

中央供料输送专业塑胶辅助设备

Central conveying system area plastic industrial auxiliary equipment

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螺杆式冷水机
Screw chillers



模温机
Mold temperature machine



机边粉粹机
Populist side powder machine



色母机
Machine tools



配料机
Batching machine



中央式吸料机
Central vacuum loader

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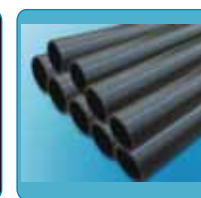
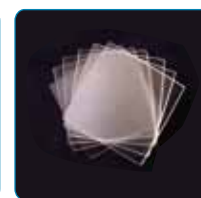
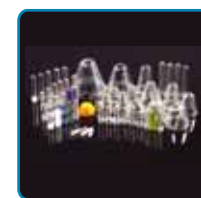
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NIASI[®] 尼嘉斯
▼ Machinery

除湿干燥机系列

DEHUMIDIFYING DRYER SERIES



产品手册
CATALOGUE **2013**

www.niasi.cn

为高分子注入科技
Bring the high technology to high polymer field



料斗式干燥机 Hopper Dryers

1. 采用均匀分散的高性能热风扩散装置，保持塑料干燥温度均匀，提高干燥效率。
 2. 特有热风管弯型设计，可避免粉屑堆积于电热管底引起燃烧。
 3. 采用比例式偏差指示温控器，可精确控制温度。
 4. 有过热保护装置，可减少人为或机械故障所产生之意外。
 5. 外观新颖，外表光亮。
1. Adopt hot air diffuser to keep even hot air flow to improve drying efficiency.
 2. Hot air elbow inlet that can avoid powder piles up to the bottom of the heating pipe and burns on fire.
 3. The hopper and spare parts are made of stainless steel to ensure the plastic not be contaminated.
 4. The drum and hooper are separated and easily to be cleaned.
 5. Adopt proportional deviation temp controller to control the temp precisely.
 6. Overheating protection device reduces accidents.
 7. Innovative design with sleek appearance.

欧化干燥机 “Euro” Hopper Dryers

1. 特有下吹风管设计，能均匀分散热风，落料顺畅，保持塑料干燥，温度稳定，提高干燥效率。
 2. 全数位式 P.I.D. 控制，LED 状态显示。
 3. 外观新颖，外表光亮。
 4. 有过热保护装置，可减少人为或机械故障所产生之意外。
 5. 一周定时自动开关机，以达到省电目的。
 6. 选配高温型时，整机为全保温。
 7. 有欧化吸料盒、欧化型脚架、料斗磁铁、磁力底座、风机入口 过滤器、热风回收器、排风空气滤清器可供选配。
1. Hot air down-blowing design ensures even distribution of hot air Smooth blanking to maintain a steady temperature in the hopper and increase drying efficiency.
 2. Digital P.I.D temperature control with LED display.
 3. Innovative design with sleek appearance.
 4. Overheat protection to ensure reliable operation.
 5. 7 days automatic start/stop timer to improve energy saving level.
 6. Hi temperature type adopts full insulation.
 7. Optional accessories : magnetic base mobile floor. Stand, suction box, hot air recycling, exhaust air filter, blower inlet filter, etc.



技术参数 Specifications

机 型 Model	容量 (kg) Capacity	电热 (kw) Heater	风机 (w) Blower	电源 (v) Power supply	外形尺寸 (cm) Dimension	底座安装尺寸 (cm) Base size	净重 (kg) Weight
NHD-12	12	1.8	50	380/3Φ	64×44×76	11×11×Φ4	22
NHD-25	25	3.5	122	380/3Φ	76×50×104	16×16×Φ6.2	34
NHD-50	50	4.5	157	380/3Φ	87×54×121	16×16×Φ7	45
NHD-75	75	6.5	246	380/3Φ	94×60×131	16×16×Φ7	56
NHD-100	100	6.5	246	380/3Φ	101×70×141	18×18×Φ8	68
NHD-150	150	9	350	380/3Φ	110×74×162	20×20×Φ8.8	78
NHD-200	200	12	350	380/3Φ	118×84×176	23×23×Φ11.5	110
NHD-300	300	15	400	380/3Φ	142×100×183	27.5×27.5×Φ12	152
NHD-400	400	15	400	380/3Φ	148×106×202	27.5×27.5×Φ12	170
NHD-600	600	20	1000	380/3Φ	158×116×240	28×28×Φ13.5	280
NHD-800	800	30	2200	380/3Φ	177×118×254	28×28×Φ13.5	380
NHD-1000	1000	40.8	1100	380/3Φ	192×147×327	28×28×Φ13.5	650
NHD-1500	1500	51	1500	380/3Φ	203×154×385	28×28×Φ13.5	750

注：① 干燥机容量以装载尼龙 6 颗粒状原料的质量为标准；
② NHD-1000、1500 外形尺寸包含了支撑脚架的尺寸；
③ 机器电压规格为：3Φ，380V,50Hz。

产品规格若有变更，恕不另行通知
The specification is subject to change without prior notice.

