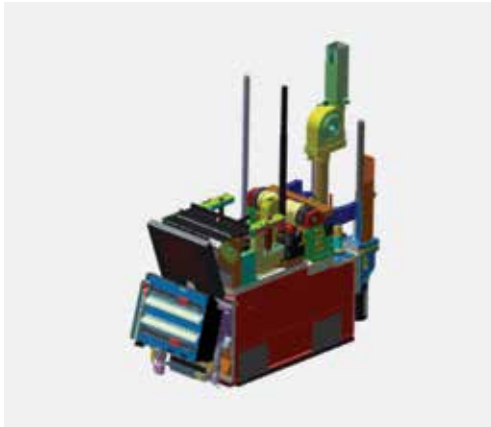


The next generation of pneumatic glass container forming machines

AIS 2 machines



AIS 2 machine overview

The AIS machine is recognized by the industry as the superior performer among pneumatically driven glass container forming machines. A combination of valued features, including parallel Mold Open and Close MOC mechanism, pneumatic operation, high efficiency VertiFlow cooling, and built-in flexibility, make the AIS machine top of its class.

The next generation AIS 2 is built to give glassmakers even more, with many new features designed to deliver enhanced performance, better production, and reduced maintenance on the forming line.

Machine function	New features	Benefits
Delivery	<ul style="list-style-type: none"> Constant Cone Bézier Deflectors 	<ul style="list-style-type: none"> More consistent loading
Blank side individual cavity control	<ul style="list-style-type: none"> Cooling of each cavity half can be controlled individually 	<ul style="list-style-type: none"> Improved controllability of blank side cooling (in combination with closed loop)
Valve block improvements	<ul style="list-style-type: none"> Blank side cooling valves directly piloted (not through valve block) Move plunger speed controls from underneath platform to into valve block 	<ul style="list-style-type: none"> Ease of use: Speed control valves
Twist mechanism: improved speed control	<ul style="list-style-type: none"> Spherical outboard bearing funnel Improved speed needle configuration in valve block 	<ul style="list-style-type: none"> Twist mechanism speed control at fast cycle rates as increasing challenge <ul style="list-style-type: none"> New solution: Improve speed setting
Vertiflow mechanism	<ul style="list-style-type: none"> Removable vacuum tubes 	<ul style="list-style-type: none"> Easier cleaning Improved serviceability
Wide cullet chute	<ul style="list-style-type: none"> Cullet chute with wide exit area 	<ul style="list-style-type: none"> Improved cullet chute performance without blocking
MOC with external check valve	<ul style="list-style-type: none"> Check valve of MOC moved to outside of cylinder 	<ul style="list-style-type: none"> Improved serviceability
Plunger stroke	<ul style="list-style-type: none"> 8" plunger stroke Standardize on +65 mm frame 	<ul style="list-style-type: none"> More flexibility for tall containers

Features

- FlexIS 3 Control System
- Servo electric gob distributor
- Constant Cone delivery
- Bézier deflectors
- Full Parallel Blank and Blow mold opening
- Quick Change Plunger Mechanism 8" stroke DG/TG
- Enhanced 26 Lines Valve Block
- Servo Electric Invert SEI
- Servo Electric Takeout SETO
- FlexPusher
- FPS Valve Technology for plunger up and counter blow
- VertiFlow Blank Mold Cooling with Individual cavity control
- Neck ring cooling
- Vertiflow blow mold cooling
- High Low deadplate cooling
- Vacuum assist blow side
- Blank side Barrier

Optional features

- Blank Side Invertiflow with individual cavity control
- FPS Valve technology for final blow
- Plunger Process Control PPC (enabling closed loop control)
- Temperature Control System TCS (enabling closed loop control)
- Vertiflow assist
- Lifting Device

AIS 2 machine ware range

Ware range	6 1/4" Double Gob			4 1/4" Triple Gob		
	B&B	P&B	NNPB	B&B	P&B	NNPB
Height under finish						
Minimum	120	80	80	110	80	80
Maximum	347	300	300	304	285	285
Body diameter						
Maximum	120	120	120	76	76	76
Finish diameter						
Maximum	48	105	38	48	70	38

