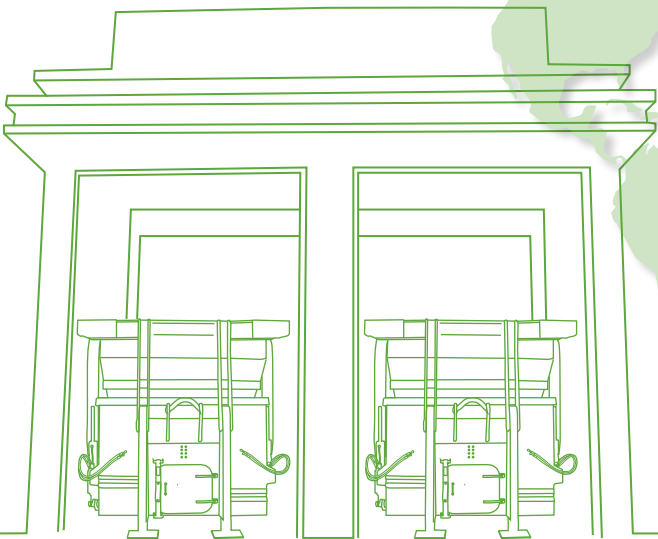


AEL



REFUSE TRANSFER STATION
垃圾压缩转运站



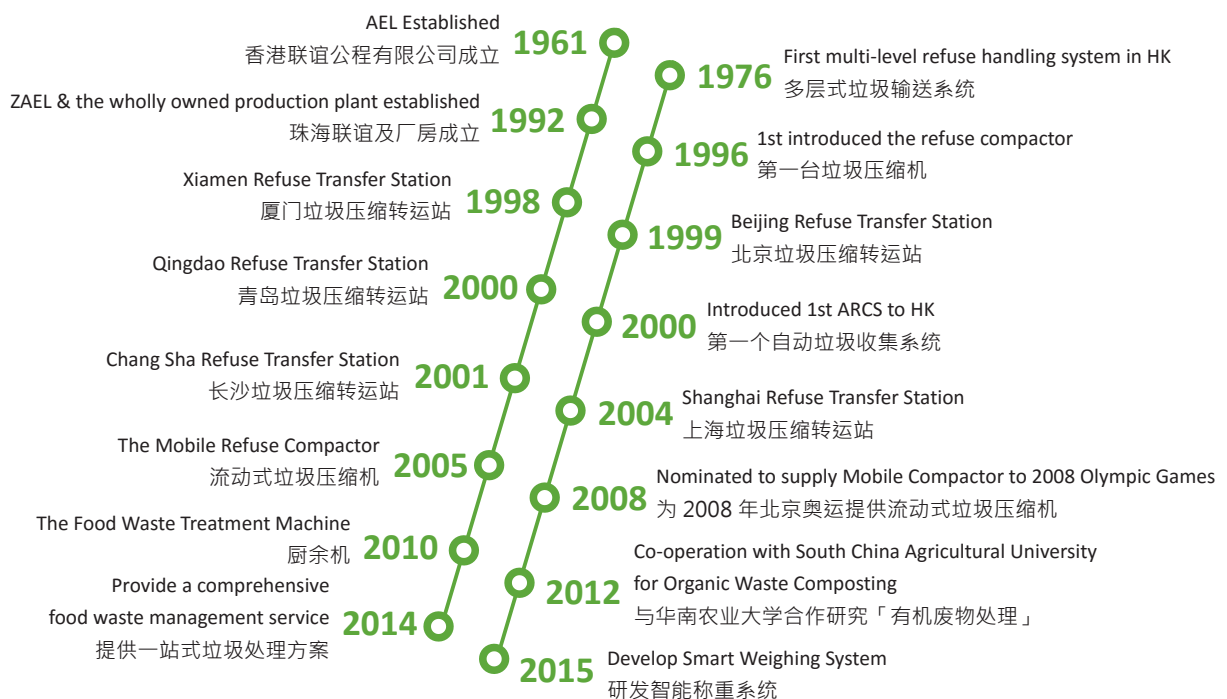


Introduction of AEL

联谊工程简介

Associated Engineers Ltd. (AEL) was established in 1961 as a specialist ground support equipment repair and maintenance services provider for airports. Over half century, we have broadened our service offerings to encompass in construction, steel structure, material handling system, solid waste management, biological food waste treatment and aircraft maintenance docking system. With extensive experience and professional technical knowledge. AEL offers one-stop services from consulting, design, manufacturing, project management, commissioning and after-sales maintenance. Appreciating the importance of product quality, production safety and environmental protection, AEL is accredited with various international achievements including ISO9001, ISO14001, ISO50001 and OHSAS18001.