选购配件 Optional Features



技术参数 Specifications

机 型 Model	干燥电热 Heater (kw)	风 机 Blower (kw)	料桶容量 Material tank (L)	外形尺寸 (mm) Dimension H×W×D	脚架尺寸 (mm) Floor stand H×W×D1	整体高度 Whole Height (mm) H2	排风管 口 径 Inlet Pipe Dia.	出风管 口 径 Outlet Pipe Dia.	风机脚架尺寸 (mm) H3×W3×D3 Blower Stand Dimension	
NHD-20L	2.4	0.135	20	1275×610×470	622×450×470	1275	2 "	2 "	.....	40
NHD-40L	2.4	0.135	40	1280×658×587	725×446×470	1280			.....	45
NHD-80L	4	0.17	80	1534×760×655	725×540×760	1534	2 "	2 "	.....	50
NHD-120L	4	0.17	120	1618×870×700	722×680×700	1618			.....	60
NHD-160L	5.4	0.2	160	1710×922×762	825×680×700	1710	2.5 "	2.5 "	.....	90
NHD-230L	7.2	0.33	230	1860×880×700	722×680×700	1860			.....	100
NHD-300L	10	0.33	300	1860×880×700	722×680×700	1860	3 "	3 "	.....	130
NHD-450L	12	0.41	450	1860×880×700	722×680×700	1860			.....	160
NHD-600L	15	0.41	600	2350×930×1150	970×930×930	2470	3.5 "	3.5 "	.....	200
NHD-750L	20	0.75	750	2350×1250×1040	970×1025×1040	2780			.....	220
NHD-900L	20	0.75	900	2500×1550×1050	970×1030×1030	2900	4 "	4 "	.....	250
NHD-1200L	22	1.5	1200	3230×1680×1160	2900×1160×1160	3230			.....	380
NHD-1500L	36	1.5	1500	3300×1420×1850	3000×1420×1420	3000	5 "	5 "	1210×560×700	495
NHD-2000L	36	2.2	2000	3650×1420×1850	3450×1420×1420	3450			1210×560×700	570
NHD-2500L	48	3.7	2500	4100×1420×1850	3730×1420×1420	3730	6 "	6 "	1210×560×700	620
NHD-3000L	64	5.5	3000	4100×1630×2150	3820×1640×1640	3820			1210×560×700	700
NHD-3500L	64	5.5	3500	4310×1770×1400	1500×1640×1640	4800	8 "	8 "	1400×680×800	785
NHD-4000L	64	5.5	4000	4050×1980×1600	1650×1900×1900	4550			1400×680×800	860
NHD-4500L	80	5.5	4500	4350×1980×1600	1650×1900×1900	4850			1400×680×800	940
NHD-5000L	80	5.5	5000	4650×1980×1600	1650×1900×1900	5150			1400×680×800	1050
NHD-5500L	96	5.5	5500	4950×1980×1600	1650×1900×1900	5450			1400×680×800	1120
NHD-6000L	96	5.5	6000	4350×2220×1800	1650×2100×2100	5100			1450×780×850	1210
NHD-6500L	112	7.5	6500	4600×2220×1800	1850×2100×2100	5350			1450×780×850	1285
NHD-7000L	112	7.5	7000	4850×2220×1800	1850×2100×2100	5600			1450×780×850	1375
NHD-8000L	128	11	8000	5350×2220×1800	1850×2100×2100	5850			1450×860×900	1445

注：① 内桶做抛光处理，机型后面加注 “P”；
② 改为 180℃高温型，加完全保护料桶，机型后面加注 “HT”；
③ 机器净重包含风机，但不包含脚架；
④ 机器电压规格为：3Φ，380V,50Hz。

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蜂巢式除湿机 Dehumidifying Dryer

蜂巢式除湿转轮的优点

The advantages of honeycomb dehumidifying rotor

露点温度稳定

不产生污染，确保塑料品质

- 1、陶瓷基材为吸湿剂所产生流动，脱离或湿流散问题。
- 2、基材与硅胶化学结晶合成，没有浸泡式转轮产生硅胶粉结合力不足而流失之问题。
- 3、改善颗粒分子筛筒式及转盘式除湿机，因分子筛损化后的粉粒随干燥风进入干燥筒的缺点。

吸附面积大，压力损失小

低能源高效率

寿命长，可水洗

转轮基材为无机陶瓷纤维，可耐酸耐碱抗腐蚀，并可耐 1000℃ 高温以防火灾。因吸附剂为长晶成型故可用水或溶剂清洗而性能不减退。平均寿命 10 年以上。

No Pollution, Ensure Plastic Quality

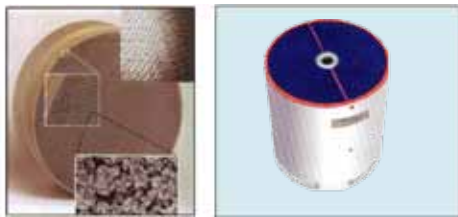
- 1.Ceramic substrate improved the problem of flow, detachment and scattering of dehumidifying capabilities due to the use of LiCl based de-humidifying agent.
- 2.Silicone-based chemical agent prevents the problem of low efficiency as seen in the submerged rotor.
- 3.The new system has improved the defect of having materialized particles sucked by dry air into the dehumidifying drum, as seen in the particles filtered and rotor type dehumidifier.

Large Absorption Surface, Least Pressure Loss

Low Energy Consumption With High Efficiency

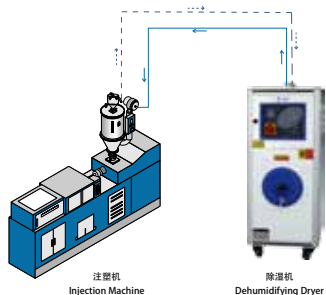
Long life and washable

The rotor is made of ceramic-based fiber, which can withstand high acidic and alkaline level and corrosion, as well as 1000℃ of temperature to prevent fire hazard. Since the agent is in long molecular format, it is washable by water and solvent without affecting its durability. It carries an average life of 10 years.

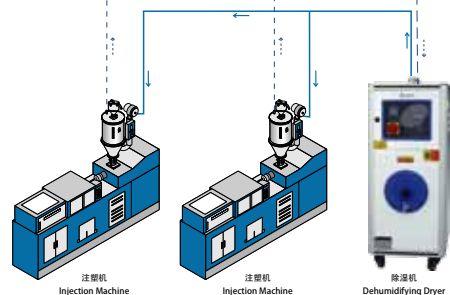


日本霓佳斯蜂巢
Japanese nichias hive

一对一台除湿干燥系统 One to One dehumidifying drying system



一对多台除湿干燥系统 One to many dehumidifying drying system



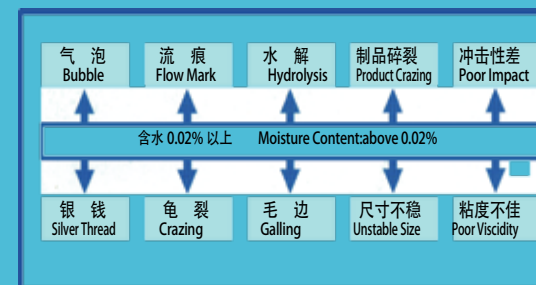
可不可以不使用除湿机？ What if not to use the Dehumidifier?

