

# BALLAST

3500 - 4500 - 6000 - 7500 -  
9000 - 11000 - 13500 - 16000

Technical catalogue  
Catalogo tecnico  
Technischer Katalog



Battioni®  
Pagani

*Setting the pace since 1953*





*Setting the pace since 1953*

**Kit Aluminum Final Air Filter**

Kit filtro aria alluminio  
Saugfilter Satz

**Predisposition for overpressure valve**

Predisposizione per valvola di sovrappressione  
Vorbereitung für Überdruckventil

**Forced lubrication pump as standard (automatic lubrication on request)**

Pompa di lubrificazione forzata di serie (lubrificazione automatica a richiesta)  
Druckschmierung als Serie (Automatische Schmierung auf Anfrage)

**Temperature indicator**

Rilevatore di temperatura  
Temperaturdedektor



**160° C Irreversible indicator**

Indicatore Irreversibile 160° C  
irreversibel Anzeiger 160°C

**Nr. 8 Long Life Blades as standard**

**Heat-resistant blades of special material as standard**  
Nr.8 Palette "long life" resistenti al calore di serie  
Nr. 8 Hitzebeständigen Lamellen aus Spezialmaterial als Serie



**Extend Oil level indicator**

Indicatore livello olio esterno  
Ölstandsanzeige

**Air injection cooling**

Iniezione aria di raffreddamento  
Injektion der Luftkühlung



**AIR INJECTION  
COOLED - ROTARY  
VANES VACUUM/  
PRESSURE PUMP**



3500 - 4500 - 6000 - 7500 - 9000 - 11000 - 13500

● **Selector vacuum - pressure**  
Selettore Vuoto - Pressione  
Wähler von Vakuum/Druck



● **CPS - CRASH PROTECTION SYSTEM**

**Sliding Flanges to avoid breakages of the body and rotor during vanes crashes**

Flange con asole di scorrimento in caso di ingresso materiale o rottura palette  
Flansche mit Slotsblättern falls Materialschmierung oder Palettenbruch



**Flange-housing alignment control**

Tacca di allineamento flangia - corpo  
Ausrichtmarke der Flanschgehäuse

● **Blades inspection hole**

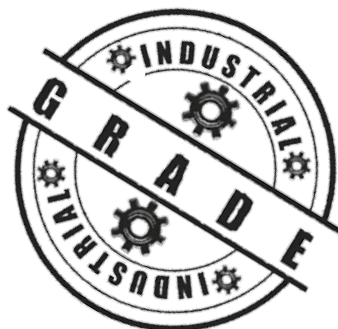
Foro ispezione palette  
Bohrung für Lamellen Prüfung

**Vanes inspection hole with max wearing indicator**

Tacca per rilevamento usura palette  
Ausrichtmarke für die Abnutzung der Palette



● **Compression and thrust rings for bearings**  
Anello di compensazione  
Ausgleichsring



## VERSIONS



BALLAST - M/MA



BALLAST - P



BALLAST - D



BALLAST - H

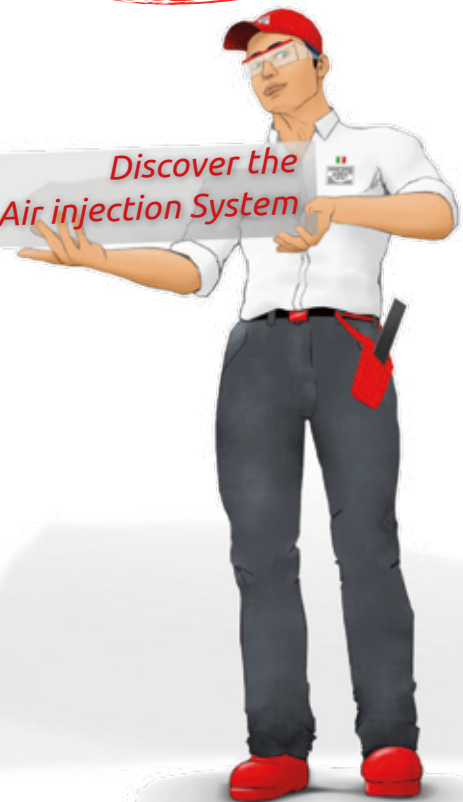


BALLAST - HM

**NEW**

Air injection cooled -  
Rotary Vanes Vacuum/  
Pressure pump

Discover the  
Air injection System



The picture is only for informative purpose.  
See the table on page 89 for the complete list of the available optionals.