香港联谊工程（联谊）成立于1961年，成立初期致力于提供机场设备的维修和维护服务，其后业务逐渐扩展至其他领域，包括钢结构建造、机械运输系统、固体垃圾处理、生物式处理厨余废弃物和飞机维修系统。凭借专业的技术和卓越的服务，联谊致力提供一站式服务，从咨询、设计、生产、项目管理、委托到售后维修。联谊一直视产品质量、生产安全和环境保护为企业的先要，并已获得ISO9001、ISO14001、ISO50001、OHSAS18001国际认证。



Why we need Refuse Transfer Station (RTS)

垃圾转运站的重要性

Rapid developments in cities have led to increasingly waste problems whilst waste collection, handling and transportation are regarded as imminent issues. It is necessary to take effective and sustainable measures in carrying out waste management solutions in order to diminish the environmental pollution. RTS is designed for waste collection where the waste is compacted and containerized in purposely built containers for onward transportation to the landfills, incinerator or other waste treatment plant disposal. This method of transporting waste in bulk has reduced the overall transportation cost and reduced the traffic and environmental nuisance associated with a large number of small refuse collection vehicles moving on the road.

城市急速发展，垃圾日俱递增，其存放面积且不断扩大，因此必须采取高效和卫生化的运输及处理，减少对环境的破坏和污染。垃圾转运站的主要作用是将各收集站运来的垃圾集中并运往废物转运站进行密闭压缩，压缩后的垃圾通过密封的集装箱运送至垃圾填区、焚烧站或其他垃圾处理厂处置。垃圾压缩减容后，运输的次数大大减少，降低了转运成本；密封运输和处理更卫生化，令环境不会受到污染，能有效地保持城市的整洁卫生。

Refuse Transfer Station provides environmental solutions

环卫解决方案

Noise 噪音



Collection trucks produce noise in operations and would affect the life of nearby residence. The transfer station employs low noise-emitting machineries and installs vibration reduction add-ons in order to reduce the noise from the equipment.

AEL 垃圾转运站设备采用的垃圾专用集装箱装载能力比一般集装箱高，既可降低运送大量废物时的整体运费。另外，转运站内采用低噪音的操作机械，加装减震装置，令各种设备所引的噪音相应减少。

Odor and Dust 臭味和灰尘



Plenty of unpleasant smell and dust are produced during the transfer of refuse, while variable level of odor is released depending on the retention time of refuse. To relieve the problems, special-designed de-odorizing systems are deployed in every transfer station. It can also external areas near the station, in further preventing the station from contaminations.

在垃圾转运过程中，倾倒垃圾时会产生大量臭味和灰尘，同时垃圾因应滞留的时间而散发不同程度的臭味，转运站内使用特别设计的除尘脱臭系统，分解空气中的异味分子。这套系统可改善室外的环境，使整个转运站没有受到环境严重污染。

Sewage 污水



Refuse containers are designed to prevent leachate leakage. Seal strips are installed in all gaps between doors and on container body to avoid secondary pollution.

为了防止垃圾专用集装箱内的垃圾渗漏液外泄，垃圾集装箱是采用全密封保护。不论是集装箱大门与箱身，均装有特殊设计的宫形橡胶密封条，防止运输途中渗漏而造成二次污染。

Environment 环境



Through refuse compaction, air and wastewater are extracted from the collected waste. As a result, less refuse vehicles are required, reducing traffic congestion as well as greenhouse gas emission.

AEL 垃圾转运站设备采用的垃圾专用集装箱装载能力比一般集装箱高。垃圾中多余的空气及水份会被压缩，可减少大量小型垃圾收集车在道路上行走对交通及环境造成的滋扰，直接减少温室气体排放。

Cost 成本



Refuse leaving the transfer station has a high compaction density. By having the actual amount of waste transported per refuse vehicle trip, total operating cost is reduced.