在塑料加工业中，塑料在塑脂状时极易从空气中吸收水份，也就是说，在贮藏和加工前所吸收的水分会严重影响最终成型产品的质量，如尼龙、聚碳酸酯等等。即便是非吸水性的塑料对表面的湿气污染也很敏感（水分积聚在塑料颗粒表面），所以在加工之前应对塑料进行适当的除湿干燥处理，以保证产品得到最佳的成型效果。

In plastic processing industry, the plastic material can easily absorb moisture from air when it is in resin state. In another word, the the moisture absorbed during the storage and the course of previous processing that can seriously effect the quality of final molded products, e.g. nylon, polycarbonate, etc. Even if the non-bibulous plastic, it is sensitive to moisture pollution (Moisture accumulates at the surface of plastic particles). Therefore, proper dehumidifying treatment before processing is required and necessary to ensure the best molding effect of the product.

不恰当的干燥将导致哪些问题？

What problems will be caused by improper drying?



美国塑胶协会建议成型前塑料须先干燥到 0.02% 以下含水率。

相对湿度 (RH) Relative humidity (RH)
指在特定温度下的水汽压 (Pw) 和饱和水汽压 (Pws) 之比。 $\%RH = \frac{P_w}{P_{ws}} \times 100\%$
Indicating the ratio of water vapor pressure (Pw) to saturation water .vapor pressure (Pws) under specific temperature.

It is recommended by the society of the plastics industry, Inc., USA that plastic before molding must be dried to the moisture content of below 0.02%.

湿度及含水率对照表 Humidity and Moisture Content

含水率 Moisture Content		相对湿度 Relative Humidity	露点温度 Dew Point	
PPM	%	%	℃	°F
38.96	0.0038	0.169	-50	-58
127.50	0.0127	0.553	-40	-40
377.76	0.0377	1.640	-30	-22
1025.00	0.1025	4.440	-20	-4
2573.68	0.2573	11.150	-10	+14
6027.63	0.6027	26.120	0	+32
12117.10	1.2117	52.520	+10	+50
23072.37	2.3072	100.00	+20	+68

露点温度 (Td) Dew point temperature (Td)

指空气中饱和水汽达到饱和状态并在平面表面产生纯液态水时的温度。 Indicating the temperature when the saturation water vapor in the air reaches the saturation state and generates liquid water on the plane surface.

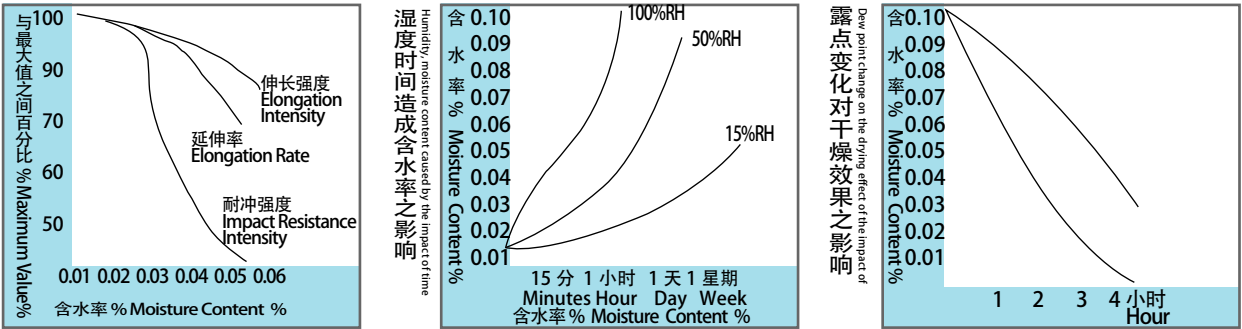
此时 $P_w = P_{ws}$ 的温度，既为露点温度 Td

At this time, $P_w = P_{ws}$ temperature, meaning the dew point temperature (Td)

露点温度越小于环境温度，就意味着越小的结露可能，也就意味着空气越干燥。

The lower temperature of the environment temperature than the dew point temperature, means the less possibility of dew producing, and more dry of the air as well.

含水率物性之影响 The effect of moisture properties

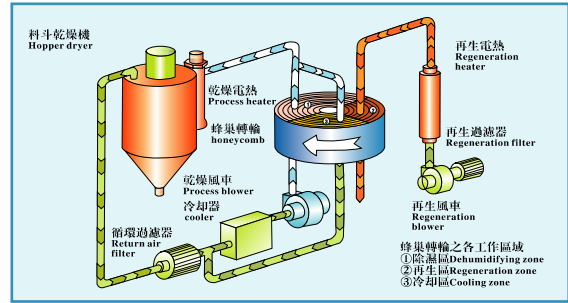


工作原理 Working Principle

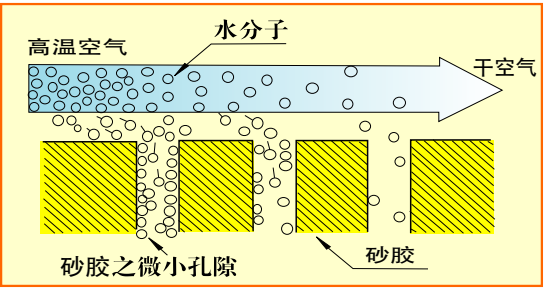
尼嘉斯蜂巢式转轮除湿干燥机系列的核心部件为一不断缓慢转动的蜂巢状除湿转轮，该转轮分为三个区域：除湿区，再生区，冷却区。当需要除湿的潮湿空气进入除湿区域，湿空气中的水分子被转轮中吸湿性矽胶所吸附，从而得到干燥，干燥后的空气经送风机送出供用户使用，随着吸附水份的增加，除湿扇区渐渐越于饱和，在调速马达的驱动下，慢慢转入再生区，开始再生过程；再生空气经加热到 180℃后，反向吹入再生区域，使转轮中吸附的水分子脱出，被风机送出机外，完成再生过程。再生后的扇区恢复了吸湿能力，在调速马达的驱动下，慢慢转入慢冷却区，经除湿侧的干空气冷却后，进入除湿区域进行除湿。上述的除湿、干燥、冷却过程是同时发生的，空气不断被干燥，转轮不断再生，周而复始，从而保证了除湿机持续稳定的工作状态，彻底解决了其他除湿机露点起伏不定，高能耗的缺点。

NIASI honeycomb rotor dehumidifier comprises a slow rotating honeycomb dehumidifying rotor. The honeycomb rotor is divided into dehydration, regeneration and cooling zones. As humid air flows in the dehydration zone,moisture content deposits on the silica gel surface of the rotor, the dry air is delivered by the fan to the outlet. When the dehydration zone becomes saturated, it is slowly rotated by the reduction motor to the regeneration zone. Regeneration air, heated to 180℃ blows in reverse drection and removes the moisture content out of the rotor. The regeneration zone resumes dry condition air. Then it is rotated to the dehydration zone again. This continuous cycle of dehydration, regeneration and cooling makes it possible to create a steady dehumidifying effect which is in great contrast to other uneven and energy consuming processes.

