

## THE PIAGGIO RANGE



## MF TECHNOLOGY MAINTENANCE FREE

The MF or VRLA batteries - Valve Regulated Lead Acid - are sealed batteries using the gas recombination technology. This technology allows less maintenance and does not require water top-up. The battery is activated by immersion in the acid (included in the package), upon first use.

Piaggio Code	Battery Type	Voltage	Capacity Ah (10 Hr)	CCA (-18°C)	Weight (Kg)	Length	Width	Height	Polarity
1L004081	PTX4L-BS	12V	4	50A	1,42	113	70	85	- +
1R000317	PTX7L-BS	12V	6	110A	2,43	113	70	130	- +
1L004083	PTX9-BS	12V	8	135A	3,09	150	87	105	+ -
1R000318	PTX12-BS	12V	10	180A	3,97	150	87	130	+ -
1R000319	PTX14-BS	12V	12	200A	4,47	150	87	145	+ -

### SAFETY



- Sealed after filling, in normal conditions, no gas emission through the breather
- Reduced plate sulphation
- Do not require recharging during storage

### LONG LIFE



- Superior life cycle, up to three times more than traditional batteries
- Longer voltage stability

### HIGH PERFORMANCE



- Resistant to extreme climates
- High power

## DRY TECHNOLOGY

Traditional batteries are lead-acid batteries.

These batteries must be refilled upon first use. The high performance DRY batteries include an "anti-sulphation" technology that reduces the formation of sulphate crystals on the plate and guarantees a longer battery life, especially during inactivity and storage periods



## THE PIAGGIO RANGE

Piaggio Code	Battery Type	Voltage	Capacity Ah (10 Hr)	CCA (-18°C)	Weight (Kg)	Length	Width	Height	Polarity
1L004080	PB4L-B	12V	4	50A	1,61	120	70	92	- +
1L004079	PB4L-B with acid pack	12V	4	50A	1,61	120	70	92	- +

### RELIABILITY



- Resistance to vibrations
- Cold start capacity

### SAFETY



- Does not require recharging during storage

### CONVENIENCE



- The best price-quality ratio

## OUR QUALITY TESTS



### Capacity check in 10 hours (C10)

To determine the actual capacity (Ah) under normal operation in 10 hours, the Piaggio batteries are kept at a constant temperature of 25°C and are discharged using a constant current until obtaining a final voltage at the terminals of 10.50 V. The discharge duration is registered.

At the end of the test, the actual capacity was more than 90% of the rated value.



### Acceptance of charge at 0°C when the battery is partially charged

The acceptance of charge is the current that a partially charged battery accepts at a temperature of 0°C and at a constant voltage of 14.40 V. For this test, the Piaggio batteries are discharged for 5 hours and then placed in an environment at 0° where they are charged with a constant voltage for 10' while measuring the current absorbed.



### Cold start behaviour

The batteries from the Piaggio range are charged at a 14.40 V constant voltage for 24 h at a temperature comprised between 25° and 35°C and then they are placed in an environment at -15°C and discharged for 2'. At the end of the test, the final voltage is higher than 6 V.



### Extreme cold discharge

The batteries from the Piaggio range are charged at a 14.40 V constant voltage for 24 h at a temperature comprised between 25° and 35°C and then they are placed in an environment at -18°C and discharged with high current. During the test, the voltage and the discharge time are measured until the battery reaches a minimum value of 6 V.



### Vibration test

To guarantee that there are no valve electrolyte losses, the Piaggio range batteries are charged at a 14.40 V constant voltage for 24 h at a temperature comprised between 25° and 35°C, after which they are placed on a vibrating table and subjected to vibrations on the 3 axes. There should be no variations regarding the expected performance.



### Charge and discharge cycle durability test

The cycle durability is the behaviour of a battery upon repeated charge and discharge cycles and long inactivity and open circuit periods. This behaviour is tested by subjecting the battery to several cycles and inactivity periods in the specified conditions, after which their cold start performance must be determined. At the end of the test, the voltage is higher than 7.2 V.



### Recharge after complete discharge

This is the recharge behaviour of a battery that was completely discharged in certain conditions. The test starts with the battery completely charged and stabilised at ambient temperature, then it is discharged and subjected to an ambient temperature of 25°C, for 7 days, with a lamp load power of 10 W connected to its poles. At the end of this period, the battery is recharged at ambient temperature for 24 hours, and, after a 6 hour pause, it is subjected to the capacity test. The available capacity is more than 80% of the initial capacity.

