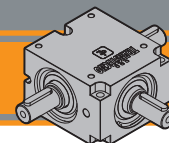




Rinvii angolari Right-angle bevel gearboxes

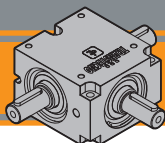




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Caratteristiche tecniche	<i>Technical features</i>	D2
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Versione	<i>Version</i>	D3
Sensi di rotazione	<i>Direction of rotation</i>	D4
Simbologia	<i>Symbols</i>	D4
Lubrificazione	<i>Lubrication</i>	D5
Carichi radiali e assiali	<i>Radial and axial loads</i>	D5
Dati tecnici	<i>Technical data</i>	D5
Dimensioni	<i>Dimensions</i>	D6

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet www.transtecno.com**

*This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site www.transtecno.com***



Caratteristiche tecniche

I rinvii angolari serie BB sono stati progettati per applicazioni industriali dove occorre trasmettere un moto rotatorio tra alberi disposti perpendicolarmente tra loro.

Sono disponibili:

- 2 grandezze: BB50 e BB90
- 5 rapporti: 1/1, 1/1.5, 1/2, 1/3 e 1/4 per BB50; 1/1 per BB90
- 2 o 1 prese di moto in uscita;

Caratteristiche comuni a tutta la serie sono:

- Carter monoblocco in lega di alluminio
- Coppia Conica Spiroidale GLEASON in acciaio al Nikel Cromo con trattamento di Cementazione - Tempra
- Alberi cavi in acciaio al carbonio e alberi maschi con trattamento di cementazione e tempra. Le sedi linguetta possono assumere qualsiasi posizione angolare
- Cuscinetti radiali a sfere
- Anelli nilos su BB50
- Anelli di tenuta tipo A in NBR su BB90
- Lubrificazione con grasso minerale 2 EP permanente per la grandezza BB50
- Lubrificazione con grasso minerale 00 EP permanente per la grandezza BB90

Technical features

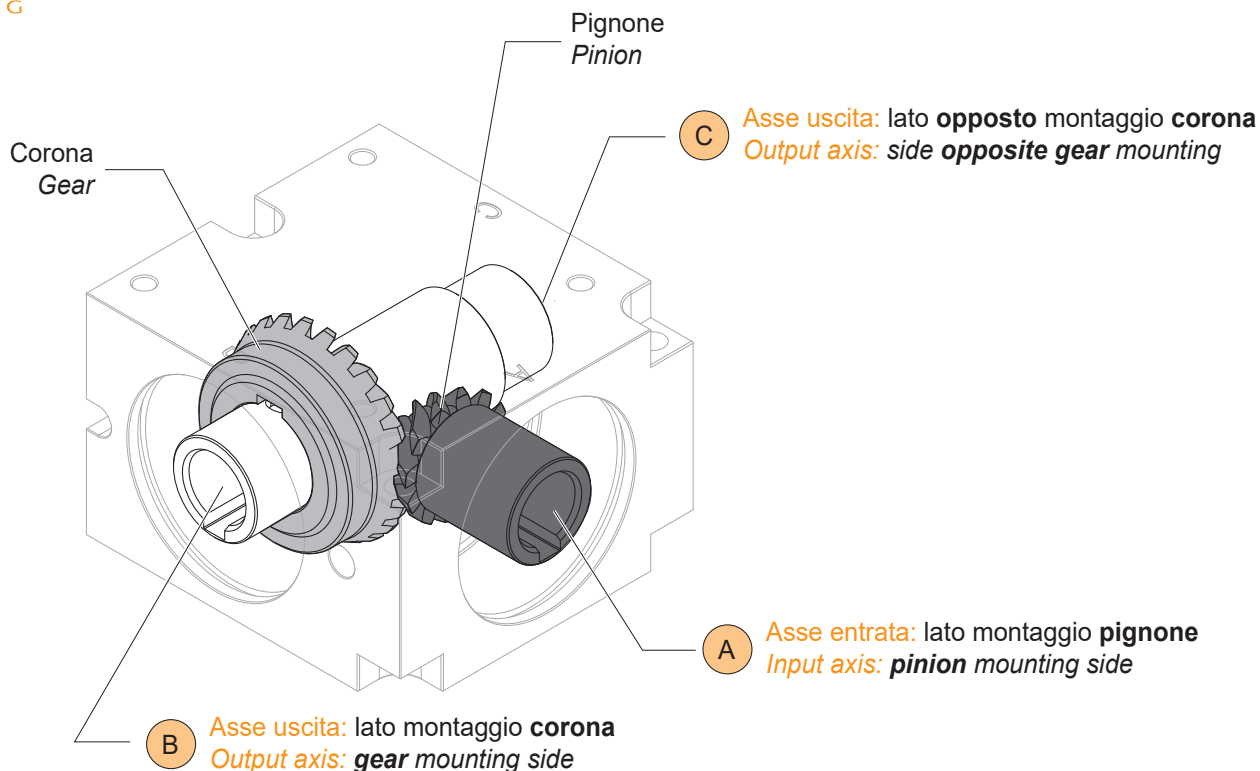
BB-series right-angle bevel gearboxes are designed for industrial applications where rotary motion must be transmitted between perpendicularly arranged shafts.