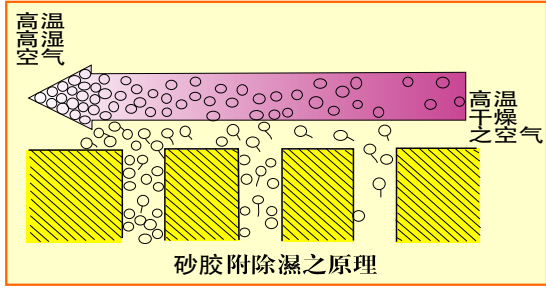
工作流程图 Working Flow Chart



除湿再生之原理 Of Silica Gel Attachment Dehumidifying



▲ 除湿DEHUMIDIFICATION



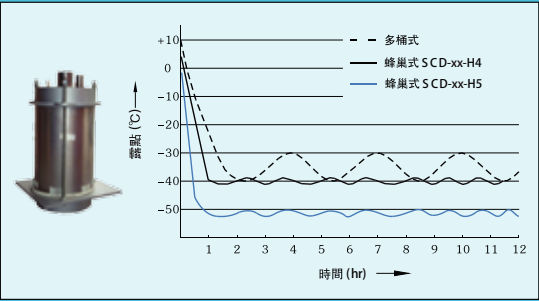
▲ 再生REGENERATION

为高分子注入科技
Bring the high technology to high polymer field

蜂巢式除湿转轮有哪些优点？
What Are The Advantages Of Honeycomb Dehumidifying Rotor?

1. 露点温度稳定
Stable dew point

尼嘉斯系列除湿转轮露点温度曲线在 -40℃以下稳定成一直线，改善颗粒分子筛筒式除湿机及颗粒分子筛转盘式除湿机露点温度曲线不稳定的缺点。
Stable dew point below -40℃ to improve the instability of Dew Point curve of the Particles filter type dehumidifier and Particles filter rotor type dehumidifier.



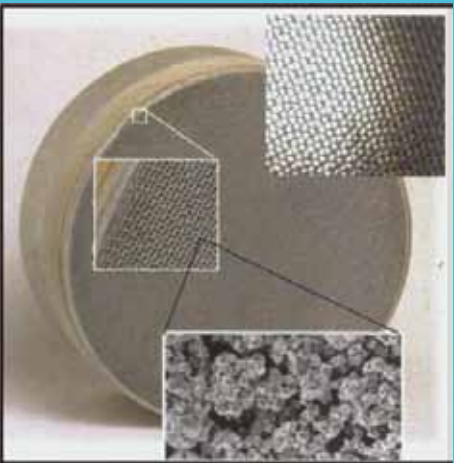
2. 不产生污染，确保塑料品质
No Pollution, Ensure Plastic Quality

1. 陶瓷基材为吸湿剂所产生流动，脱离或湿流散问题。
 2. 基材与硅胶化学结晶合成，没有浸泡式转轮产生硅胶粉结合力不足而流失之问题。
 3. 改善颗粒分子筛筒式及转盘式除湿机，因分子筛阡化后的粉粒随干燥风进入干燥筒的缺点。
1. Ceramic substrate improved the problems of flow, detachment and scattering of dehumidifying capabilities due to the use of LiCl based dehum-idifying agent
 2. Silicone-based chemical agent prevents the problem of lowering efficiency as seen in the submerged rotor.
 3. The new system has improved the defect of having materialized particles sucked by dry air into the dehumidifying drum, as seen in the particles filter and rotor type dehumidifier.



3. 吸附面积大，压力损失小
Large Absorption Surface, Least Pressure Loss

每千克的分子筛吸附面积可达 700m2，蜂巢转轮每立方米推开可达 3000m2，达到最大吸附面积，使除湿机体形变为最小。蜂巢结构具有许多小孔，因此空气可以顺畅通过，无额外负荷产生，不会造成不必要的能源消耗。
Every kilogram of particle filter can provide as much as 700m2 surface; The maximum surface area of honeycomb rotor can reach 3000m2; Thus allowing maximum absorption surface and lesser dehumidifier size. The honeycomb structure comes with a lot of small holes,which may let air get through freely without extra burden on the unit, and improve unwanted energy loss.



4.低能源高效率

Low Energy Consumption With High Efficiency

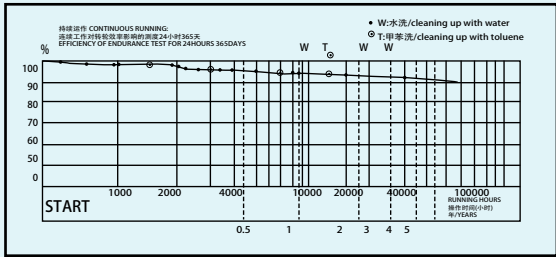
蜂巢型中心厚度 0.22mm，故吸湿和再生脱湿时皆非常快速。再生温度 180℃比传统再生温度 230℃减省 40% 以上能源，比传统的热风干燥节约 2/3 能源。
The thickness of the honeycomb rotor's core is only 0.22mm, So dehumidification and regeneration is very fast. the regeneration temperature 180℃ saves more than 40% energy than the trational regeneration temperature 230℃ and saves 2/3 energy than that of the traditional hot air drying.



5.寿命长，可水洗

Long life and washable

转轮基材为无机陶瓷纤维，可耐酸耐碱抗腐蚀，并可耐 1000℃高温以防火灾。因吸附剂为长晶成型故可用水或溶剂清洗而性能不减退。平均寿命 10 年以上。
The rotor is made of ceramic-based fibre, which can withstand high acidic and alkaline level and corrosion, as well as 1000℃ of temperature to prevent fire hazard.Since the agent is in long molecular format, it is washable by water and solvent without affecting its dura-bility. It carries an average life of 10 years.