# NEW PIAGGIO BATTERY RANGE



- Maintenance Free Technology
- Dry conventional technology
- High Reliability,
- Long life
- Strict qualification tests
- Almost complete coverage of the Piaggio fleet



# MF BATTERIES APPLICABILITY LIST

CODE	PIAGGIO BATTERY	BRAND	MODELLO
1L004081	PTX4L-BS	Aprilia	Rx 50 ->2018
1L004081	PTX4L-BS	Aprilia	Scarabeo 50 2T ->2018
1L004081	PTX4L-BS	Aprilia	Smt ->2018
1L004081	PTX4L-BS	Aprilia	Sx 50 ->2018
1L004081	PTX4L-BS	Derbi	Senda 50 ->2018
1L004081	PTX4L-BS	Gilera	Gilera Eaglet
1L004081	PTX4L-BS	Gilera	Rcr 50 2011-2018
1L004081	PTX4L-BS	Gilera	Runner 50 2T ->2006
1L004081	PTX4L-BS	Gilera	Stalker 50 ->2011
1L004081	PTX4L-BS	Piaggio	Fly 50 2T 2005-2011
1L004081	PTX4L-BS	Piaggio	Free
1L004081	PTX4L-BS	Piaggio	Liberty 50 2T 2000-2013
1L004081	PTX4L-BS	Piaggio	Nrg 2T ->2017
1L004081	PTX4L-BS	Piaggio	Sfera 50
1L004081	PTX4L-BS	Piaggio	Typhoon 50 ->2018
1L004081	PTX4L-BS	Piaggio	Zip 50 2T
1L004081	PTX4L-BS	Piaggio	Zip Sp H2o
1L004081	PTX4L-BS	Vespa	Vespa Lx 50 2T
1L004081	PTX4L-BS	Vespa	Vespa Primavera 50 2T 2013-2017
1L004081	PTX4L-BS	Vespa	Vespa S 50 2T
1L004081	PTX4L-BS	Vespa	Vespa Sprint 50 2T 2014-2017
1L004081	PTX4L-BS	Vespa	Vespa Touring Lx 50 2T 2005-2013
1R000317	PTX7L-BS	Aprilia	Cross City 125 4T 2007-2012
1R000317	PTX7L-BS	Aprilia	Rs 125 4T 2017 - 2018
1R000317	PTX7L-BS	Aprilia	Rs4 125 4T 2011-2016
1R000317	PTX7L-BS	Aprilia	Tuono 125 4T S 2017
1R000317	PTX7L-BS	Aprilia	Mojito 125-150 4T 2003-2008
1R000317	PTX7L-BS	Derbi	Mulhacen 125
1R000317	PTX7L-BS	Derbi	Senda R 125 2004-2010
1R000317	PTX7L-BS	Derbi	Terra 50/125
1R000317	PTX7L-BS	Piaggio	Fly 125 4T/3V le 2013 - 2015
1R000317	PTX7L-BS	Piaggio	Fly 50 4T 4V 2012-2017
1R000317	PTX7L-BS	Piaggio	Liberty 125/150 3V le 2013 - 2014
1R000317	PTX7L-BS	Piaggio	Liberty 125/150 Iget 2015 - 2018
1R000317	PTX7L-BS	Piaggio	Liberty 50 Iget 4T - 2015-2017
1R000317	PTX7L-BS	Piaggio	Medley 125/150 2016-2018
1R000317	PTX7L-BS	Vespa	Vespa Gts 125/150 2016-2017
1R000317	PTX7L-BS	Vespa	Vespa Primavera 125/150 2013-2018
1R000317	PTX7L-BS	Vespa	Vespa Sprint 125/150 2014-2018
1R000317	PTX7L-BS	Vespa	Vespa Sprint 50 4T 2014-2018
1L004083	PTX9-BS	Ape	Ape 50 - 2018
1L004083	PTX9-BS	Aprilia	Scarabeo 100 4T
1L004083	PTX9-BS	Aprilia	Scarabeo 50 4T
1L004083	PTX9-BS	Gilera	Runner 125
1L004083	PTX9-BS	Gilera	Runner 50 Purejet
1L004083	PTX9-BS	Piaggio	Beverly 125 ->2006
1L004083	PTX9-BS	Piaggio	Hexagon 125/150
1L004083	PTX9-BS	Piaggio	Liberty 125 4T Ptt
1L004083	PTX9-BS	Piaggio	Liberty 125 4T ->2015
1L004083	PTX9-BS	Piaggio	Liberty 50 2T 2006-2008
1L004083	PTX9-BS	Piaggio	Liberty 50 4T ->2018
1L004083	PTX9-BS	Piaggio	X9 125
1L004083	PTX9-BS	Piaggio	Sfera 125
1L004083	PTX9-BS	Piaggio	Skipper 125/150
1L004083	PTX9-BS	Piaggio	Zip 125 4T
1L004083	PTX9-BS	Piaggio	Zip 50 4T
1L004083	PTX9-BS	Piaggio	X9 125

