

**NEW**

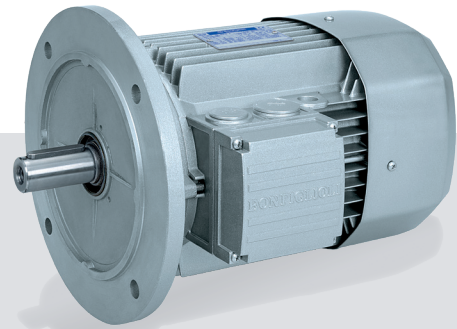
**Bonfiglioli**  
*Forever Forward*

## NEW BONFIGLIOLI BSR SYNCHRONOUS AND RELUCTANCE MOTORS

High efficiency and high power density:  
a green and cost-effective investment

The BSR range of synchronous and reluctance motors can reach the **IE4 efficiency class in the same size** as standard IE2 class induction motors. Alternatively, with the same size and efficiency, it can produce twice the power with respect to a corresponding induction motor.

To reach these objectives, Bonfiglioli has developed two packages: a “**High Efficiency**” package with IE4 efficiency class, and a “**High Power Density**” package. For both solutions, the optimal motor control is guaranteed by the Active Cube series drives, now equipped with sensorless algorithms dedicated to the new technology, and capable of enhancing their performance.



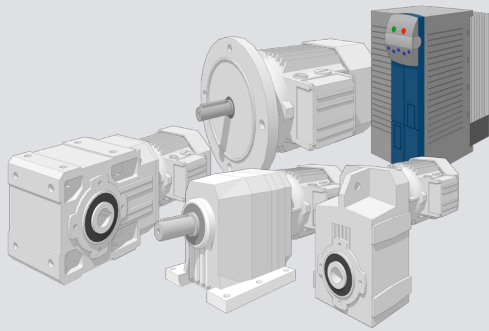
**SAVE**  
**3,500 EURO**  
**PER YEAR\***  
AND HELP MAKE  
THE WORLD A LITTLE  
GREENER



(\*) Measured on a power drive system applied to a pumping station with 15 kW of committed power.

# BSR + A/C/F/S + ACTIVE CUBE PACKAGE

Reliability and high efficiency

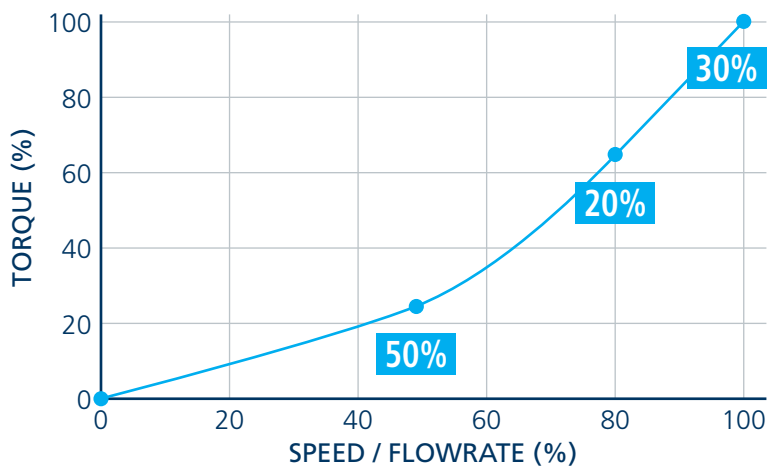


**47%**  
AVERAGE REDUCTION  
OF LOSSES VS IES1

## NORMATIVE REFERENCE 61800-9-2

OPERATING POINT		PDS RELATIVE LOSSES			LOSSES REDUCTION
Speed [%]	Torque [%]	IES1 [%]	IES2 [%]	BSR 90LE + ACU410 [%]	Reduction vs IES1 [%]
100	100	39.1	31.2	<b>19.5</b>	-50%
100	50	23.7	19.0	<b>12.7</b>	-47%
50	100	30.5	24.4	<b>18.3</b>	-40%
50	50	20.0	16.0	<b>10.5</b>	-47%
50	25	16.9	13.5	<b>7.3</b>	-57%
0	100	27.9	22.3	<b>17.3</b>	-38%
0	50	17.1	13.7	<b>9.4</b>	-45%
0	25	14.5	11.6	<b>6.4</b>	-56%

## PUMP LOAD PROFILE AND OPERATING TIME SHARING



## ANNUAL SAVINGS

€/Y	kWh / Y	kg CO2 / Y*
3492	17290	15267

(\*): CO2 emissions due to thermoelectric energy production from solid fuels.



### HEADQUARTERS

Bonfiglioli Riduttori S.p.A.  
Via Giovanni XXIII, 7/A  
40012 Lippo di Calderara di Reno  
Bologna (Italy)

tel: +39 051 647 3111  
fax: +39 051 647 3126  
bonfiglioli@bonfiglioli.com  
www.bonfiglioli.com