压缩机可增加垃圾的密度，可减少运送垃圾的次数，从而减少整个运输成本。



Features 性能特点

- Daily handling capacity from 40 tonnes to 150 tonnes
日处理量 40-150 吨
- Compactor and container are detachable; centralized control, compact structure; small footprint, flexible installation; low energy consumption, low noise, low operating costs
机箱分离、结构紧凑、占地少、能耗低
- Accurate tight fit between compactor and container to ensure no leakage during compaction or decoupling
采用专利技术，确保箱体与压缩机分离时无垃圾夹杂
- Patented multi-lock structure to ensure no leakage and scattered trash
专利紧密锁紧结构、防止滴漏及垃圾细屑散落
- Automatic drainage system to ensure cleaner workshop
压缩机中后部设有污水导排装置，实现自动排水系统，确保车间清洁
- Automatic Container Transfer System with precise shift function; applicable for hand trolleys, tricycles and small electric vehicles to reduce labour intensity
移位系统可实现快速移机、移箱功能，定位精准，提高了系统运行效率
- Tailored waste management solutions with wide variety of customizations to accommodate specific site requirements
个性化产品服务，具备翻桶、翻斗、后平台手推车等多种上料方式、满足不同场地需求。

Patents and Awards 专利和奖项

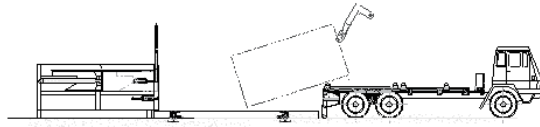


1. Certificate on Construction of Beijing 2008 Olympic and Paralympic Games Fencing Hall and International Broadcasting Centre
北京 2008 年奥运会和残奥委会击剑馆及国际广播中心建设者证书
2. Split-type Refuse Compaction Equipment
分体式垃圾压缩设备专利证书
3. Container-integrated Refuse Compactor
机箱连体式垃圾压缩机专利证书
4. Container Semitrailer-type Refuse Transfer Vehicle
集装箱半挂式垃圾转运车专利证书

Operation Sequence

转运站运作流程

1



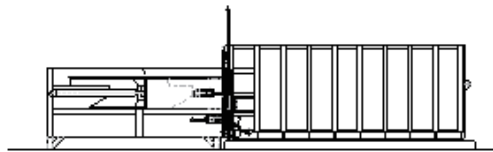
The hook lift vehicle unloads the container onto the guide rails. The container is then automatically connected to the compactor.
钩臂车回站放下集装箱于导轨上，压缩机推拉装置现机箱自动对接。

2



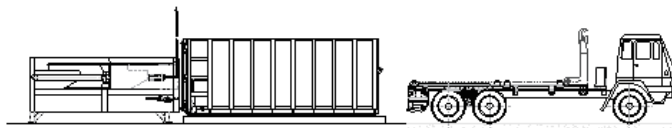
Refuse collection vehicles unloads at the infeed chamber.
垃圾收集车往压缩机料腔卸料。

3



The compactor compresses the refuse into the container until it becomes full.
压缩机压头将垃圾推压进垃圾集装箱，装满为止。

4

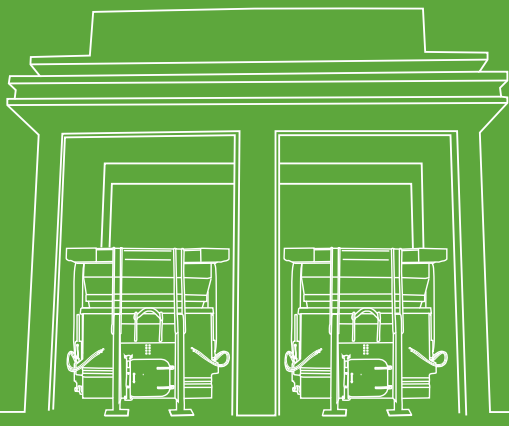


The container detaches from the compactor while the hook lift vehicle backs up.
集装箱与压缩机脱钩，钩臂车上前准备勾装集装箱。

5



The hook lift vehicle picks up the container and leaves the refuse transfer station.
钩臂车勾好集装箱，离站运走



50-60T

Daily treatment capacity: 50-60 t/d
处理量约 50 - 60 吨 / 日

AP II series refuse compaction system models: 2090 and 2120
APII 系列垃圾压缩系统主要包括：2090 型及 2120 型系列产品