1L004083	PTX9-BS	Piaggio	Zip 125 4T
1L004083	PTX9-BS	Piaggio	Zip 50 4T
1L004083	PTX9-BS	Vespa	Vespa Granturismo 125
1L004083	PTX9-BS	Vespa	Vespa Et4 125
1L004083	PTX9-BS	Vespa	Vespa Et4 124
1R000318	PTX12-BS	Aprilia	Dorsoduro 750
1R000318	PTX12-BS	Aprilia	Dorsoduro 900
1R000318	PTX12-BS	Aprilia	Rsv 1000 ->2008
1R000318	PTX12-BS	Aprilia	Rsv Tuono V2 1000 ->2009
1R000318	PTX12-BS	Aprilia	Scarabeo 125-200 le Light ->2012
1R000318	PTX12-BS	Aprilia	Shiver 750
1R000318	PTX12-BS	Aprilia	Shiver 900
1R000318	PTX12-BS	Aprilia	Sport City Cube / Street
1R000318	PTX12-BS	Derbi	Rambra 125-250 -300 -> 2011
1R000318	PTX12-BS	Derbi	Sonar 125/150
1R000318	PTX12-BS	Gilera	Nexus 125/300
1R000318	PTX12-BS	Gilera	Runner Vx/Vxr ->2006
1R000318	PTX12-BS	Piaggio	Beverly 125/250 2007-2010
1R000318	PTX12-BS	Piaggio	Beverly 300
1R000318	PTX12-BS	Piaggio	Beverly 350
1R000318	PTX12-BS	Piaggio	Carnaby 125/300
1R000318	PTX12-BS	Piaggio	Liberty 125 4T E3 2009-2012
1R000318	PTX12-BS	Piaggio	Liberty 125 Iget 2017-2018
1R000318	PTX12-BS	Piaggio	Liberty 125 4T Ptt
1R000318	PTX12-BS	Piaggio	Liberty 200
1R000318	PTX12-BS	Piaggio	Mp3 350 2006-2008
1R000318	PTX12-BS	Piaggio	X10 125/350
1R000318	PTX12-BS	Piaggio	X7 125/300
1R000318	PTX12-BS	Piaggio	X8 125
1R000318	PTX12-BS	Piaggio	X9 125
1R000318	PTX12-BS	Vespa	Vespa Gts 125/250 2007-2017
1R000318	PTX12-BS	Vespa	Vespa Gts 300
1R000318	PTX12-BS	Vespa	Vespa Gtv 125
1R000318	PTX12-BS	Vespa	Vespa Gtv 300
1R000318	PTX12-BS	Vespa	Vespa Lx 125/150
1R000318	PTX12-BS	Vespa	Vespa Lxv 125/150
1R000318	PTX12-BS	Vespa	Vespa S 125/150
1R000318	PTX12-BS	Vespa	Vespa Super Gts 125
1R000318	PTX12-BS	Vespa	Vespa Super Gts 250
1R000318	PTX12-BS	Vespa	Vespa Super Gts 300
1R000318	PTX12-BS	Vespa	Vespa Touring Lx 125/150
1R000319	PTX14-BS	Aprilia	Caponord 1200
1R000319	PTX14-BS	Aprilia	Dorsoduro 1200
1R000319	PTX14-BS	Aprilia	Dorsoduro 750
1R000319	PTX14-BS	Aprilia	Mana 850
1R000319	PTX14-BS	Aprilia	Shiver 750 2007-2010
1R000319	PTX14-BS	Aprilia	Sr Max
1R000319	PTX14-BS	Aprilia	Etv 1000
1R000319	PTX14-BS	Gilera	Fuoco 500
1R000319	PTX14-BS	Gilera	Gp 800
1R000319	PTX14-BS	Gilera	Nexus 125/250/300
1R000319	PTX14-BS	Gilera	Srv 850
1R000319	PTX14-BS	Moto Guzzi	California 1100 ->2012
1R000319	PTX14-BS	Moto Guzzi	Nevada 750
1R000319	PTX14-BS	Moto Guzzi	Norge 1200
1R000319	PTX14-BS	Moto Guzzi	V7
1R000319	PTX14-BS	Moto Guzzi	V9 Bobber
1R000319	PTX14-BS	Moto Guzzi	V9 Roamer
1R000319	PTX14-BS	Piaggio	Beverly 250 2005-2009
1R000319	PTX14-BS	Piaggio	Beverly 300 le Tourer

