Global

BONDIOLI & PAVESI

398DDS002EN00

Global

In 1950 Bondioli & Pavesi was born, and with that came a driveline design that took technology and innovation to heart. Used all over the world, with production of over 25 million, this driveline has never stopped moving forward. Today it has a new look. It's called Global and it is younger than ever.

SIZE		NOMINAL POWER Pn		NOMINAL TORQUE Mn		CATEGORIES ASAE		U-JOINTS	TRIANGLE PROFILE TUBE		SPLINED TELESCOPING MEMBERS
	min^{-1}	kW	CV	N·m	in·lb	RD	HD	mm	mm	mm	mm
G1	12	16	210	1850	2073	1	1	**Ø=** 22,0 **H=** 54,0	**A=** 2,6 **B=** 32,5	**C=** 4,0 **D=** 26,5	---
	18	25	172	1500	1679						
G2	15	21	270	2400	3224	2	1	**Ø=** 23,8 **H=** 61,3	**A=** 3,2 **B=** 36,0	**C=** 4,0 **D=** 29,0	---
	23	31	220	1950	2612						
G3	26	35	460	4050	4376	2	2	**Ø=** 27,0 **H=** 74,6	**A=** 3,4 **B=** 43,5	**C=** 3,2 **D=** 36,0	---
	40	55	380	3350	3545						
G4	26	35	460	4050	5758	3	3	**Ø=** 27,0 **H=** 74,6	**A=** 3,4 **B=** 43,5	**C=** 4,0 **D=** 36,0	**D=** 30 **z=** 10
	40	55	380	3350	4664						
G5	35	47	620	5500	6334	4	3	**Ø=** 30,2 **H=** 79,4	**A=** 3,0 **B=** 51,5	**C=** 3,8 **D=** 45,0	**D=** 35 **z=** 12
	54	74	520	4600	5161						
G7	47	64	830	7350	8061	4	4	**Ø=** 30,2 **H=** 91,4	**A=** 4,0 **B=** 54,0	**C=** 4,2 **D=** 45,0	**D=** 35 **z=** 12
	74	100	710	6250	6592						
G8	61	83	1080	9560	10364	5	5	**Ø=** 34,9 **H=** 93,5	**A=** 4,0 **B=** 54,0	**C=** 5,5 **D=** 45,0	**D=** 40 **z=** 14
	96	130	913	8050	8457						
G9	70	95	1240	10950	10364	6	5	**Ø=** 35,0 **H=** 106,0	**A=** 4,0 **B=** 63,0	**C=** 4,0 **D=** 54,0	**D=** 40 **z=** 14
	110	150	1050	9300	8457						

The nominal torque Mn as the torque associated with a 1000 hour lifetime of a joint operating with joint angle α = 5°, rotational velocity n = 540 min^{-1} (or 1000 min^{-1}), and a 50 hour lubrication frequency. The nominal power Pn is the power corresponding to the nominal torque Mn.

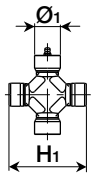
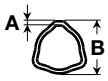
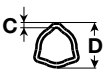
Profile Tubes are also available with Rilsan coated or with heat-treated inner tube.

CV 80°

Constant velocity joints:
high efficiency, low maintenance

Constant Velocity (CV) joints were first widely used for agricultural applications during the 70's. CV joints increased the efficiency of towed implements by reducing or eliminating the problems associated with high and/or unequal joint angles during turns. The requirement for tight turns with the implement has dictated a wide range of motion for the centering disc inside the CV joint. This required large apertures in the CV joint body, which risks contamination of the lubricating grease. Until now, CV joints have allowed better maneuverability in the field compared to "equal angle" drivelines, but required frequent lubrication with copious amounts of grease. The new SFT EL CV joint overcome these problems and requires regreasing only once a week (or every 50 hours, but sometimes this may be extended to 100 hours). In addition, SFT EL CV joints do not require nearly as much grease as conventional CV joints. The same cross kits are used for 80° and 50° SFT EL CV joints, with double-lip seal caps, and have the same lubrication interval of 50 hours.

