

OCTOPUS VACUUM GRIPPING BARS

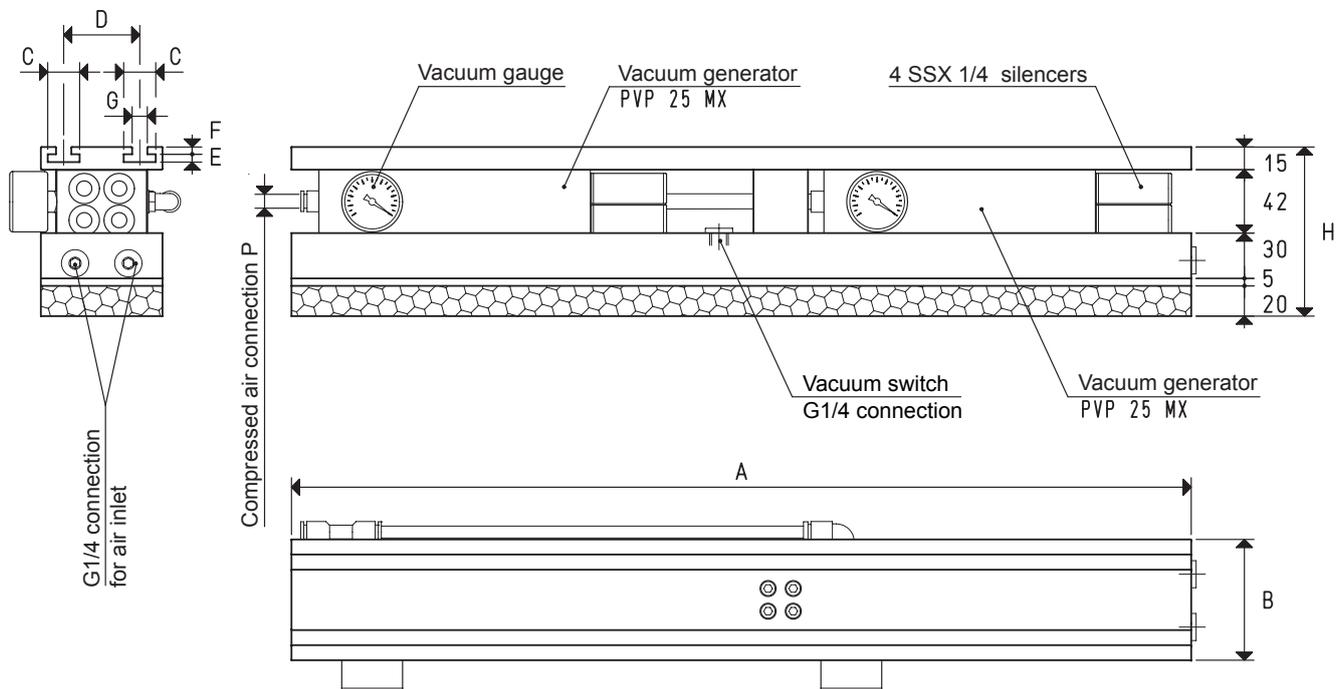
OCTOPUS vacuum gripping bars are our answer to the ever increasing requirements of palletisation robots operational flexibility.

They are composed of:

- A slotted fixing plate, to allow a quick installation onto the machine and an easy placement with respect to the load to be lifted;
- Two or three compressed air-fed vacuum generators, according to their size;
- A box made with light alloy, sealed by a suction plate coated with special perforated foam rubber.

The suction plate perfectly adapts itself to any surface, either smooth, rough or uneven.

These bars allow gripping objects of any shape and feature, provided that they do not have an excessive transpiration, without having to change or place vacuum cups and even when their surface does not occupy the entire suction plate. The maximum weight of the load to be lifted will obviously be proportional with the gripping surface. The connections provided for are four: one provided with quick coupler, for supplying compressed air to the vacuum generator; one for the possible installation of a vacuum switch, and two, closed by a threaded cap, for the air inlet inside the OCTOPUS bar in the discharge phase, for a prompt restoration of the atmospheric pressure.



