



Customer object specification

KRONES Handle Specifications
Inline Handle Applicator (Integrated in
Variopac Pro)



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1 General information

1.1 Basic information

This specification contains a broad range of packaging options. These possible combinations of material and material characteristics require a release by KRONES in all cases.

With standard equipment, in terms of packaging, customer materials that are already available can be checked and released for commissioning by KRONES. If no packaging materials are provided yet by the customer, KRONES provides recommendations (pack-specific proposals), which must be confirmed by the customer. The drawings prepared by KRONES apply.

Following successful customer acceptance under production conditions on site (refer to the specifications for acceptance conditions), the packaging material used is logged, countersigned by both parties and approved for processing on this machine.

In the event of subsequent changes to the material and packaging, it is the customer's responsibility to inform KRONES about the matter and to obtain a release. If changes are made to the material and packaging, KRONES reserves the right to run tests under near-production conditions. The test materials required for this purpose must be provided by the customer.

The scopes used for this test are agreed in advance with KRONES and could comprise the following, for example:

- One shift (one day of approx. 8 hours) + corresponding sufficient packaging material

Test results are recorded and given to the customer. Manual samples and/or finished packs are provided for examination. If the results reveal no defects for the customer, they are recorded in writing, signed by the customer and by KRONES and approved again for processing on the related machine. If the tests show that the defects which are the subject of the customer's complaint are caused not by the design of the machine, but rather by the material, which is outside of KRONES specifications, KRONES reserves the right to bill the customer for costs incurred at standard market rates.

1.2 Environment/Installation location

	Min.	Max	Unit	Comment
Ambient temperature	10	50	°C	
Air humidity	40	95	% rel. humidity	No formation of condensate on film permissible; KRONES film specification regarding storage of the film reels before processing must be observed.
Air pressure/Installation height	0	2,000	m above sea level	From 2,000 m special motors and hardware components are required in some cases.
Air quality	-	-	-	Do not install next to units which heavily contaminate the air (diesel soot and carbon dust), since this will result in insufficient adhesion. Only install in the dry part! Do not install in the wet area, as aggressive cleaning medium (e.g. acetic acid) can impair functions of the components.



General information

	Min.	Max	Unit	Comment
Compressed air supply	6		bar	Requirements for the compressed air to be used: oil, dust and water-free. Residual particle size < 5 µm. Can be achieved with FESTO standard air service unit. Water or oil in the compressed air provided by the customer can impair the function of the pneumatic components. Pneumatic cylinders can become slow. Valves may fail prematurely.
Voltage supply/Mains				See the KRONES electrical specification

2 Handle adhesive tape

2.1 Pre-fabricated adhesive tape



Minor wrinkling (PET)



Major wrinkling (MOPP)

	Min.	Max	Unit	Comment
Manufacturer/Type	independent			
Material	<input type="checkbox"/> Preferably PET (polyester) <input type="checkbox"/> Mono-oriented polypropylene (MOPP)			
Adhesive	Thermally stable adhesive on natural rubber basis			
Handle length	360 300 *	530	mm	* Min. handle length with pre-fabricated adhesive tape.
Handle width	25	± 0.25	mm	
Film thickness	50		µm	No guarantee processing will be possible or of handle strength if thinner film is used. Approval only with handle material according to KRONES specification.
Total thickness	72		µm	No guarantee processing will be possible or of handle strength if thinner film is used. Approval only with handle material according to KRONES specification.
Carrier colour	transparent			Due to P.E. sensor detection of label!
Adhesive strength on PU	6	-	N/25 mm	
Tensile strength	200	-	N/25 mm	
Elongation at break	-	130	%	
Label length	90	400	mm	
Label grammage	90	120	g/m ²	Important for the processability in the non-returnable packer
Label transparency				No transparency is permitted because the end of the label is used as a print mark to determine the timing of the cut. Alternatives only if requested and tested.
Adhesive tape reel type	cross-spoiled			
Adhesive tape reel sabre maximum	-	10	mm	Angled offset of adhesive tape to 1 m unwound length
Inside diameter of adhesive tape reel	152.4	-	mm	6" core
Maximum outside diameter of adhesive tape reel	-	380	mm	
Width of adhesive tape reel	-	350	mm	



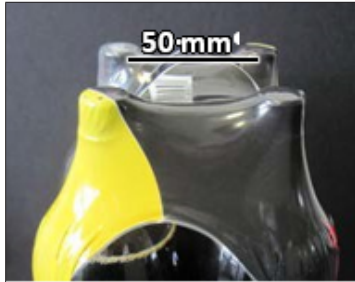
3 Shape and position of adhesive tape on pack

	Min.	Max	Unit	Comment
Position of tape to register mark (in running direction)	-5	5	mm	
Position of tape to centre of pack (transverse to running direction)	-15	15	mm	Inaccuracies due to lateral film offset in packer and shrinking process
Loop formation possible				No - processing of can packs unfavourable



Pack

4 Pack



Min. distance between 2 containers

Processing program	Min.	Max	Unit	Comment
Centre distance of packs	200	600	mm	Min./max. Centre distance of application modules
Permissible pack weight	-	12	kg	Permissible maximum weight due to handle; if necessary, lower values due to insufficiently dimensioned film material
Distance between container closures				<p>Restrictions in the processing program when positioning the handle centred to containers (e.g. with 3x2 formation): In order to grip the carrying strap, a corresponding negative curvature between the container closures is necessary. The distance between the closures must be at least 50 mm for a sufficient curvature. The min. container diameter required for this ≥ 80 mm for standard closure diameter of 30 mm.</p> <p>Restrictions in the processing program when positioning the handle between two containers (e.g. with 2x2 formation): Container closures ≤ 30 mm (standard closure diameter for PET)</p>



5 Storing packaging material

	Min.	Max	Unit	Comment
Storage at the machine				The adhesive tape reels and labels must be stored at the machine at least 24 hours before processing.
General storage environments				Protection against direct sunlight, high temperatures, mechanical damage, dust and humidity. Storage in original packaging.
Storage temperature of adhesive tape	18	21	°C	Adhesive suitability of the tape depends greatly on temperature. Adhesive begins to flow, thermal decomposition of adhesive.
Air humidity	40	60	% rel. humidity	
Storage duration				Max. 1 year under optimum conditions
Transport				Packed individually in cartons on pallet