

# A Class





#### Your trust is our strength

#### DEVELOPMENT, MANUFACTURE, AND RECONDITIONING OF INDUSTRIAL COMPONENTS

Established in 2009 in southeast France, BMR is a company specialising in the development, supply and reconditioning of standard and specific GLASS and PET industrial components.



#### **Contact us**

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© contact@bmr-industry.com

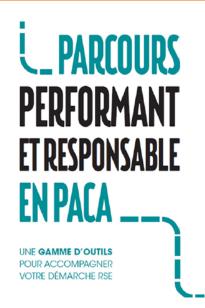
www.bmr-industry.com

Opening hours: 9am-12pm / 2-5pm



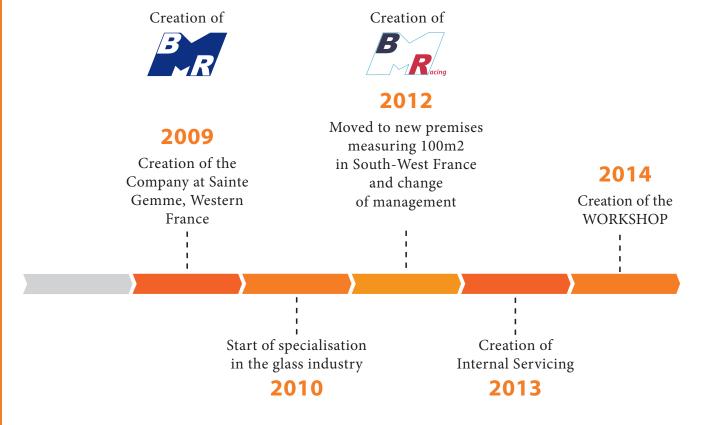


#### **Our commitment to RSE**



BMR maintains its role of helping its customers through significant industry, economic and environmental changes and commits to being their ideal partner.

BMR is one of the leaders of French industry. We partner with our customers, and we want to constantly improve our relationship with them by offering high quality products and services, better meeting their needs. The components developed and recommended by our teams are maintained and repaired in our workshops in order to ensure an almost perfect circular economy process.

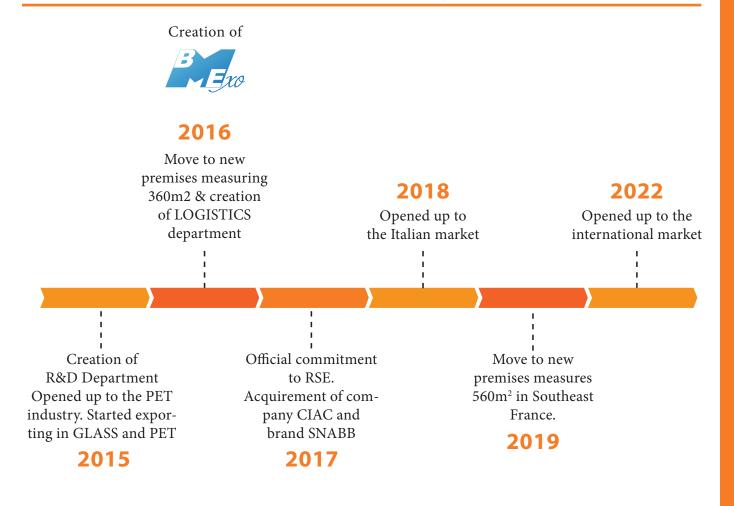


## PRESENTATION

BMR's industrial excellence model places its social and environmental commitments at the heart of its strategy. BMR is proud of its ambitions and its values, so it maintains its role of helping its customers through significant industry, economic and environmental changes and commits to acting as a high quality, conscientious, transparent, innovative and proactive partner at every stage of its value chain and towards all parties involved. BMR operates sustainably and responsibly every day: by developing and protecting its human workforce, growing its contribution to the economic and social development of local communities, while implementing circular economy.



#### **Our history**



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* BMR n'est pas une société approuvée par les marques BOTTERO, NUMATICS and LINCOLN	

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ENGRAVED ALUMINIUM BARS

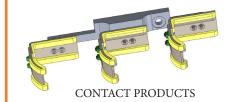


REINFORCED WIRING HARNESSES





MECHANICAL **PARTS** 



**CARTRIDGES** 















SOLENOID VALVE CONTROL BOARD AND REINFORCED HARNESSES













## **VALVES**



**SNABB** valve High pressure air-blower Cartridges for 21 and 2-ways valve block **Specific cartridges BOTTERO\*** cartridges Safety replacement valves NUMATICS



## SNABB Seaman

#### valve

Patented S.G.D.G



SN Standard version



SFA Automatic close version

For compressed air, pressurised water and other gas or fluid systems

#### **ADVANTAGES:**

- Ease of use low maintenance
- Easy manipulation even at low temperatures up to 15 bars
- Safety system small size economical
- Direct and instant fluid flow

#### **TECHNICAL SPECIFICATIONS**

- · Certified brass material
- Perbunan O-rings
- Special fittings on request (Viton, nitrile, ethylene, etc.)
- Standardised thread ¼", 3/8", ½", 1" (GAS)
- In "purge" version, enables evacuation of air built up in front of the valve

#### **ADVANTAGES:**

Useful device for pressure tests and quickly purging systems, tanks, actuators, pistons and other pneumatic systems.