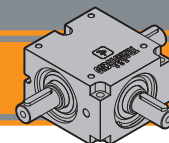
Those available:

- 2 sizes: BB50 and BB90
- 5 ratios: 1/1, 1/1.5, 1/2, 1/3 and 1/4 for BB50; 1/1 for BB90
- 2 or 1 output power take-off;

Common features throughout the series are:

- One-piece aluminium alloy casing
- GLEASON spiral bevel gear in Nickel Chrome steel with Case hardening treatment
- Carbon steel hollow shafts and solid shafts with case hardening treatment. The feather key seats can assume any angular position
- Radial ball bearings
- Nilos rings on BB50
- Sealing rings type A in NBR on BB90
- Lubrication with permanent 2 EP mineral grease for size BB50
- Lubrication with permanent 00 EP mineral grease for size BB90





Designazione

Classification

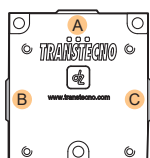
RINVIO ANGOLARE / RIGHT-ANGLE BEVEL GEARBOX						
BB	IS	50	3	U	10	VS (*)
Tipo Type	Albero entrata (A) Input shaft (A)	Grandezza Size	Vie Shafts	Albero uscita (B e C) Output shaft (B and C)	Rapporto Ratio	Albero uscita (D) Output shaft (D)
BB	-	50	3	U	10 (i=1)	- (*)
	Albero cavo Hollow shaft	90	4 (*)	BC	15 (i=1.5) (*)	4 vie D albero cavo 4 shafts D hollow shaft
	IS		*Solo gr.50 *Only size 50	B	20 (i=2) (*)	VS (*)
	Albero maschio Shafts male			C	30 (i=3) (*)	4 vie D albero maschio 4 shafts D male
					40 (i=4) (*)	* Solo gr.50 * Only size 50
					* Solo gr.50 * Only size 50	

BB

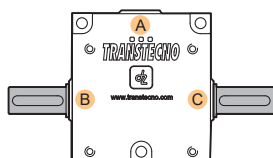
Versione

Version

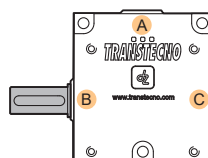
BB - 3 VIE / 3 SHAFTS



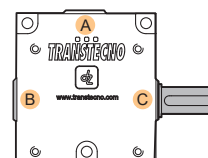
BB..3U..



BB..3BC..

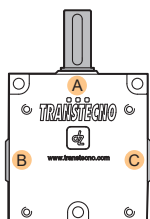


BB..3B..

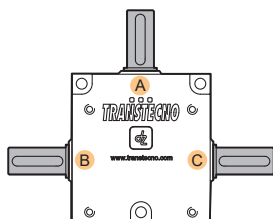


BB..3C..

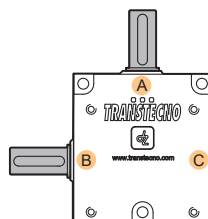
BBIS - 3 VIE / 3 SHAFTS



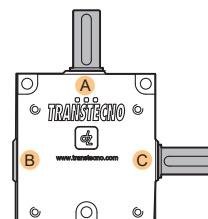
BBIS..3U..



BBIS..3BC..



BBIS..3B..

