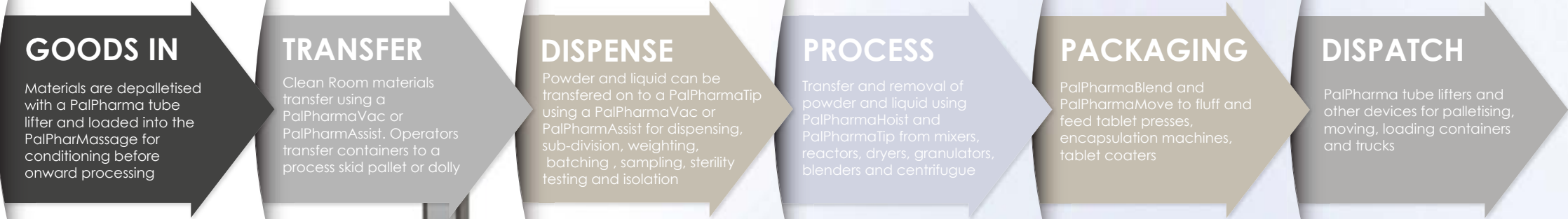


Life Sciences
Materials Handling
Solutions Provider

Product Lines

Equipment for lifting, transferring, positioning, dispensing, conditioning, containing, weighing, blending, processing, mixing, removing, forming, packaging and transporting.



PalPharma is a Life Sciences Materials Handling Solutions Provider

Dedicated to solving our customers' in-process problems, providing innovative solutions and life-time support

☯ PalPharmaVac™	03
⊠ PalPharMassage™	05
/ PalPharmaTip™	07
↕ PalPharmaHoist™	09
▲ PalPharmaBlend™	11
○ PalPharmaMove™	13
= PalPharmAssist™	15
🗑 PalPharmaBin™	17
◆ PalPharmaTrac™	19
Clean Process Solutions	21

cGMP vacuum tube lifting systems for cleanroom and process environments -

Lift your load weightlessly with no operator effort



PRODUCT INFORMATION

Typical applications:

- Pallet to pallet transfer and batch assembly
- Elevate containers to allow cleaning of them
- Discharging product from drum to receiving vessel or reactor
- Feeding product into a blender, mixer or dryer
- End of line palletising

Products handled:

- Sacks/bags
- Boxes/cartons
- Drums
- Kegs
- Reels

Weights: up to 125kg (275lb)

Coverage: To suit requirement

Features and benefits:

- Lightweight hand demountable design for ease of cleaning and low maintenance
- Wipe down lift tube cover
- FDA approved elastomer's on suction feet
- Incorporates a HEPA filtration system which means no downstream contamination of components or maintenance areas
- Safe change filter and end effector station

Finish: 304 to 316L cGMP

1 > GANTRY OPTIONS

SWING JIB



Ideal for close proximity lifting up to 350kg (772lb)

ARTICULATED



Provide access in confined restrictive spaces

MOBILE



Portable systems for operational convenience

H-STYLE



Provides large area coverage

2 > CONTROL HANDLE

STANDARD



Ergonomic handle for ease of use

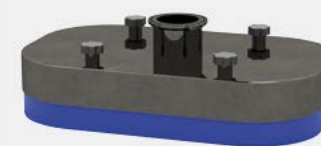
EXTENDED



Extended handle for longer reach when lifting large products

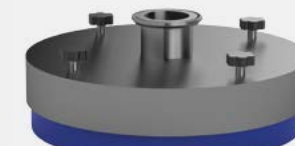
3 > END EFFECTORS

SACKS & BAGS



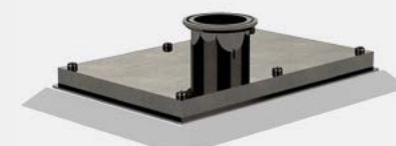
Suitable for plastic and paper sacks up to 50kg