Drive shafts CV-Joints

SIZE		NOMINAL POWER		NOMINAL TORQUE		CATEGORIES		U-JOINTS	TRIANGLE PROFILE TUBE		SPLINED TELESCOPING MEMBERS
		Pn		Mn		ASAE					
	min^{-1}	kW	CV	N·m	in·lb	RD	HD	mm	mm	mm	mm
G2	15	21	270	2400	3224	2	1	**Ø1=** 22,0 **H1=** 76,0	**A=** 3,2 **B=** 36,0	**C=** 4,0 **D=** 29,0	---
	23	31	220	1950	2612						
G4	26	35	460	4050	5758	3	3	**Ø1=** 22,0 **H1=** 86,0	**A=** 3,4 **B=** 43,5	**C=** 4,0 **D=** 36,0	**D=** 30 **z=** 10
	40	55	380	3350	4664						
G5	35	47	620	5500	6334	4	3	**Ø1=** 27,0 **H1=** 100,0	**A=** 3,0 **B=** 51,5	**C=** 3,8 **D=** 45,0	**D=** 35 **z=** 12
	54	74	520	4600	5161						
G7	47	64	830	7350	8061	4	4	**Ø1=** 27,0 **H1=** 100,0	**A=** 4,0 **B=** 54,0	**C=** 4,2 **D=** 45,0	**D=** 35 **z=** 12
	74	100	710	6250	6592						
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	96	130	913	8050	8457						

The nominal torque Mn as the torque associated with a 1000 hour lifetime of a joint operating with joint angle α = 5°, rotational velocity n = 540 min^{-1} (or 1000 min^{-1}), and a 50 hour lubrication frequency. The nominal power Pn is the power corresponding to the nominal torque Mn.

Four Tooth Profile Tubes are also available with Rilsan coated or with heat-treated inner tube. Free Rotation tubes are also available with Rilsan coated inner Tube.

Permanently lubricated torque limiters and overrunning clutches: less maintenance for higher efficiency

Global drivelines are designed to respond to the user's needs: reliability, high performance, low weight, easy installation, and less maintenance.
These same goals were met with the design of the devices that control torque. The extended 50-hour lubrication interval represents a significant step forward in reduced maintenance requirements. In addition, ratchet torque limiters LC and LT, and shear bolt torque limiter LB, require lubrication only once a season.

OVERRUNNING CLUTCH

RA

50

RL

PERMANENTLY LUBRICATED

SHEAR BOLT TORQUE LIMITER

LB

SEASONAL LUBRICATION

RATCHET TORQUE LIMITER

ONE-WAY

SA

50

LC

SEASONAL LUBRICATION

SYMMETRICALS

LN

50

LT

SEASONAL LUBRICATION

AUTOMATIC TORQUE LIMITER

PERMANENTLY LUBRICATED

LR

FRICTION TORQUE LIMITERS

ADJUSTABLE

FV

FFV

NON-ADJUSTABLE

FT

FK

FRICTION TORQUE LIMITERS INCORPORATED OVERRUNNING CLUTCH

ADJUSTABLE

FNV

FFNV

NON-ADJUSTABLE

FNT

TORSIONALLY RESILIENT JOINT

GE

RL

FT

FNV

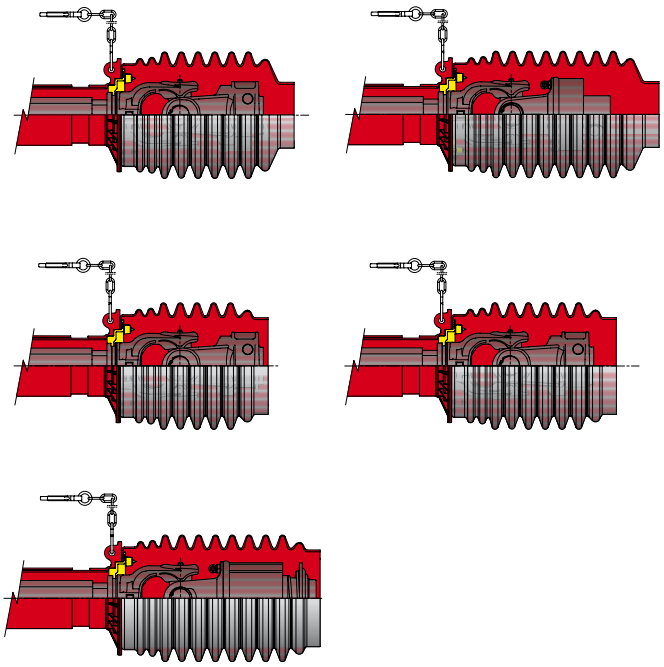
The standard lubrication frequency for all components of series Global cardan joint drivelines is 50 hours. This lengthens the lubrication interval from a daily chore to a weekly routine. Grease fittings are aligned and easy to access.

All rotating parts must be guarded. Contact with a rotating driveline can cause death or serious injury. The tractor master shield, the driveline guards, and the implement input connection shields form an interactive guarding system

Proper use and maintenance of the driveline and shielding is of primary importance for operator safety. A high percentage of driveline accidents occur when safety shielding is missing or does not function properly. Bondioli & Pavesi recommends the use of proper shields and guards for the driveline, tractor, and implement. Damaged or missing components must be replaced with original equipment spare parts, correctly installed, before using the driveline. Use the implement only with the original driveline. The implement input connection shield must be compatible with the driveline and the application.

