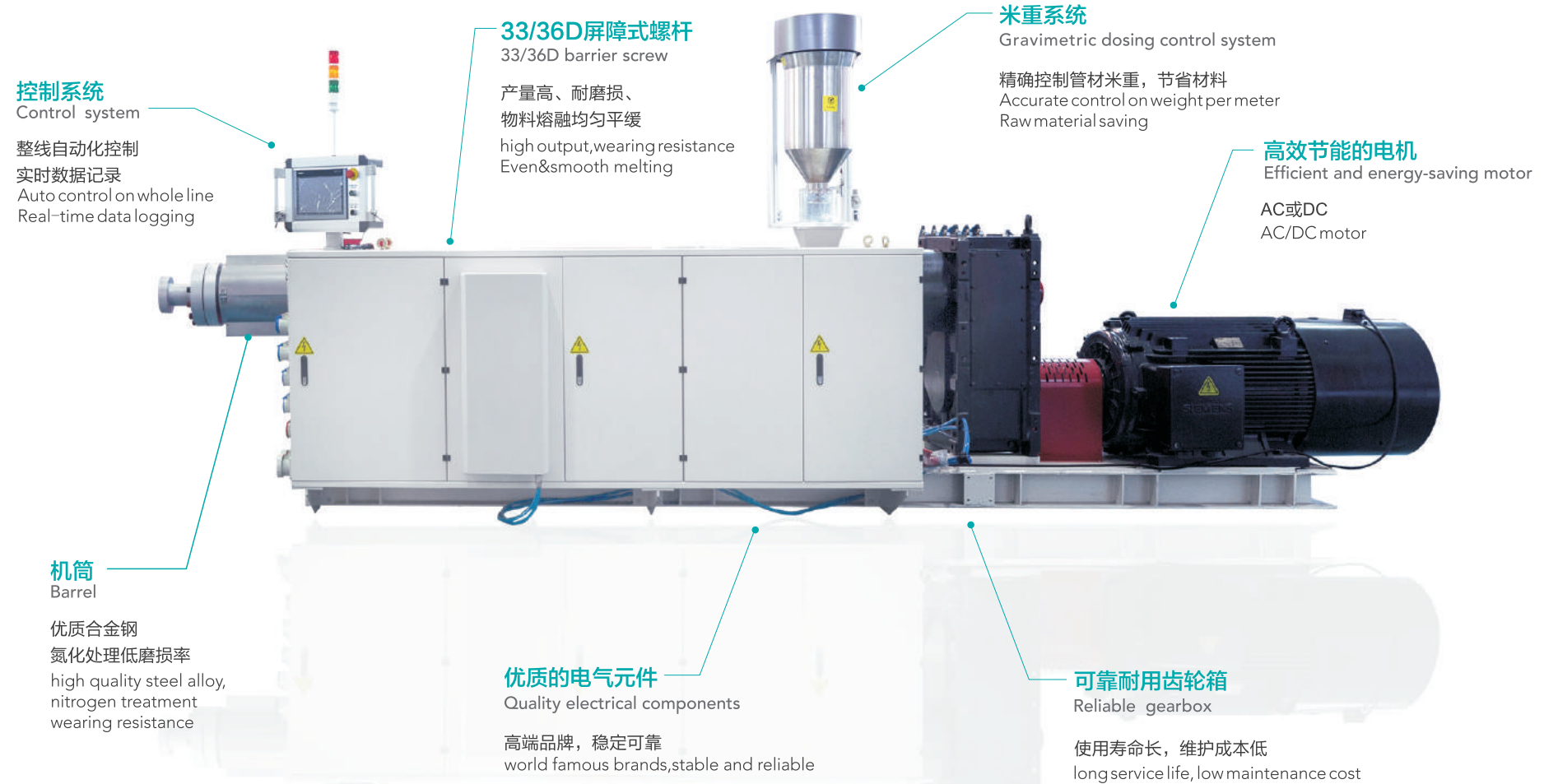
The extrusion line from DEKUMA adopts the latest German technology which guarantees the superior machine performance. DEKUMA strives for the perfection of each single component to optimize the machine performance. DKM single screw extruder provides nine different diameter screws: 45mm, 60mm, 70mm, 75mm, 80mm, 90mm, 100mm, 120mm and 150mm, and two different L/D ratio 33D and 36D. Advanced B&R or SIEMENS modular control system realizes automatic control and real-time data logging of the whole line.