#### STANDARD VERSION



Function 2/2

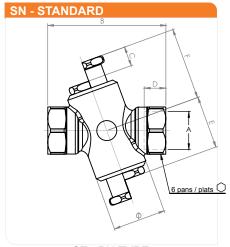
BSP orifice	Réf.
F 1/4"	SN 0813 ST
F 3/8"	SN 1217 ST
F 1/2"	SN 1521 ST



Function 3/2

F 1/4"	SN 0813 PU
F 3/8"	SN 1217 PU
F 1/2"	SN 1521 PU

**MOST USED ON IS MACHINES** 



#### ST - PU TYPE

#### **AUTOMATIC CLOSE VERSION**



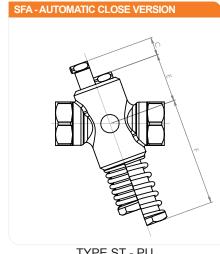
Function 2/2

Orif. BSP	Réf.
F 1/4"	SFA 0813 ST
F 3/8"	SFA 1217 ST
F 1/2"	SFA 1521 ST



Function 3/2

F 1/4"	SFA 0813 PU
F 3/8"	SFA 1217 PU
F 1/2"	SFA 1521 PU



TYPE ST - PU

#### **DIMENSIONS**

Α	В	(	<u> </u>	D	E			F		Ø	
1/4" 8 x 13	57	12	23	7	29	40	51	65	76	30	26
3/8" 12 x 17	61	12	23	8.5	29	40	51	65	76	30	26
1/2" 15 x 21	65	12	23	9	29	40	51	65	76	30	26
		ST	PU	ST+PU		ST	PU	ST	PU		
		SN + SFA			S	N	SI	A			



#### **NEW OPTION: PADLOCKABLE**







Position lock and clamp using padlock



Padlock straight through orifices



**SP1511-XXX**Complete valve with locking tab

#### **NEW OPTION: IDENTIFICATION**



Add engraved symbols for specific function identification

#### **OPTION: ALUMINIUM BUTTON**





#### HIGH PRESSURE STRONG AND LIGHTWEIGHT **COMPRESSED AIR-BLOWER**

Main applications GLASSWORKS: Replacement for existing MOULD BLOWING SYSTEMS

Can be installed on site for existing systems

#### **ADVANTAGES**:

- + Effective
- + Strong
- + Lightweight
- + Easy to hold down
- + Economical

+ SAFETY FEATURE: SHUTS OFF WHEN THE HANDLE IS RELEASED



Fluid: Compressed air or water Maximum pressure: 12 bar Temperature: -20°C to +100°C

Specific developments on request

#### **DIMENSIONS**

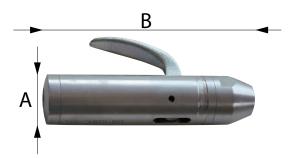
Models	Inlet	Outlet	A (mm)	B (mm)	Ø intern (mm)	Weight (g)
SO1818	1/8	1/8	22	85	3	100
SO1418	1/4	1/8	22	85	3	100
SO1414	1/4	1/4	22	85	3	100
SO3814	3/8	1/4	35	145	12	315
SO3838	3/8	3/8	35	145	12	315
SO1238	1/2	3/8	35	145	12	315
SO1212	1/2	1/2	35	145	12	315
SO1212HF	1/2	1/2	35	145	14,5	315
SO3412LF	3/4	1/2	35	145	14,5	315
SO3412	3/4	1/2	42	145	18	407
SO3434LF	3/4	3/4	35	145	14,5	315
SO3434	3/4	3/4	42	145	18	407
SO134	1	3/4	42	145	18	407
SO11	1	1	42	145	18	407

Most used by IS machines



#### **MATERIALS**

Aluminium



#### **OPTIONS**

Extended handle: -P



Steel tip: -ACS









#### **CARTRIDGES FOR 21 AND 26-WAY VALVE BLOCK**

Valve block cartridges with valve system Easy to assemble and disassemble

#### **ADVANTAGES**:

- + Can be installed on site
- + Effective
- + Reliable
- + Strong
- + Economical, cheaper

Less sensitive to contamination



#### **MATERIALS**

Anodised aluminium

#### **TECHNICAL SPECIFICATION**

Cartridge: Normally open or normally closed

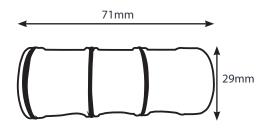
Colour: Red ou blue

Data may be changed without warning

#### **MODELS**

BMR Reference	Inverted colour	Colour	Normally open	Normally closed	EMHART* equivalent reference
BMR022014	~	Red		~	59-27241 191-7705 191-8274 59-27677
BMR012014	~	Blue	~		59-27242 191-7704 191-8273 59-27616
SP14NFB		Blue		~	191-7705-1 191-8274 59-27241 59-27617
SP14NOR		Red	~		59-27616 191-7704-1 59-27242-A 191-8273

#### **DIMENSIONS**



\*BMR is not an approved company by EMHART, nor an official vendor



#### **SPECIFIC CARTRIDGES**

#### **ADVANTAGES**:

- + Long lifespan
- + High flow
- + Viton fittings

Blocker available on request

#### **REFERENCES**:

BMRO-21-4088 1' NC 3-way Cartridge

**BMRO-21-4076**1' 3/8" NC 3-way Cartridge



#### **BOTTERO\* CARTRIDGES**



#### **REFERENCES**:

**BMRBOT-A338-3-CA3**Normally Open Cartridge Blue

BMRBOT-A338-3-CA4 Normally Closed Cartridge Red

\*BMR is not an approved company by BOTTERO, nor an official vendor





## SAFETY REPLACEMENT VALVES NUMATICS 34JDR4430011C00

#### **ADVANTAGES**:

+ On site replacement



**Current installations** 



#### **34JDR443O011C00** Pneumatically controlled valve

PA40 replaced by Numatics 55 with BMR adaptation



SP210606

MK55 valve with specific extended manual controls



## **FULL SYSTEMS**

Tilt table **Charpy impact machine** Test bench for standard and proportionnal valves Proportional valve control cabinet DCX2 counting, down ware, jams, and alignment system Improvement of the cooling case Bespoke burner control cabinet



#### **TILT TABLE**

The BMR tilt table is an easy-to-use device allowing operators to measure the release angle when items slide between themselves. This incline angle for containers made of glass, plastic, or metal enables the coefficient of friction to be calculated between the items.