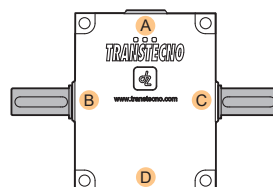


BBIS..3C..

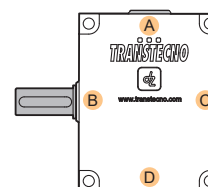
BB - 4 VIE / 4 SHAFTS - Solo gr. 50 / Only size 50



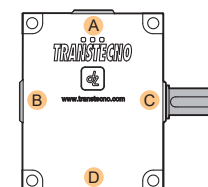
BB..4U..



BB..4BC..

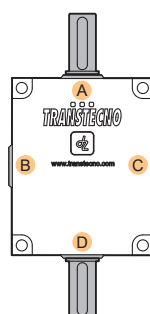


BB..4B..

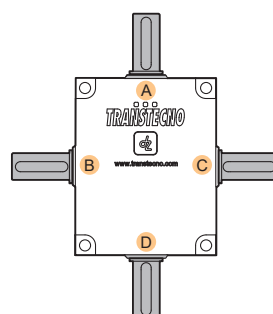


BB..4C..

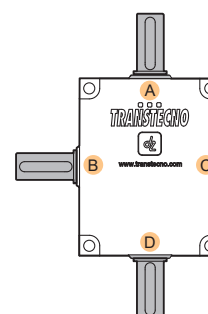
BBIS - 4 VIE / 4 SHAFTS - Solo gr. 50 / Only size 50



