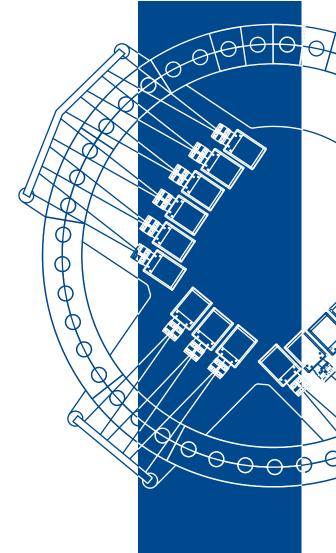
	VISUAL INSPECTOR						LEAK TEST		MONOBLOC		
MODEL	ARGO I	PRIME		ARGO		ANGKOR	ICON		EV0		
PITCH	60	85	60	85	110	60	SVP - Small Volume	LVP- Large Volume	60	110	
FEATURES		1			ļ		Voidino	Volumo			
MAX SPEED [pcs/hour]	up to	up to	up to	up to 18000	up to	up to	up to	up to	up to	up to	
Waster EED [poormoun]	4000	3000	24000	ap 10 10000	12000	18000	18000	12000	18000	12000	
MAX SPEED [pcs/min]	up to 66.6	up to 50	up to 400	up to 300	up to 200	up to 300	up to 300	up to 200	up to 300	up to 200	
MOTION	· ·		up to 100			up to 000			· ·		
	Intermittent up to 14 up to 14		Continous		1	un to 20	Continous		Continous up to 39 up to 28		
NUMBER OF GRIPPERS	<del></del>		up to 48 up to 39		up to 28	up to 39	-				
NUMBER OF CHAMBERS	-				-		from 20 to 30	from 20 to 30	from 20 to 30	from 20 to 30	
CONTAINERS	i				,		•			i	
TYPE	Ampo	oules	Ampoules		Vials	Pre-filled syringes	Ampoules	Vials	Ampoules	Vials	
	Vials		Vials		Bottles		Vials	Bottles	Vials	Bottles	
	Cartridges		Cartridges				Cartridges		Cartridges		
SIZE [mm] 🕌 🌡	A=10.75÷36		A=10.75÷36		A=46÷98	6,85÷17	A=10.75÷36	A=46÷98	A=10.75÷36	A=46÷98	
	B=47÷67	B=47÷132.5	B=47÷67	B=47÷132.5	B=76÷223	in diameter	B=47÷67	B=76÷223	B=47÷67	B=76÷223	
VOLUME [ml]	1÷30	1÷250	1÷30	1÷250	50÷1000	1÷10	1÷30	50÷1000	1÷30	50÷1000	
MATERIAL			1-30		30-1000	Glass					
IVIATERIAL	Glass		Glass				Glass		Glass		
CONTENT	Plastic		Plastic			Plastic	Plastic		Plastic		
	Liquid (solution, suspension,		Liquid (solution, suspension, en			Liquid	Liquid (solution, suspension, emulsion, oil based product)  Powder		Liquid (solution, suspension, emulsion, oil ba product) Powder		
	emulsion, oil based product)		oil based product)		t)	(solution,					
	Powder		Powder			suspension)					
	Lyophilized		Lyophilized					Lyophilized		Lyophilized	
FUNCTIONS											
INFEED	Tra	av	Tr	ay	Inline	De-nester unit	Tray	Inline	Tray	Inline	
CONFORMING OUTFEED	or inline (vials only)		or inline (vials only)			or inline	Inline (vials only)		Inline (vial sonly)	1	
	· '				Inline	Re-nester unit	, , , , , ,	Inline	Tray	Inline	
	Tray		Tray		HIIIIE		Tray	- Inline		- Initine	
	,	or inline (vials only)		or inline (vials only)		or inline	Inline (vials only)	_	Inline (vials only)	` ''	
REJECTS OUTFEED	Tra	ay	Tr	ay	Tray	Basket	Tray	Tray	Tray	Tray	
	or conveyor	r (vial only)	or conveyo	r (vials only)	or conveyor	or coveyor	Conveyor (vials	Conveyor	Conveyor(vials only)	Conveyor	
							only)				
REJECT SYSTEM	Pneumatic		Pneumatic Pneumatic		Pneumatic	Suction	Pneumatic	Pneumatic	Pneumatic	Pneumatic	
			or suction	or suction	or suction		or suction	or suction	or suction	or suction	
NSPECTION AND CON	TROL						-			•	
NUMBER OF CAMERAS	1+1	1+1	2+2 ÷ 4+4	2+2 ÷ 3+3	1+1 ÷ 2+2	1+1 ÷ 3+3	_		1+1 ÷ 3+3	1+1 ÷ 3+3	
INSPECTION							Non-desctructive in	togrity chack with	Double independent sta		
CHARACTERISTICS	Double independent station fitted each with two different illumination systems for proper detection of reflective and opaque particles		Double independent station fitted each with two different illumination systems for proper detection of reflective and opaque particles				vacuum decay		different illumination systems for proper detecti of reflective and opaque particles + Non- desctructive integrity check with vacuum deca		
STANDARD	Double partic			Double pe	artiala and laval		Vacuum laa	k dataction		icle and level	
	i Duudie dai iii	de allu level	Double particle and level				Vacuum leak detection		Double part		
									.,		
INSPECTIONS	·									ak detection	
OPTIONAL	Cosmetic (side		Cosn	netic (sidewall su	ırface)	Pluger	Cap/tip i	. * : .	Cosmetic (	ak detection vial surface)	
	·			netic (sidewall su		Still particles on	Cap/tip i Flip-off integr	. * : .	Cosmetic (	ak detection	
OPTIONAL	Cosmetic (side	ty and quality	Cap/	,	quality	i i		. * : .	Cosmetic ( Cap/tip	ak detection vial surface)	
OPTIONAL	Cosmetic (side	ty and quality es and surface)	Cap/ Botton	tip integrity and o	quality surface)	Still particles on		. * : .	Cosmetic ( Cap/tip Bottom (particl	ak detection vial surface) integrity	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle	ty and quality es and surface)	Cap/ Botton	tip integrity and on the control of	quality surface)	Still particles on the plunger		. * : .	