# BALLAST

3500 - 4500 - 6000 - 7500

## BALLAST – Built to last

The BALLAST pump represents a technology breakthrough resulted from a major joint effort in product development and innovative design processes.

The BALLAST features the **Crash Protection System**: a sliding flanges protection mechanism that prevents the housing or rotor to break of in case of vanes crash. The pump is easily repairable inexpensively in field. The BALLAST II pump is equipped with the latest automatic **air injection cooling system** to enable continuous operation at 70% range of vacuum.

The BALLAST is the ideal pump for heavy duty applications.



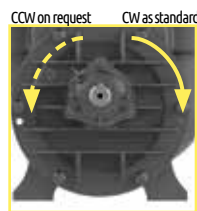
## STANDARD FEATURES

- Long Life Blades, Crash Protection System, forced lubrication, external oil level indicator, side outlets, exhaust elbows, 4-ways valve, check valve
- Thread for Overpressure valve: G 1 1/2"
- Available hoses connections: Ø 45 mm / Ø 60 mm / Ø 76 mm (3") / Ø 80 mm

## VERSIONS



**Version M**  
Splined shaft  
1 3/8 - Z6 ISO 500



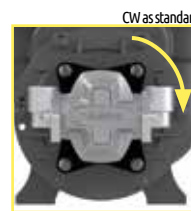
**Version P**  
Smooth Cylindrical shaft,  
Ø 32, lenght 63 mm  
Parallel key UNI 6604



**Version D**  
Splined shaft  
1 3/8 - Z6 ISO 500



**Version HM**  
125.7 cc/rev -  
Pmax 175 bar  
In G 1/2" - Out G 1/2"



**Version H**  
**BALLAST 3500:** Group 3 26.7 cc/rev - Pmax 280 bar - In G 1" - Out G 3/4"  
**BALLAST 4500:** Group 3.5 43.98 cc/rev - Pmax 250 bar - In G 1" - Out G 1"  
**BALLAST 6000:** Group 3.5 43.98 cc/rev - Pmax 250 bar - In G 1" - Out G 1"  
**BALLAST 7500:** Group 3.5 51.83 cc/rev - Pmax 230 bar - In G 1" - Out G 1"

## TECHNICAL DATA

	Geometrical capacity			Max rpm		Max abs pressure Bar/PSI	Max vacuum % (inHg)	Max continuous vacuum % (inHg)	Power at max vacuum kW (HP)	Weight kg				
	m³/h	l/min	cfm	M/HM	P/D/H					M	P	D	H	HM
BALLAST 3500	217,3	3621	128	540	1400	2,5 (36)	92% (27,2")	70% (21")	8 (10,7)	101	86	87	100	103
BALLAST 4500	275,6	4593	162	540	1400	2,5 (36)	92% (27,2")	70% (21")	10 (13,4)	111	96	97	111	113
BALLAST 6000	371,0	6183	218	540	1400	2,5 (36)	94% (28,0")	70% (21")	12 (16,1)	126	111	112	126	128
BALLAST 7500	455,8	7596	268	540	1400	2,5 (36)	94% (28,0")	70% (21")	14 (18,8)	144	129	130	145	146

## OPTIONALS



**Automatic Lubrication**  
Double lubrication points



**EN 707 Lever**  
Code 6080200299



**Hydraulic Changeover**  
Code 6080200303



**Pneumatic Revolving Changeover**  
Code 6080200302



**Kit Aluminum final air filter 500**  
Code 6080200363



**Revolving Elbow**  
Ø 45 mm /  
Ø 60 mm /  
Ø 76 mm (3") /  
Ø 80 mm



**Battioni Pagani Vacuum Pump Oil 5 lt.**  
Code 5070200100



**Battioni Pagani Flushing Fluid 5 lt.**  
Code 5070200102



**Flushing Kit**  
Code 6080200325



**Customized Painting**



## ACCESSORIES



### 01 Vacuum Relief Valve 1 1/2"

Code 5100200012  
Setting range:  
-0,3 bar / -0,8 bar  
Working temperature:  
-20°C / +90°C  
Thread: G 1 1/2"  
Weight: 0,65 kg