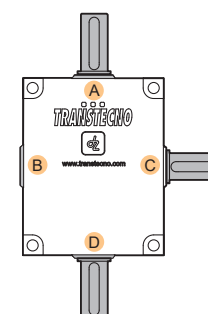
BBIS..4U..VS



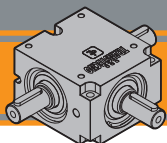
BBIS..4BC..VS



BBIS..4B..VS



BBIS..4C..VS



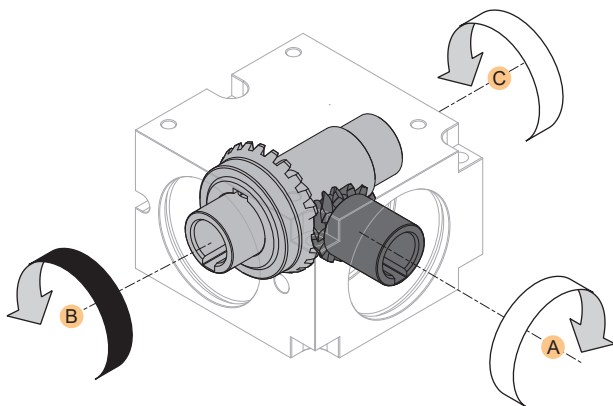
BB

Rinvii angolari Right-angle bevel gearboxes

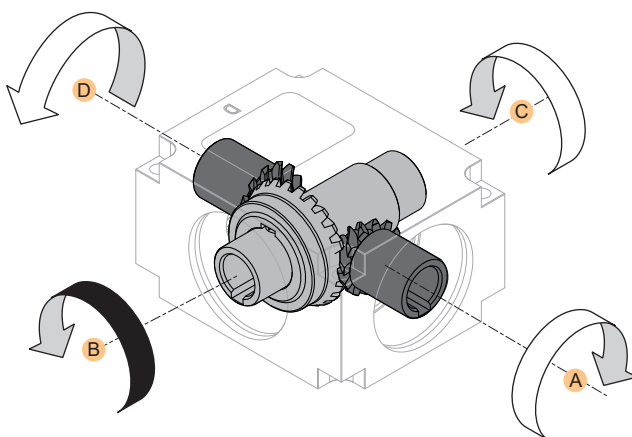
Sensi di rotazione

Direction of rotation

3 VIE / 3 SHAFTS



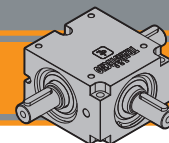
4 VIE / 4 SHAFTS



Simbologia

Symbols

n_1	$[\text{min}^{-1}]$	Velocità in ingresso / <i>Input speed</i>
n_2	$[\text{min}^{-1}]$	Velocità in uscita / <i>Output speed</i>
i		Rapporto di riduzione / <i>Ratio</i>
P_1	$[\text{kW}]$	Potenza in entrata / <i>Input power</i>
M_2	$[\text{Nm}]$	Coppia nominale in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
P_{n1}	$[\text{kW}]$	Potenza nominale in entrata / <i>Nominal input power</i>
M_{n2}	$[\text{Nm}]$	Coppia nominale in uscita in funzione di P_{n1} / <i>Nominal output torque referred to P_{n1}</i>
sf		Fattore di servizio / <i>Service factor</i>
R_1	$[\text{N}]$	Carico radiale ammissibile in entrata / <i>Permitted input radial load</i>
A_1	$[\text{N}]$	Carico assiale ammissibile in entrata / <i>Permitted input axial load</i>
R_2	$[\text{N}]$	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
A_2	$[\text{N}]$	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
	$[\text{kg}]$	Peso del solo riduttore / <i>Weight of the gearbox only</i>



Lubrificazione

Lubrication

I rinvii angolari serie BB, sono forniti completi di lubrificante minerale 2 EP.

BB-series right-angle bevel gearboxes are supplied complete with 2 EP mineral lubricant.

Possono essere installati in qualunque posizione di montaggio.

They can be installed in any mounting position.

Carichi radiali e assiali

Radial and axial loads

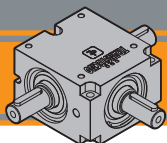
Contattare il servizio tecnico.

Contact technical service.

Dati tecnici

Technical data

	i	n ₁ [min ⁻¹]	n ₂ [min ⁻¹]	M _{n2} [Nm]	P _{n1} [kW]	n ₁ [min ⁻¹]	n ₂ [min ⁻¹]	M _{n2} [Nm]	P _{n1} [kW]	n ₁ [min ⁻¹]	n ₂ [min ⁻¹]	M _{n2} [Nm]	P _{n1} [kW]	n ₁ [min ⁻¹]	n ₂ [min ⁻¹]	M _{n2} [Nm]	P _{n1} [kW]	n ₁ [min ⁻¹]	n ₂ [min ⁻¹]	M _{n2} [Nm]	P _{n1} [kW]
BB 50	1	50	50	25.4	0.13	100	100	21.3	0.21	250	250	17.0	0.43	500	500	11.8	0.59	750	750	9.5	0.72
	1.5		33	31.0	0.10		67	25.5	0.17		167	18.0	0.30		333	13.5	0.45		500	11.0	0.55
	2		25	20.0	0.05		50	19.5	0.10		125	18	0.23		250	14.5	0.36		375	11.7	0.44
	3		17	10.0	0.02		33	9.9	0.03		83	9.8	0.08		167	9.6	0.16		250	9.4	0.24
	4		13	6.7	0.01		25	6.6	0.02		63	6.5	0.04		125	6.4	0.08		188	6.3	0.12
	1	1000	-			1500	-			2000	-			2500	-			3000	-		
	1.5		667	9.5	0.64		-				-				-						
	2		500	10.3	0.52		750	10	0.72		750	10	0.72		667	8.0	0.5		-	-	-
	3		333	9.2	0.31		500	9.0	0.45		500	9.0	0.45		500	6.0	0.3		625	6.0	0.4
	4		250	6.2	0.16		375	6.1	0.23												
BB 90	1	50	50	47.0	0.24	100	100	39.0	0.39	250	250	33.0	0.83	500	500	28.0	1.41	750	750	24.0	1.81
	1	1000	-			1500	-			2000	-			2500	-			3000	-		

