



ADROIT
TECHNOLOGY

GRADO

GRAVIMETRIC GAIN-IN-WEIGHT BLENDER
WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL



DOTECO
ART OF CONTROL

GRADO ADROIT TECHNOLOGY

GRAVIMETRIC GAIN-IN-WEIGHT BLENDER WITH INTEGRATED GRAVIMETRIC EXTRUSION CONTROL

A new concept of batch blending system, with a quite innovative and original mix of design and technology. GRADO ADROIT is the highest expression of know-how, creative thinking and passion of a leading manufacturer of batch blenders for the plastic extrusion industry, with two decades of experience and more than 10.000 blenders made. Nothing comparable in terms of blending accuracy, higher throughput, easy maintenance and cleaning, modularity, reliability.

GRADO ADROIT is the third generation of GRADO, the batch blender which became a best seller and a master-piece for the plastic extrusion industry.

带有挤出控制功能的称重式混料系统

GRADO ADROIT 是批量式混料系统的新概念，它是一种原创的创新型技术和设计组合。它拥有超过20余年的混料经验，已经生产了超过10,000个混料器，它创新的思维以及作为行业领导企业的责任感，代表了塑料挤出行业的最高水准。无论在混合精度，更高的生产能力，便捷的维护和清洁，模块化，可靠性等任何方面，他都拥有无可比拟的优势

GRADO ADROIT 是 GRADO 批次式混料器系列最新的第三代产品，它是塑料挤出行业的杰作，是最受客户欢迎的产品

ULTIMATE DESIGN & TECHNOLOGY



INGREDIENT CHANGEOVER AND CLEANING HAS NEVER BEEN SO EASY AND QUICK



- spherical mixing chamber with conical bottom part, to guarantee the most efficient mixing action and no residuals to stuck into
- discharge spouts with slide gates
- inclined slide-gate, linked to the drain spout, to guarantee a complete draining of the ingredient, with no residuals to stuck into
- quickly removable slide-gate block for deep cleaning
- 圆球状混料仓保证了高效的混料效率并且无物料残留
- 带滑动门的卸料管道
- 斜插式管道保证迅速彻底的清空物料
- 快速拆卸锁扣可方便进行彻底清洁

With the ADROIT version, we gave GRADO some further characteristics which make it even more unique:

- innovative industrial design
- D.I.Y. modularity to add more ingredients
- improved reliability
- reduced maintenance
- higher & constant throughputs
- improved gravimetric efficiency
- easier cleaning and maintenance

Suitable to be installed in-line, directly on the extruder throat or either on a mezzanine, and also off-line, on a take-off stand to feed one or more extruders.

Available in 4 different sizes: 200, 400, 800 and 1.300 kg/h
Each size is available in **5 models**: from 2 ingredients up to 6 ingredients.

我们为ADROIT曾加了一些新特性以使之更加的与众不同

- 创新的工业设计
- DIY模块可随时增加组分
- 更加良好的可靠性
- 减少维护成本
- 更高更稳定的挤出量
- 更好的称重效率
- 更加便捷的清理及维护

混料器可之间安装在挤出机下料口上，也可安装在夹层之上，亦可安装在离线基座上同时为多个挤出机服务

我们有4种不同型号可供选择：200, 400, 800, 1.300 kg/h
从2组分到6组分，每种型号各有5种模式可供选择

MODULARITY IT'S A FULL MODULAR BLENDER



The "basic machine" (for 2 ingredients) comes already provided with wiring terminals and control box prearranged for upgrading up to 6 ingredients. Upgrading kits include all parts, wires and fittings needed and easy-to-follow instructions. Add more ingredients is a D.I.Y. operation, very easy and quick, with no technical commissioning needed.