Advantages:

- High output in high energy efficiency
- Wide adaptability of raw materials
- Stable production

单螺杆挤出机技术参数 Technical Data Of Single Screw Extruder

型号 EXTRUDER TYPE	DKM- EI45X33A	DKM- EI60X33A	DKM- EI70X33A	DKM- EI75X36A	DKM- EI80X33A	DKM- EI90X36A	DKM- EI100X33A	DKM- EI120X33A(36)	DKM- EI150X33A(36A)
驱动 DRIVE									
额定驱动功率(kw) Nominal Drive Capacity	45	75(110)	90	160	132	250	200	315(355)	500
最大驱动速度(1/min) Max.Nominal Driving Speed	1500	1500	1500	1500	1500	1500	1500	1500	1500
螺杆 SCREW									
螺杆直径(mm) Screw Diameter	45	60	70	75	80	90	100	120	150
长径比(L/D) Effective Screw Length	30	33(36)	33	36	33	36	33	33(36)	33
最大螺杆转速(1/min) Max. Screw Speed	300	220	180	185	160	155	132	120	95
机筒 BARREL									
加热/冷却段数 No.of heating/cooling zones	4	4	4	4	4	5	5	6	6
机筒加热功率(KW) Barrel Heating Capacity	10	12	18	22	21.2	28	28	38	42
连接体加热功率(KW) Adapter Heating Capacity	1.7	1.75	1.75	1.8	1.8	2.1	2.1	2.8	4
产量 OUTPUT RATE									
HDPE/MDPE(kg/h)	175-200	280(430)	360	650	550	970	800	1100(1350)	1600(2000)
LDPE(kg/h)	160	260(400)	320	600	500	900	800	-	1600(2000)
PP(kg/h)	140	220(320)	360	480	420	700	580	750	1250
PB(kg/h)	70	100	100	-	120	-	215	-	-
PS/ABS(kg/h)	125	150	200	-	250	-	380	-	-
PE-RT(kg/h)	180	260(400)	320	650	500	900	800	1000	-



33/36 L/D 单螺杆挤出机系列

- 高效挤出生产
- 防磨损设计螺杆
- 熔融过程平缓，
- 物料熔融均匀
- 较低的熔体温度

33/36 L/d Single Screw Extruders

- High Output
- Wear-resistant Design
- Even Melting
- Gentle Melting Process
- Low Melt Temperature