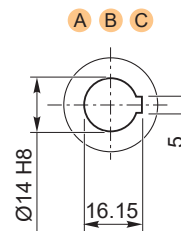
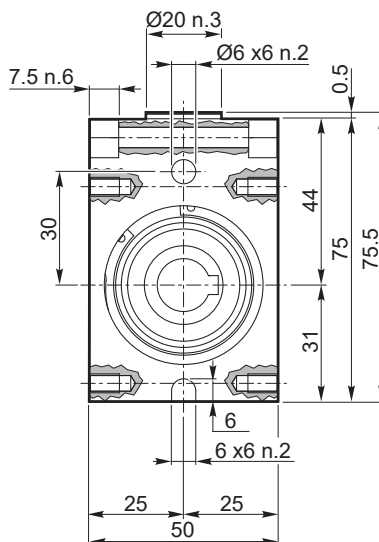
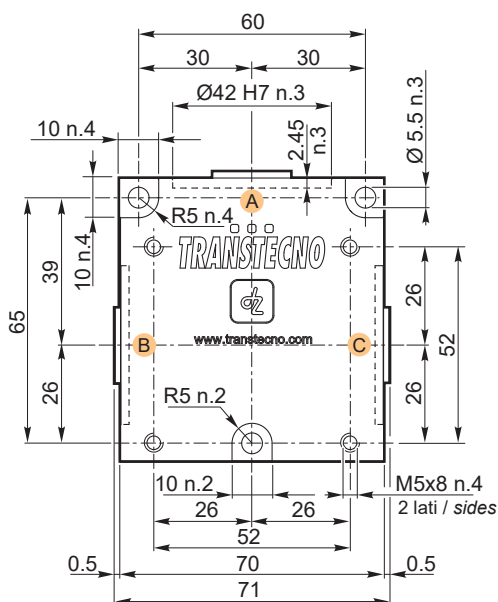


BB Rinvii angolari Right-angle bevel gearboxes

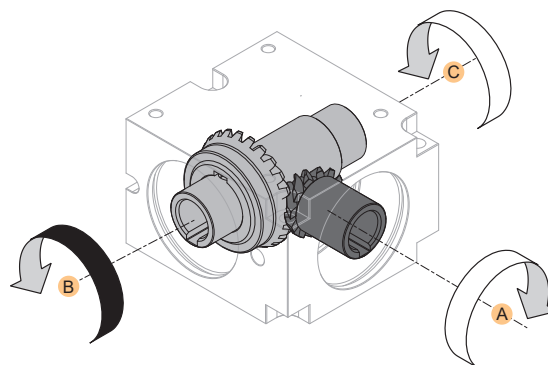
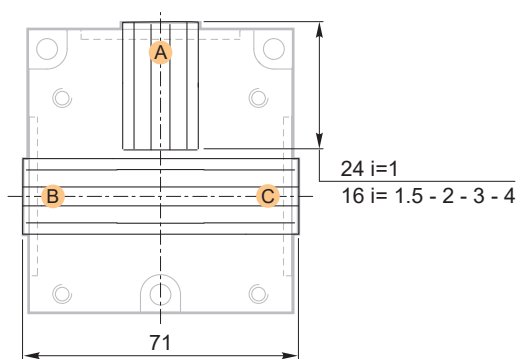
Dimensioni

Dimensions

BB 503 U...



Kg 0.80

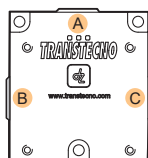


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

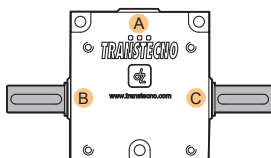
The keyways in hollow shafts as in solid shafts can assume any angular position.

Versione

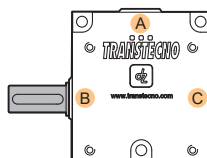
Version



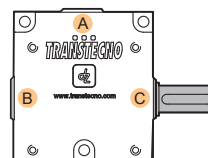
BB..3U..



BB..3BC..



BB..3B..



BB..3C..

i	Code
1	BB503U10 TTN
1.5	BB503U15 TTN
2	BB503U20 TTN
3	BB503U30 TTN
4	BB503U40 TTN

i	Code
1	BB503BC10 TTN
1.5	BB503BC15 TTN
2	BB503BC20 TTN
3	BB503BC30 TTN
4	BB503BC40 TTN

i	Code
1	BB503B10 TTN
1.5	BB503B15 TTN
2	BB503B20 TTN
3	BB503B30 TTN
4	BB503B40 TTN

i	Code
1	BB503C10 TTN
1.5	BB503C15 TTN
2	BB503C20 TTN
3	BB503C30 TTN
4	BB503C40 TTN



BBIS 503 BC...



The keyways in hollow shafts as in solid shafts can assume any angular position.

The diagram shows a rectangular control panel with a central display area. At the top center is a vertical rectangular slot labeled 'A'. Below it, the word 'TRANSTECNICO' is written in a stylized, outlined font. Underneath the name is a square button with a circular icon containing a stylized 'T'. Below the button is the website address 'www.transtecnico.com'. On the left side, there is a vertical rectangular slot labeled 'B'. On the right side, there is a circular button labeled 'C'. The panel has rounded corners and several small circular indentations or buttons around the perimeter.