APII Refuse Transfer Station 垃圾压缩系统

- Integrated design for mechanical, electrical and hydraulic systems, centralized control, simple operation; compact structure, small footprint, flexible installation; low energy consumption, low noise, low operating costs
系统集机、电、液一体式设计，集中控制，操作简便；结构紧凑，占地小，安装方便，灵活；系统能耗小，噪音低，运营成本低。
- Unique system design with precise manufacturing; leading the industry with its advanced design, rich practicality and high reliability
系统设计精心、独特，制作精良，其先进性、实用性，可靠性处于行业领先水平
- Accurate positioning and tight fit between compactor and container to ensure no leakage during compaction or decoupling; applicable for hand trolleys, tricycles and small electric vehicles to reduce labour intensity
压缩机与垃圾箱联接定位准确，紧密牢靠，在压装进箱过程或机箱分离时无任何垃圾洒漏；满足手推车、三轮车、小电动车直接卸料，减少劳动强度。
- Tailored services with wide variety of customizations to accommodate specific site requirements
产品采用个性化服务，满足场地特殊需求。

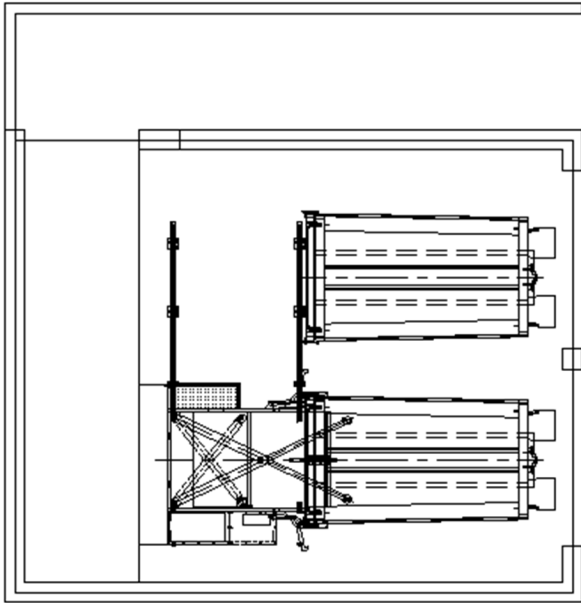


Refuse compaction system Infeed option: Rear platform
垃圾压缩系统后平台上料模式

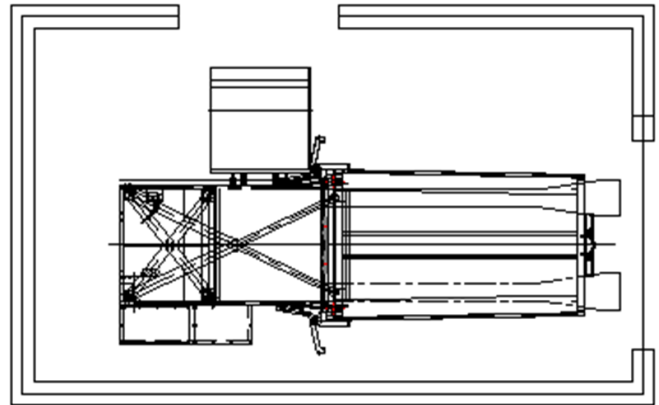


Refuse compaction system Infeed option: Front bin lifter
垃圾压缩系统翻桶上料模式

AP II series: Typical layout plan AP II 系列常用布置图



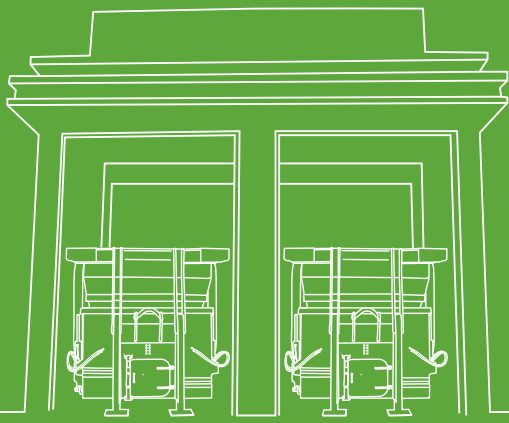
- Movable refuse compactor for rear platform infeed; 12 m³ container
移位机后平台 + 12m³ 垃圾箱