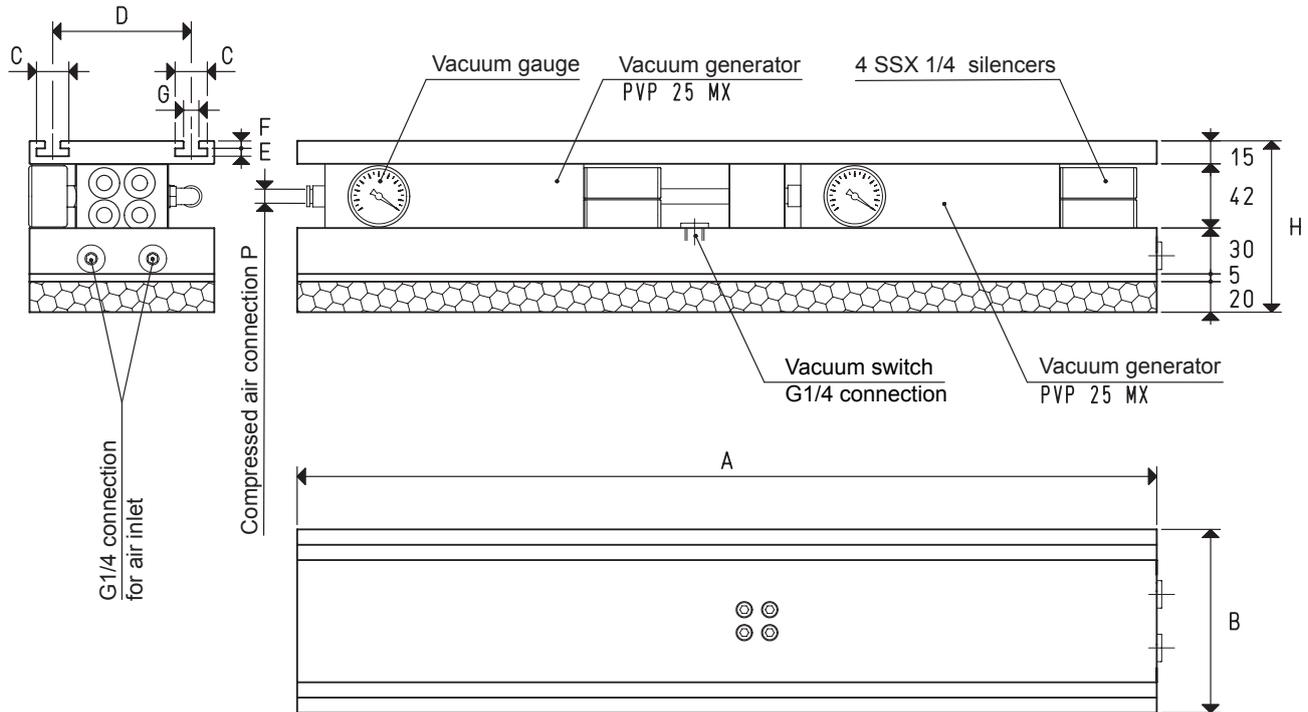
Art.		BO 08 60 X	BO 08 80 X
Suction plate	art.	PX 08 60	PX 08 80
Gripping force	Kg	31.7	42.2
N° 2 vacuum generators	art.	PVP 25 MX	PVP 25 MX
Max. supply pressure	bar (g)	6	6
Max. vacuum level	-KPa	90	90
Air consumption at 6 bar (g)	NI/s	6.4	6.4
Quantity of sucked air	cum/h	62	62
Working temperature	°C	-20 / +80	-20 / +80
Weight	Kg	6	8
A		600	800
B		80	80
C		21	21
D		50	50
E		5.2	5.2
F		4.8	4.8
G		10	10
H		112	112
P	Compressed air pipe connection	ext. Ø	8

Note: The code BO 08 .. X, identifies the OCTOPUS bar (g) base box with the associated suction plate PX, the slotted support plate and the vacuum generators indicated in the table.