The diagram shows a top-down view of a TransTecnico connector. It is a rectangular unit with a central vertical slot at the top. The word "TRANSTECNICO" is printed in the center. Below it is a logo consisting of a stylized 'e' inside a circle, followed by the website "www.transtecnico.com". Three orange circles with black letters are placed on the diagram: 'A' is at the top center, 'B' is at the bottom left, and 'C' is at the bottom right. There are also several small circular holes around the perimeter of the unit.

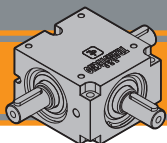
The diagram shows a control panel with three buttons labeled A, B, and C. Button A is at the top, B is on the left, and C is on the right. The panel features the Transstecno logo and the website address www.transstecno.com.

A diagram of a TransTecnio unit. It is a rectangular box with a grey top and bottom section. The top section has a vertical slot labeled 'A'. The front panel is white with the 'TRANSTECNIO' logo and website 'www.transtecnio.com'. There are three orange circles labeled 'A', 'B', and 'C' indicating connection points. 'A' is at the top center, 'B' is at the bottom left, and 'C' is at the bottom right. The unit is connected to a grey pipe on the right side.

BBIS..3C..

i	Code
1	BBIS503BC10 TTN
1.5	BBIS503BC15 TTN
2	BBIS503BC20 TTN
3	BBIS503BC30 TTN
4	BBIS503BC40 TTN

i	Code
1	BBIS503C10 TTN
1.5	BBIS503C15 TTN
2	BBIS503C20 TTN
3	BBIS503C30 TTN
4	BBIS503C40 TTN

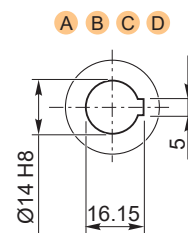
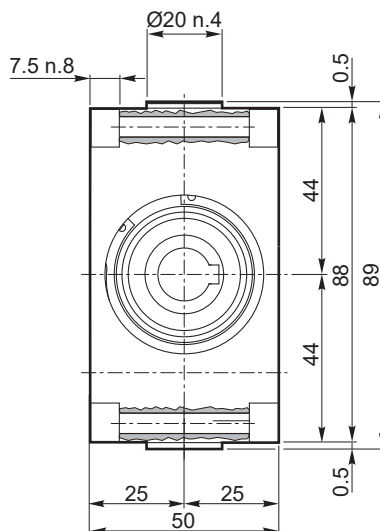
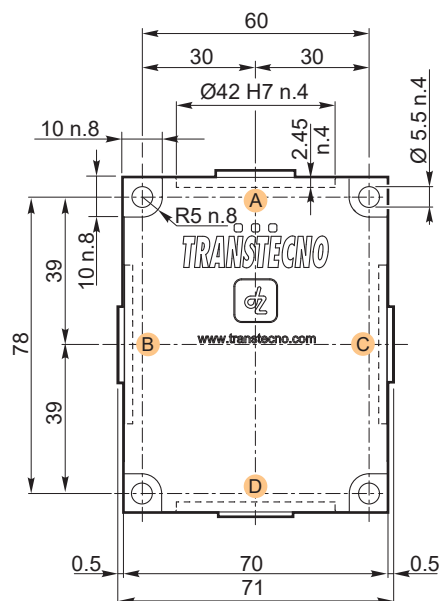


BB Rinvii angolari Right-angle bevel gearboxes

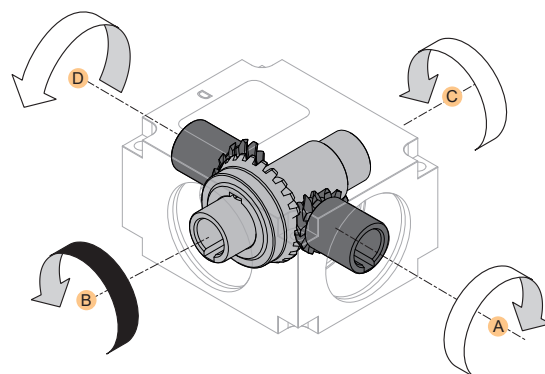
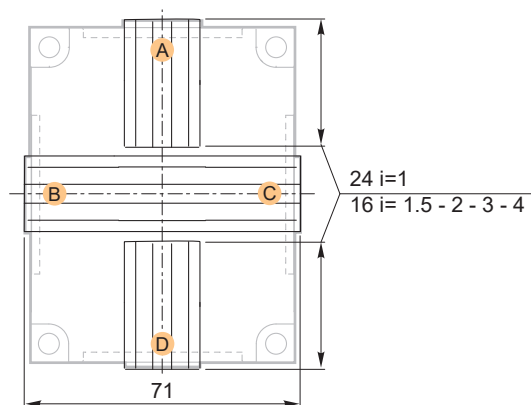
Dimensioni