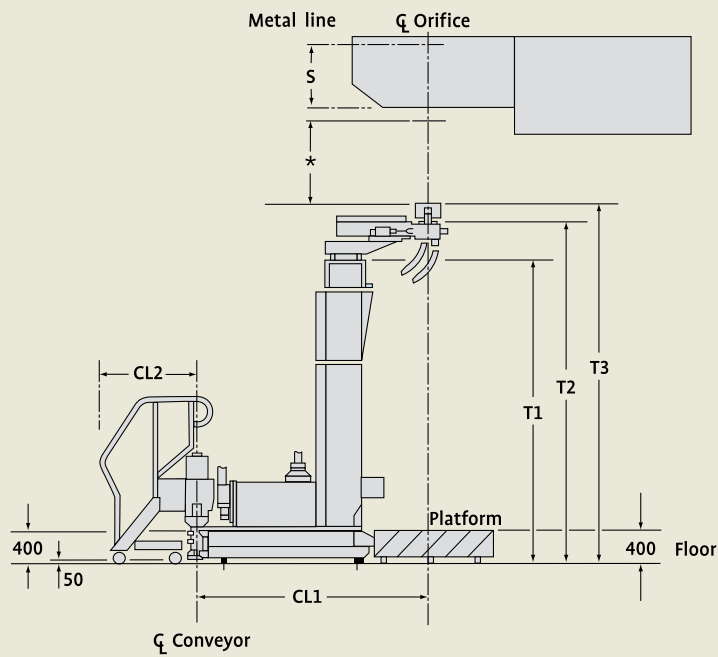
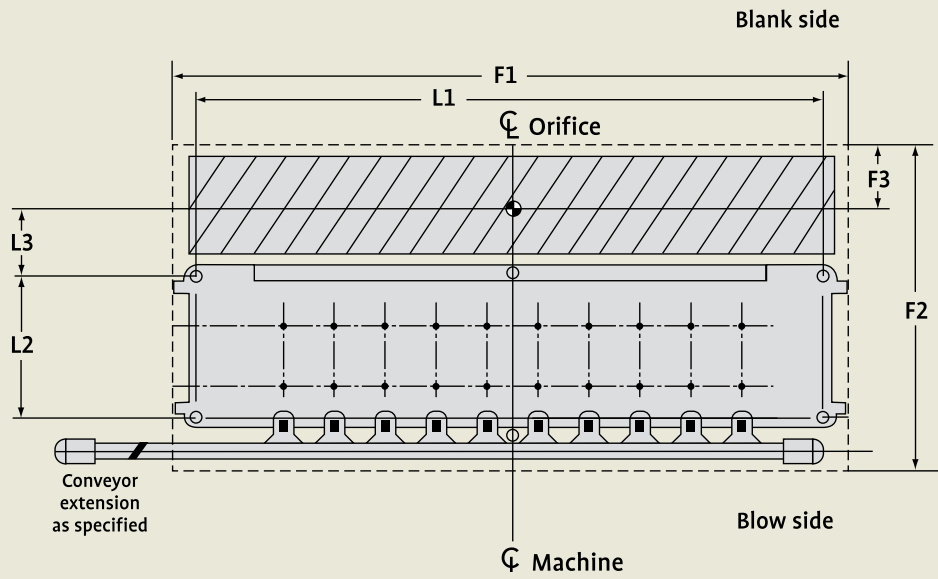
AIS 2 machine installation layout with Constant Cone delivery

		6	8	10	12
F1	Required space length (floor cutout)	5000	6000	7100	8200
F2	Required space width (floor cutout)	4100	4100	4100	4100
F3	Required space to CL orifice (floor cutout)	920	920	920	660
L1	Loading points of bed length	4476	5544	6610	7678
L2	Loading points of bed width	1580	1580	1580	1580
L3	Loading points to CL orifice	640	640	640	899
T1	Top of beam	3451	3682	3916	4228
T2	Top of funnel	3846	4077	4311	4623
T3	Top of interceptor	4114	4346	4578	4892
CL1	CL orifice to CL conveyor	2604	2604	2604	2864
CL2	CL conveyor to end of ladder	884	884	884	884

Note: For machine height with non-Constant Cone delivery, please contact Bucher Emhart Glass.