All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4} = \frac{\text{pounds}}{453.6} = \frac{\text{g}}{0.4536} = \frac{\text{Kg}}{0.4536}$$

OCTOPUS GRIPPING BAR



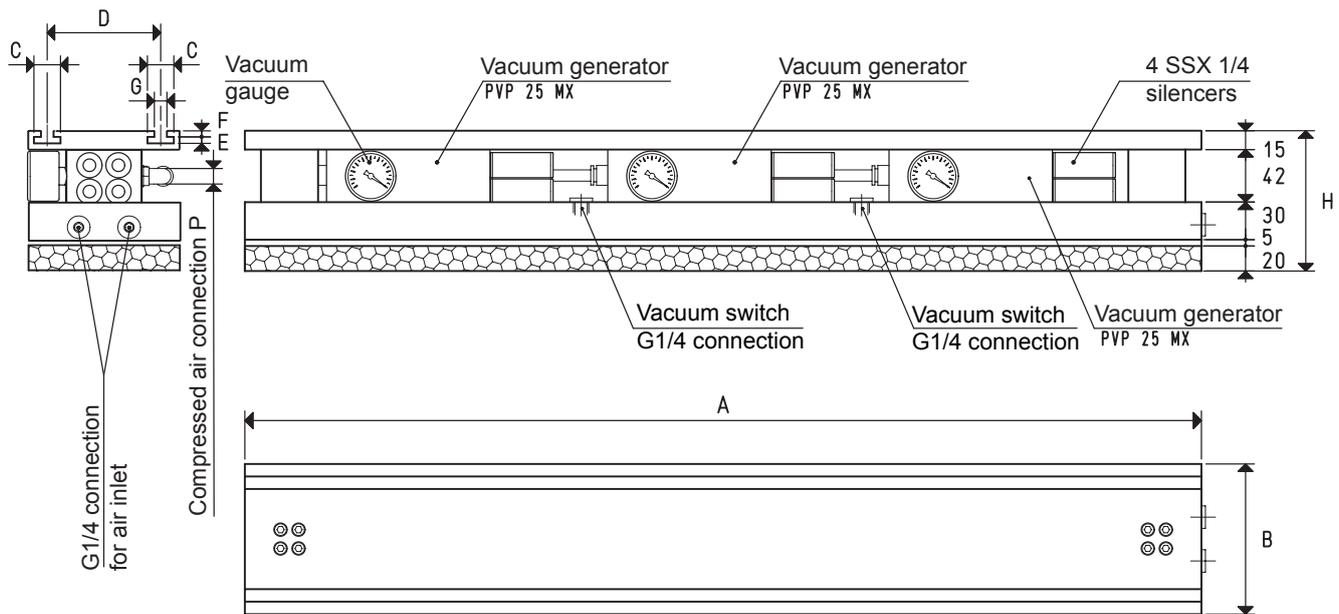
Art.		B0 12 60 X	B0 12 80 X
Suction plate	art.	PX 12 60	PX 12 80
Gripping force	Kg	42.2	56.3
N° 2 vacuum generators	art.	PVP 25 MX	PVP 25 MX
Max. supply pressure	bar (g)	6	6
Max. vacuum level	-kPa	90	90
Air consumption at 6 bar (g)	NI/s	6.4	6.4
Quantity of sucked air	cum/h	62	62
Working temperature	°C	-20 / +80	-20 / +80
Weight	Kg	8.1	10.8
A		600	800
B		120	120
C		21	21
D		90	90
E		5.2	5.2
F		4.8	4.8
G		10	10
H		112	112
P	Compressed air pipe connection	ext. Ø	8

Note: The code B0 12 .. X, identifies the OCTOPUS bar (g) base box with the associated suction plate PX, the slotted support plate and the vacuum generators indicated in the table. All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

9.20

Conversion ratio: inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

OCTOPUS GRIPPING BARS



Art.		BO 12 100 X	BO 12 120 X
Suction plate	art.	PX 12 100	PX 12 120
Gripping force	Kg	70.4	86.2
N° 3 vacuum generators	art.	PVP 25 MX	PVP 25 MX
Max. supply pressure	bar (g)	6	6
Max. vacuum level	-KPa	90	90
Air consumption at 6 bar (g)	NI/s	9.6	9.6
Quantity of sucked air	cum/h	93	93
Working temperature	°C	-20 / +80	-20 / +80
Weight	Kg	14.5	17.4
A		1000	1200
B		120	120
C		21	21
D		90	90
E		5.2	5.2
F		4.8	4.8
G		10	10
H		112	112
P	Compressed air pipe connection	ext. Ø	8

Note: The code BO 12 .. X, identifies the OCTOPUS bar base box with the associated suction plate PX, the slotted support plate and the vacuum generators indicated in the table.