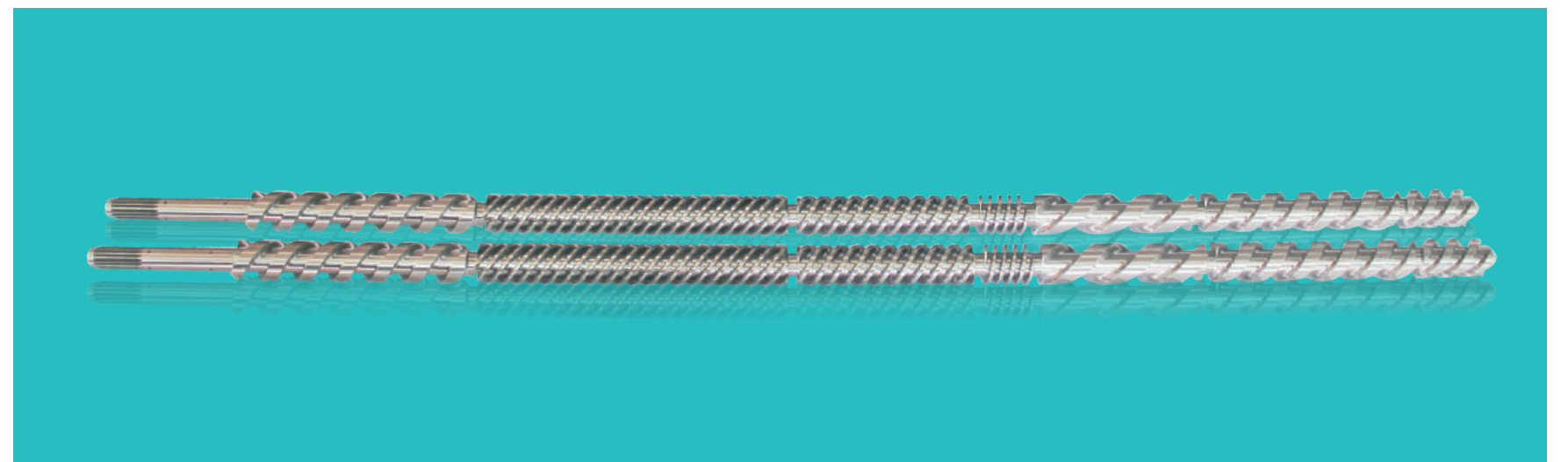
双螺杆挤出机 Twin Screw Extruder

- ▶ 优化设计的整体排气式平行异向双螺杆，可适用于CPVC/UPVC不同配方的原料，同时具备低磨损，低能耗，高效率，均匀稳定等挤出特性；
- ▶ 专业品牌的平双挤出机齿轮箱，稳定耐用，维护成本低；
- ▶ 采用西门子电脑控制系统，实现对整线的自动化控制；
- ▶ 优质电气元件保证系统可靠的控制精度和使用寿命；
- ▶ 性能卓越的温控系统保证挤出机各加热区的温度控制精度，进而保证PVC制品的质量良好；
- ▶ 良好的真空排气系统保证产品挤出过程抽气抽湿效果；
- ▶ 结构良好的机筒水冷、风冷系统确保良好的产品性能。

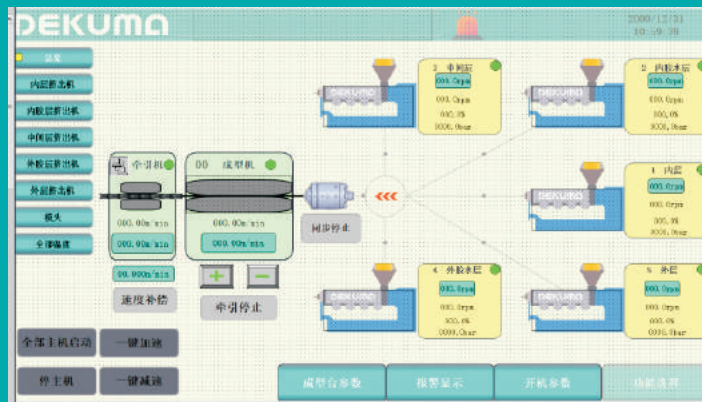
- Optimized design of the ventilating parallel counter-rotating twin screw, can be applied to different formulations of CPVC / UPVC materials. Having the advantages of low wear, low energy consumption, high efficiency, and uniform stability extrusion;
- Professional brand of gearbox for parallel twin screw, stable and durable, low maintenance costs;
- SIEMENS control system, Guarantees the automatic control of whole line;
- High quality electrical components ensure reliable control accuracy and service life;
- The excellent temperature control system guarantees the temperature control precision of each heating zone of the extruder, thus ensuring the good quality of PVC pipe;
- A good vacuum exhaust system ensures the pumping and dehumidifying effect during the extrusion process;
- The well-structured water-cooled, air-cooled system on the barrel ensures good product quality.

双螺杆挤出机技术参数 Technical Data Of Twin Screw Extruder

型号 EXTRUDER TYPE	DKM-EII75x28A	DKM-EII92x28A	DKM-EII107x26A
螺杆直径 Screw Diameter	75mm	92mm	φ107mm
长径比 L/D Ratio	28	28	26
驱动功率 Drive Capacity	45kw	67kw	90kw
最高转速 Max.Screw Speed	45.4rpm	41rpm	36rpm
加热区数 Heating Zones	6zones	6zones	6zones
加热功率 Heating Capacity	45kw	54kw	63kw
风冷功率 Air Cooling Capacity	0.72kw	0.72kw	1.48kw
喂料功率 Feeding Capacity	0.75kw	1.1kw	1.1kw
最大产能 Max.Output	350kg/h	600kg/h	700kg/h
适用原料 Applicable Materials	UPVC/CPVC	UPVC/CPVC	UPVC/CPVC



控制系统 Control system



2专业的通讯方式/professional Communication

整线采用PROFINET通讯，具有开放性、灵活性、高效率和高性能，为接入工业4.0打下基础。
The whole line adopts PROFINET communication, having characters of wide opening, strong flexibility, high efficiency and excellent performance. All are good foundation to Industry 4.0.