技术参数 Specifications

ND 机型 ND model		50	80	120	150	200	300	400	500	700	1000	1500	2000
干燥风量 Drying air capacity	m³/h	50	80	120	150	200	300	400	500	700	1000	1500	2000
干燥风车耗电量 Drying Blower	Kw	0.55	0.75	1.1	1.5	2.2	3.75	5.5	7.5	7.5	7.5	11	20
再生风车耗电量 Regen. Blower	Kw	0.18	0.18	0.25	0.25	0.4	0.75	0.75	1.5	2.2	3.0	3.8	5.5
再生电热耗电量 Regen. Heater	Kw	4	4	4	5.4	5.4	7.2	7.2	10	12	12	20	30
出入口之管径 Diameter of inlet and outlet	Inch	2"	2"	2"	2"	2 1/2"	3"	3"	4"	5"	5"	6"	8"
电压 Voltage	V	220/380/415/440(3Φ)											
宽度 W	mm	570	620	620	620	620	620	1000	1000	1000	1300	1350	1550
深度 D	mm	780	820	820	820	940	940	1300	1300	1300	1400	1450	1650
高度 H	mm	1400	1400	1400	1400	1720	1720	1900	1900	1900	1900	2300	2400
重量 Weight	Kg	150	215	265	272	392	405	575	650	880	880	950	1050

产品规格若有变更，恕不另行通知
The specification is subject to change without prior notice

干燥能力参照表 Specifications for Drying Capacity

原 料 Raw Material	干燥 温度 Drying Temp (℃)	干燥 时间 Drying Time (hr)	比热 Specific Heat (J/kg.℃)	原料 比重 Specific Gravity (kg/dm3)	除湿前 含水率 Before Drying (%)	除湿后 含水率 After Drying (%)	干 燥 能 力 (kg/hr) Drying Capacity														
							ND-30	50	80	120	150	200	300	400	500	700	1000	1500	2000	3000	4000
ABS	80	2-3	0.34	0.6	0.3	0.02	11	18	27	35	71	105	180	210	285	355	425	710	1065	1500	1600
CA	75	2-3	0.5	0.5	1	0.02	9	15	22	30	60	90	150	180	235	295	355	590	885	1200	1330
CAB	75	2-3	0.5	0.5	0.8	0.02	9	15	22	30	60	90	150	180	235	295	355	590	885	1200	1330
CP	75	2-3	0.6	0.6	1	0.02	11	18	27	35	71	106	180	210	235	355	425	710	1060	1500	1600
LCP	150	4	0.6	0.6	0.04	0.02	8	13	20	27	55	80	135	160	210	265	320	530	800	1150	1200
POM	100	2	0.35	0.6	0.2	0.02	16	27	40	53	105	160	265	320	425	530	640	1060	1600	1800	2400
IONOMER	90	3-4	0.55	0.5	0.1	0.04	7	11	17	22	44	66	111	133	177	220	265	442	663	750	1000
PA6/6.6/10	75	4-6	0.4	0.65	1	0.05	6	10	14	19	38	58	96	115	153	192	230	383	575	960	1040
PA11	75	4-5	0.58	0.65	1	0.05	7	12	17	23	46	69	115	138	184	230	275	460	690	780	1150
PA12	75	4-5	0.28	0.65	1	0.05	7	12	17	23	46	69	115	138	184	230	275	460	690	780	1150
PC	120	2-3	0.28	0.7	0.3	0.01	13	21	31	41	83	124	206	250	330	413	495	826	1238	1400	1860
PU	90	2-3	0.45	0.65	0.3	0.02	11	19	29	38	77	115	190	230	307	383	460	767	1150	1530	2080
PBT	130	3-4	0.3-0.5	0.7	0.2	0.02	9	15	23	31	62	93	155	186	248	310	372	620	930	1100	1600
PE	90	1	0.55	0.6	0.01	<0.01	32	53	80	106	212	318	531	637	850	1062	1275	2125	3185	3600	4800
PEI	150	3-4	0.6	0.6	0.25	0.02	8	13	20	27	53	80	133	160	212	265	320	530	800	1030	1370
PET	160	4-6	0.3-0.5	0.85	0.2	0.05	8	13	19	25	50	75	125	150	200	250	300	500	750	1150	1360
PETG	70	3-4	0.6	0.6	0.5	0.02	8	13	20	27	53	80	133	160	212	265	320	530	800	1030	1370
PEN	170	5	0.85	0.85	0.1	0.05	9	15	23	30	60	90	150	180	240	300	360	600	900	1150	1360
PES	150	4	0.7	0.7	0.8	0.02	9	15	23	30	60	90	150	180	240	630	360	600	900	1050	1400
PMMA	80	3	0.65	0.65	0.5	0.02	11	19	29	38	77	115	190	230	310	385	460	765	1150	1530	1730
PPO	110	1-2	0.4	0.5	0.1	0.04	13	22	33	44	88	133	220	265	355	440	530	885	1330	1730	2660
PPS	150	3-4	0.6	0.6	0.1	0.02	8	13	20	27	53	80	133	160	212	265	320	530	800	1030	1370
PU	120	2	0.27	0.6	0.4	0.02	16	27	40	53	105	160	265	320	425	530	640	1060	1600	1800	2400
PP	90	1	0.46	0.5	0.1	0.02	26	44	66	88	180	265	442	530	710	885	1060	1770	2655	3500	4000
PS(GP)	80	1	0.28	0.5	0.1	0.02	26	44	66	88	180	265	442	531	708	885	1062	1770	2655	3500	4000
PSU	120	3-4	0.31	0.65	0.3	0.02	8	14	22	29	60	85	145	173	230	290	345	575	865	1300	1485
PVC	70	1-2	0.2	0.5	0.1	0.02	13	22	33	44	90	135	220	265	355	442	530	885	1330	1730	2660
PAN(AS)	80	1-2	0.32	0.5	0.1	0.05	13	22	33	44	90	135	220	265	355	442	530	885	1330	1730	2660
TPE	110	3	0.7	0.7	0.1	0.02	13	20	30	40	85	125	205	250	330	413	495	826	1238	1650	1860

☆如何选择所需之除湿机的机型：为达到最佳效率，请取干燥能力表的 80%，对照所需的原料及干燥能力，即可寻得正确的机型
例如：欲干燥 80kg/hr 的 PET，则 ND-300 即为适当的选择

产品规格若有变更，恕不另行通知
The specification is subject to change without prior notice

除湿、干燥、送料三合一 Dehumidifying Dryer (3 in 1)