All the values shown in the table are valid at a normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

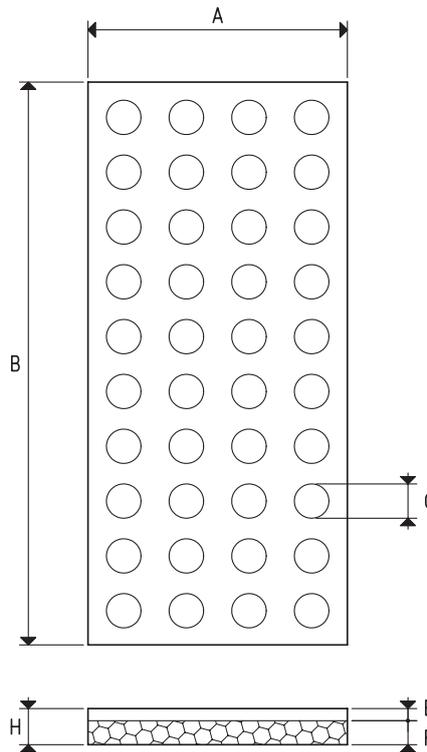
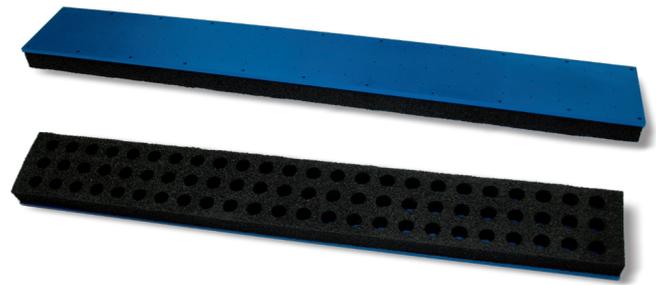
Conversion ratio: $\text{inch} = \frac{\text{mm}}{25.4}$; $\text{pounds} = \frac{\text{g}}{453.6}$; $\text{Kg} = 0.4536$

3D drawings available at www.vuototecnica.net

STANDARD SUCTION PLATES PX E P2X, FOR OCTOPUS GRIPPING BARS

The suction plates PX described in this page are installed, as a standard, on all OCTOPUS gripping bars and, therefore, they can be supplied as a spare part.

They are made with anodised aluminium and coated with special perforated foam rubber, with two types of thickness: 20 mm with suction plates of the PX range, 30 mm for special suction plates of the P2X range. Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall perforated surface on the foam rubber and a safety factor 3.



Art.	Force Kg	A	B	C Ø	E	F	H	Weight Kg
PX 08 60	31.7	80	600	15	5	20	25	0.70
PX 08 80	42.2	80	800	15	5	20	25	0.94
PX 12 60	42.2	120	600	15	5	20	25	1.06
PX 12 80	56.3	120	800	15	5	20	25	1.41
PX 12 100	70.4	120	1000	15	5	20	25	1.76
PX 12 120	86.2	120	1200	15	5	20	25	2.11
P2X 08 60	31.7	80	600	15	5	30	35	0.72
P2X 08 80	42.2	80	800	15	5	30	35	0.96
P2X 12 60	42.2	120	600	15	5	30	35	1.08
P2X 12 80	56.3	120	800	15	5	30	35	1.44
P2X 12 100	70.4	120	1000	15	5	30	35	1.80
P2X 12 120	86.2	120	1200	15	5	30	35	2.17