Our device is unique thanks to its electric actuator and the precision of the laser sensor. The laser sensor features a diode and enables items to be placed closer and to detect the exact moment that the item starts to slide even with small and light objects.



#### **TECHNICAL SPECIFICATIONS**

<u>Container size:</u> Standard plate fits diameters between 20 and 140mm. Any other dimension can be requested.

Speed: 3 actuator speeds – 1.9, 4 or 10mm/s or speeds going from 3 to 10 degrees per second.

Table base dimensions: 350x350mm

Weight: 10kg

Specific developments on request







#### **CHARPY IMPACT MACHINE**

Test the resistance of a glass bottle by striking it with a pendulum hammer.

#### **ADVANTAGES**:

- + Accurate thanks to its graduated wheel
- + Magnet-locking hammer
- + Economical
- + Easy to use



#### **TECHNICAL SPECIFICATIONS**

- Position adjustment for the height of the container being tested
- · Impact speed adjustment with the strike angle
- Lockable in strike position

Specific developments on request



## TEST BENCH FOR STANDARD AND PROPORTIONAL VALVES

Test all solenoid valves on a glass production machine.

#### **ADVANTAGES**:

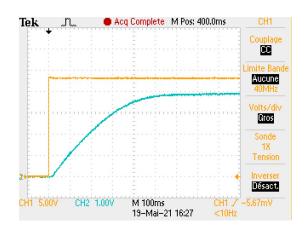
- + Adaptability (all types of sockets and quantity desired)
- + 2 modes : manual and automatic to cycle through the valves
- + Capacity to connect an oscilloscope to obtain response times and flow rates



#### **TECHNICAL SPECIFICATIONS**

- Switch test
- Automatic cycling function
- Test for solenoid valves: standard 12 VDC / 24 VDC, proportional 4-20 mA / 0-10 Vdc and BOTTERO\*
- Bespoke manufacturing available on request
- · Specific development on request





\*BMR is not a company approved by brand BOTTERO, nor an official vendor





## PROPORTIONAL VALVE CONTROL CABINET WITH OR WITHOUT EXHAUST SOLENOID VALVE





#### **USAGE AND CONFIGURATION**

The system allows an all or nothing pneumatic control system to be turned into a proportional controlled system.

Specific developments on request





The cycle screen displays the cycle status in real time.

The Tempo and Pressure allow for the respective values to be adjusted of time in seconds with a decimal (e.g. 1.2s or 8.7s) and pressure in bars with a decimal (e.g. 0.1 bar or 3.6 bars).

The settings are adjusted by pressing the box showing the value with your finger.





## DCX2 – COUNTING, DOWN WARE, JAMS, AND ALIGNMENT SYSTEM

This new version of our item counting system is using an updated technology thanks to its infrared camera control system that gives you full control over counting as well as complete control of alignment on the conveyor.

As the system is interconnected to your IS machine, it will automatically eject any item that is unaligned, touching another item or down ware on the conveyor.

The new control interface provides an easier overview to optimally adjust your system and direct access to data using the ethernet connection, preferably, and Wi-Fi. The software is also one click away on your smartphone, tablet and computer.

#### **FEATURES**

- Item counter
- Ejects articles that are stuck/lying flat
- Ejects articles that are unaligned
- Connectivity with IS machines
- Small dimensions: 200x200x100mm

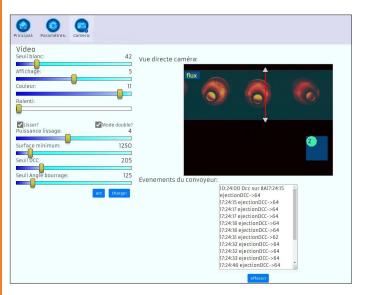


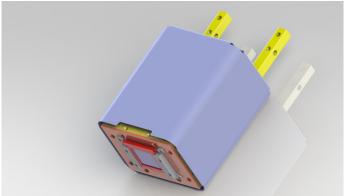
#### **FUNCTION AND USAGE**

The system has been developed in order to adapt to any needs of our customers. Our version features water cooling, which allows it to be installed in harsh locations. Our aircooled or non-cooled versions provide considerable ease of use in certain conditions. An ease of use that, even when far from the conveyor belt, this system will provide thanks to

easy installation and user-friendly interface.

Only the settings integral to manufacture need to be adjusted by yours during production changes. Adjustments during manufacture will be able to be carried out during operation. Data are available on all devices at any moment. A connection to a global site monitoring system is also possible.