### 02 Overpressure Safety Valve - 1 1/2"

Code 5100200010  
Setting range:  
+0,3 bar / +1,5 bar  
Working temperature:  
-20°C / +90°C  
Thread: G 1 1/2"  
Weight: 1,02 kg



Tank with side pipe



### 06 Filter - Silencer

Code 5090000110  
Ø 45 mm  
Code 5090000083  
Ø 60 mm  
Code 5090000044  
Ø 80 mm  
Hose connection:  
Ø 45-60-80 mm  
Weight: 4-7 kg



### 04A Rain Cap

Code 5090000111  
Ø 45 mm  
Code 5090000060  
Ø 60 mm  
Code 5090000061  
Ø 80 mm  
Weight: 0,3/0,4 kg



### 04B Pre-Filter

Code 5090000045  
Ø 60 mm  
Code 5090000046  
Ø 80 mm  
Weight: 0,6/1,1 kg



### 03 Primary Overflow Valve - Single Rubber Ball

Code 6100200006 - Ø 45  
Code 6100200007 - Ø 60  
Code 6100200008 - Ø 80  
Iron ring to be welded  
Weight: 4,7/9,6 kg



### 05 Secondary Valve - Single Rubber Ball

Code 6100200003 - Ø 45  
Code 6100200004 - Ø 60  
Code 6100200005 - Ø 80  
Weight: 18,5/20,5 kg



### 05A Discharge Valve - 3/4"

Code 5040200006  
To be fitted on Secondary  
valve



### 05B Gauge - Ø 80 mm Axial Connection

Code 5101700007  
To be fitted on Secondary  
valve

Air injection cooled -  
Rotary Vanes Vacuum/  
Pressure pump



# BALLAST

## 9000 - 11000 - 13500

### BALLAST – Built to last

The BALLAST pump represents a technology breakthrough resulted from a major joint effort in product development and innovative design processes.

The BALLAST features the **Crash Protection System**: a sliding flanges protection mechanism that prevents the housing or rotor to break of in case of vanes crash. The pump is easily repairable inexpensively in field. The BALLAST II pump is equipped with the latest automatic **air injection cooling system** to enable continuous operation at 70% range of vacuum.

The BALLAST is the ideal pump for heavy duty applications.



### STANDARD FEATURES

- Long Life Blades, Crash Protection System, forced lubrication, external oil level indicator, side outlets, exhaust elbows, 4-ways valve, poppet check valve
- Thread for Overpressure valve: G 2"
- Available hoses connections: Ø 76 mm (3") / Ø 80 mm / Ø 100 mm (4")

### VERSIONS

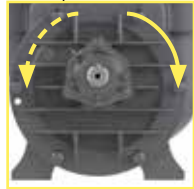
CCW as standard



#### Version M - MA

Splined shaft  
1"3/8 - Z6 ISO 500

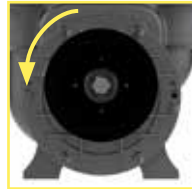
CCW on request CW as standard



#### Version P

Smooth Cylindrical shaft,  
Ø 32, length 63 mm  
Parallel key UNI 6604

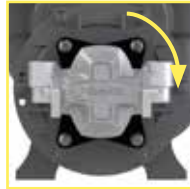
CCW as standard



#### Version D

Splined shaft  
1"3/8 - Z6 ISO 500

CW as standard



#### Version H

**MEC 9000:** Group 3.5 51.83 cc/rev - Pmax 230 bar - In G 1" - Out G 1"  
**MEC 11000:** Group 3.5 73.82 cc/rev - Pmax 180 bar - In G 1" - Out G 1"1/4  
**MEC 13500:** Group 4 86.56 cc/rev - Pmax 280 bar - In G 1"1/4 - Out G 1"1/2

