



XINDA is located in the southern suburb of a scenic city named Jiangyin which is only two-hour drive from Shanghai. Our company is on the Huangtang exit of Xicheng expressway.

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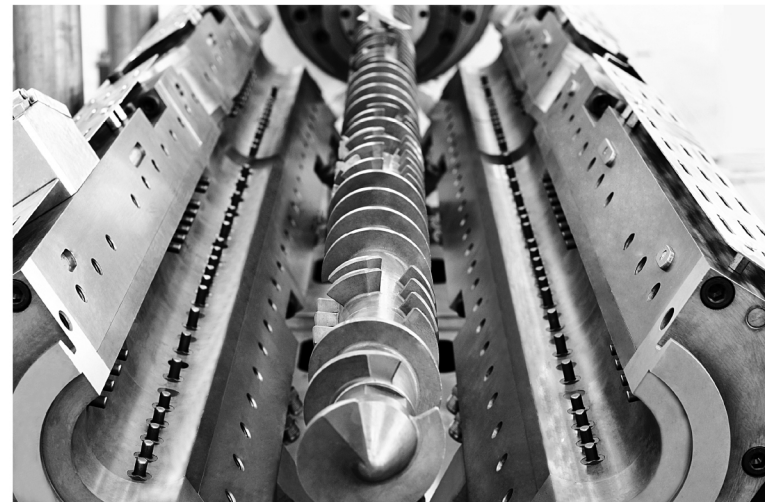
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SKW-126

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SKW 系列往复式混炼挤出机 SKW Series Compounding System

新型四螺片混炼技术
Four-flight Compounding Technology



Jiangsu Xinda Science & Technology Co., Ltd

江苏新达科技有限公司

 **XINDA**
Compounding System

SKW 四螺片往复机组

基于原有三螺片往复机组，新达推出新型四螺片往复式混炼挤出机组。由原有360°圆周三片混炼螺片设计成四片混炼螺片，物料在长径比不变的情况下，剪切次数增加，并且减少了单次剪切所产生的摩擦热。利用往复机独特的工作原理，螺杆在旋转的同时前后往复运动，每旋转一周，前后往复一次。螺杆芯轴上根据不同物料灵活安装组合的混炼螺块与固定于内衬套内的混炼销钉相对运动，使各种配方组分在螺片和销钉之间受到比其它设备更多的剪切和分散混合。往复运动的螺杆使产品受到周而复始的剪切、取向、切割、折叠、拉伸，在轴向往同时也得到高效的分布混合。

Four-flight Compounding System

Based on 3-flight compounding design, XINDA develops latest new technology with 4 flights. The XINDA SKW Kneader each spiral is broken by four gaps per revolution to locate the kneading flights. Four rows of kneading pins, which are individually inserted in the barrel per 90 degree, are intermeshed with these flights. With the same L/D ratio, it achieves more mixing, but less friction heat. The reciprocating wobble-box synchronizes the shaft rotation and oscillation so that each revolution of the screw is accompanied by one full stroke forward and backwards. This ensures optimal distributive and dispersive mixing with minimal energy consumption.

往复式混炼机技术的优点

由于独特的工作原理，往复混炼机系统具有如下优点，这些优点对塑胶配混加工是至关重要的

- > 均匀的剪切效应。
- > 较低的产品温度
- > 准确的温度控制
- > 轴向和径向同时混合
- > 产品停留时间短
- > 高填充的加工能力
- > 液体组分的有效注入
- > 优秀的自洁性能
- > 产品转换时时间短设备使用率高
- > 混炼和造粒工艺可单独优化
- > Lower energy input, lower melt temperatures
- > Extremely homogeneous mixing, no shear spikes, equal treatment of polymer matrix
- > High degree of self-wiping and have no dead spot
- > Dispersive mixing without destroying delicate fillers
- > High volumetric loadings of fillers and additives
- > Efficient blending of liquid components
- > Broad application for compounding without changing hardware
- > Axially opened split barrel guarantees ease of cleaning and fast maintenance
- > Replacement parts, such as screws, barrel lining and pins can be changed individually