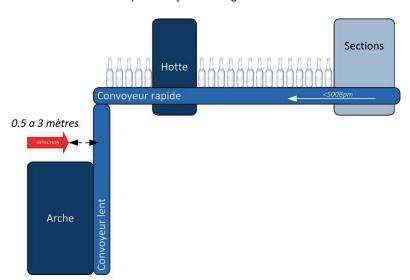






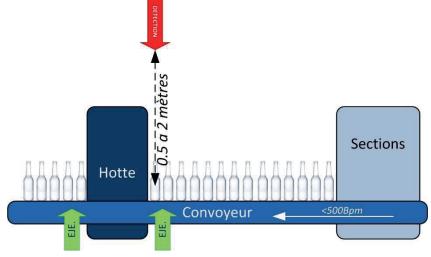
#### **USES**

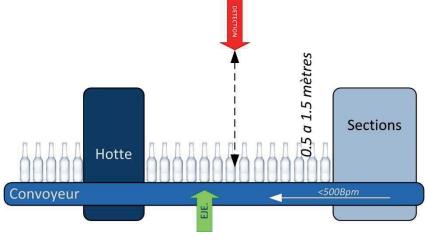
Here are some examples of system usage:



Counting: The unit is placed just at the entrance to the arch, and here the bottles can be counted immediately on leaving, there is no precise distance, in this case we can place the unit quite far away, against the arch. We could count the bottle just when they exit the last section, marking the ejected counts as pressing errors or similar.

JAMS: We can place the unit just in front of the hood,in jam mode, and it could trigger a magnetic controller or Solenoid valve, or even two. Jam is halted and the bottles are ejected to avoid the risk of jaming. We can use this mode by placing the sensor at the end of the machine, or even on the conveyor and as such detect partial or global conveyor jams.





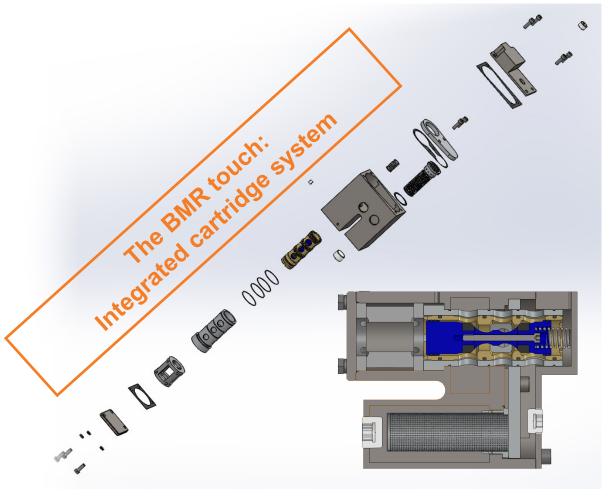
DCC Detection: As the name implies, this mode is used for ejected bottles that are stuck together or lying down, and is the most resource-intensive mode that requires the most accurate configuration. The unit must be closer to the conveyor. And the optical configuration must be set very precisely. But it will work even with cycles specific to machines that produce small, light articles (beer).

Usage is not limited to these three modes, the equipment presented can be applied in all detection/ejection application.



#### **IMPROVEMENT OF THE COOLING CASE ON REQUEST**







#### **BESPOKE BURNER CONTROL CABINET**

Development and manufacture of a control system for oxygen, gas and acetylene on request. The base service includes:

- Development
- Valves, tensioners, manometers, flowmeters, control boxes, regulator, filters, tubes, etc.
- Manufacture and testing in our workshop



NOTES

# **BMR SERVICES**

Reconditioning of solenoid valves Cylinders reconditioning Shock absorbers reconditioning Reconditioning of LINCOLN injectors Reconditioning of grease pumps Reconditiong of all IS machine parts Engraved bars, labels... Installation of light curtains On site maintenance



#### **RECONDITIONING SOLENOID VALVES**

Reconditioning of the whole set of solenoid Valves used in the glass industry:

- Numatics (mk8, mk15 et i34)
- Ross
- Generalmatic
- Bosch
- Emhart\*
- Bottero\*...

#### **ADVANTAGES**:

- + Reduction in purchasing costs
- + Operating costs are reduced
- + Fewer random breakdown with traceability
- + Fewer machine stoppages



### Environmentally + Economical friendly

#### REDUCTION IN PURCHASING **COSTS**

As BMR manufactures or has access to all spare parts of various manufacturers, reconditioning a solenoid valve can be much cheaper.

#### **CONTROL OVER COMPONENT MAINTENANCE**

Our package includes:

- Delivery
- Inspection and testing
- Initial exterior cleaning
- Tracking engraving
- Disassembly
- Second cleaning of all components
- Replacement of all wear parts
- Reassembly
- Pneumatic test at low and high pressure (switch test and leak test)
- Electrical test (with measurement for voltage, excitation, and de-excitation intensity)
- Written report of any remarks with tracking file

#### **REDUCTION IN MACHINE DOWNTIME**

Some solenoid valves or pilots have lead times that can go sometimes of up to 10 weeks. This, as well as the fact that many factories use the same solenoid valve or pilot references may lead to challenging situations with a section that has shut down.

Our experience allows us to recondition over 60% of "unrepairable" components, enabling the shutdown section(s) to be restarted or avoid stoppage due to lack of spare parts.

#### **CONTROL OVER RANDOM BREAKDOWNS**

When reconditioning, the solenoid valves that go through our workshops are individually engraved with two letters corresponding to the factory that they came from, followed by the number of the repaired solenoid valve.

All the references, remarks before and after the reconditioning, customer figures and data (customer summary sheet detailing the exact installation location of the solenoid valve, the date, time, team that changed the valve and the reason, etc.) are stored in an Excel file.

This file is supplied with the delivery note for the reconditioned solenoid valves as well as in digital format by email.