### TECHNICAL DATA

	Geometrical capacity			Max rpm			Max abs pressure Bar/PSI	Max vacuum % (inHg)	Max continuous vacuum % (inHg)	Power at max vacuum kW (HP)	Weight kg			
	m <sup>3</sup> /h	l/min	cfm	M	MA	P/D/H					M/MA	P	D	H
BALLAST 9000	541,8	9030	319	600	1000	1400	2,5 (36)	95% (28,5")	70% (21")	17 (22,8)	145	131	132	154
BALLAST 11000	668,22	11137	393	600	1000	1400	2,5 (36)	95% (28,5")	70% (21")	21 (28,2)	160	146	147	170
BALLAST 13500	830,7	13845	489	600	1000	1400	2,5 (36)	95% (28,5")	70% (21")	25 (33,5)	178	164	165	205

### OPTIONALS



**Automatic Lubrication**  
Double lubrication points



**Kit Aluminum Final Air Filter 1300**  
Code 6080200290



**Side Outlet With Two Revolving Elbows**  
Ø 76 mm/80/100



**Double Outlet**  
Ø 80 mm



**Kit Vacuum Relief Valve For Revolving Elbow**  
Code 6080200181



**Extra Side Tank**  
Code 6080200304 (LA)  
Code 6080200310 (LF)



**EN 707 Lever**  
Code 6080200173



**Hydraulic Changeover**  
Code 6080200176



**Hydraulic Revolving Changeover**  
Code 509000078



**Pneumatic Revolving Changeover**  
Code 6080200238



**Pneumatic Revolving Changeover - 3 Positions**  
Code 6080200293



**Customized Painting**

## OPTIONALS



**Battioni Pagani Vacuum Pump Oil 5 lt.**  
Code 5070200100

**NEW**



**Battioni Pagani Flushing Fluid 5 lt.**  
Code 5070200102

**NEW**



**Flushing Kit**  
Code 6080200325

# BALLAST

9000 - 11000 - 13500



## ACCESSORIES



**01 Vacuum Relief Valve 1 1/2**

Code 5100200012  
Setting range:  
-0,3 bar / -0,8 bar  
Working temperature:  
-20°C / +90°C  
Thread: G 1 1/2  
Weight: 0,65 kg



**02 Overpressure Safety Valve - 2"**

Code 5100200011  
Setting range:  
+0,3 bar / +1,5 bar  
Working temperature:  
-20°C / +90°C  
Thread: G 2"  
Weight: 1,02 kg



Tank with side pipe



**06 Filter - Silencer**  
Code 5090000025  
BALLAST 9000-11000  
Ø 80 mm  
Code 5090000026  
BALLAST 13500  
Ø 100 mm  
Hose connection:  
Ø 80/100 mm  
Weight: 9,5/13 kg



**04A Rain Cap**  
Code 5090000061  
BALLAST 9000-11000  
Code 5090000062  
BALLAST 13500  
Weight: 0,4 kg



**04B Pre-Filter**  
Code 5090000046  
BALLAST 9000-11000  
Code 5090000047  
BALLAST 13500



**03A Primary Overflow Valve - Two Balls**  
Code 6100200030 - Ø 76  
Code 6100200025 - Ø 80  
Code 6100200026 - Ø 100  
Iron ring to be welded  
Weight: 13,9/14,0 kg



**03B Primary Overflow Valve - One SS Ball**  
Code 6100200027 - Ø 80 SS  
Code 6100200028 - Ø 100 SS  
Ball material: AISI 316  
Iron ring to be welded



**05 Secondary Valve - Two Balls**  
Code 6100200035 - Ø 76  
Code 6100200021 - Ø 80  
Code 6100200022 - Ø 100  
Weight: 35,6 kg