Dimension specification for feeder and spout

Feeder & spout	S Spout depth (mm)
81 std	324
81 deep	375
503	414
515	477
555 std with 503 spout	414
555 deep with 515 spout	477



* A free gob drop of 900-1200 mm is recommended

Utility requirements - Compressed air and vacuum supply

Air type	Pressure	Receiver size	Consumption (Nm ³ /min/section)						Connection
Compressed air Low pressure	2.1 bar ±0.1 bar	min 0.3 m ³ /section	1.0						(2xRp 4")
Compressed air High Pressure & FPS			4 1/4 & 5" machine			5 1/2 & AIS & 6 1/4 machine			
			No FPS	FPS Pl. up	FPS Pl. up & C'Bl./Pl. cooling	w/o FPS	FPS Pl. up	FPS Pl. up & C'Bl./Pl. cooling	
HP	3.1 bar ±0.1 bar	min 0.3 m ³ /section	4.5	4.2	2.5	5.5	5.2	3.5	(2xRp 3")
FPS	max 5 bar	min 0.3 m ³ /section	N/A	0.4	2	N/A	0.4	2.5	(1xRp 3")
Compressed air pilot	4.0 bar	min 0.05 m ³ /section	0.003						(Rp 3/4")
Vacuum	0.15 bar absolute	min 0.15 m ³ /section	0.3-0.5 (2.0-3.5m ³ /min/IS section)						(2xRp 4")
Air supply feeder & shear	3.1-4 bar		1.0						1/2

Properties	Classification
Foreign particles	ISO Class 4 (ISO 8573-1)
Dew point	ISO Class 4 (ISO 8573-1)
Oil content	ISO Class 4 (ISO 8573-1)
Temperature	10° C – 55° C

Blank mold - Neck ring, blow mold, and conveyor cooling

Mechanism cooling	Pressure	Consumption	Connection
BK & NR cooling & Vertiflow Assist (AIS)	1200-1600 mm H ₂ O	Refer to 200-15864	DN 200 PN6 (also refer to 200-16000-xx)
BW Vertiflow	1200-1600 mm H ₂ O	Refer to 200-15864	DN 150 PN10 (also refer to 200-16000-xx)
Conveyor	Max 1200 H ₂ O Δp inlet deadplate <250 mm H ₂ O	12 Nm ³ /min/IS section Note: Consumption based on 1200 mm H ₂ O. For other pressure values interpolate the consumption	DN 250 PN6 (EN1092-1) (also refer to 200-16000-xx)
Conveyor extension		10 Nm ³ /min for every 0.5m ext. length	
Ware handling - optional (conveyor drive end, cross conveyor, stacker)	Recommended 400 mm H ₂ O	4 Nm ³ /min	DN 80 PN6 (refer to document 200-16000-xx)

Feeder cooling

Mechanism cooling	Pressure	Consumption	Connection
Gob distributor	Recommended 400 mm H ₂ O	2 Nm ³ /min	Ø 2" (50 mm) OD sleeve
Shear mechanism	Recommended 400 mm H ₂ O	7 Nm ³ /min	Ø 4" (100 mm) OD sleeve
Feeder mechanism	Recommended 400 mm H ₂ O	7 Nm ³ /min	Ø 4" (100 mm) OD sleeve
Revolving tube	Recommended 400 mm H ₂ O	2 Nm ³ /min	Ø 2" (50 mm) OD sleeve

Cooling air requirements

Properties	Classification
Foreign particles	ISO Class 5 (ISO 8573-1)
Dew point	ISO Class 5 (ISO 8573-1)
Temperature	10° C – 55° C

Remarks:

- For detailed information about machine connections refer to Installation Layout documents 200-16000-XX as well as to Auxiliary Equipment document 200-1818-00.
- Vacuum forming needs depend on mold design, wear and timing
- Air consumption values above are stated in Normal cubic meters



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