# BMR SERVICES



- Ross W7456A8332, D2173A5949, etc.
- EMHART\* proportional valves
- BOTTERO\* proportional valves
- ROSS proportional valves
- Numatics I34, I23, MK8, MK15 valves
- BV26 valves





#### BMR can also supply you with all spare parts, either standard or improved by our team:

- · High temperature adhesive Socket seals specific for the glass industry
- Bespoke draws/kits
- Pistons for ROSS valves
- · Components/kits for I34RS made of brass
- Kits for BV26
- Kits for ROSS D2173A5949 (+ more economical)



SP160524 I34RS piston

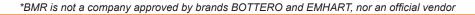


Repair kit for I34



BMRE-160427 BV26 kit









#### **CYLINDERS RECONDITIONING**

#### Reconditioning of all cylinders used in the glass industry:

- Numatics
- Norgren
- BDF\*
- Bimba
- Emhart\*
- Martonair

#### **ADVANTAGES**:

- + Reduction in purchasing costs
- + Reduced operating costs
- + Fast lead time



#### **SHOCK ABSORBERS RECONDITIONING**

Reconditioning of all shock absorbers used in the glass industry :

#### **ADVANTAGES**:

- + Reduction in purchasing costs
- + Operating costs reduced
- + Fast lead time

Mainly ex BSN and ENIDINE (SP22287, ex. SP5695)





\*BMR is not a company approved by brands EMHART and BDF, nor an official vendor





#### **RECONDITIONING OF LINCOLN INJECTORS**



Mainly SL-42 and SL-44

Kits on request

BMR also reconditions full injector blocks

#### **RECONDITIONING OF GREASE PUMPS**



#### **RECONDITIONG OF ALL IS MACHINE PARTS**



+ Supply of all reconditioning parts (depending on availability and on request)





#### **ENGRAVED BARS, LABELS...**



#### **INSTALLATION OF LIGHT CURTAINS**

Installation and configuration of light curtains

#### **ADVANTAGES**:

- + Adaptation onto existing electrical cabinets
- + Compliance with standards
- + Prior visit to site to design the best light curtain for the application





#### **ON SITE MAINTENANCE**

We offer a full range of on-site maintenance in France and in Europe

#### **ADVANTAGES**:

- + Adaptation to your environment
- + Reactivities of teams on site
- + Less stoppage time for machines



#### TYPES OF INTERVENTIONS

#### Diagnostics

- Air economy
- After sales care/Issue resolution
- Optimisation

#### Reconditioning

- Filters
- Valves
- SNABB

Assembly/installation of new components

#### Training

On site / vidéo



# **AIR PREPARATION**

Thumbwheel-controlled air flow limitors for IS machines

Kits for pressure regulators



THUMBWHEEL-CONTROLLED
AIR FLOW LIMITORS FOR IS MACHINES

#### **ADVANTAGES**:

- + On-line installation
- + Captive pin
- + Spring-lockable setting
- + Brass and aluminium construction



#### TECHNICAL SPECIFICAITONS

Fluid: Compressed air, filtered, lubricated/unlubricated Operating pressure: 0.3 to 16 bar Room temperature: -20°C to +80°C (other models up to +150°C)

For different specifications, contact us

#### **MATERIALS**

Body, setting button and lock ring: brass Seals: Nitrile

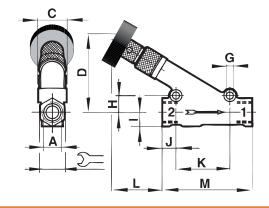
#### **DIMENSIONS**

Modèles	А	D max.	ø G	Н	1	J	К	L	М	
SP110318	G1/8	38	5,1	8,5	8	5	24,5	27,5 max.	46	13
SP110314	G1/4	37,5	5,2	11	9,5	6	41	25 max.	60	17
SP110338	G3/8	80	8,3	17	14	-2	57	68 max.	80	25
SP110312	G1/2	80	8,3	17	16	13	57	53 max.	95	28
SP110334	G3/4	104	8,3	21,5	17,5	20,5	76	66 max.	118	32
SP110310	G1	147	13	26	24	23	90	107 max.	150	48

All specifications (sizes, fittings, etc.) are available on request

#### **MODELS**

RACC, BSPP			Max reg	ulated flow	Flow factor		
Model	Function	Fitting	C*	CV	C*	CV	
SP110318		G1/8	0,7	0,17	2,1	0,6	
SP110314		G1/4	2	0,49	4,3	1	
SP110338	1 2	G3/8	12	2,9	17	4,1	
SP110312		G1/2	12	2,9	17	4,1	
SP110334		G3/4	18	4,4	38	9,3	
SP110310		G1	36	8,8	45	11	



## AIR PREPARATION

#### KITS FOR PRESSURE REGULATORS

#### AT THE BEST PRICES





R18-100 R R18-100V with viton seals



11-908-100



11-400-100-20AL



11-204-100

#### **Contact us**



NOTES

## **CYLINDERS**

Specific dual rod cylinder for pallet ejection



SPECIFIC DUAL ROD CYLINDER FOR PALLET EJECTION

The dual rod cylinder pallet ejection specific enables the glass bead to be sent to the basement if maintenance is required on a section

100% interchangeable with the Emhart cylinder ref 535-1493 standard Stroke 125mm



Rod guidance:

- + Longer
- + Stronger

Piston:

- + Wide
- => Absorbs strong forces and radial impacts
- ==> Increased lifespan

## **TECHNICAL SPECIFICATIONS**

<u>Diameter:</u> 50mm <u>Stroke:</u> 125mm

Delivered with polymer damper

Specific developments on request

## MATERIALS

Aluminium Steel

## **DIMENSIONS**

Models	Ø (mm)	Stroke (mm)	Cross rods	Polymer damper	Other options	Equivalence	Extra stroke (mm)
SP121005	50	125	~	~	×	EMHART 535-1493	×
SP140201	50	155	•	•	×	EMHART 535-1493	30
SP14052	50	150	•	~	×	EMHART 535-1493	25
SP14062	50	125	~	•	without front flange	EMHART 535-1493	×
SP160119	50	125	×	×	astuator only	EMHART 535-1493	×
SPVDHT 50125R	50	125	×	~	×	EMHART 535-1493	×