新达SKW四螺片往复机组 转速更快、产量更高、混炼更好、能耗更低
XINDA SKW Co-kneader: Higher speed, Bigger capacity, Better mixing, Lower energy consumption

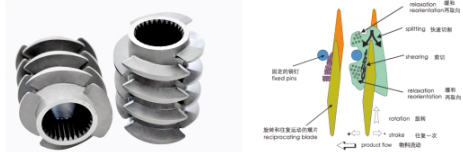


图1 四螺片混炼螺块
Four-flight kneading elements
图2 混炼挤出机的剪切机理
Shear mechanism in the Co-kneader

典型应用

电绝缘料：

- > 低烟无卤阻燃电绝缘料 (HFFR)
- > 半导屏蔽电绝缘料 (交联及非交联型)
- > 硅烷交联电绝缘料
- > 黑色护套电绝缘料

母粒：

- > 高浓度色母粒
- > 炭黑母粒，钛白母粒
- > 无机粉体高填充母粒
- > PET/PP/PA 纤维母粒
- > MIM 粉末冶金喂料

Application

Cable Compounds:

- > HFFR
- > XLPE
- > Semi-conductive insulating
- > Black sheathing

Masterbatches:

- > High concentrated color MB
- > Black and white MB
- > High loaded filler MB
- > PET/PP/PA fiber MB
- > Metal injection molding

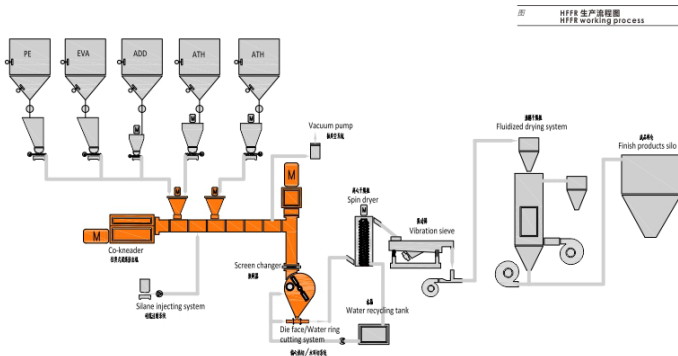


图 HFFR 生产流程图
HFFR working process

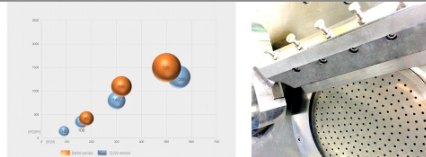


图1 SJW&SKW 比较
Comparison of SJW&SKW
图2 偏心切粒
Eccentric cutting

SKW Serial Four-flight Co-kneader

Model 型号	SKW-85	SKW-105	SKW-125
Co-kneader Screw Diameter 螺杆直径 MM	85	105	125
L/D Ratio 长径比	15-22	15-22	15-22
Max. Screw Speed 螺杆最大转速 RPM	600	600	600
Main Motor Power 主电机功率 KW	110-160	200-280	350-450
Second-stage Screw Diameter 第二阶螺杆直径 MM	150	180	220
Second-stage Screw L/D Ratio 第二阶长径比	7	7	7
Max. Screw Speed 螺杆最大转速 RPM	60	60	60
Second-stage Motor Power 第二阶电机功率 KW	55	75	110

Reference Output 参考产量 KG/HOUR	SKW-85	SKW-105	SKW-125
HFFR Cable Compounds 低烟无卤电绝缘料	200-400	500-800	800-1500
Black sheathing 黑色护套料	200-400	500-800	800-1500
Silane XLPE Cable Compounds 硅烷交联电绝缘料	200-400	500-800	800-1500
High Concentrated Color MB 高浓度色母粒	150-350	400-700	700-1200
Carbon Black MB 炭黑母粒	150-350	400-700	700-1200
High Loaded Filler MB 高填充母粒	200-400	600-1000	900-1600
Fiber MB 纤维母粒	150-350	400-700	700-1200