

Production line innovations at OCMi GROUP

Composed by the FLA18 index rotation forming machine and LF518 after-forming line, the Group's new production line assures maximum flexibility in terms of product specifications as well as optional devices for installation as per customer request.

Following the index rotation working concept, the FLA18 deviates significantly from traditional OCMi-OTG forming machine production yet guarantees the same output. It has been developed to reach a maximum output of 55 pieces per minute with 2R vials while being equipped to process glass tube diameters from 10 mm to 30 mm.

On its upper mouth the new machine has been developed with 18 stations, forming a crown, then 9 stations at its lower bottom as a finishing turret. This configuration and combination between upper and lower working turret ensures that productivity remains at maximum even if the lower station should go out of service for any reason.

FORMING AND FINISHING

Turret rotation is driven by a torque-motor that's supplied jointly with a water chiller for its cooling, with the same chiller being usable for cooling of the forming plungers.

Forming operations are per-



2022 brings a fresh start for OCMi-OTG as the worldwide leading supplier of borosilicate glass tube processing lines for medical containers focuses upon new developments related to processing equipment for glass vials.



formed by way of three dedicated stations, each respectively dedicated to roughing and shoulder preparation, pre-finishing and finishing. The stations follow rotation of the upper chucks via rotating bearings that have been mounted upon forming heads such that no manual alignment with the chucks is necessitated. All three stations are removable, thereby facilitating easy maintenance and job-change operation on the part of the operator.

OPERATOR-FRIENDLY PRECISION

Tools, plungers and rollers are servo-driven, which all makes setting and forming operations more precise and far smoother. It's thanks to this feature that the operator can adjust the parameters related to

tool position starting/ending as well as to acceleration from the machine control panel.

Following the mouth forming operation, main dimensions can be controlled by the OPTIVIAL camera system, which is developed from experience acquired from other OCMI vial forming machines. The new generation camera allows up to 15 pictures to be taken from the same rotating vial, thus procuring a more precise average value for each dimension.

The servo-motors also drive the setting of both the tube receiving plates and the cutting station.

9 lower chucks of the lower turret are driven by independent motors. Before the device is unloaded a dedicated station flattens the bottom by way of

a containment buffer, which is especially important for large size vials.

The lower chucks are equipped with blowers enabled by solenoid valves, which remove smoke from the inner side of the vials in order to keep alkalinity within the limits fixed by ISO standards.

The take-out, via servo-driven transfer system, has been developed for connection with the OCMI after-forming line.

From the machine control panel the operator can easily set the start and end positions of the plates and cams, which are driven by servo-motors through user-friendly software. During setting and job-change procedures the operator can make use of a remote push-button by enabling jog mode.

FLA18 machine is also suit-



able to be connected with the automatic loader supplied by OCMI, now available in the new version picking the single tube from the packed bundle.

VIALS AFTER-FORMING

The new LF518 after-forming line has been purposely developed to be connected to the FLA18 forming machine.

The new electrically-powered vial annealing version developed by Lehr at OCMI's Italy

headquarters is alimented by a feeding manipulator with six mechanical grippers which picks the vials up from the cooling conveyor before placing them in a horizontal position upon drilled metal trays. Oven length and width can be modified according to production area layout, together with the vial quantity to be conveyed per row. The pick-place manipulator, with its adjustable gripper jaws, allows for vial process-

ing that can reach a minimum length of 30 mm.

AUTOMATIC PACKING

The PM-V Automatic Packing machine, complete with 4 or 5 available box filling stations placed upon a rotating table, can replace the traditional manual packing operation, hence solving the problem of friction between vials and any resulting scratches. This option leaves no contact between vials thanks to picking up via vacuum cups from the line chain - so minimizing any risk of scratches or breakages during packing.

Digital-technical documentation on the new line will shortly be available on the new OCMI website, which is under continual revision according to ongoing updating by the Group. ■



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