<sup>\*</sup>BMR is not an approved company by EMHART, nor an official vendor

### **OPTIONS**

- Longer course on request
- Adding of cross rods to absorb strong forces and radial impacts
- Adding the protective cover if using cross rods
- Pallett carrier





# HOSES AND DUCTS

Pipes and hoses specific for IS machines Vacuum hoses M0 certified ducts



## PIPES AND HOSES SPECIFIC FOR IS MACHINES

#### THE MOST COMMONLY USED ON IS MACHINES:



#### P98510

Blower hose with stainless LHT1400 steel braid



#### P68270

Hose with acetylene stainless steel braid –  $150^{\circ}$ C pipe + LG 720mm  $\frac{1}{4}$ " fitting, fitted with  $\frac{1}{4}$ " FB



#### P35778

TDS LHT 900mm fitted blower head hose



#### P60788

DN12 800mm hose for passing electrical cables with rotating fitting for refractory wash



#### P436571

Blower head/blower cooling hose stainless steel DN16mm LG 1100mm



#### P66977

Hose for acetylene – 150°C pipe + LG 720mm ¼" fitting, fitted with ¼" FB

#### P42124C

Tef Conv FDV reinforced hose DN16 lg 780mm FJ 1"1/16

#### SP15102-3M-F-ST

Take out/inversion 3m hose + flame-retardant shielding

#### 2TE19X29R

Reinforced hose (the BMR touch – does not get pinched when cooling/blowing)



# HOSES AND DUCTS

## **VACUUM HOSES**

Specific hose manufacturing for finishing machine vacuum

#### **ADVANTAGES**:

- + Able to reuse the tips
- + Bespoke design
- + Plug and play
- + Economical, cheaper



## **TECHNICAL SPECIFICATIONS**

Stainless steel hose covered with shielding and featuring tips specific for vacuum finisher

Specific developments on request

## **DIMENSIONS**

Réf.	DN.	Length
BMR-FVxx	25	xx

## **MATERIALS**

Stainless steel

## TO ORDER

BMR-FVxx Length in dm

Example:

BMT-FV14 = vacuum hose length 1400mm





## **BMR-MO-MO CERTIFIED DUCTS**



High temperature-resistant suction and ventilation hose; silicone, super light, ultra-flexible + compressible, diameter up to 1,000mm (up to 260°C)

### **APPLICATIONS**

- · For applications where non-flammable hoses are required
- · For solid materials like dust, powders and fibres
- For aggressive gas environments such as vapours and fumes
- For installations performing dust removal, suction, fume suction, oven exhaust and soldering fume removal
- As a blower and compensator

## **SPECIFICATIONS**

- · Highly heat resistant
- Ultra-flexible + compressible 4:1
- Protection against abrasion using external clamping profile
- · Hose wall clip in the friction resistant clamping profile
- · Able to create very tight corners
- · Resistant to being pierced by folding
- Lightweight
- Inflammable up to: DIN 4102-B1 RoHS compliant

#### MOST USED IN THE GLASS INDUSTRY:

#### BMR-M0-265

Silicone duct 265mm M0

#### BMR-M0-275

Silicone duct 275mm M0

#### BMR-M0-315

Silicone duct 315mm M0

#### BMR-M0-330

Silicone duct 330mm M0

## **MATERIALS**

Construction

- 1. Spiral support clamping profile: made entirely of stainless steel
- 2. Double wall; Wall: glass fibre material covered in silicone

### **TEMPERATURE RANGE**

- -70°C to +260°C
- Temporarily up to +280°C

#### **VARIANTS**

- Other measurements and lengths available on request
- · Stainless steel clamping profile
- Dual layer

### **TO ORDER**

BMR-M0-xx

Internal diameter in mm

Example:

BMR-M0-315 = M0 duct with int. dia. Of 315mm

## MOST COMMONLY USED ACCESSORIES



21201350000 Screw clamping collar



Quick change clamping collar

# CONTACT **PRODUCTS**

**Stacker bars Push handles Braided discs** Stainless steel braids and bands **Graphite-reinforce mesh** 



## STACKER BARS, PUSH HANDLES, BRAIDED DISCS...



# CONTACT PRODUCTS

## STAINLESS STEEL BRAIDS AND BANDS

Stainless steel braids and bands are especially used for contact with hot glass on push handles, stackers and bars.

#### **ADVANTAGES:**

- + All types of developments and shapes possible
- + Very resistant to heat
- + Long lifespan
- + Avoids glazing
- + No slippage
- + Does not emit harmful dust



## **TECHNICAL SPECIFICATIONS**

Stainless steel braids and bands Resistant up to several hundred degrees

Specific developments on request

## STAINLESS STEEL BRAIDS

Ref. Length Width Thickn	ess
BMR-TI4X4 25 m 4 mm 4 mr	n
BMR-TI5X5 25 m 5 mm 5 mr	n
BMR-TI6X3 25 m 6 mm 3 mr	n
BMR-TI6X6 25 m 6 mm 6 mr	n
BMR-TI8X8 25 m 8 mm 8 mr	n
BMR-TI10X10 25 m 10 mm 10 mm	n

For different specifications, contact us.

#### **OPTIONS**

All models can be made bespoke with or without support.

## **MATERIALS**

Stainless steel
Braid 100% 3D stainless steel
Band 100% stainless steel

## STAINLESS STEEL

Ref.	Length	Width	Thickness
BMR-TI25X2	100 m	25 mm	2 mm
BMR-TI30x2	50 m	30 mm	2 mm
BMR-TI40X2	50 m	40 mm	2 mm
BMR-TI50X2	25 m	50 mm	2 mm
BMR-TI60X2	25 m	60 mm	2 mm

For different specifications, contact us.