DRUMS & KEGS



For drums and kegs, multiple options available

BOXES & CARTONS



Available in multiple sizes to suit application

SIDE LIFT & POUR



Ideal for the loading and unloading of metal, plastic and fibre drums



Range of drum and container conditioning systems - There are two types; MAXI for ultimate flexibility of container styles, the MINI is more economic for a smaller range and is pneumatic



PRODUCT INFORMATION

Products handled:

- Fibre & Plastic Drums
- Kegs
- Sacks
- Flexible containers

Features and benefits:

- PLC Control
- Simple to use by colour HMI
- Infinitely variable control for:
 - Height of massage arms
 - Distance into container
 - Torque
 - Speed
 - Recipe programmes
 - Time
 - Repeatability
- Mobile or Fixed Options
- Can be used with PharmaVac / PharmaTip or conveyors to offer turnkey automated handling and tipping solution
- Heavy duty construction
- Safety Guarding to suit requirement
- Ex/ATEX options
- FAT and IQ/OQ documentation

Finish: 304 to 316L cGMP

1 INFEED OPTIONS

VACUUM LIFTER



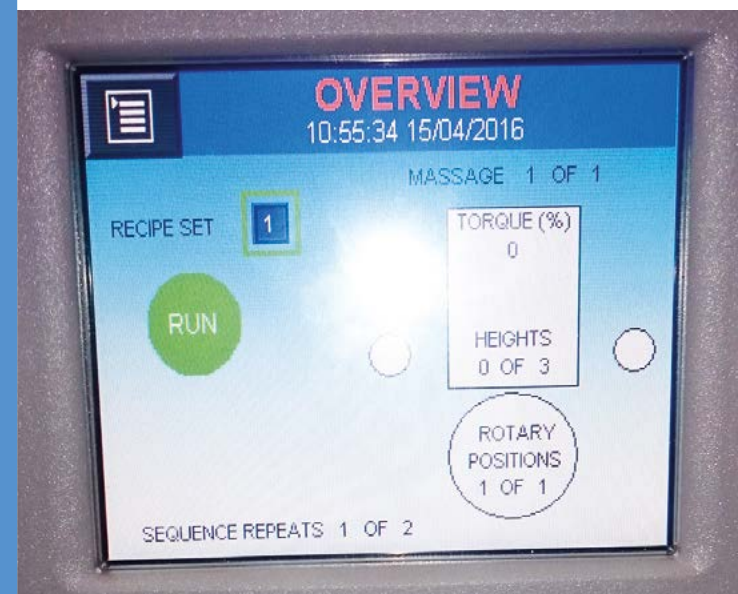
ROLLER CONVEYOR



DOLLY



Options



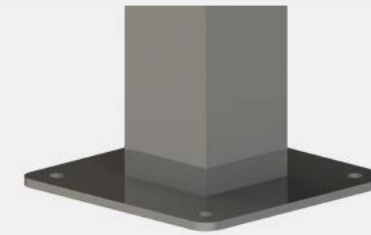
Mobile or static container tipping and positioning machines for dispensing powders and liquids into process

vessels and machines -

Tip your containers safely and efficiently to discharge their contents

1 BASE OPTIONS

FIXED



Fixed in place by resin anchor bolts

MOBILE



Portable systems for operational convenience

2 CRADLE OPTIONS

FULL CRADLE



Holds drums securely

ROLLER CRADLE



Allows drums to be loaded via a conveyor

ADVANCE CRADLE



Features a sliding cradle

PRODUCT INFORMATION

Typical applications:

- Discharging product from drum into receiving vessel
- Discharging product from drum into reactor
- Feeding product into blender or mixer
- Feeding tablets into a sugar coater
- Feeding product into filter dryer
- Docking a drum onto an isolator
- Presenting the drum at an ergonomic height to sample product
- Presenting the drum at an ergonomic height to help protect the operator and product
- Tipping product with a laminar flow air hood to prevent dust contamination to the surrounding area
- Easy material transfer

Finish: 304 to 316L cGMP



Systems for discharging, docking, feeding, tipping, pouring and blending of product in IBC's, drums and supersacks