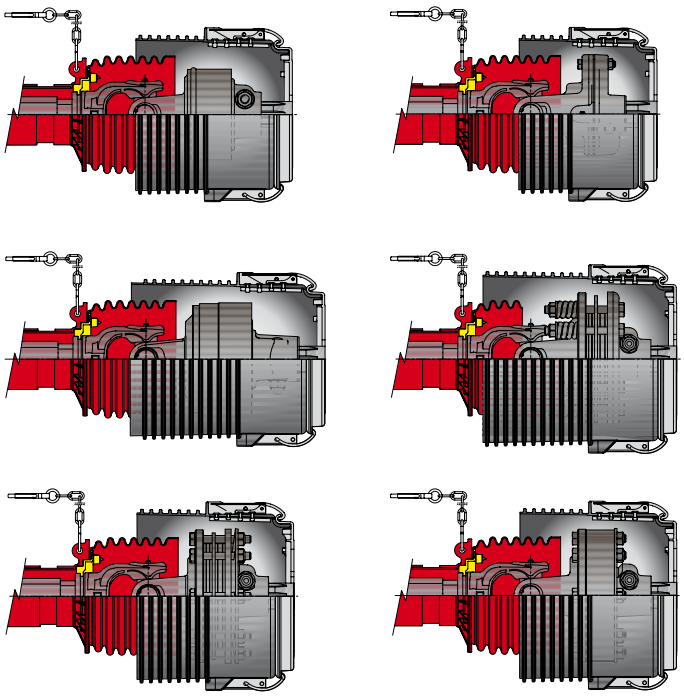
Shield cone configurations

Shields can be provided with extended outer cones that cover the joint completely. The ends of these extended cones must be supported by the implement by means of a clamp, and the shield must be properly restrained. Extended outer cones are normally used on internal drivelines that handle the flow of processed material such as fodder or forage. Extended outer cones are available in various lengths and diameters, depending on the size of the driveline.



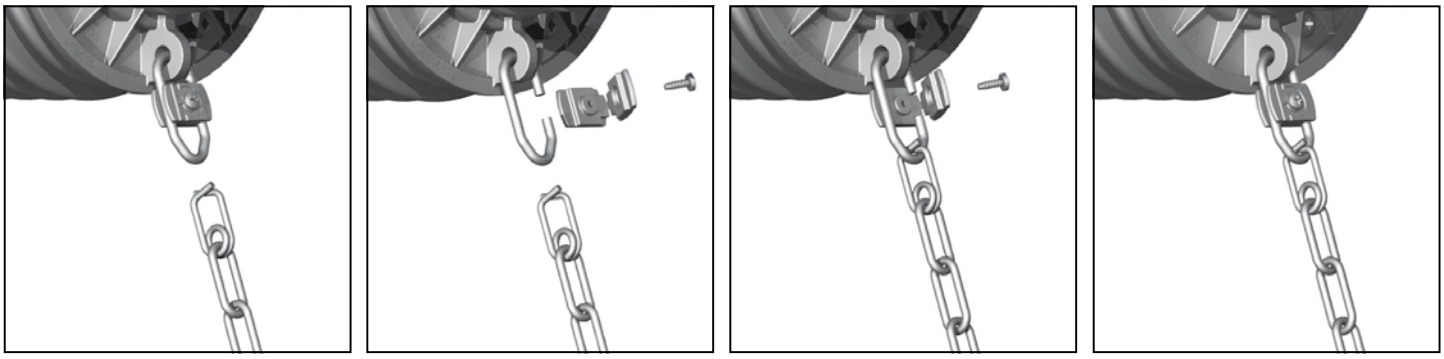
Implement input connection shields

Implement input connection (IIC) shields comply with international standards and are designed to complete an interactive guarding system along with the driveline guard and tractor master shield, even if the driveline is equipped with a CV joint, torque limiter, or an overrunning clutch. These shields are practical and can be opened to easily access the joints for installation and maintenance operations.