## GRAPHITE-REINFORCE MESH FOR DEAD PLATE

Mesh composite covered with graphite that can be used as a contact material on any equipment.

- · Dead or transfer plate
- Slide arm
- Transfer wheel rods
- Stacker

#### **ADVANTAGES:**

- + Complete absence of glazing when in contact with items (conclusive test at 800°C)
- + Adaptation to all supports (the material can be cut with scissors and can be folded like a fabric)
- + Low cost
- + Resistant to high temperatures
- + Very low wear because of its very high thermal dissipation capacity
- + Super-fast on-site change



Wasted time is a source of increased costs for any glass factory. This product can adapt to all applications and reduces the number of items in the warehouse, reduces the restocking time and time spent changing. Several standard versions enable it to be produced in large quantities and as such to offer a very attractive price that will ensure savings for our customers.

**Standard dimensions:** 30x30cm and 10x10cm (contact us for other dimensions)

# MECHANICAL PARTS

Springs and leaf springs **Spraying plates Feeder Supports Cooling plates** 



## **SPRINGS AND LEAF SPRINGS**



#### THE MOST COMMONLY USED ON IS MACHINES:

#### BMR-1911834

Leaf spring 112.7mm ring mould arm SG diam 63mm

#### BMRE-235527

Leaf spring 106mm ring mould arm DG compatible ref Emhart\* 23-5527 (+ economical)

#### BMRE-235527-A

Leaf spring 106mm ring mould arm DG ref Emhart\* 23-5527 (identical standard version)

#### BMRE-235527R

Leaf spring 106mm ring mould arm DG Stiffer ref Emhart\* 23-5527 Bottero\* A223-5527X

#### BMRE-235681

Leaf spring 128mm

#### BMRE-236661

Leaf spring 134mm ring mould arm diam 83mm

#### BMRE-236885

Leaf spring 122mm

#### **BMROI-16797A**

Leaf spring for transfert arm 135mm reinforced

#### BMROI-16798

Leaf spring for transfert arm 158mm



Sale by the roll possible on request by 10 meters (Ref. BMR-L-10.55-10M-0.8)





# **MECHANICAL PARTS**

## **SPRAYING PLATES**

Upon request

#### THE MOST COMMONLY USED ON IS MACHINES:

BMR160913

Spraying plate SE24235

BMR160913D

Modified right spraying plate

BMR160913G

Modified left spraying plate

BMR1802261D

Modified right spraying plate with 5° angle

BMR1802261G



## **SPRAYING FEEDER SUPPORTS FOR SCISSORS**



Upon request





## **COOLING PLATES**

Plates made on request

#### **ADVANTAGES**:

- + Improved airflow
- + Easy to install

#### **MOST COMMONLY USED ON IS MACHINES:**

#### SP211124-D

Straight cooling plate for IS machine blank side mold

#### SP211124-G

Left cooling plate for IS machine blank side mold



## **FITTINGS**

High temperature rotating fittings Couplers



## **HIGH TEMPERATURE ROTATING FITTINGS**







## **COUPLERS**

#### THE MOST COMMONLY USED FOR REFRACTORY WASHING:

#### BMR-CM-MG38-OX

Male coupler - MG3/8 RH for oxygen

#### BMR-CF-MG38-OX

Female coupler - MG3/8 RH for oxygen

#### BMR-CM-MG38-GAZ

Male coupler - MG3/8 LH for gas

#### **BMR-CF-MG38-GAZ**

Female coupler - MG3/8 LH for gas

#### BMR-CM-MG14-OXY

Male coupler - MG1/4 RH for oxygen

#### BMR-CF-FG14-OXY

Female coupler - FG1/4 RH for oxygen

#### BMR-CM-MG14-GAZ

Male coupler - MG1/4 LH for gas

#### BMR-CF-MG38-GAZ

Female coupler - MG3/8 LH for gas





#### **ON IS MACHINES:**

## P380471

Male coupler 3/4 Equivalent Bottero\* PI70105896



P380472 Female coupler 3/4 Equivalent Bottero\* PI70105895





NOTES

# ELECTRICAL COMPONENTS

Reinforced wiring harnesses Solenoid valve control board for IS machine **Aluminium button heads** 3-Position emergency stop buttons



## REINFORCED WIRING HARNESSES SPECIAL FOR CRACKING / HIGH VOLTAGE

#### **ADVANTAGES**:

- + Resistant
- + Reliable through time
- + Lifespan
- + On-site EMHART\* replacement



#### THE MOST COMMONLY USED:

#### BMR-CPHT-F-3-5

ABL connector high voltage female for cracking with cable length 3m PCS-3-761

#### BMR-CPHT-F-3-5-SP1

ABL connector high voltage female for cracking STRAIGHT with cable length 3m PCS-3-761

#### BMR-CPHT-M-1.5-5

ABL 5mm cable high voltage for cracking male connector Lg 1.5m reinforced PCS-3-763 reinforced

#### BMR-CPHT-M-1.5-5-SP1

ABL 5mm cable high voltage for cracking male STRAIGHT Lg 1.5m reinforced PCS-3-763



Breaking of the original cable



#### **ADVANTAGES**:

- + Resistant
- + Reliable through time
- + Lifespan
- + On-site LINDE\* replacement





#### THE MOST COMMONLY USED:

#### SP220511

High voltage harness 1.2m with straight connector – elbow connector

#### SP220512

High voltage harness with 6m cable and straight connector

\*BMR is not a company approved by brands EMHART and LINDE, nor an official vendor