NSD-50/50-1



NSD-200/200-4

说明 Description:

尼嘉斯除湿干燥送料三合一系统集干燥除湿及送料三种功能一体，特别适用于自动化程度高，空间紧凑的场所。全体采用 IC 控制，操作简单，另提供可随时监控机器除湿效果的露点计供选配。近期结合欧化设计的要求，使机器的外形更加美观，性能更稳定，能耗更低。

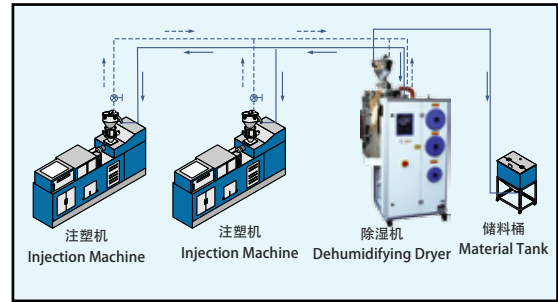
NIASI Dehumidifying Dryer(3 In 1) combines drying, dehumidifying and material delivery function in one frame.It is ideal for automatic production with limited working space.Operation is simple with PLC controller. Dew Point Meter available as optional accessory for instant monitor of dehumidification.The latest design takes up European style with smart profile,stable function and low energy consumption.

产品特点 Features:

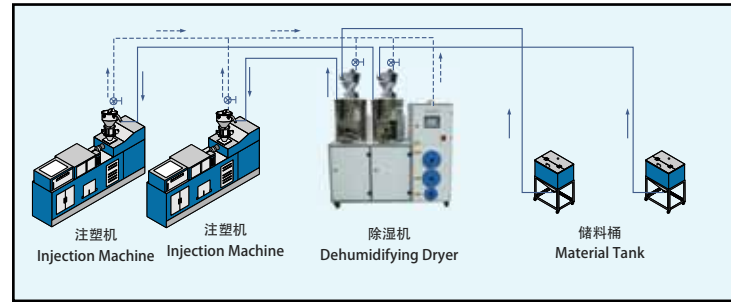
- 1. 自动化程度高，减少操作人员劳动强度；
 - 2. 采用日本陶瓷纤维为基材的蜂巢转轮，除湿效果好，性能稳定可靠；
 - 3. 除湿干燥及送料是独立操作；
 - 4. 干燥温度，再生温度 PID 控制；
 - 5.PLC 触控屏，操作简单，一目了然；
 - 6. 各种完善的保护电路，具有停机延时除湿功能。
- 1. Automatic operation, saves manpower;
 - 2. Adopt SEIBU ceramic fibre core honeycomb rotor from Japan,stable and excellent dehumidification;
 - 3. Dehumidification,drying and material delivery work independently;
 - 4. Drying temperature and regeneration temperature is PID;
 - 5. Control by PLC controller and touchpanel, control easy operation;
 - 6. With various safety protection devices, and stop delay cooling function.

应用实例 Typical Application

(三机一体)一对二除湿干燥系统
(3 In 1) One to two drying system



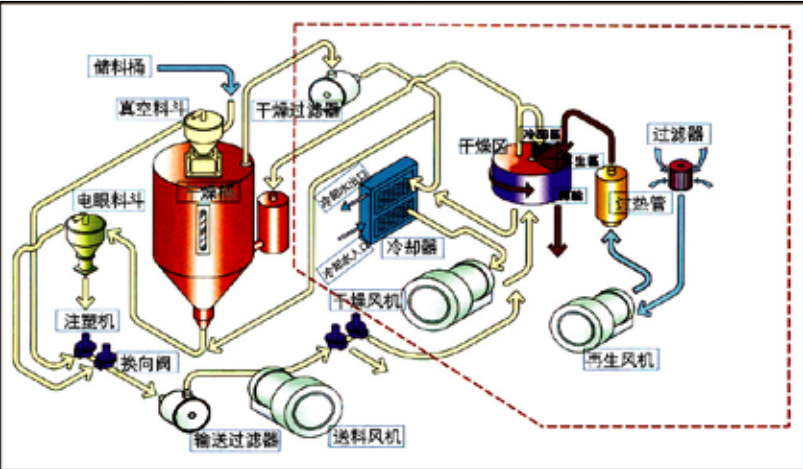
(双色除湿机)一对二除湿干燥系统
(Double dehumidifier)One to two drying system



功能及用途
Function and application

尼嘉斯牌除湿干燥送料组合集干燥、除湿及送料三种功能为一体，特别适用于处理吸湿性很强的塑料。严格控制原料中的水份，是加工高品质塑料制品的关键，本公司采用的是日本霓佳斯陶瓷纤维为基材的蜂巢转轮，干燥空气轻松可达到 -40℃露点，理想情况下更可达到 -50℃甚至更低的露点。露点温度稳定，保证了成形塑料制品的物理性能(强度、硬度、透明度等)。该系列产品实现了自动化，降低操作员劳动强度，节省空间。NIASI 3 in 1 model have 3 functions of dehumidifying, drying and conveying. This model is particularly suitable for highly hygroscopic plastic. Strict control of moisture content in the plastic materials is the key factor of producing high quality plastic products. We adpot Japanese nichias fiber to make the honecomb rotor. The dry air dew point can reach -40℃ easily. Ideally, it can reach -50 degrees Celsius dew point. The dew-point temperature is stable so it can ensure the plastic's physical properties (strength, hardness, transparency, etc.). or even This model is automatic, reduces labor's intensity and save space.