**05A Discharge Valve - 1"**  
Code 5040200014  
To be fitted on Secondary valve



**05B Gauge - Ø 80 mm Axial Connection**  
Code 5101700007  
To be fitted on Secondary valve

Air injection cooled - Rotary Vanes Vacuum/ Pressure pump



**Battioni®  
Pagani**

*Setting the pace since 1953*

**Selector vacuum - pressure**

Selettore Vuoto - Pressione  
Wähler von Vakuum/Druck



**Non-return valve**

Valvola di non ritorno  
Kontrollventil als Serie

**Automatic lubrication pump as standard**

Pompa di lubrificazione automatica di serie  
Automatische Schmierung als Serie



**Temperature indicator**

Rilevatore di temperatura  
Temperaturdedektor



**160° C Irreversible indicator**

Indicatore  
Irreversibile 160° C  
irreversibel  
Anzeiger 160°C

**Long Life blades as standard**

Palette "long life" resistenti al calore di serie  
Hitzebeständigen Lamellen aus  
Spezialmaterial als Serie

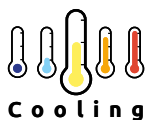


**High wearing resistance thanks to cast-iron with high hardness**

Elevata resistenza ad usura grazie a ghisa ad alta durezza  
Hohe Festigkeit zu Abnutzung für Gußeisen mit hohe Härte

**Air injection cooling**

Iniezione aria di raffreddamento  
Injektion der Luftkühlung



**AIR INJECTION  
COOLED - ROTARY  
VANES VACUUM/  
PRESSURE PUMP**





**Integrated Final air filter, effective in both vacuum and pressure use**

Filtro aria finale integrato, efficace sia in vuoto che in pressione  
Integriert Endluftfilter, wirksam in Vakuum und auch in Druck

**CPS - CRASH PROTECTION SYSTEM**

**Sliding Flanges to avoid breakages of the body and rotor during vanes crashes**

Flange con asole di scorrimento in caso di ingresso materiale o rottura palette  
Flansche mit Slotsblättern falls Materialschmierung oder Palettenbruch

**External Side oil tank**

Serbatoio olio laterale  
Externe Seitenöltank

**Blades inspection hole**

Foro ispezione palette  
Bohrung für Lamellen Prüfung

**Vaness inspection hole with max wearing indicator**

Tacca per rilevamento usura palette  
Ausrichtmarke für die Abnutzung der Palette



## VERSIONS



BALLAST - M/MA



BALLAST - P



BALLAST - D



BALLAST - H



BALLAST - K/KA

Air injection cooled -  
Rotary Vanes Vacuum/  
Pressure pump

Discover the CPS - Crash Protection System



The picture is only for informative purpose.  
See the table on page 89 for the complete list of the available options.



# BALLAST

## 16000

### BALLAST – Built to last

The BALLAST pump represents a technology breakthrough resulted from a major joint effort in product development and innovative design processes.

The BALLAST features the **Crash Protection System**: a sliding flanges protection mechanism that prevents the housing or rotor to break of in case of vanes crash. The pump is easily repairable inexpensively in field. The BALLAST II pump is equipped with the latest automatic **air injection cooling system** to enable continuous operation at 70% range of vacuum.

The BALLAST is the ideal pump for heavy duty applications.



### STANDARD FEATURES

- Long Life Blades, Crash Protection System, Automatic lubrication, External Side oil tank, Integrated Air Filter, 4-ways valve, Poppet Check valve
- Available hoses connections: Ø 76 mm (3") / Ø 80 mm / Ø 100 mm (4")

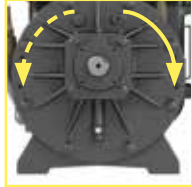
### VERSIONS

CCW as standard



**Version M / MA**  
Splined shaft  
1"3/8 - Z6 ISO 500

CCW on request CW as standard



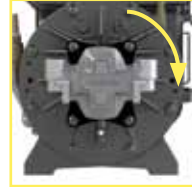
**Version P**  
Smooth Cylindrical shaft,  
Ø 40, lenght:93 mm  
Parallel key UNI 6604