# ELECTRICAL COMPONENTS

#### THE MOST COMMONLY USED ON-SITE FROM EMHART:

#### SP1312171

Harness with 10 pin connectors, pivot cable slip arm

#### SP10081A

Specific harness with Harting connector for moulding block

#### **BMROI-SCS-051-XXX**

Master resolver harness SCS-051 reinforced (XXX= length)

#### BMROI-SCS-0652

Drop harness scoop cut

#### BMROI-SCS-0653

Drop harness scoop cut. High temperature resolver cable

#### BMROI-SCS-0659

Harness with 2x 10 pin connectors and two square solenoid valve heads

#### BMROI-SCS-0660

Power harness with 2 straight 4-pin connecters, 1.4m minimum reinforced

#### BMROI-601-5056-0120

Valve supply harness 1.2 m

#### BMROI-CS2-0220-GR16

Reinforced solenoid valve control harness length 5.5m

#### BMROI-PCS-0204

Harness for plunger sensor

#### **BMROI-PCS-028**

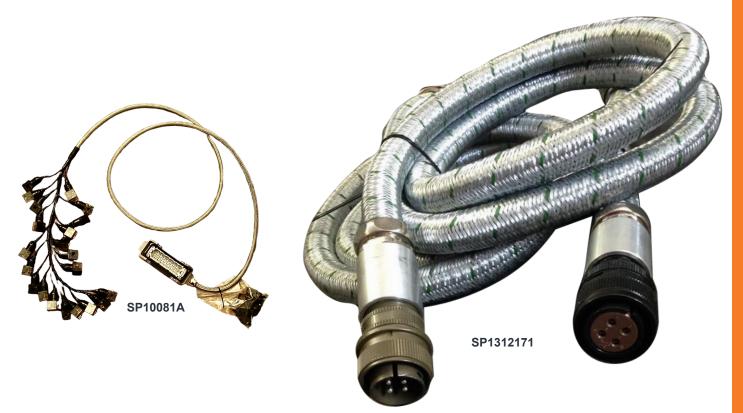
Reinforce funnel harness with high temperature cable and reinforced insulated shielding



BMROI-SCS-0659



**BMROI-PCS-028** 





## SOLENOID VALVE CONTROL BOARD FOR IS MACHINE BMR SP12069

The board is used for splitting the connection in order to connect several cables with cylindrical connectors to solenoid valve heads. Originally with a printed circuit, micro-solder and mini connectors,

We replace the ensemble with more resistant 2-pin connectors directly connected to a single cylindrical connector.



- + More robust
- + Removal of connectors
- + Higher temperature resistance
- + Removal of false contacts

Board features exactly the same setup as L905004 with round socket

Specifications may change without warning

## **MATERIALS**

Chassis made of folded steel with high temperature resistant blue paint

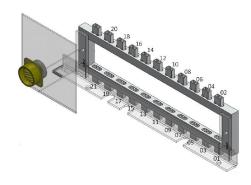
Connector support made of aluminium to lighten the structure.

High temperature wiring

## REPLACES BOARD REF L905004 FROM O-I MACHINES



## **DRAWING**



# ELECTRICAL COMPONENTS

## **ALUMINIUM BUTTON HEADS**



#### RECURRENT PROBLEM

Buttons "burnt" by clamps or bottles

#### **BMR SOLUTION**

Replace the plastic button head by an aluminium one

#### **ADVANTAGES**:

- + Lifespan
- + Reduction in machine downtimes
- + On-site installation with original GE P9MSM button



#### SP150511

Aluminium button head for GE P9MSM Emhart\* finisher panel



Aluminium button for finisher panel Emhart\* one to be installed on GE P9MSM

The BMR touch: The aluminium stem replaces the plastic and does not melt

\*BMR is not a company approved by brand EMHART, nor an official vendor





## 3-POSITION EMERGENCY STOP BUTTONS (2 fixed, 1 recall)

FUNCTION	CONTACTS	POSITION ON FLANGE	POSITION ON FLANGE		
		2 3 1			
2	2 x Standard	- X X			
3	2 x Standard	X X -			

## **TECHNICAL SPECIFICATIONS**

Standard button equipped with a 40mm red push button



Available as an option, the button is ergonomically designed 26mm made of red anodised aluminium On request: reference SP12042



## TO ORDER

Function 2 or 3 Specific flange reference + standard button: SP12041 Rev A

Standard NC contact: 187012





## TOOLS

Laser guide Manufacture of all specific tools for IS machines and cold end Hinge lifter



## **LASER GUIDE** BMR-LA-25.4x100



## **TECHNICAL SPECIFICATIONS**

Diameter: 25mm Length: 93mm

Wavelength: 634nm (red) Target point at 10m: <10mm

ON/OFF button Comes assembled with one CR123A battery

## Specific developments on request

## **MATERIALS**

Button head and body Laser diode

Case with variable diameter shim

Diameter and lengths to order





## MANUFACTURE OF ALL SPECIFIC TOOLS FOR IS MACHINES AND COLD END ON REQUEST





## **HINGE LIFTER**

Specific tool for lifting hinges

#### **ADVANTAGES**:

- + Robust
- + Possibility to produce bespoke versions
- + Secure locking



## **TECHNICAL SPECIFICATIONS**

Developed for 22 and 25mm rings Any other version possible on request

Specific developments on request

## **DIMENSIONS**

Réf.	Ø ring.	Max load
BMR190622-22	22.22 mm	60 kg
BMR190622-25	25.4 mm	60 kg

For different specifications, contact us.

## **OPTIONS**

- Locking handle
- Certification
- Hooks



## **MATERIALS**

Steel





NOTES



NOTES







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