3系统的高度集成/perfect Integration

整机系统控制高度集成，主机和牵引机的启/停、加/减速、各类保护及互锁、以及控制全部集成，示意清晰，操作直观便捷。此外，可以对主机和牵引同步加减速，并直观的观察到实时反馈的各项数据等。
The whole line has realized the high level integration. Full integration between extruder and haul-off unit for controls on start/stop, speed up/down, machine protection and interlock. Indication is clear, operation easy and convenient. Besides, Dekuma extruder control system is capable of synchronous control on extruder and haul-off unit speed. And all data by real-time feedback are observable directly in the control system.

1先进的控制系统/advanced Control System

控制系统采用西门子S71200系列PLC，控制面板为西门12寸或19寸精智1280x800像素彩色显示。操作简单、可靠性强、维护性强。

By adopting SIEMENS S7-1200 series PLC and SIEMENS 12 inch or 19 inch LED intelligent touch screen with 1280x800 resolution color display, Dekuma extruder control system has advantages of easy operation, strong reliability and maintenance.

iSee 智能管理云平台 iSee Intelligent management cloud platform



iSee的由来 / The Origin of iSee

iSee4.0智能管理云平台，是CML集团自主研发的计算机软件系统。

The iSee4.0 Intelligent Management Cloud System is self-developed by CML group.

主要功能 / Main functions

收集、分析和监控设备数据，从而让经营决策者能随时随地系统全面地了解机器状态，制定精准的生产计划和公司策略。

The machine data will be collected, analysed and monitored, and the company managerial decision maker can apply the accurate production plant and company strategy after fully gaining the machine status anytime anywhere.