除湿干燥送料结构原理图
Dehumidifying Drying Conveying Structure Principle



技术参数 Specifications

产品规格若有变更，恕不另行通知
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机 型 Model	NSD	25/50	50/50	50/80	75/80	75/120	100/120	100/150	150/150	200/200	300/200	400/300	600/400
保温料桶容量 Insulated Hopper	kg	25	50	50	75	75	100	100	150	200	300	400	600
除湿机风量 Drying Air Capacity	m³/h	50	50	80	80	120	120	150	150	200	200	300	400
干燥风机耗电量 Drying Blower	kw	0.55	0.55	0.55	0.75	0.75	1.1	1.5	1.5	2.2	2.2	3.75	5.5
再生风机耗电量 Regen. Blower	kw	0.18	0.18	0.18	0.18	0.18	0.25	0.25	0.25	0.4	0.4	0.75	0.75
干燥电热耗电量 Drying Heater	kw	4	4	4	4	4	5.4	5.4	5.4	7.2	7.2	18	22
再生电热耗电量 Regen. Heater	kw	2.4	2.4	2.4	2.4	2.4	4	4	4	5.4	5.4	7.2	7.2
送料风机耗电量 Conveying Blower	kw	1.1	1.1	1.1	1.1	1.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5
送料机配管 Conveying Hose Dia.	inch	11/2"	11/2"	11/2"	11/2"	11/2"	11/2"	11/2"	11/2"	11/2"	11/2"	11/2"	11/2"
标准件 1—真空料斗 Vacuum Hopper	L	6L	6L	6L	6L	6L	6L	6L	6L	12L	12L	12L	12L
标准件 1—电眼料斗 Electric Eye Hopper	L	3L	3L	6L	6L	6L	6L	6L	6L	12L	12L	12L	12L
宽 度 W	mm	820	980	980	980	980	1300	1350	1350	1350	1350	2050	2050
深 度 D	mm	620	820	820	820	820	940	1000	1000	1000	1000	1000	1000
高 度 H	mm	1380	1700	1850	1850	1850	1950	2000	2000	2000	2000	2790	2790
重 量 Weight	kg	320	344	375	385	405	442	449	475	560	585	6 35	640

☆除湿干燥机的容量 (kg/hr)≥干燥时间 (hr)
例如：欲干燥 80kg/hr 的 PET，则 80x5=400kg，容量的干燥料斗，即为适当的选择
Capacity of the dehumidifier(kg/hr)≥Drying Time(hr)
Example: For dry the PET of 80kg/hr, Then 80x5=400kg Drying capacity hopper,Shall be an appropriate choice



大型除湿干燥系统 Large dehumidifying drying system



ND-5000

DDS 大型除湿干燥机系统应用于塑胶使用量大且露点要求低的场合。本公司制造的大型除湿干燥系统用于处理 PET 原料时最高可达 8000kg/h。该系统主要包含每小时干燥风量最高 8,000m3 的蜂巢转轮式除湿机及容量高达 10,000L（于装载 PET 时的有效重量为 8,000 kg）的保温式干燥料桶，经由转轮除湿机处理过后的干燥原料最终含水率最高可以达到 0.004% 以下。

When you need to use large quantity of plastic and lower dew-point, you should choose DDS series large dehumidifying drying systems. DDS series' capacity can reach 8000kg/h. This system includes honeycomb rotor dehumidifier(8000m3/h) and insulation hopper (10000L or 8000kg PET). After treatment, the highest rate of dry raw material can reach the final moisture content below 0.004%.

应用行业 Application Area

1. PET, PA 纺丝，片材行业；

2. PET, PLA, PC, PMMA, PS 板材挤出注塑成型行业；

3. PA, CA 挤出行业；

4. TPU 吹膜，流延膜行业；

5. 塑胶原料造粒行业；

6. 海底高压电线电缆行业；
1. PET spinning, sheet industry

2. PET, PLA, PC, PMMA, PS sheet extrusion Injection molding industry

3. PA, CA extrusion industry

4. TPU blown film, cast film industry

5. Plastic materials granulation industry

6. Undersea high-voltage wire and cable industry



NSD-3000/2000-1

PET 结晶机 Crystallization Machine

NCR 型密闭循环干燥结晶机用于持续结晶非结晶化材料，将尚未结晶化的 PET 原料或回收料换成可以直接除湿干燥的结晶原料，可大幅减少购买成本的支出。该系统包括高温加热装置，保温料桶，定速之重载驱动搅拌组件。当未晶相化的 PET 原料或粉碎料进入料斗后，对其进行结晶处理，同时进行搅拌，可防止原料结块并降低产品不良率。结晶后的塑料可以从料斗底部输送到储料桶或直接输送到干燥料桶中干燥后使用。

NCR type of closed loop drying crystallization machine for continuous crystallization of amorphous material, Yet crystallized PET replaced by raw materials or recycled materials can directly dehumidification dry crystalline materials, Can significantly reduce the purchase cost, The system includes a high-temperature heating apparatus, Insulation barrel, The constant speed overloads drive stirring component, When not crystalline phase The PET raw or crushed material into the hopper, Its crystallization process, While stirring, Prevents the raw materials The caking and reduce product defect rate, After crystallization of the plastic may be conveyed from the bottom of the hopper to a storage tank or directly input to the drying drum dried.

本机特点 Proudcts Features:

1. 定速搅拌设计使未结晶之塑料在晶相化的制程温度中不沾结成块；

2. 结晶效率高且均匀；

3. 可以简化并提高原料干燥时的效率；

4. 原料干燥可以在高温下进行，并且干燥过程可以直接使用现有的标准干燥料桶；

5. 制程温度可透过温控器进行准确控制；

6. 增加回收料在 PET 新料中的使用比例；

7. 可搭配除湿机，直接执行除湿作业；

8. 可选配螺旋送料装置定量输出已结晶原料。
1. Constant speed stirring uncrystallized designed so that the plastic does not stick in the temperature of the crystalline phase of the process to form blocks;

2. Crystallization efficiency is high and uniform;

3. It can simplify and improve the efficiency of the raw material drying process;

4. Drying of the raw material can be performed at high temperature, and the drying process can be used directly to the existing standard drying drum;

5. Process temperature can be accurately controlled by thermostat;

6. Increase the proportion of recycled material in the use of new PET material;

7. it is optional of the dehumidifier that can directly perform the dehumidification work.;

8. Optional screw feeding device output the crystallized material quantitatively.



NCR-1600L



NHD-4600L

规格表 Specifications

产品规格若有变更，恕不另行通知
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机 型 Model	NCR-160L	NCR-450L	NCR-900L	NCR-1600L	NCR-2500L
装料量 (kg) Loading capacity	100	300	600	1000	1500
搅拌电机功率 (kW) Mixing motor power	0.25	1.1	1.5	1.5	2.2
风机功率 (kW) Fan Power	0.55	2.2	3	11	15
电热功率 (kW) Electric power	12	24	48	86	134
最大处理量 (kg/hr) Handling capacity	50	150	300	500	750

☆机器电压规格为 :3 ¢ ,400V,50Hz.

