SHEET EXTRUSION TECHNOLOGY LEADER

uCAMS™/DR

uCAMS[™]/DR (universal Cleaning Assembly Maintenance System Die Rotator)

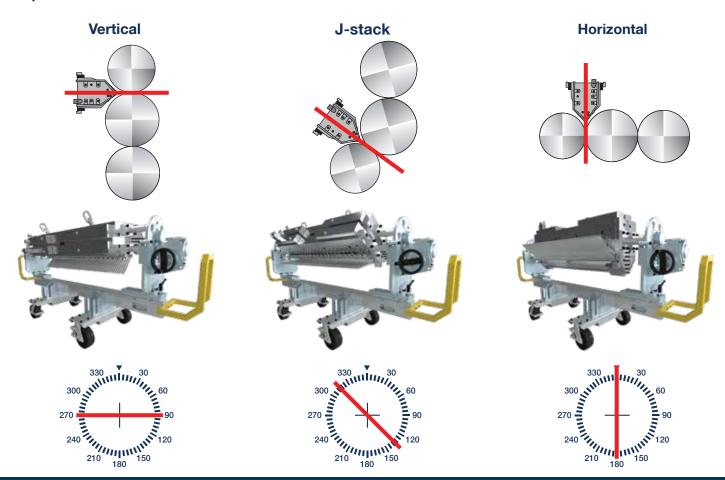
Designed specifically for handling flat dies (cast or sheet), uCAMSTM/DR serves as an essential 'tool' for managing the difficult task of removing and transporting dies from the extrusion line.

The uCAMS™/DR simplifies die removal and reinstallation, offering greater protection to personnel and company assets!

Due to various spatial constraints an extrusion die can often be the most difficult to access, especially for purposes of inspection and servicing. Standard procedures require roll stand retraction with the workspace surrounding the die and roll stand often constricted with little to no cross-machine direction space available. The compact footprint associated with uCAMSTM/DR allows for easy maneuverability between the sheet die mounting location and the retracted roll stand.

uCAMSTM/DR simplifies the job of either removing or remounting a die from the extrusion line minimizing risks to people and equipment. Using uCAMSTM/DR to transport the die to the position (immediately adjacent to the re-installation location) and rotating it to the angle desired greatly simplifies the process of re-mounting a die. Using uCAMSTM/DR simply involves a straight lift between the uCAMSTM/DR rotation cradles and the remounting position on the extrusion line, thereby eliminating multiple alignment attempts and temporary sawhorses or wood skids commonly used today. Furthermore, the challenges of handling a die that weighs several thousand pounds are minimized to a single operator now capable of rotating the die to the proper orientation.

Example Die Orientations:

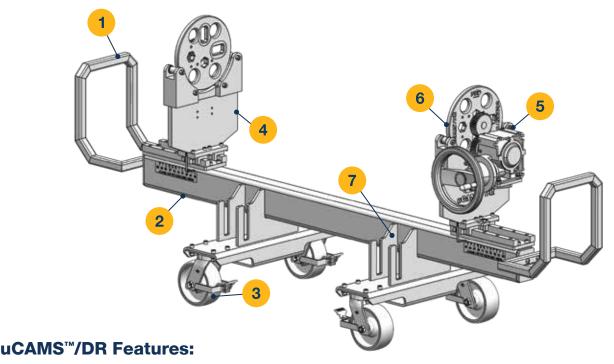


uCAMS™/DR Advantages

The uCAMSTM/DR provides significant advantages over current die removal and inspection procedures.

The unique design of the uCAMS™/DR...

- Allows compact cart to fit directly beneath die mount position for ease of die removal and transport
- Permits safe 360 degree rotation for orienting dies to/from horizontal, vertical or angled positions (complex configurations common to vertical, horizontal or j-stack roll stands)
- Provides the means for die rotation to occur thru the axis center-of-gravity for stable and safe operation
- Eliminates risky die rigging/manipulations onto pallets, plywood or carboard surfaces
- Serves as an inspection and maintenance workstation, positioned at a safe ergonomic height for operator
- Offers compatibility with a variety of die sizes due to its adjustable width settings situated on linear bearing glides
- Transports dies safely to/from uCAMS[™] service location for additional maintenance processes of splitting/cleaning/servicing functions



- 1 Heavy-duty grab bars permit safe maneuvering of cart
- 2 Low-profile, heavy-duty framework keeps center of gravity low for safe operation
- Precision casters glide easily to/from the desired service location and locks securely in place
- 4 Linear bearing mounted cradles adjust to the desired width and features position reference scales and locks to secure the service position
- Heavy duty gear reducer and handwheel powers pinion/intermediate meshed spur gears to allow effortless die rotation while preventing over/back driving
- 6 Universal rotator disks with integral pinion gears mount directly onto trunnions for use with a variety of manual and auto-profile style dies
- 7 On board stowage caddies keep rotator disks organized when not in use

Intended use in coordination with uCAMS™

PATENT APPLIED FOR