Cosmetic ( Cap/tip Bottom (particl	ak detection vial surface) integrity es and surface)	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr	ty and quality es and surface) rity and color	Cap/ Botton Flip-	tip integrity and on (particles and so-off integrity and	quality surface) color	Still particles on the plunger Needle cover inspection		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ	ak detection vial surface) integrity es and surface) rity and color	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr	ty and quality es and surface) rity and color particles	Cap/ Botton Flip-	tip integrity and on particles and so-off integrity and	quality surface) color	Still particles on the plunger Needle cover inspection Flange inspection		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ	ak detection vial surface) integrity es and surface) rrity and color particles	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating Powder/lyophili	ty and quality es and surface) rity and color particles zed inspection	Cap/ Bottor Flip- Powde	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection	Still particles on the plunger Needle cover inspection Flange inspection Glass defects		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi	ak detection vial surface) integrity es and surface) particles lized inspection	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating Powder/lyophili Powder/lyophili	ty and quality es and surface) ity and color  particles zed inspection zed bottom in-	Cap/ Bottor Flip- Powde	tip integrity and on particles and so-off integrity and	quality surface) color s pection	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi	ak detection vial surface) integrity es and surface) rrity and color particles	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating Powder/lyophili	ty and quality es and surface) ity and color  particles zed inspection zed bottom in-	Cap/ Bottor Flip- Powde	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection inspection	Still particles on the plunger Needle cover inspection Flange inspection Glass defects		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating Powder/lyophili Powder/lyophili	ty and quality es and surface) ity and color  particles zed inspection zed bottom in-	Cap/ Bottor Flip- Powde	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection	
OPTIONAL	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating Powder/lyophili Powder/lyophili	ty and quality es and surface) ity and color  particles zed inspection zed bottom in-	Cap/ Bottor Flip- Powde	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection inspection Hanger	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi	ak detection vial surface) integrity es and surface) prity and color particles lized inspection d bottom inspection Hanger presence	
OPTIONAL INSPECTIONS	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating Powder/lyophili Powder/lyophili	ty and quality es and surface) ity and color  particles zed inspection zed bottom in-	Cap/ Bottor Flip- Powde	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection inspection Hanger presence and	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi	ak detection vial surface) integrity es and surface) rity and color particles lized inspection d bottom inspection Hanger presence and	
OPTIONAL INSPECTIONS	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating Powder/lyophili Powder/lyophili	ty and quality es and surface) ity and color  particles zed inspection zed bottom in-	Cap/ Bottor Flip- Powde	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection inspection Hanger presence and	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between		. * : .	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi	ak detection vial surface) integrity es and surface) rrity and color  particles lized inspection d bottom inspection  Hanger presence and	
OPTIONAL INSPECTIONS  OTHER OPTIONS  LABELLING application & verifi-	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating   Powder/lyophili Powder/lyophili	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip- Powder/ly	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between	Flip-off integr	ity and color	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity	
OPTIONAL INSPECTIONS  DTHER OPTIONS  LABELLING application & verification	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating   Powder/lyophili Powder/lyophili	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip- Powder/ly	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between	Flip-off integr	ity and color	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity	
OPTIONAL INSPECTIONS  DTHER OPTIONS  LABELLING application & verification  CODE	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integr  Floating   Powder/lyophili Powder/lyophili	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip- Powder/ly	tip integrity and on particles and so- off integrity and so- Floating particles or/lyophilized ins	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger Needle cover inspection Flange inspection Glass defects Liquid between	Flip-off integr	ity and color	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity	