基本款（2组分）提前预装有接线端子和控制箱以便将来升级至6组分。升级套件包含所有所需的零部件，线缆，配件以及浅显易懂的说明书。升级过程非常简单，迅速，完全不需要技术调试

INCOMPARABLE ACCURACY AND PRECISION HIGHEST THROUGHPUT IN A SMALL SIZE

- radically improved kinetic of the slide-gate
- innovative techno-polymer flaps
- double lip polymer seals
- vibration dumpers on the weight bin
- last generation electronic B&R-X20
- 彻底改善了阀门的开合动作
- 创新的工程塑料翻板
- 双层树脂密封垫
- 称料斗内装有振动式卸料器
- 最新一代B&R-X20 控制器

give GRADO ADROIT

- the most precise and accurate dosing performances
- the highest gravimetric efficiency
- an incomparable performance of blending accuracy and precision, most probably the best ever seen in a batch blender
- the highest throughput related to the machine size
- higher reliability, i.e. less maintenance and longer life time

- 最精准的送料表现
- 最高的称重效率
- 无与伦比的混料精准性是您见过的最好批次式混料机
- 最高的产出
- 更高的可靠性，例如更少的维护，更长的寿命



DOUBLE ACTION BLENDER

双动式混料

- Gravimetric gain-in-weight blending
- Gravimetric loss-in-weight extrusion control (extruders control and take-off control)

- 称重式混料
- 失重式挤出控制（挤出机及线速度控制）

Batch gain-in-weight blending: ingredients are dosed, in sequence, by a slide-gate valve, and then fed into a gravimetric bin, mounted on load-cells.

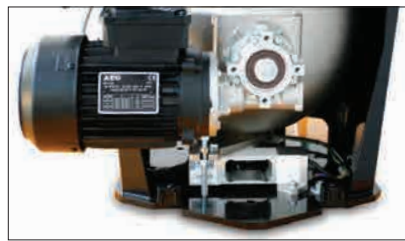
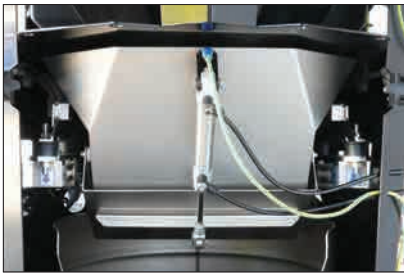
称重式批次混料：每种原料按顺序通过测阀门进入到装有重量传感器的料仓内

GRADO-ADROIT has an internal loss-in-weight mixing chamber, with an hemispheric bottom, installed on load-cells, which continuously weights the material flow into the extruder. The system can measure and control the extrusion throughput or use this value to control the line speed or, as an alternative, perform both functions simultaneously.

GRADO-ADROIT 内置有底部为半球状的混料器，混料器安装在重量传感器上，持续的测量进入挤出机的原料消耗量。系统可以测量并控制挤出量，同时可利用相关数据控制线速度，或者同时控制挤出量及线速度。

With multi-layer lines, each extruder throughput is measured and controlled to maintain a constant layer-to-layer ratio.

在多层挤出线中，系统可以测量并控制每层的挤出量，从而持续稳定保持层间的比例。



INTEGRATED VACUUM LOADING SYSTEM SMARTCONVEY

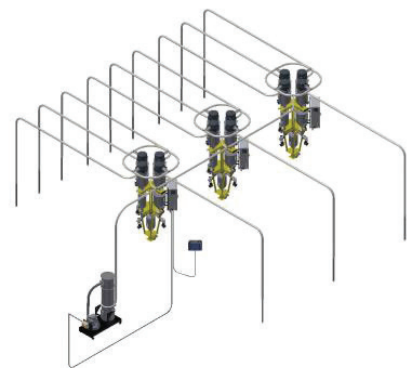
集成真空上料的 智能传输系统 VSMARTCONVEY

Fully automatic vacuum loading system, controlled by the same PLC which controls the blending system and operated by the same HMI. One or more vacuum pumps to serve one or more receivers, whose association can be set through personalized configuration.

由PLC控制的全自动真空上料系统，可提供个性化设置，每个真空泵均可对一个或多个终端提供服务

All receivers linked to one pump are served in turn, according to a priority sequence which is automatically assigned by the control PLC. Changeover Active Control software available, to minimize the ingredients residual quantity at the end of any job order.

PLC会按照优先序列依次为连接到同一真空泵的每个终端提供服务，独有的转换控制软件可以最低限度的降低生产后期的原料残留



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