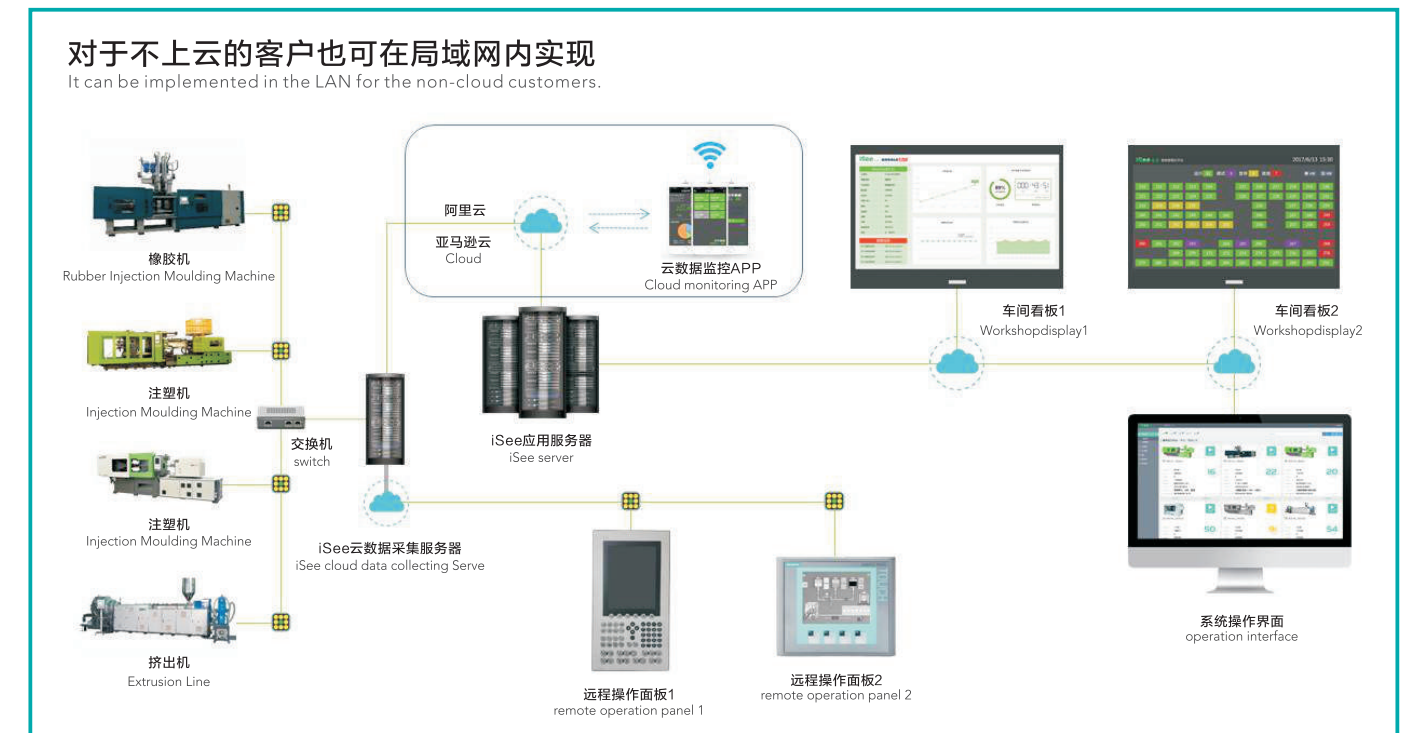
适用范围 / Scope of application

适用任何开放接口的机器。

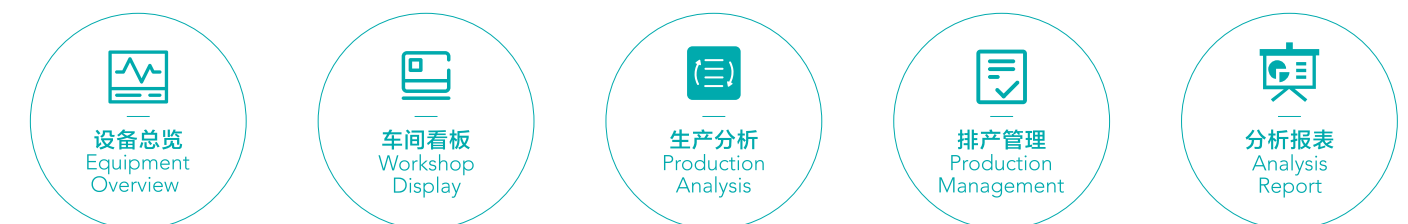
Applicable to any machine of interface access-free.



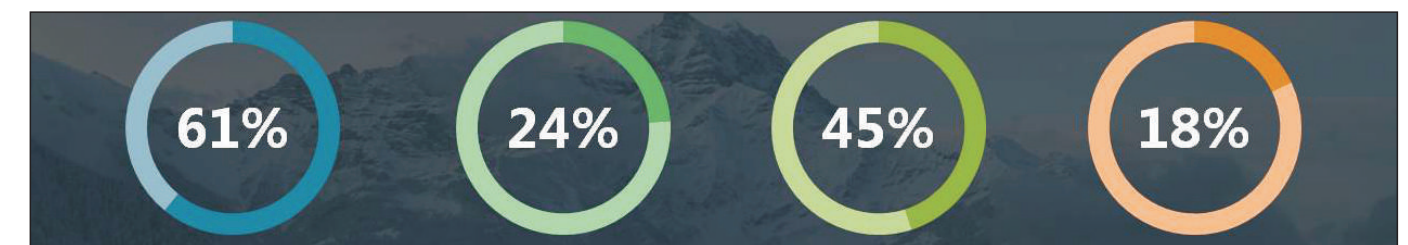
iSee网络架构图 / iSee Network Structure chart