OPTIONAL INSPECTIONS  OTHER OPTIONS  LABELLING application & verification  CODE application & verifi-	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating i Powder/lyophili Powder/lyophili spec	ty and quality s and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip: Powder/ly	tip integrity and on (particles and soft integrity and on (particles and soft integrity and Floating particles en/lyophilized inspophilized bottom	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs	Flip-off integr	ity and color	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophilized	ak detection vial surface) integrity es and surface) rrity and color particles lized inspection d bottom inspection Hanger presence and integrity	
OPTIONAL INSPECTIONS  DTHER OPTIONS  LABELLING application & verification  CODE application & verification	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Ploating   Powder/lyophili Spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip- Powder/ly	tip integrity and of n (particles and s off integrity and s off integrity and Floating particles er/lyophilized inspophilized bottom	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs	Flip-off integr	ety and color	Cosmetic ( Cap/tip Bottom (particl Flip-off integ  Floating Powder/lyophi Powder/lyophilized -	ak detection  vial surface)  integrity  es and surface)  particles  lized inspection  d bottom inspection  Hanger presence and integrity	
OPTIONAL INSPECTIONS  DTHER OPTIONS  LABELLING application & verification CODE application & verification RINSING	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Ploating   Powder/lyophili Spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip- Powder/ly	tip integrity and of n (particles and s off integrity and s off integrity and Floating particles er/lyophilized inspophilized bottom	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs	Flip-off integr	ity and color	Cosmetic ( Cap/tip Bottom (particl Flip-off integ  Floating Powder/lyophil Powder/lyophilized  -	ak detection  vial surface)  integrity  es and surface)  particles  lized inspection  d bottom inspection  Hanger presence and integrity	
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OPTIONAL INSPECTIONS  DITHER OPTIONS  LABELLING application & verification CODE application & verification RINSING BLOWING  DITHER FEATURES	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Ploating Powder/lyophili Powder/lyophili spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip- Powder/ly	tip integrity and of n (particles and s of not integrity and s off integrity and Floating particles er/lyophilized inspophilized bottom	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs	Flip-off integr	• • •	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophi Powder/lyophilized -  • • • • •	ak detection vial surface) integrity es and surface) rrity and color  particles lized inspection d bottom inspection  Hanger presence and integrity	
OPTIONAL INSPECTIONS  DTHER OPTIONS  LABELLING application & verification CODE application & verification RINSING BLOWING	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Ploating   Powder/lyophili Spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion	Cap/ Bottor Flip- Powder/ly	tip integrity and of n (particles and s off integrity and s off integrity and Floating particles er/lyophilized inspophilized bottom	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs	Flip-off integr	ity and color	Cosmetic ( Cap/tip Bottom (particl Flip-off integ  Floating Powder/lyophil Powder/lyophilized  -	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection  Hanger presence and integrity	
OPTIONAL INSPECTIONS  DITHER OPTIONS  LABELLING application & verification CODE application & verification RINSING BLOWING DITHER FEATURES DIMENSIONS L x D	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating   Powder/lyophili Powder/lyophili spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion    2000x2000	Cap/ Bottor Flip- Powder/ly	tip integrity and on (particles and so off integrity and on (particles and so off integrity and Floating particles ear/lyophilized inspophilized bottom	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs  Tbd	Flip-off integr	• • Tbd	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized -  Tbd	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity	