- Fixed refuse compactor with side tipper; 12 m³ container
固定机侧翻斗 : 12m³ 垃圾箱

Product Specifications 规格说明

Performance 主要性能					Installation and Infeed Options 安装及供料方式	Equipped container (m ³) 配用垃圾箱 m ³	Equipped hooklift (t) 配用拉臂车 (t)	
Model 产品系列	Power (kW) 功率	Daily capacity (t) 日处理量	Compression force (t) 工作推力	Footprint (m x m) 外形尺寸				
2090	7.5KW	50-60T	30T	2.6 x 3.3	Fixed or movable refuse compactor 机体固定或移位	Bin lifter 翻桶上料	12	16
						Tipper 翻斗上料	12	16
						Rear platform 后平台上料	12	16
						Side Platform 侧平台上料	12	16
2120	7.5KW	50-60T	36T	3.2 x 3.0	Fixed or movable refuse compactor 机体固定或移位	Bin lifter 翻桶上料	12	16
						Tipper 翻斗上料	12	16
						Rear platform 后平台上料	12	16
						Side Platform 侧平台上料	12	16



100-120T

Daily treatment capacity: 100-120 t/d
处理量约 100 - 120 吨 / 日

AP III series refuse compaction system models: 3180 and 3200
AP III 系列垃圾压缩系统主要包括：3180 型及 3200 型系列产品

AP III Refuse Transfer Station 垃圾压缩系统

- Utilizing a horizontal incline press system, high efficiency, PLC program control, simple operation; compact structure, small footprint, flexible installation; low energy consumption, low noise, low operating costs; perfect solution for small refuse transfer stations

系统采用水平斜推模式，效率高，操作简便，采用 PLC 程序控制；结构紧凑，安装方便，灵活；系统能耗小，噪音低，运营成本低，为小型垃圾站首选。
- Unique system design with precise manufacturing; leading the industry with its advanced design, rich practicality, high reliability and diverse applicability

系统设计精心、独特，制作精良，其先进性、实用性，可靠性处于行业领先水平，应用范围广。
- Accurate positioning and tight fit between compactor and container to ensure no leakage during compaction or decoupling; various infeed options suitable for tipper and front/rear platform, applicable for tricycles and vehicles at or below 5t to enhance suitability and reduce labour intensity

压缩机与垃圾箱联接定位准确，紧密牢靠，在压装进箱过程或机箱分离时无任何垃圾洒漏；卸料多样化，翻斗、后平台、前平台卸料，满足三轮车、5T 及以下机动车收集方式，适用性强，劳动强度低。
- Tailored services with wide variety of customizations to accommodate specific site requirements

产品采用个性化服务，满足场地特殊需求。

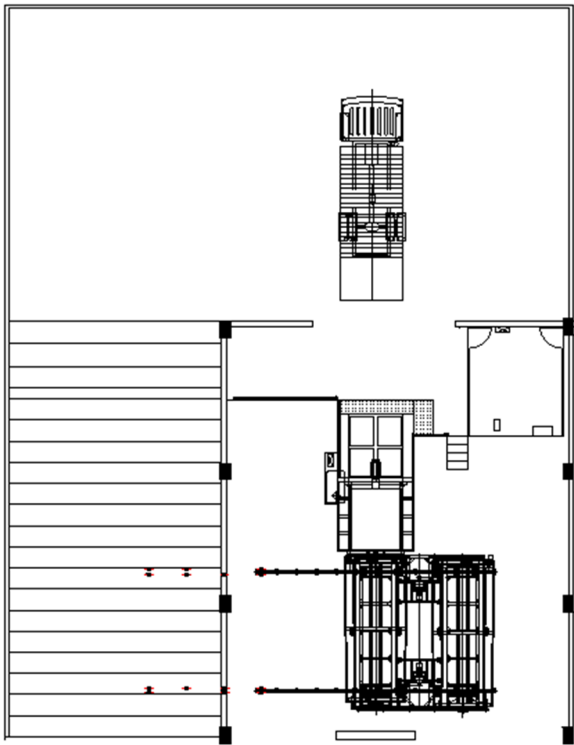


Model 3200: Refuse compaction system Infeed option: Rear platform
3200 型压缩系统后平台上料模式