iSee功能模块 / iSee SPC



iSee的投资效益分析 / Investment Benefit Analysis of iSee



减少交班的纸面工作
Reduce paper work on shifts

减少半成品
Reduce semi-finished products

减少制造周期时间
Reduce manufacturing cycle time

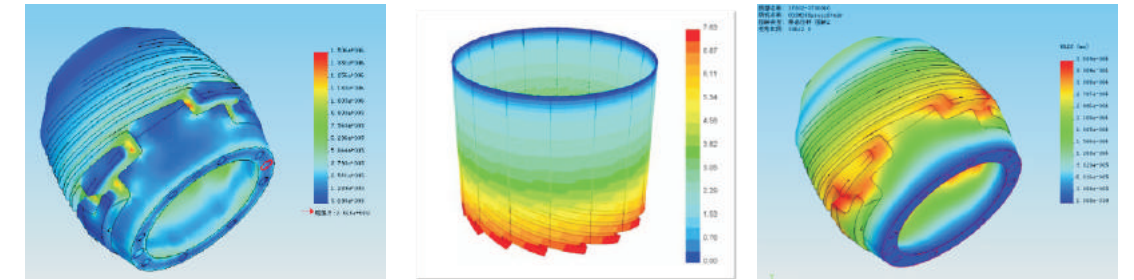
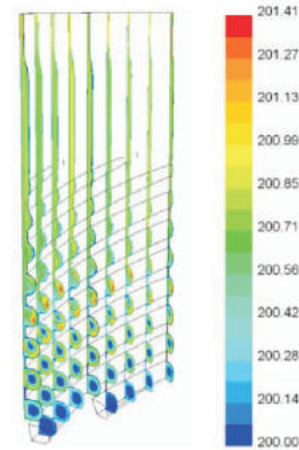
减少产品缺陷
Reduce product defects

挤出模头

DEKUMA-extrusion Die Head

- ▶ 不受物料粘度变化的影响适应于HDPE/MDPE、PERT、PP/PP-R、PPR-FBER、PB、PS/ABS及HMW-PE管材生产，并有极稳定的加工特性；
- ▶ 极低的压力损耗和低熔融体温度下的高挤出量；
- ▶ 较低的熔体压力和熔体温度使管材内应力降至最低；
- ▶ 大容量的顺畅通道确保管材内应力降至最低；
- ▶ 高品质陶瓷加热器使用寿命长；
- ▶ 管材内外表面光滑无划痕。

- Regardless of material viscosity variation, widely applicable for HDPE/MDPE, PERT, PP/PP-R, PPR-FIBER, PB, PS/ABS and HM W-PE pipe production with reliable processing property;
- High output but rather low pressure drop and melt temperature;
- Small pipe stress due to the low melting pressure and temperature;
- Capacious and smooth runner reduces the pipe stress to the minimum;
- High quality ceramic heater with longer service life;
- Pipe with scratch-free smooth surface finishing.



专为DKM系列单螺杆挤出机开发的，DKM篮式模头和篮式螺旋复合模头，与DKM高速真空定型装置配套使用，您能在保证极高产量的同时，获得完美的产品质量，生产最大管径 $\Phi 2800\text{mm}$ 。

The specially designed DKM basket die head and spiral die head for the DKM series single screw extruder fits well with the DKM high speed vacuum calibrator and guarantees the high output with excellent article quality. The max producible pipe diameter is 2800mm.