Dimensions

BB 504 U...



Kg 1.0

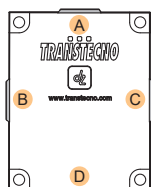


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

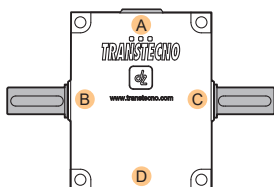
The keyways in hollow shafts as in solid shafts can assume any angular position.

Versione

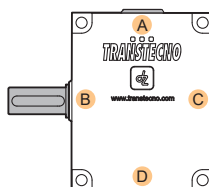
Version



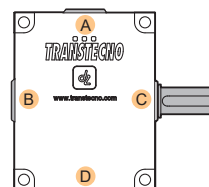
BB..4U..



BB..4BC..



BB..4B..



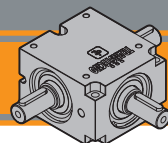
BB..4C..

i	Code
1	BB504U10 TTN
1.5	BB504U15 TTN
2	BB504U20 TTN
3	BB504U30 TTN
4	BB504U40 TTN

i	Code
1	BB504BC10 TTN
1.5	BB504BC15 TTN
2	BB504BC20 TTN
3	BB504BC30 TTN
4	BB504BC40 TTN

i	Code
1	BB504B10 TTN
1.5	BB504B15 TTN
2	BB504B20 TTN
3	BB504B30 TTN
4	BB504B40 TTN

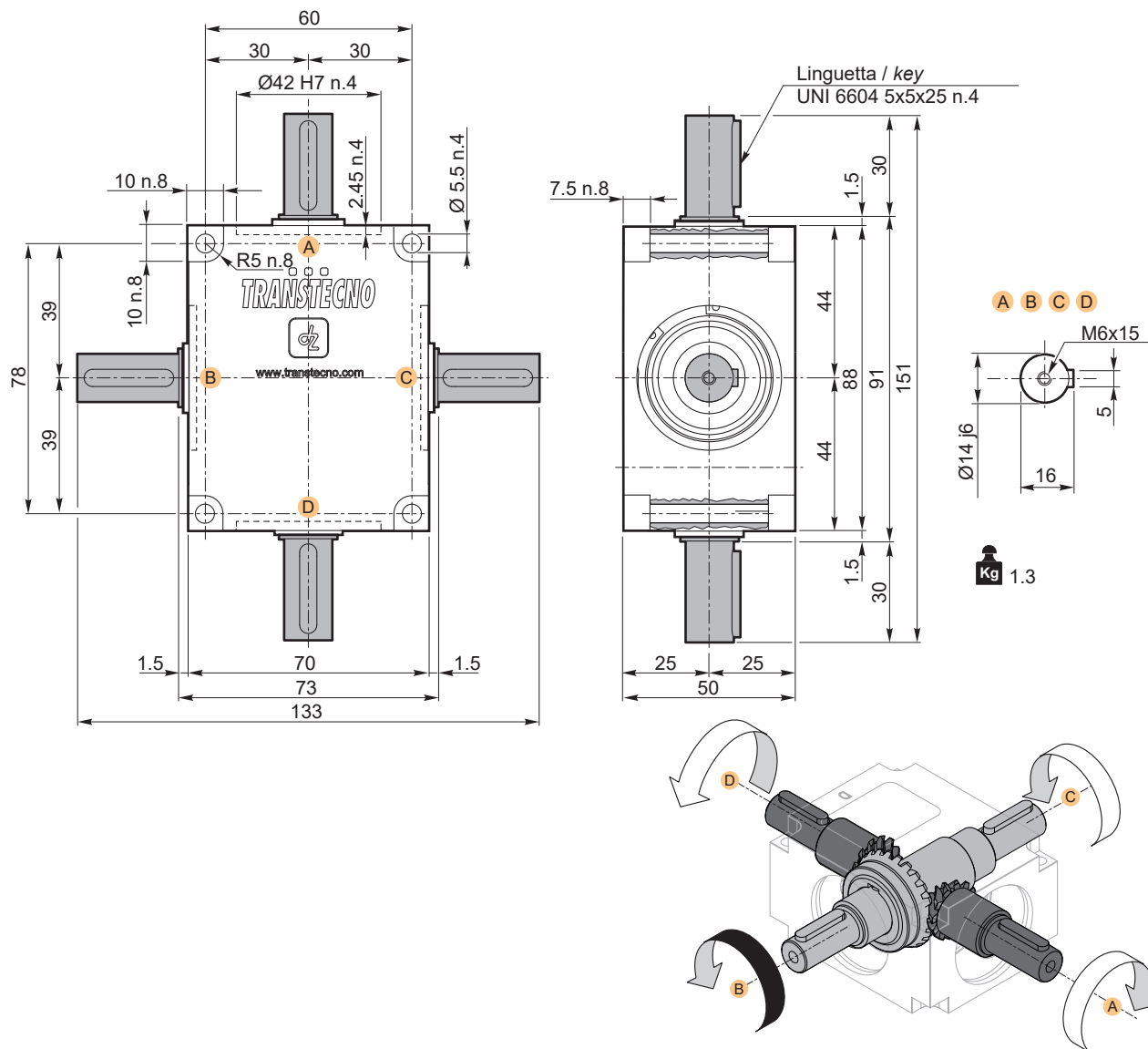
i	Code
1	BB504C10 TTN
1.5	BB504C15 TTN
2	BB504C20 TTN
3	BB504C30 TTN
4	BB504C40 TTN