PRODUCT INFORMATION

Typical applications:

- Discharging product from drum, IBC or FIBC into receiving vessel at high or low level
- Docking drum, IBC, sack or bag onto Isolator or Tipping Station
- Feeding packaging lines
- Docking split butterfly valves together with minimal downward force on the receiving half of the valve or the supporting structure
- Can be used in conjunction with a discharge squeeze funnel for high containment product transfer and sterile applications
- Platform lifts for pallets and trolleys to mezzanine levels or additional floor levels

Features and benefits:

- No hydraulics
- Suitable for up to 16000mm vertical stroke and 2000m reach
- UK design and manufacture with CE/LOLLER approval
- Ball screw motor gearbox with failsafe
- Centrifugal over speed mechanical safety lock
- Designed to be free standing with no top support
- PLC or pneumatic controls
- Speeds up to 8m per minute

Finish: Available in mild steel through to 316L stainless steel / Hastelloy C22

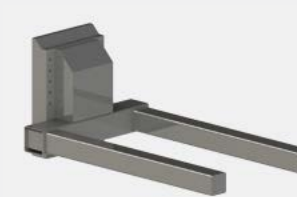
1 > END EFFECTORS

PLATFORM LIFT



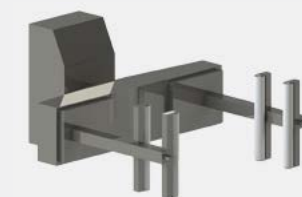
Product transportation platform for pallets & IBCs

FORKS



For lifting IBCs, features weighing system

DRUM GRIP OR CLAMP



For side gripping drums, features 180° inversion

SQUEEZE CONE



For dust-tight powder handling and transfer, 180° inversion

2 > MAST OPTIONS

FIXED BASE



Fixed in place by resin anchor bolts

MANUAL SLEWING BASE



With manual lock/unlock

POWERED SLEWING BASE



Pneumatic or electrically powered



Container blending solutions to suit customers every requirement



PRODUCT INFORMATION

Features and benefits:

- Variable speed rotation between 1-25rpm dependant up on size and weight of container
- Suitable for any type of container from 5l to 2500l
- Intergration with PalPharmaHoist for vertical elevation and docking to process vessels and machinery
- Range of safety barrier or scanner options to protect the operator from rotating equipment
- NIR and PAT options available
- Automatic vertical or dock return
- Fixed and mobile options
- No hydraulics
- Suitable for containers up to 2000kg (4400lb)
- Suitable for up to 16000mm vertical stroke and 2000m reach
- UK design and manufacture with CE/LOLLER approval
- Ball screw or chain motor gearbox with failsafe
- Centrifugal over speed mechanical safety lock
- Designed to be free standing with no top support if application allows
- PLC GAMP or pneumatic controls
- Vertical raise or lower speeds up to 8m per minute

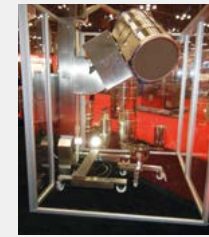
Finish: Available in mild steel through to 316L stainless steel / Hastelloy C22



1

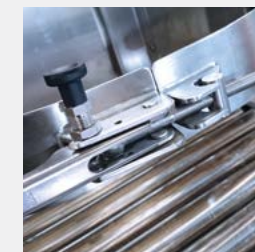
OPTIONS

SAFETY ENCLOSURE



Provides protection

DRUM CLAMP



For clamping plastic, metal or flexible drums

IBC CLAMP



IBC cradles that accommodate all sizes

FORK



For lifting FIBC's and Supersacks

CGMP fixed/mobile lifting and handling systems - Lift, move and process your powder and liquids effortlessly



PRODUCT INFORMATION

Features and benefits:

- Manual push/pull M3/M5/M7 or powered drive K9 versions available
- Can be battery, electric or pneumatic – No hydraulics are used ever
- PLC control system – K9
- Suitable for ATEX environment to zone 1/2T4 with documentation (pneumatic)
- Optional telescopic mast to achieve 3.2m lift height but can still fit through a 2.1m doorway height
- Stacker/Straddle Base M7 5kg (11lb) – 1 tonne (2200lb) capacity
- Counterbalanced K9 version – 1500kg (3300lb) capacity. Higher capacity on application
- Compact footprint which is designed to fit through standard doorways
- Fully clad stainless steel 304 or 316 construction which is easy to clean and validate
- Effortless to move
- Various end effectors available to handle drums, boxes, sacks, reels, pallets and trays
- Range of discharge cone options to aid product flow or discharge
- Optional 180° drum manipulation for pouring and blending (360°)
- High containment options available
- Anti static wheels, non marking wheels available and optional washable wheel bay

Finish: 304 to 316L cGMP

1 > M3

Mobile trolley with manual handwheel raise and lower for simple transport, docking and lifting tasks



2 > M5

Fixed mast manually propelled mobile truck with manually actuated drum raise, lower and forward pour



3 > M7

Fixed mast manually propelled mobile truck with pneumatically actuated drum raise, lower and forward pour



4 > K9

Electrically propelled mobile truck for gripping lifting and inverting drums and IBC's, Bins and Totes up to 250kg



Pneumatic engineered static lifting systems for bespoke process, maintenance and electrically classified lifting applications



PRODUCT INFORMATION

Typical applications:

- Removing process components for cleaning and re-validation between batches
- Feeding product into a process vessel
- Docking split butterfly valves together with minimal downward force on the receiving half of the valve or the supporting structure
- Excellent for low headroom applications such as clean rooms, containment booths, removing components from process vessels
- Handling requiring a reach or a cantilever into a recess
- Handling a large range of drum sizes and weights for a pallet to pallet transfer application with a vacuum end effector
- Long stroke applications such as charging a bottle to a process vessel via split butterfly valve
- The unit can be floor ceiling or wall mounted with the articulated arms folding neatly together maximising production space for the operator

Load Capacities: Up to 10,000kg (22,050lb)

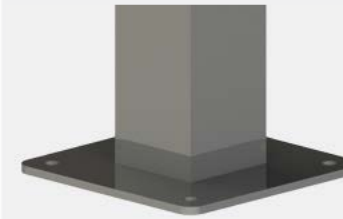
Features and benefits:

- Require only a clean, dry, oil free compressed air supply
- Vertical or horizontal pneumatic cylinder
- Cable winch mounted internal of SS316 cabinet
- Rigid manipulator arm up to 4m
- FDA approved gasket on all suction feet
- Low noise levels and easy maintenance complete with a two year warranty and validation documentation ensures a quality handling solution.
- Suitable for ATEX environment to Zone 1/21 T4 with documentation.