1R000319	PTX14-BS	Piaggio	Beverly 400 le Tourer
1R000319	PTX14-BS	Piaggio	Beverly 500 Cruiser
1R000319	PTX14-BS	Piaggio	Carnaby 200/250
1R000319	PTX14-BS	Piaggio	Mp3 125/250/300 ->2018
1R000319	PTX14-BS	Piaggio	Mp3 400/500
1R000319	PTX14-BS	Piaggio	X Evo 125/250/400
1R000319	PTX14-BS	Piaggio	X7 250
1R000319	PTX14-BS	Piaggio	X8 250/400
1R000319	PTX14-BS	Piaggio	X9 250/500

# CONVENTIONAL DRY BATTERIES APPLICABILITY LIST

CODE	PIAGGIO BATTERY	BRAND	MODELLO
1L004080	PB4L-B	Aprilia	Rx 50 ->2018
1L004080	PB4L-B	Aprilia	Scarabeo 50 2T ->2018
1L004080	PB4L-B	Aprilia	Smt ->2018
1L004080	PB4L-B	Aprilia	Sx 50 ->2018
1L004080	PB4L-B	Derbi	Senda 50 ->2018
1L004080	PB4L-B	Gilera	Gilera Eaglet
1L004080	PB4L-B	Gilera	Rcr 50 2011-2018
1L004080	PB4L-B	Gilera	Runner 50 2T ->2006
1L004080	PB4L-B	Gilera	Stalker 50 ->2011
1L004080	PB4L-B	Piaggio	Fly 50 2T 2005-2011
1L004080	PB4L-B	Piaggio	Free
1L004080	PB4L-B	Piaggio	Liberty 50 2T 2000-2013
1L004080	PB4L-B	Piaggio	Nrg 2T ->2017
1L004080	PB4L-B	Piaggio	Sfera 50
1L004080	PB4L-B	Piaggio	Typhoon 50 ->2018
1L004080	PB4L-B	Piaggio	Zip 50 2T
1L004080	PB4L-B	Piaggio	Zip Sp H2o
1L004080	PB4L-B	Vespa	Vespa Lx 50 2T
1L004080	PB4L-B	Vespa	Vespa Primavera 50 2T 2013-2017
1L004080	PB4L-B	Vespa	Vespa S 50 2T
1L004080	PB4L-B	Vespa	Vespa Sprint 50 2T 2014-2017
1L004080	PB4L-B	Vespa	Vespa Touring Lx 50 2T 2005-2013
1L004079	PB4L-B with acid pack	Aprilia	Rx 50 ->2018
1L004079	PB4L-B with acid pack	Aprilia	Scarabeo 50 2T ->2018
1L004079	PB4L-B with acid pack	Aprilia	Smt ->2018
1L004079	PB4L-B with acid pack	Aprilia	Sx 50 ->2018
1L004079	PB4L-B with acid pack	Derbi	Senda 50 ->2018
1L004079	PB4L-B with acid pack	Gilera	Gilera Eaglet
1L004079	PB4L-B with acid pack	Gilera	Rcr 50 2011-2018
1L004079	PB4L-B with acid pack	Gilera	Runner 50 2T ->2006
1L004079	PB4L-B with acid pack	Gilera	Stalker 50 ->2011
1L004079	PB4L-B with acid pack	Piaggio	Fly 50 2T 2005-2011
1L004079	PB4L-B with acid pack	Piaggio	Free
1L004079	PB4L-B with acid pack	Piaggio	Liberty 50 2T 2000-2013
1L004079	PB4L-B with acid pack	Piaggio	Nrg 2T ->2017
1L004079	PB4L-B with acid pack	Piaggio	Sfera 50
1L004079	PB4L-B with acid pack	Piaggio	Typhoon 50 ->2018
1L004079	PB4L-B with acid pack	Piaggio	Zip 50 2T
1L004079	PB4L-B with acid pack	Piaggio	Zip Sp H2o
1L004079	PB4L-B with acid pack	Vespa	Vespa Lx 50 2T
1L004079	PB4L-B with acid pack	Vespa	Vespa Primavera 50 2T 2013-2017
1L004079	PB4L-B with acid pack	Vespa	Vespa S 50 2T
1L004079	PB4L-B with acid pack	Vespa	Vespa Sprint 50 2T 2014-2017
1L004079	PB4L-B with acid pack	Vespa	Vespa Touring Lx 50 2T 2005-2013