

设备清单

租赁协议号: 20667410

租赁附表号: 20667410-1

Pos. 1/ 第一部分

5 Reel Stand RS-X/ 原纸架

- air ventilated multiple point brakes
配备风扇冷却型多点式刹车
- solid chucks for 3" and 4" cores
坚固夹纸头 3 寸和 4 寸

5 AutoLoad
fully automatic reel loading
原纸自动上纸

- auto-centering in machine direction
机器方向上自动对中
- core ejection device for quick roll removal
残卷快速卸载

Pos. 2/ 第二部分

5 Splicer SP-X 350 II./接纸机 SP-X350II

- DUAL CONTROL tension control
包括纸幅张力控制“双重控制”
- empty storage mode
零储纸控制系统

5 Tear Control / 断纸自动接纸功能
for automatic release
of splice at paper breaks
at speeds up to 120 m/min
在车速达到 120 米/分以下断纸时
自动进行接纸5 Rest Roll Computer RRC
残捲计算机
for automatic splice release
at pre-set paper length
用于预设原纸长度后自动接纸5 Integrated Pendular Roll / 摆动辊
for automatic tension compensation
纸张张力自动平衡

Pos. 3 / 第三部分

1 Single Facer QF-P / 单面机 QF-P

- including one cassette equipped with C-flute corrugating rolls, tungsten coated
包括 1 组卡匣, 配备 C 楞碳化钨涂层瓦楞棍
- peripheral heating of corrugating rolls
周边加热瓦楞棍
- one manual cassette trolley for quick flute changes
1 组手动更换卡匣的台车可快速换楞
- Heavy Duty pressure roll
to suit all standard board grades above 90 g/m²
重型压力辊, 适用于克重 90g/m² 及以上的标准纸板
- BHS LPC System for constant Line Pressure Control
at the pressure roll, individually adjustable per side
BHS LPC 系统, 压力辊稳定的线性控制, 每边独立自动调整
- hydraulic control for corrugating roll pressure
individually adjustable per side
针对瓦楞辊压力设计的液压控制, 每边可独立调整
- "Soft Touch Control" for applicator roll
by completely self-adjusting hydraulic system
可以通过液压系统自调的上糊辊 "软接触控制"
- motorized glue dam positioning
糊挡板电动定位
- fully retractable glue unit
for easy access and quick cleaning
可完全拉出糊盆, 易于作业和快速清洗
- automatic glue gap control
in regard to machine speed
根据机器速度进行糊间隙自动调节
- center roll vacuum system
including piping, connections and suction unit
中心真空系统, 包括管道、连结和抽吸单元
- full size steam shower chest
with drain and quick stop function
全幅宽尺寸蒸汽喷淋装置, 包括排水以及快速停止功能
- condensate traps and steam piping
as an integral part of the machine
冷凝水疏水阀和蒸汽管作为辅件安装在机器内
- paper break detection on liner and medium side
芯纸与面纸的原纸断纸探测系统



- A.C. motor
交流电机
- LENZE drive PLC
with touch screen and process data indication
德国伦茨PLC控制器
配备人机界面触摸屏及工况数据显示
- 1 Inclined conveyor up to the bridge
倾斜式传送带,用以将纸板传送至天桥
- 1 Surcharge for 300 m/min version
适用于 300 米/分瓦线的附加设备
 - adapted drive and control system
适配的电机和控制系统
- 1 Integrated Preheater 900mm
内置底纸加热烘缸
- 1 LinerBoost Hot Plate(fixed)
固定式弯板加热底纸
- 1 LinerBoost Hot Plate(Moveable)
可调节式弯板更有利于加强底纸加热
- 1 MediumBoost Hot Plate
内置弯板更有利于加强芯纸加热
- 1 Integrated Preconditioner 400mm
内置芯纸加热烘缸
- 1 Width-related glue dam positioning
基于设定幅宽的糊挡板定位
- 1 Automatic corrugating roll pressure control according to paper width
瓦楞辊压力根据原纸门幅自动控制