Finish Options: Mild steel to 316L cGMP

1 > GANTRY OPTIONS

FLOOR MOUNTED



Fixed in place by resin anchor bolts

CEILING MOUNTED



Ideal where operational space is limited

WALL MOUNTED



Ideal where operational space is limited

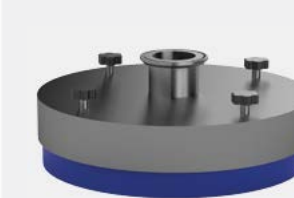
MOBILE



Portable systems for operational convenience

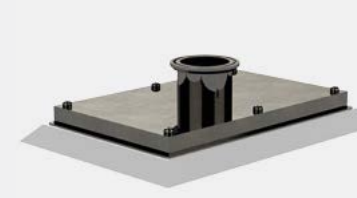
2 > END EFFECTOR

DRUMS



For drums and kegs, multiple option available

BOXES & CARTONS



Available in multiple sizes to suit application

SIDE LIFT



Ideal for the loading and unloading of metal, plastic and cardboard drums

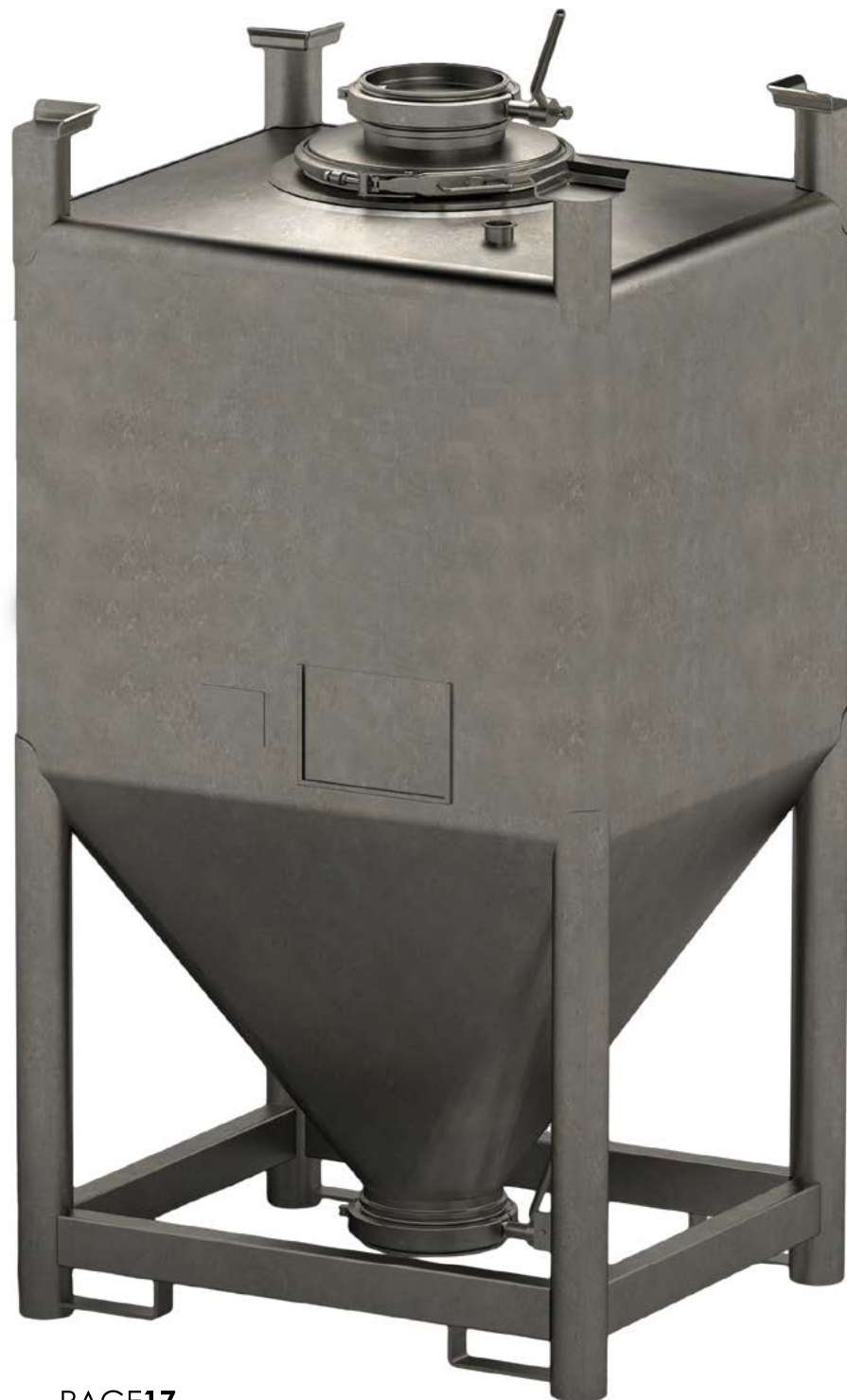
HOOK



Suitable for removing components from vessels



Drum and IBC range of stainless steel in-process, bulk storage, transfer and final packaging containers.