3D drawings available at www.vuototecnica.net

VACUUM CUP SUCTION PLATES PV FOR OCTOPUS GRIPPING BARS



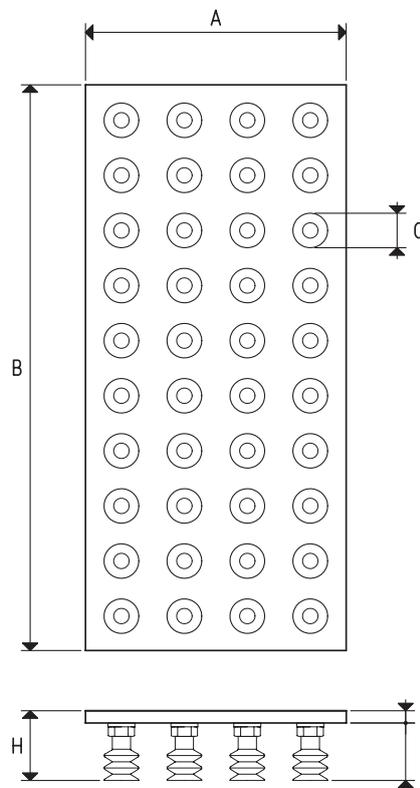
These suction plates provided with vacuum cups have been designed to ensure a better grip on uneven and very flexible surfaces (pasta or candy bags, blister or skin-film packs, thin cardboard boxes, etc.), which are difficult to grip with suction plates coated with foam rubber.

We recommend using bellows cups. Thanks to their great flexibility, they adapt themselves to any gripping surface, following its profiles and movements during the lifting phase, guaranteeing a firm and safe grip.

They are made with anodised aluminium, as are the 1/8" vacuum cup supports screwed onto them.

The cups are cold assembled onto the supports with no adhesives and can be provided in other compounds. Also these suction plates are perfectly interchangeable with the standard ones.

Their lifting force has been calculated considering a minimum vacuum level of -75 Kpa, the overall vacuum cup surface and a safety factor 3. Upon request, they can be provided with different cups, as long as the diameter does not exceed 22 mm.



Art.	Force Kg	A	B	C Ø	E	F	H	Example Vacuum cup art.	Nr. of cups	Weight Kg
PV 08 60	45.4	80	600	18	5	36	41	01 18 29	72	0.83
PV 08 80	60.5	80	800	18	5	36	41	01 18 29	96	1.26
PV 12 60	60.5	120	600	18	5	36	41	01 18 29	96	1.42
PV 12 80	80.6	120	800	18	5	36	41	01 18 29	128	1.90
PV 12 100	100.8	120	1000	18	5	36	41	01 18 29	160	2.37
PV 12 120	121.0	120	1200	18	5	36	41	01 18 29	192	2.84

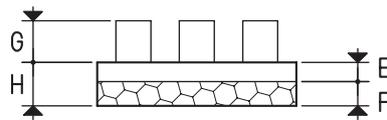
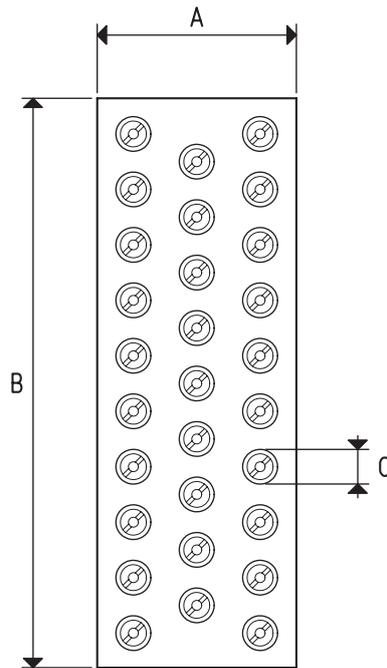
Note: The code PV.. exclusively indicates the suction plate with the vacuum cup supports screwed on it.

The vacuum cups indicated in the table or freely chosen are not integral part of the suction plate and therefore, must be ordered separately.

$$\text{Conversion ratio: inch} = \frac{\text{mm}}{25.4} \cdot \text{pounds} = \frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$$

SUCTION PLATES WITH SHUT-OFF VALVES PXE and P2XE, FOR OCTOPUS GRIPPING BARS

The suction plates described in this page are the same as the previously described ones. Their distinctive features are the shut-off valves inserted in each cup support connection. In absence of an object to grip or in case of a defective grip of the foam rubber, the shut-off valves automatically close the suction inlet, thus preventing the vacuum level from decreasing on the other gripping holes. This feature allows reducing the vacuum generator capacity compared to the OCTOPUS systems without valves, all to the benefit of energy saving.