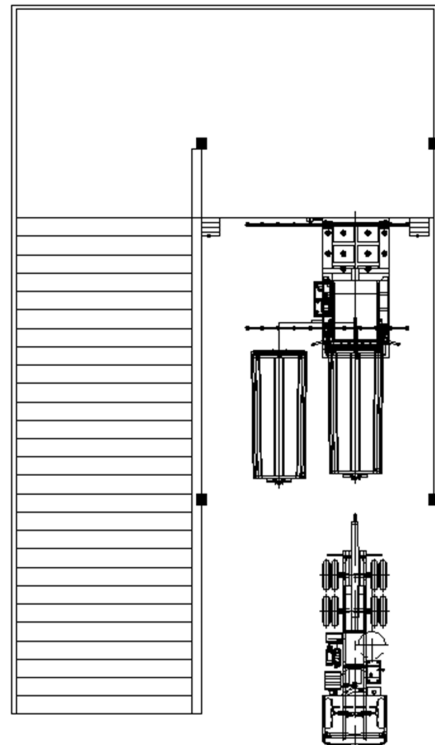


Model 3200: Refuse compaction system Infeed option:
Front platform
3200 型前平台上料压缩系统

AP III series: Typical layout plan AP III 系列常用布置图



- Refuse compactor for rear platform infeed; 20 m³ movable container
机后平台 +20m³ 箱移位



- Movable refuse compactor for rear platform infeed; 20 m³ container
移位机后平台 +20m³ 垃圾箱

Product Specifications 规格说明

Performance 主要性能					Installation and Infeed Options 安装及供料方式		Equipped container (m ³) 配用垃圾箱 m ³)	Equipped hooklift (t) 配用拉臂车 (t)
Model 产品系列	Power (kW) 功率	Daily capacity (t) 日处理量	Compression force (t) 工作推力	Footprint (m x m) 外形尺寸				
3180	7.5KW - 11KW	80-100T	36T	2.6 x 3.3	Fixed or movable refuse compactor 机体固定或移位	Rear platform 后平台上料	12 - 20	16 - 25
						Side Platform 侧平台上料	12 - 20	16 - 25
3200	11KW	100-120T	36T	3.2 x 3.0	Fixed or movable refuse compactor 机体固定或移位	Rear platform 后平台上料	12 - 20	16 - 25
						Side Platform 侧平台上料	12 - 20	16 - 25