PRODUCT INFORMATION

Typical applications:

- The PalPharmaBin becomes a blending vessel when used with a PalPharmaBlend, offering batch integrity and traceability. Once loaded into the blender frame, the PalPharmaBin is tumbled on an asymmetric axis to provide a quick and efficient blend

Volume: From 200 to 2500 litres

Features and benefits:

- Hopper angle is 60 degree on the wide side, 50 degree on the narrow side
- Increased process efficiency and reduction in labour
- The PalPharmaBin can be partially or completely discharged and then sorted, re-used or cleaned
- Dust Tight
- Stacking feature
- Four way fork channels
- Pallet jack guides
- Silicone gaskets
- Mass flow design
- Special hopper angle
- Sight glass
- Optional venting
- Optional Castors
- Any type of valve

Finish: The PalPharmaBins are manufactured in 304/316L stainless steel as standard.

- Interior polished to 0.2 microns.
- External finish is 0.4 microns

Large upper lid in stainless steel 304 or 316L with lock clamp connection



PalPharma supply a complete range of overhead support systems individually rated for use with PalPharmaVac units

For a high specification Pharmaceutical or clean food environments Palamatic's PalPharmaTrac overhead gantry offers an ideal alternative to conventional open track designs.



The lifting system runs up and down the swing arm which moves side to side giving 270° coverage and up to 350kg working load.

Where headroom is an issue, an inverted or articulated jib can be offered which can also offer 180°/360° coverage.

FEATURES

- Can be hung from existing steelwork, wall mounted, ceiling mounted or as a mobile base option.
- 180° or full 360° coverage.
- Lifting products up to 350kg (772lb)



All articulated arm jibs can be suspended from vertical steel columns or from existing stanchions. In some cases these can also be fitted to a building wall and offered as a mobile version.

IDEAL FOR

- Process operations that require a greater working area reach
- Facilities where either space or headroom is at a premium
- Movement of bags, boxes, drums, and sacks in process and dispatch areas.
- Lifting products up to 250kg (551lb)
- Easier to clean with no convoluted vacuum hose

H-STYLE



1: The Manual Handling Disadvantage

- Workforce fatigue and injuries
- Reduced throughput
- Risk of damage to product

2: The PalPharma Advantage

- Single operator usage
- Increased throughput
- Workforce and product protection
- Operational cost reduction
- Increased productivity and profitability

PalPharmaTrac™ stainless steel jib, bridge and monorail cranes are designed specifically with hygienic and clean room environments in mind. The unique 'diamond' profile reduces hang-up points for airborne dust particles and makes wipe down and wash down easier than flanged or tunnel track rail systems.

PalPharmaTrac™ has a closed track design of stainless steel square tubing with externally running trolleys. There is no risk of paint chipping associated with conventional mild steel, open flange, I-beam or tunnel track systems. Trolleys and end truck wheels are manufactured of FDA approved material. White acetyl co-polymer is standard for all trolley wheels, with all stainless steel structural and fastening components.

LOAD CAPACITIES

50 to 160 kg (110 to 350lb)

Reach or span is dependent on payload weight and the distance(s) between your structural supports.

FINISH OPTIONS

304 to 316L stainless steel available with a range of polish finishes.



We are experts in cGMP Materials Handling Problems for Pharmaceutical, Infant food formula processing, Nutraceutical and Biopharmaceutical, Fine Chemical, Nuclear, Clean Process, FDA/MHRA Regulated Environments and Food.

Our design philosophy is born out of the desire to continually improve, innovate and invent. The success of our products means they are often imitated but never bettered.

Manufacturing expertise extends from primary process chemical environments through secondary formulation and tableting, packaging and warehousing of food, chemical and pharmaceutical products.

As experts in handling and containment you can rest assured that our solutions are fully compliant for very high potent & dangerous compounds (APIs), your legal obligations are met and your product and workforce are protected.

PalPharma manufactures lifting, handling and process solutions for all clean process industries including cGMP, Nuclear, Food, Fine Chemical and Pharmaceutical.

Our tailored and off the shelf solutions save you time, improve your process, protect your product and help prevent injury to your workforce.

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