Art.	Force Kg	A	B	C ∅	E	F	G	H	Nr. of Valves	Weight Kg
PXE 08 60	43.7	80	600	20	10	20	18	25	56	1.69
PXE 08 80	60.0	80	800	20	10	20	18	25	77	2.25
PXE 12 60	42.1	120	600	20	10	20	18	25	54	2.53
PXE 12 80	57.7	120	800	20	10	20	18	25	74	3.38
PXE 12 100	73.3	120	1000	20	10	20	18	25	94	4.22
PXE 12 120	88.9	120	1200	20	10	20	18	25	114	5.07
P2XE 08 60	43.7	80	600	20	10	30	18	40	56	1.72
P2XE 08 80	60.0	80	800	20	10	30	18	40	77	2.29
P2XE 12 60	42.1	120	600	20	10	30	18	40	54	2.58
P2XE 12 80	57.7	120	800	20	10	30	18	40	74	3.44
P2XE 12 100	73.3	120	1000	20	10	30	18	40	94	4.30
P2XE 12 120	88.9	120	1200	20	10	30	18	40	114	5.16

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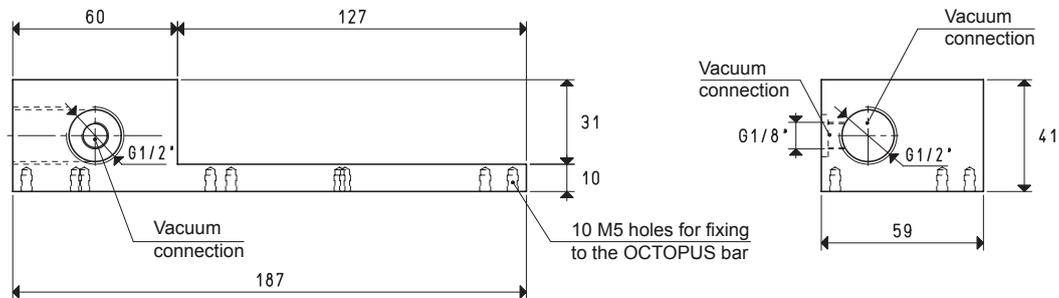
LOCKING PLATES, FOR OCTOPUS GRIPPING BARS WITHOUT VACUUM GENERATOR

The locking plate with manifold described in this page has been designed to connect an OCTOPUS gripping bar to a remotely installed vacuum generator or to an alternative vacuum source.

This anodised aluminium plate is fixed with screws to the body of the OCTOPUS bar, instead of the generator. The manifold is equipped with connectors for a direct connection to the OCTOPUS bar, to the generator or to the alternative vacuum source, as well as to vacuum level reading and control devices. The unused connections can be closed with special metal caps which they are equipped with. The locking plate with manifold is suited for any kind of OCTOPUS gripping bar that uses PVP 12 MX and PVP 25 MX vacuum generators.



Art.	For OCTOPUS gripping bars
00 BO 07	BO 08 60 X
	BO 08 80 X
	BO 12 60 X
	BO 12 80 X
	BO 12 100 X
	BO 12 120 X



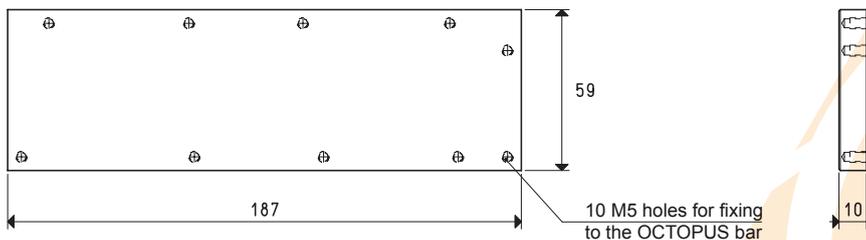
LOCKING PLATES FOR, OCTOPUS GRIPPING BARS WITHOUT VACUUM GENERATOR

The locking plate described in this page has been created to close the suction holes on the OCTOPUS bar body and left free by the removal of the vacuum generator.

This anodised aluminium plate is fixed with screws to the OCTOPUS bar instead of the generator. The gasket provides perfect seal. The locking plate with manifold is suited for any kind of OCTOPUS gripping bar that uses PVP 12 MX and PVP 25 MX vacuum generators.



Art.	For OCTOPUS gripping bars
00 BO 06	BO 08 60 X
	BO 08 80 X
	BO 12 60 X
	BO 12 80 X
	BO 12 100 X
	BO 12 120 X



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