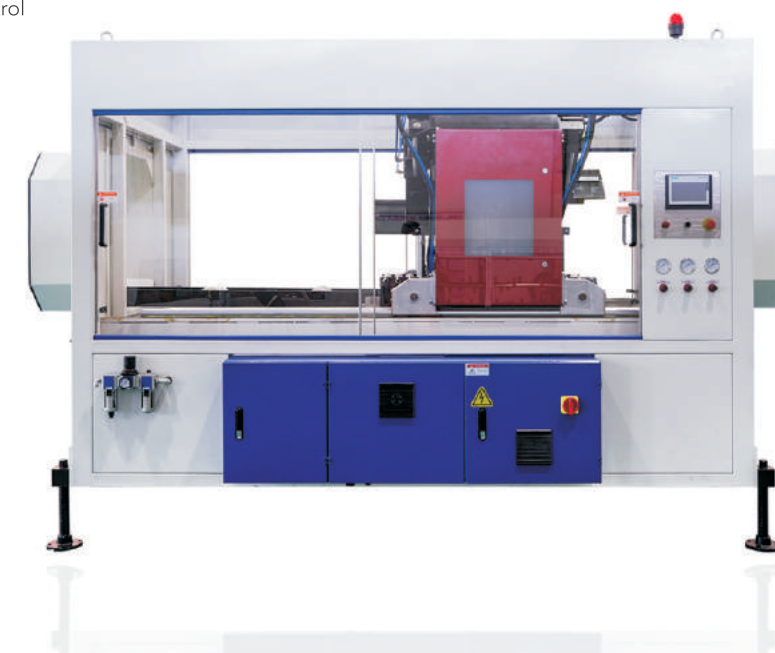
牵引机 Haul-off Unit

- ▶ 履带传动采用交流变频伺服电机精确同步驱动;
 - ▶ 上履带采用气缸柔性加紧,自动适应管材规格变化并与管材保持良好接触压力,下履带根据管材规格电动调节至所需牵引管径位置;
 - ▶ 采用与链条直联的高摩擦系数橡胶块;
 - ▶ 有二、三、四、六、八、十、十二、十六条履带多型号牵引机
 - ▶ 适应管径范围:Φ5-Φ2800mm
- Caterpillar with AC servo motor realizes precise synchronization driving
 - With pneumatic flexible clamping, the upper caterpillar can be adapted per the pipe specification variation and keeps good contact pressure with the pipe; the lower caterpillar can be electrically adjusted to the required haul-off position per the pipe specification
 - High friction rubber pads connects with the chain.
 - Haul-off unit with 2, 3, 4, 6, 8, 10, 12, 16 caterpillars.
 - Applicable for pipe diameter: 5- 2800mm



切割机 Cutting Unit

- ▶ 采用液压浮动进刀方式,特殊结构锯片适合厚壁PO管切割,切口光洁美观;
 - ▶ PVC切割和倒角可以同时进行;
 - ▶ 有锯切割和刀片无屑切割两种形式
 - ▶ PLC控制同步进行;
- Hydraulic fluctuating blade advancing method, special blade/saw structure suitable for cutting pipes of big wall thickness smooth cutting
 - Simultaneous PVC cutting and chamfering
 - Provide saw cutting& swarfless cutting options
 - PLC synchronization control



牵引机参数 Technical Data Of haul- off unit

型号 TYPE	DKM-EQY63	DKM-EQY125	DKM-EQY160	DKM-EQY250	DKM-EQY315	DKM-EQY450	DKM-EQY630	DKM-EQY800	DKM-EQY1200	DKM-EQY1600	DKM-EQY2000
牵引范围 pipe diameter	Φ10-63	Φ20-125	Φ20-160	Φ50-250	Φ75-315	Φ90-450	Φ200-630	Φ280-800	Φ500-1200	Φ710-1600	Φ1200-2000
履带数量(mm) number of caterpillar	2	2	3	3/4	4	4/6	6	8	10	12	16
接触长度(mm) Contact Length	1200	1500	1500	1500	1750	2300	2000	2350	2350	2350	2350
最大牵引力(n) Max.haul-off Force	10000	15000	2000	20000	25000	40000	60000	80000	200000	240000	200000
牵引速度(m/min) Haul-off Speed	0.6-30(125)	0.5-23	0.5-20	0.2-10	0.1-5	0.1-5	0.1-5	0.05-2.5	0.05-1	0.05-1	0.05-1

切割机参数 Technical Data Of cutting unit

型号 TYPE	DKM-EFK32(63)	DKM-EJX63S	DKM-EJX63	DKM-EJX125	DKM-EJX160	DKM-EJX250	DKM-EJX315	DKM-EJX450	DKM-EJX630	DKM-EJX800	DKM-EJX1200	DKM-EJX1600	DKM-EJX2000
最大管径 Max Pipe Diameter	Φ32(63)	2*Φ63	Φ75	Φ125	Φ160	Φ250	Φ315	Φ450	Φ630	Φ800	Φ1200	Φ1600	Φ2000
最小管 Min Pipe Diameter	Φ10	2*Φ10	Φ10	Φ20	Φ20	Φ50	Φ75	Φ90	Φ200	Φ280	Φ500	Φ710	1200
切割功率 Cutting Power	2.2	2*0.4	0.4	1.5	1.5	1.5	2.2	3	3	3	3	4	4
最大切割速度(▲) Max.Cutting Speed	150	2*30	30	23	20	10	8	5	5	2.5	1	0.5	0.5
切割厚度(无屑、锯切) Cutting Thickness(Swarfless/Saw)	6	15/20	15/20	28/30	30/40	30/50	35/60	45/70	65/80	70/100	70/100	70/120	70/120