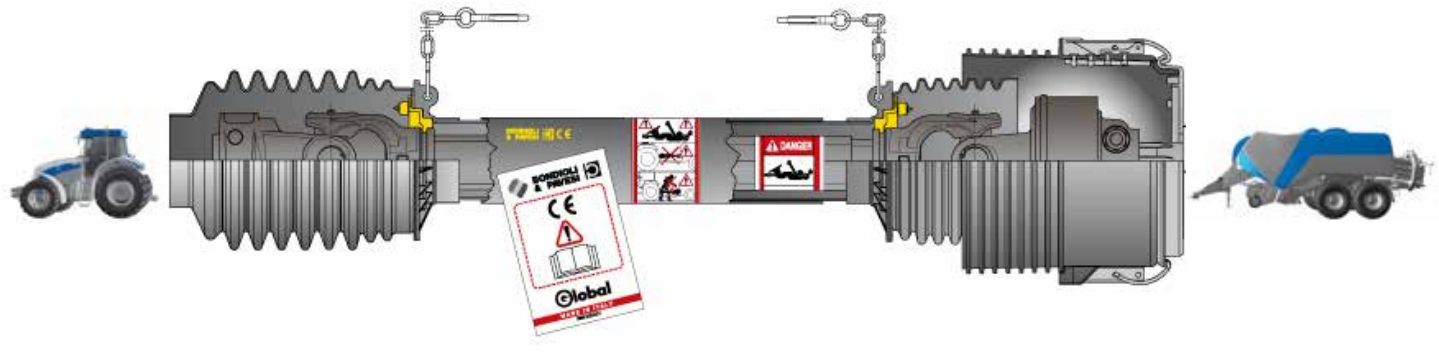
Spring Link

Restraint chains can be supplied on request with the Spring Link device. This device includes a clip which can be opened and closed by screwdriver, and a spring hook which detaches from the shield when subjected to the loads described in the standards.



Safety labels and operator's manuals

Global driveshafts are provided with safety labels and operator's manuals as prescribed by international safety standards and regulations.
The destination of the driveline, and consequently its labels and operator's manual, is indicated by a destination code, i.e. the character in the eighth position in the driveline code number. The table below shows the codes assigned to the labels and operator's manuals provided with Series 100 drivelines, according to their destination codes.



Country of destination	Destination code	Inner label	Outer label	Operator's manual
Drivelines bearing the CE mark	**C**	399143000	399CEE051	399CEEG01
Drivelines made for USA and CANADA	**U**	399143000	399141000	399USAG01
Drivelines made for Japan	**J**	399143000	399JAP001	399USAG01
Drivelines made for other countries and for CEE – EFTA countries not bearing CE mark	**F**	399143000	399CEE051	399USAG01

Outer label 399CEE051

The outer label displays basic safety information for using the driveline, presented according to the rules existing in the country of destination. In Europe, the Machinery Directive requires that information shown on the outer label must be understood in the language of the country of destination, which in practice means all EEC languages. For this reason, label no. 399CEE051 provides information by means of illustrations. This label is used for all CE marked drivelines, as well as other countries.

Outer label 399141000

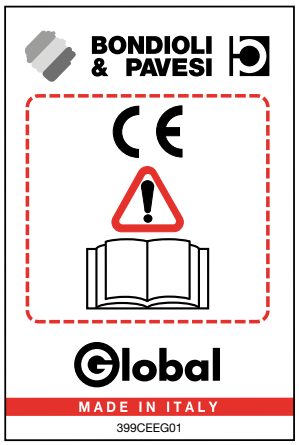
In North America (United States, Canada, Mexico) standard ASAE S441.3 and ANSI Z535 details the requirements for labels and text. Drivelines for sale into North America are provided with the outer label no. 399141000.

Outer label 399JAP001

Drivelines bound for Japan are provided with the outer label no. 399JAP001.

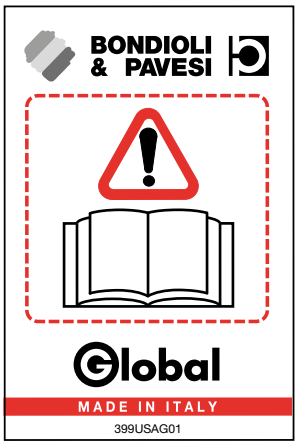
Inner label 399143000

This safety label draws the operators' attention to the fact that the protective guard is missing and therefore the driveline is hazardous to operate. This is shown by the pictorial of a person entangled by a rotating shaft. In addition, the signal word "DANGER" is used, which is understood throughout the world. Inner label no. 399143000 is applied on the outer profile tube, under the protective guard, and provided on drivelines for all countries.



Operator's manuals 399CEEG01

Operator's manuals contain explanations on the labels, information on safe and correct driveline use, and instructions for proper maintenance. Machinery Directive 2006/42/CE specifies that drivelines between self-powered vehicles (or tractors) and implements, marketed in EU and EFTA countries, should be CE marked. The manual 399CEE011 is provided with CE marked drivelines and includes a Declaration of Compliance with Machinery Directive 2006/42/CE.



Operator's manuals 399USAG01

Manual 399USA011 is provided with drivelines without EC marking, i.e. for non-primary drivelines market in the EEC and EFTA countries and for drivelines for other countries.

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