Pos. 4 / 第四部分

1 Single Facer QF-P

- including one cassette equipped with B-flute corrugating rolls, tungsten coated
包括 1 组卡匣，配备 B 楞碳化钨涂层瓦楞辊
- peripheral heating of corrugating rolls
周边加热瓦楞辊
- one manual cassette trolley for quick flute changes
1 组手动更换卡匣的台车可快速换楞
- Heavy Duty pressure roll
to suit all standard board grades above 90 g/m²
重型压力辊，适用于克重 90g/m² 及以上的标准纸板
- BHS LPC System for constant Line Pressure Control
at the pressure roll, individually adjustable per side
BHS LPC 系统，压力辊稳定的线性控制，每边独立自动调整
- hydraulic control for corrugating roll pressure
individually adjustable per side
针对瓦楞辊压力设计的液压控制，每边可独立调整
- "Soft Touch Control" for applicator roll
by completely self-adjusting hydraulic system
可以通过液压系统自调的上糊辊，软接触控制
- motorized glue dam positioning
糊挡板电动定位
- fully retractable glue unit
for easy access and quick cleaning
可完全拉出糊盆，易于作业和快速清洗
- automatic glue gap control
in regard to machine speed
根据机器速度进行糊间隙自动调节
- center roll vacuum system
including piping, connections and suction unit
中心真空系统，包括管道、连结和抽吸单元
- full size steam shower chest
with drain and quick stop function
全尺寸蒸汽喷淋装置，包括排水以及快速停止功能
- condensate traps and steam piping
as an integral part of the machine
冷凝水疏水阀和蒸汽管作为辅件安装在机器内
- paper break detection on liner and medium side
芯层与面纸的原纸断纸探测系统

- A.C. motor
交流电机
- **LENZE drive PLC**
with touch screen and process data indication
德国伦茨PLC控制器
配备人机界面触摸屏及工况数据显示
- 1 **Inclined conveyor up to the bridge**
倾斜式传送带,用于将纸板传送至天桥
- 1 **Surcharge for 300 m/min version**
适用于 300 米/分瓦线的附加设备
 - adapted drive and control system
适配的电机和控制系统
- 1 **Integrated Preheater 900mm**
内置底纸加热烘缸
- 1 **LinerBoost Hot Plate(fixed)**
固定式弯板加热底纸
- 1 **LinerBoost Hot Plate(Moveable)**
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内置弯板更有利于加强芯纸加热
- 1 **Integrated Preconditioner 400mm**
内置芯纸加热烘缸
- 1 **Width-related glue dam positioning**
基于设定幅宽的糊挡板定位
- 1 **Automatic corrugating roll pressure control according to paper width**
瓦楞辊压力根据原纸门幅自动控制

Pos. 5/第五部分

- 1 **BHS Duplex Bridge, consisting of**
BHS 双层天桥,由如下组成:
 - steel construction with catwalk
located on operator side
钢结构 B/2 及钢走道位于操作侧
 - duplex bridge drive and
horizontal conveyors
双重天桥传动及水平输送机
- 1 **BHS WEBTROL duplex bridge guide**
automatic web guide in edge and center mode
双层天桥纠偏装置
纸边自动对边或对中系统
- 1 **BHS Bridge Brake duplex servo version**
pre-set of tension at DF-C screen
双层 BHS 天桥伺服电机控制刹车
可于双面机面板上预设张力
- 1 **Assembly frame for duplex bridge**
to take up bridge guide and bridge brake
Including deflection tube for festoon damping
双层天桥组装架构
包含天桥导纸及刹车之上升控制架
并包含纸板卷舒缓器
- 2 **Manual waste evacuation**
手动排废
- 1 **Edge detection for Double Facer liner**
(WEBTROL)
双面机面纸纸边侦测

Pos. 6/第六部分

- 1 **Triplex Preheater HPH-A 1100/3**
三层预热烘缸 HPH-A 1100 / 3
 - speed related drive
速度追随驱动装置
 - automatic wrap adjustment
自动包角控制
 - control and display integrated
in the GU-N / DF-C operating screen
控制显示整合到 GU-N/DF-C
的操作面板上
- 1 **Zero-wrap on bottom drum**
底层（面纸）烘缸零包角

Pos. 7/ 第七部分

- 1 **Duplex Glue Unit GU-N / 2**
双层式糊车 GU-N / 2
 - with individual servo drives
独立的伺服电机控制
 - self-adjusting pressure shoe system
自调式压力靴系统
 - integrated touch panel
高度集成的触屏控制
- 1 **Automatic glue dam adjustment
and glue level control for GU-N/2**
自动糊挡板跟随系统
和糊液位控制系统