PET/PETG /PLA/PMMA/PCCRYSTAL DRYING SYSTEM

PET/PETG/PLA/PMMA/PC

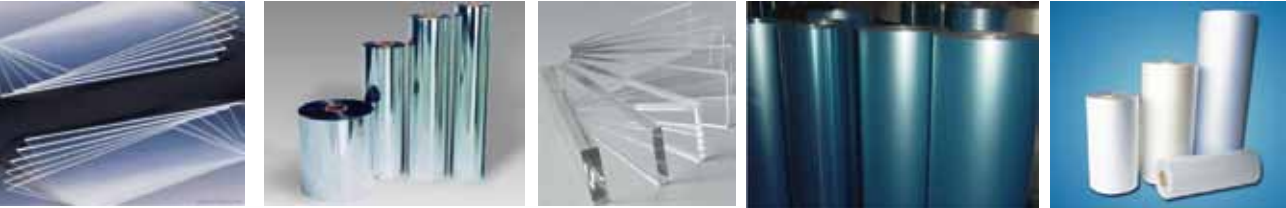
树脂挤出成型结晶干燥系统

尼嘉斯的结晶及干燥系统设备以丰富的干燥技术、程序化的电脑控制技术以高性能的机械技术为基础，高效地解决片材的挤出生产过程中所产生的片材脆化、含水分解、粘度降低、酸性劣化等品质问题。The NIASI crystal&drying system equipment is built on experienced drying technology, programmed computer control and high performance of mechanical technology, which efficiently solves the problems e.g. sheet or piece brittleness, resolve with water, reduce of viscosity and degradation of acid etc. during the plastic extrusion processing course.

尼嘉斯的结晶、干燥系统设备以人性化设计为基础操作使用、保养快捷简便确保挤出生产线连续稳定地提供干燥完成的树脂原料。
The NIASI crystal&drying system equipment with humanized designed which can easy and efficient assure the supply of dried resin material incessantly and steadily.

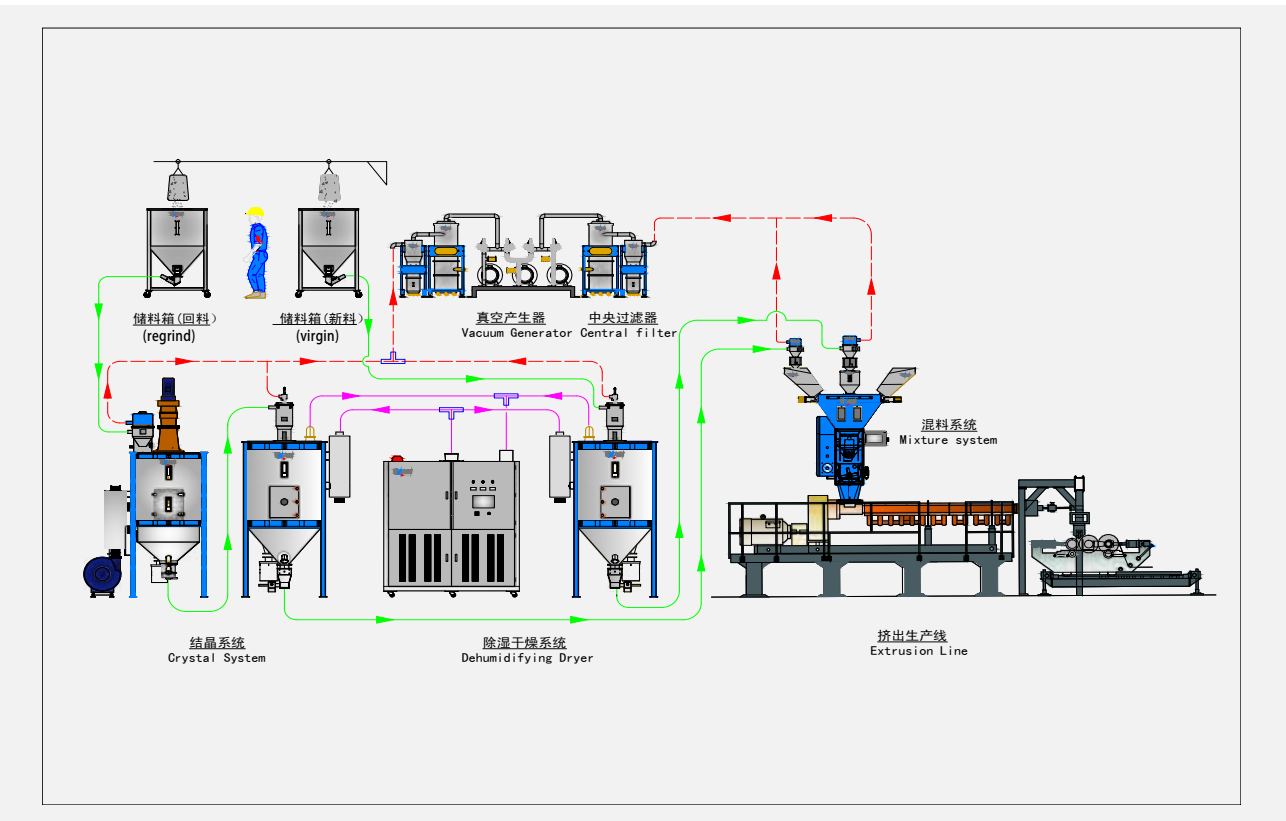
尼嘉斯的树脂结晶、干燥系统设备要求对温度、风量、风压、输送时间等系统参数进行在线高精度控制、并使用系统内交互热能充分利用、大幅度降低了能耗。系统过滤装置可高效过滤原料中的粉尘，确保制品的品质稳定。

The NIASI crystal&drying system equipment requires for high precisely control of the air temperature, volume, pressure and feeding time etc. and fully use of the internal heat energy which can greatly reduce the consumption of energy power. Also the filter equipment could efficiently reduce the powder or duster in material this highly helps to keep the high quality of the products.



高品质的片材挤出 成型干燥输送系统

High quality sheet extrusion Sectional material drying conveying system



应用领域 Application Area

NIASI[®] Machinery 团队——为 传输界 付出必力

电线电缆

- PVC 制粒流程
- PE 被覆
- PVC 电力被覆
- XLPE 电缆

Wire and cable

- PVC granulation process
- PE coating
- PVC power coating
- XLPE cable