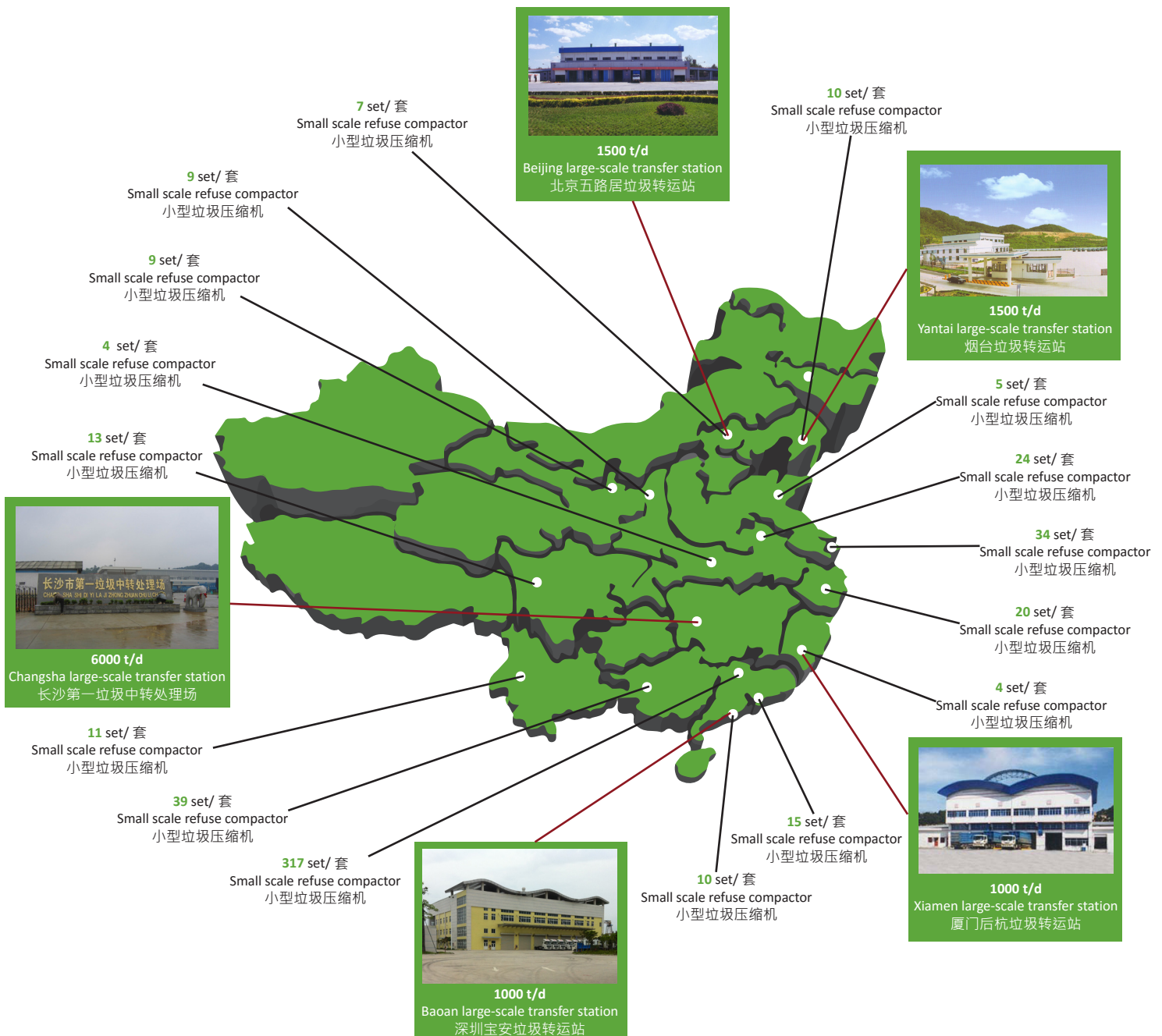


Job References

工程实绩

AEL has constructed refuse transfer stations of various treatment capacities in more than ten provinces and cities. AEL offers comprehensive solutions through one-stop services from feasibility consulting, design, manufacturing, installation, commissioning and after-sales maintenance. Here are some reference projects:

联谊过往已为中国超过十个省市兴建垃圾压缩转运站，包括不同垃圾处理量的转运站。由项目可行性分析、设计、制造、安装、测试到售后服务，联谊为客户提供全方位一站式系统解决方案，以下是一些参考案例：



Since 1997, AEL has built **over**
自 1997 年起，联谊工程建造**超过**

17 Large-scale refuse transfer station
大型垃圾压缩转运站

500 Small and medium-scale refuse transfer station
中小型垃圾压缩转运站

500 Mobile compactor
流动式垃圾压缩机

Total treatment capacity(t/d)
累积垃圾日处理量 (吨/日)

100,000+

China 中国



Dongkengchuan Refuse Transfer Station
东坑村垃圾中转站



Shierchuan Refuse Transfer Station
十二村垃圾中转站



Jiubajie Refuse Transfer Station
酒吧街中转站

Hong Kong 香港



Sha Tin Yu Chui Court
Refuse Transfer Station
沙田榆翠苑中央收集站



Lai Chi Kok Lai Yan Court
Refuse Transfer Station
荔枝角荔欣苑中央收集站



Tseung Kwan O Choi Ming Court
Refuse Transfer Station
将军澳彩明苑中央收集站



联谊工程有限公司
Associated Engineers, Ltd

香港九龙新蒲岗太子道东698号宝光商业中心23楼
23/F Stelux House, 698 Prince Edward Road East,
San Po Kong, Kowloon, Hong Kong

电话 Tel: (852) 2767 1000
传真 Fax: (852) 2767 2000
电邮 Email: info@ael.hk
网页 Website: www.ael.hk

珠海经济特区联谊机电工程有限公司
Associated Engineers Zhuhai S.E.Z. Ltd.

中国广东省珠海市前山造贝工业区
Zaobei Industrial Zone, Qianshan, Zhuhai City,
Guangdong, PRC

电话 Tel: (86) (756) 861 5663
传真 Fax: (86) (756) 861 5303
电邮 Email: gmo@zael.cn
邮编 Postal code: 519070