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OPTIONAL INSPECTIONS  DITHER OPTIONS  LABELLING application & verification CODE application & verification RINSING BLOWING DITHER FEATURES DIMENSIONS L x D	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating   Powder/lyophili Powder/lyophili spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion  2000x2000	Cap/ Bottor Flip- Powder/ly	tip integrity and on (particles and so off integrity and on (particles and so off integrity and Floating particles ear/lyophilized inspophilized bottom	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs  Tbd	Flip-off integr	• • Tbd	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized -  Tbd  Tbd	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity	
OPTIONAL INSPECTIONS  DITHER OPTIONS  LABELLING application & verification & veri	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating   Powder/lyophili Powder/lyophili spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion  2000x2000	Cap/ Bottor Flip- Powder/ly	tip integrity and on (particles and so off integrity and on (particles and so off integrity and Floating particles en/lyophilized inspophilized bottom  Tod  2500	quality surface) color s pection inspection Hanger presence and integrity	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs  Tbd  2500	Flip-off integr	• • Tbd	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized -  Tbd  Tbd	ak detection  vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity   Tbd	
OPTIONAL INSPECTIONS  DIHER OPTIONS  LABELLING application & verification CODE application & verification RINSING BLOWING DIHER FEATURES DIMENSIONS L x D HEIGHT H CONSTRUCTION PLC	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating   Powder/lyophili Powder/lyophili spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion  2000x2000	Cap/ Bottor Flip- Powder/ly  Powder/ly  Tbd	tip integrity and on (particles and soft integrity and on (particles and soft integrity and Floating particles en/lyophilized inspophilized bottom  That the soft integrity and Floating particles en/lyophilized inspophilized bottom  That Statisless steel	quality surface) color s pection inspection Hanger presence and integrity  Tbd	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs  Tbd  2500  Stainless steel	Flip-off integr	• • Tbd  Oo s steel	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized  -  Tbd  Stainle	ak detection  vial surface) integrity es and surface) particles lized inspection d bottom inspection  Hanger presence and integrity	
OPTIONAL INSPECTIONS  DIHER OPTIONS  LABELLING application & verification CODE application & verification RINSING BLOWING DIHER FEATURES  DIMENSIONS L x D HEIGHT H CONSTRUCTION	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating   Powder/lyophili Powder/lyophili spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion  2000x2000	Cap/ Bottor Flip- Powder/ly  Powder/ly  Tbd	tip integrity and on (particles and soft integrity and on (particles and soft integrity and Floating particles en/lyophilized inspophilized bottom  That the soft integrity and Floating particles en/lyophilized inspophilized bottom  That Statisless steel	quality surface) color s pection inspection Hanger presence and integrity  Tbd	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs  Tbd  2500  Stainless steel  Siemens of control paramete	Flip-off integr	• • Tbd  Oo s steel	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized  -  Tbd  Stainle	ak detection  vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity   Tbd	
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OPTIONAL INSPECTIONS  DITHER OPTIONS  LABELLING application & verification CODE application & verification RINSING BLOWING DITHER FEATURES DIMENSIONS L x D HEIGHT H CONSTRUCTION PLC FUNCTIONS  QUALITY AND VALI-	Cosmetic (side Cap/tip integri Bottom (particle Flip-off integri Floating) Powder/lyophili Powder/lyophili spec	ty and quality ss and surface) ity and color particles zed inspection zed bottom in- tion   2000x2000  00 ss steel	Cap/ Bottor Flip- Powder/ly  Powder/ly  Tbd  Customized u	tip integrity and on (particles and so off integrity and on (particles and so off integrity and Floating particles en/lyophilized insign ophilized bottom  That That 2500 Stainless steel	quality surface) color s pection inspection Hanger presence and integrity  Tbd  Tbd  password, Setting 19" touch plan, Risk analysis	Still particles on the plunger  Needle cover inspection  Flange inspection  Glass defects  Liquid between ribs  Tbd 2500  Stainless steel  Siemens of control paramete screen, Industrial PC F, Functional design s	Flip-off integr	Tbd  Tbd  ompatible with 21 C	Cosmetic ( Cap/tip Bottom (particl Flip-off integ Floating Powder/lyophil Powder/lyophilized  -  Tbd  Stainle	ak detection vial surface) integrity es and surface) particles lized inspection d bottom inspection Hanger presence and integrity	
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# VISUAL ROTATING INSPECTORS