Pos. 8/第八部分

1 Double Facer DF-C / 双面机 DF-C

- speed-related and automatically adjustable
速度跟随且可自动调节
- BARTROL loading system
浮式压板压载系统
- 20 high speed hot plates/20 块高导热性热板
- 3D shaped, peripherally heated LinerBoost infeed plate
1 块 3D 设计周边加热的弧形进纸热板
- pulling section with shoe loading
牵引段压力板式载压系统
- upper and lower transport belts
including automatic guiding and tensioning
上下传送皮带包括自动导正纠偏以及张紧装置
- A.C. motor
交流电机
- LENZE drive PLC
with touch screen and process data indication
德国伦茨PLC控制器
配备人机界面触摸屏及工况数据显示
- with 2 separately controlled steam sections
Including motor valves, condensate traps and piping
2 段式蒸汽压力独立控制, 包括电控阀,
冷凝水疏水阀和内部连接管路
- operating screen combined with GU-N
操作屏集成在糊机触摸屏上

1 Dual Boost at DF-C infeed

双面机进纸加速器
for increased double wall production speed
用于提高五层纸板生产速度

1 Additional separately controlled steam section

分段控制的蒸汽阀组

CORRUGATOR CONTROL SYSTEM

瓦楞纸板生产线控制系统

Wet End Control

湿部控制

- 1 **Duplex Bridge Level Control BLC**
with light barrier detection
control integrated into QF-P
双层天桥积纸量控制系统BLC包含
天桥光栅监测
控制系统整合于单面机中
- 1 **Parallel operating screen**
for the central control room
for QF-P, GU-N and DF-C
针对中央控制室平行操作屏
- 1 **Wet End Automation Package**
湿部自动控制软件包
 - to increase productivity/提高生产效能
 - to ensure constantly high board quality and perfectly flat board
 - 确保连续出产高质量且平整的纸板
 - to reduce waste during quality change
 - 材质切换时降低废品率
 - to minimize operator intervention during quality change
 - 材质切换时人工操控最小化
 - to reduce operating errors (less downtime)
 - 降低操作错误率（减少停机时间）

containing/包括:

a) AQC, Automatic Quality Change

AQC.自动材质切换

- for each flute combination several sets are possible (heavy, medium, light)
- 每组楞型组合可设置多种数据分别适用于高中低克重
 - database stored on the machine itself
 - 数据存储于机器本身
 - change signal from SSS—by Customer PMS

- 变更信号来自同步接纸—客户生管系统提供
- Automatic settings on the QF-P
单面机上自动设定
 - Doctor roll gap/刮胶辊间隙
 - Pressure roll pressure/压力辊压力
 - Glue dam pre-positioning/糊挡板预定位
 - Preheater / preconditioner wrap (by speed or temperature)
预热/预调烘缸包角 (根据车速或温度)
- Automatic settings on DF-C and GU-N
双面机及糊机上自动设定
 - Bridge brake tension/天桥刹车张力
 - DF loading (Bartrol)/双面机压载 (链板式)
 - DF steam section pressure
双面机蒸汽压力
 - Doctor Roll gap/刮胶辊间隙
 - Speed lagging of glue applicator roll
上胶辊速度滞后
 - Preheater wrap (by speed or temperature)
预热烘缸包角 (根据车速或温度)
- b) Temperature control on all external preheaters / preconditioners
外部预热/预调烘缸温度控制
 - temperature sensors on preheaters / preconditioners and DF-C outfeed
预热/预调烘缸以及双面机出纸处温度传感器
 - wrap arm position automatically controlled by paper temperature
通过原纸温度自动控制包角位置



Dry End Control

干部控制

- I **Dry End Control including CCC**
干部控制包括 CCC 软件包
 - single point data entry/单点数据输入
 - shift data history/换班历史记录
 - downtime analysis/停机记录分析
 - in Chinese text version/中文版本
- 1 **Online link to Host computer**
according to BHS protocols
与外部生管连线
采用 BHS 标准接口协议
- 1 **RSS, Tele Remote Service System**
for PLC and PC level for quick online back-up
with VPN tunnel and firewall
远程故障诊断系统 RSS,
用于 PLC 以及 PC 在线快速支援
配有 VPN 通道及防火墙