公司简介 Company profile

中国高端橡塑机械行业领导者

Leading rubber and plastic machinery manufacturer of China

全球知名的橡塑科技方案供应商

在全球，德科摩为顾客提供整套橡胶技术及挤出技术的交钥匙方案。多年来始终专注于橡胶注射成型机、管材挤出生产线、油压机的研发、生产、销售。产品广泛应用于汽车零部件、建筑材料、能源输送、电子通讯等领域。以卓越超前的技术及专业快速的服务，本着为客户创造最大价值的使命，并矢志成为世界橡塑设备方案的领先品牌。

Globally renowned rubber and plastics technology solution supplier

Globally, Dekuma offers customers a complete turnkey solution for rubber injection moulding technology and extrusion technology. For many years, we have been focusing on the development, production and sales of rubber injection moulding machines, pipe extrusion lines and hydraulic presses. Products have been widely used in automotive parts, building materials, energy transportation, telecommunications and other fields. With excellent advanced technology and professional and fast service, we are committed to creating the greatest value for our customers, and we are determined to become the leading brand of rubber and plastic equipment solutions in the world.

秉承德国技术标准，产品精益求精

德科摩产品始终秉承德国技术标准，核心部件均由德国工程师主导设计，且所有原材料的选用及加工流程都严格遵循德国标准，从而使德科摩的产品均具有极高的可靠性及稳定性。经过多年的发展和经验的不断积累，德科摩持续深挖行业专用市场，为客户提供行业定制专用设备。产品的技术、质量与服务均明显领先于国内同行，成为替代进口品牌的品质之选。

Adhering to German technical standards, constantly perfecting products

Dekuma products always adhere to the German technical standards, the core components are designed by German engineers, and all raw materials are selected and processed in strict accordance with German standards, so that Dekuma products have high reliability and stability. After years of development and continuous accumulation of experience, Dekuma continues to dig deep into the industry-specific market to provide customers with customized equipment for the industry. The technology, quality and service of the products are clearly ahead of the Chinese counterparts and become the quality choice for replacing those world famous brands.

德国基因，中国智造

German technology, Chinese creation

产品及服务遍及全球、享誉全球

目前，德科摩已有完善的能满足不同客户需求的各类专家团队，数十项国家专利，并承担多项政府研发公关项目，自2013年起被评为国家高新技术企业。超大型化、高精度、高效、智能化、自动化、专用化是公司各类产品的主要特点及业务发展方向。公司长期与多家国际知名橡塑设备供应商保持良好的合作关系，产品遍布欧美、拉美、中东、东南亚等数十个国家，广泛应用于汽车零部件、建筑材料、能源输送、电子通讯等不同领域，并助力各个行业技术革新及生产工艺的快速发展。我们将紧跟行业趋势与市场变化而不断自我创新，持续为国内外客户提供智能化、自动化、专业化程度更高的整体解决方案，将DKM打造成为值得信赖的世界一流品牌。

Products and services are spreaded and renowned worldwide

At present, Dekuma has a comprehensive team of experts who can meet the needs of different customers, dozens of national patents, and undertake a number of government R&D public relations projects. Since 2013, it has been rated as a national high-tech enterprise. Ultra-large size, high precision, high efficiency, intelligence, automation and specialization are the main features of the company's various products and business development direction. The company has long maintained good cooperative relations with many internationally renowned rubber and plastic equipment suppliers. Its products are distributed in dozens of countries in Europe, America, Latin America, Middle East and Southeast Asia. It is widely used in auto parts, building materials, energy transportation, telecommunications, etc. The field and the rapid development of technological innovation and production processes in various industries. We will continue to innovate in keeping with industry trends and market changes, and continue to provide intelligent, automated and professional solutions to domestic and foreign customers, and build DKM into a world-class brand that can be trusted.