# VRI VISUAL ROTATING INSPECTORS

VRI are inline and standalone machines designed to inspect a wide range of glass or plastic medical containers for liquids (such as solutions, suspensions, emulsions and oil-based products), powder or lyophilized drugs.

Visual Rotating Inspectors are made of four product families and ten different models to cover all inspection needs:

- the Argo and Angkor models combine particle checking, filling level checking with cosmetic and functional faults detection;
- the lcon models perform vacuum leak testing to verify the integrity of containers;
- the monobloc Evo models integrate all the above functions with labelling, rinsing and drying options.

The vast set includes machines able to inspect volumes from 1 ml to 1000 ml, ranging from the inspection of Small Volume Parenterals (vials, ampoules, cartridges, syringes) to Large Volume Parenterals (such as medical bottles or Blow Fill Seal).

Intermittent motion and high-speed continuous motion rotary systems allow productions up to 24.000 containers/hour.

Several light sources and different lighting techniques (direct light and back light) enable the identification of all the defects. The high resolution of the cameras and the optics used enable tiny defects to be identified, while sophisticated analysis algorithms minimise false rejections even in conditions of maximum sensitivity. Reject verification system based on "fail-safe" principle ensures that containers recognized as defective will not reach the channel of good products.

The machines can be run by a single operator through the built-in touch-screen display, where all the controls and configuring functions are available.

# **FEATURES AND BENEFITS**

#### **VERSATILE MACHINES**

- Wide range of inspected formats (from 1 to 1000 ml).
- Inspection of small and large volumes plastic/glass containers or pre-filled syringes.
   Liquids, powder, and hyphilized products inspection.
- Liquids, powder and lyophilized products inspection.
- Gripping pressure/strength is adjusted to the appropriate value according to the bottle size, weight and kind of cap using a pneumatic regulation.
- In case of different neck/cap, pads can be easily and quickly replaced simply pushing the release button.
- Motor rotation speed is automatically set depending on product size and in control type.

#### PERFORMED CONTROLS

- Particle inspection inside the product.
- Leak test with vacuum trend analysis.
- Inspection of foreign bodies over the product level.
- Filling level checking.
- Container cosmetic and functional faults detection.
- Flip-off seal cap: color and integrity.
- Cap and tip integrity
- Aluminium vial seal: crimp quality, dents or snicks.
- Container body, neck, upper and lower part: cracks, scratches, air bubbles, stains.
- Containers bottom and bottom edge: breaks and chippings.
- Hanger presence and integrity verification.
- Labelling application and verification.

## **SMART AND EFFICIENT**

- High throughput (up to 24.000 containers/hour)
- High accuracy: detection of reflective and opaque particles inside the products up to 20 µm of dimension.
- High reliability: double independent particle inspection to provide redundancy
- Accurate cosmetic inspection with detection of defects up to 1mm x 1mm.
- $\bullet$  Non-destructive integrity leak check with vacuum decay with an accuracy up to 20  $\mu m.$
- Automatic rejection system with various outlet channels depending on the nature of the defect.
- Latest vision technologies used to minimize number and complexity of inspection stations.
- Multiple cameras high resolution based inspection system with high speed vision capturing and processing system to increases accuracy and efficiency of the machine.
- Wizard menu for new formats or modification of current format.
- Leak test, visual inspection and labelling application/inspection in the same base.
- Quick change of container gripper pads without using tools.
  Fully automatic height adjustment of carousel by servo-assisted screw
- jacks to accommodate different bottle sizes.

  Fasy exchangeable infeed excess stangeds and quides for rapid changes.
- Easy exchangeable infeed screw starweels and guides for rapid changeover of different product sizes.
- Carousel grip the containers from above keeping it clear for best illumination and inspection of all parts.
- Carousel supported from top for a comfortable access to mechanical and electrical equipment as well as to the vision system (cameras and illuminators) allowing an easy cleaning and a simpler maintenance.
- Advanced statistical analyses with detailed reject typology to help detecting the reject causes in the upstream production process.
- CFR 21 Audit Trail Reports can be printed on a laser printer built into the machine.

#### ADVANCED HM

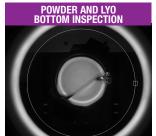
- Single touch-screen display to control all machine functions:
- check of all cameras,
- machine status
- programming of formats
- diagnostics.
- Industrial 19" PC Windows OS based.
- Easy and user-friendly graphic user interface.

# **QUALITY AND VALIDATION**

- Manages up to 5 user login levels.
- FDA 21 CFR part 11 and GMP Annex 11 compliant.
- Developed following GAMP 5 approach.
- Availability of all documentation involved in the GAMP approach.



POWDER AND LYO INSPECTION









CONFORMING

CONFORMING

PRODUCTS

PRODUCTS

LEAK TEST



### **ARGO PRIME**

for slow speed visual inspection of ampoules, vials and cartridges



# RGO

for high-speed visual inspection of ampoules, vials, cartridges, bottles



# ICON

for leak test detection of ampoules, vials, cartridges, bottles



# EV0

for visual inspection integrated with the leak test detection of ampoules, vials, cartridges, bottles



# ANGKOR

for visual inspection of prefilled syringes