CCW as standard



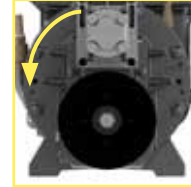
**Version D**  
Splined shaft  
1"3/8 - Z6 ISO 500

CW as standard



**Version H**  
Group 4  
86.56 cc/rev -  
Pmax 280 bar  
In G 1"1/4 - Out G 1" 1/2

CCW as standard



**Version K / KA**  
Splined shaft  
1"3/8 - Z6 ISO 500  
Support Gr. 2 or Gr. 3  
Hydraulic pump on request

### TECHNICAL DATA

	Geometrical capacity			Max rpm			Max abs pressure Bar/PSI	Max vacuum % (inHg)	Max continuous vacuum % (inHg)	Power at max vacuum kW (HP)	Weight kg			
	m³/h	l/min	cfm	M/K	P/D/H	MA/KA					M/MA	P/D	H	K/KA
BALLAST 16000	916	15270	539	540	1400	1000	2,5 (36)	95% (28,5")	70% (21")	33 (44,2)	230	210	247	220

### OPTIONALS



**Hydraulic Changeover**  
Code 6080200315



**Hydraulic Revolving Changeover**  
Code 5090000108



**Pneumatic Revolving Changeover**  
Cod. 6080200306



**Pneumatic Revolving Changeover - 3 Positions**  
Code 6080200307



**Battioni Pagani Vacuum Pump Oil 5 lt.**  
Code 5070200100

**NEW**



**Battioni Pagani Flushing Fluid 5 lt.**  
Code 5070200102

**NEW**



**Flushing Kit**  
Code 6080200325

**NEW**



**Kit Overpressure 2"**  
Code 6080200389



**Customized Painting**



## ACCESSORIES



**Vacuum Relief Valve  
1"1/2**  
Code 5100200012  
Setting range:  
-0.3 bar / -0,8 bar  
Working temperature:  
-20°C / +90°C  
Thread: 1"1/2  
Weight: 0,65 kg



**Overpressure Safety  
Valve - 2"**  
Code 5100200011  
Setting range:  
+0,3 bar / +1,5 bar  
Working temperature:  
-20°C / +90°C  
Thread: 2"  
Weight: 1,2 kg



**Pulley with pneumatic  
clutch**  
Code 6080200034

Air injection cooled -  
Rotary Vanes Vacuum/  
Pressure pump



Tank with side pipe



**Filter - Silencer**  
Code 5090000026  
BALLAST 16000  
Hose connection:  
Ø 100 mm  
Weight: 9,5/13 kg



**Rain Cap**  
Code 5090000062  
BALLAST 16000  
Weight: 0,4 kg



**Pre-Filter**  
Code 5090000047  
BALLAST 16000



**Primary Overflow  
Valve - Two Balls**  
Code 6100200030-Ø76  
Code 6100200025-Ø80  
Code 6100200026-Ø100  
Iron ring to be welded  
Weight: 13,9/14,0 kg



**Primary Overflow  
Valve - One SS Ball**  
Code 6100200027-  
Ø80 SS  
Code 6100200028-  
Ø100 SS  
Ball material: AISI 316  
Iron ring to be welded



**Secondary Valve - Two  
Balls**  
Code 6100200035-Ø76  
Code 6100200021-Ø80  
Code 6100200022-Ø100  
Weight: 35,6 kg



**Discharge Valve - 1"**  
Code 5040200014  
**Discharge Valve - 1" 1/4**  
Code 5040200016  
To be fitted on Secondary  
valve



**Gauge - Ø 80 mm  
Axial Connection**  
Code 5101700007  
To be fitted on  
Secondary valve



**Cyclon valve - 1100**  
Code 6100200033- Ø100  
Housing: Galvanized Mild Steel  
Cover: aluminum  
Weight: 35 kg





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*Setting the pace since 1953*



**Battioni Pagani Pompe S.p.A.**

Via Enzo Ferrari, 2  
43058 Sorbolo (PR) - Italy

Ph. +39 0521 663203

Fax +39 0521 663206



[www.bapag.it](http://www.bapag.it)  
[info@bapag.it](mailto:info@bapag.it)