Dimensioni

Dimensions

BBIS 504 BC...VS

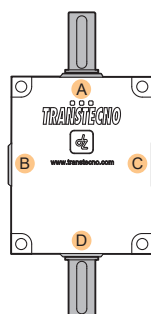


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

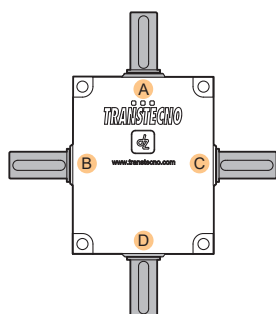
The keyways in hollow shafts as in solid shafts can assume any angular position.

Versione

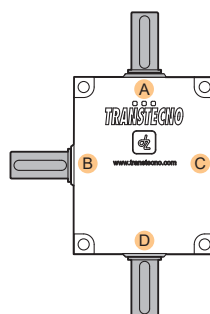
Version



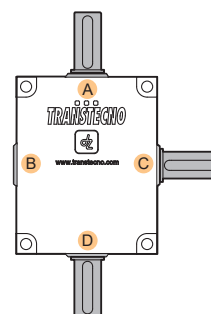
BBIS..4U..VS



BBIS..4BC..VS



BBIS..4B..VS



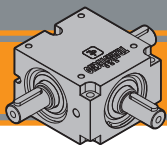
BBIS..4C..VS

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1.5	BBIS504U15VS TTN
2	BBIS504U20VS TTN
3	BBIS504U30VS TTN
4	BBIS504U40VS TTN

i	Code
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2	BBIS504BC20VS TTN
3	BBIS504BC30VS TTN
4	BBIS504BC40VS TTN

i	Code
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2	BBIS504B20VS TTN
3	BBIS504B30VS TTN
4	BBIS504B40VS TTN

i	Code
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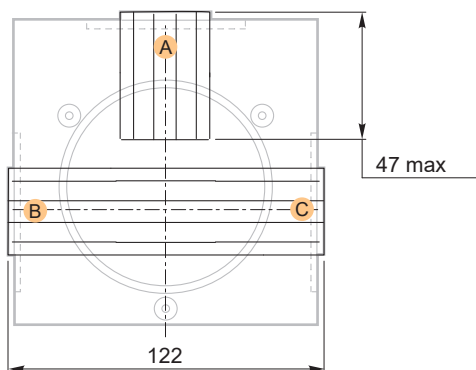
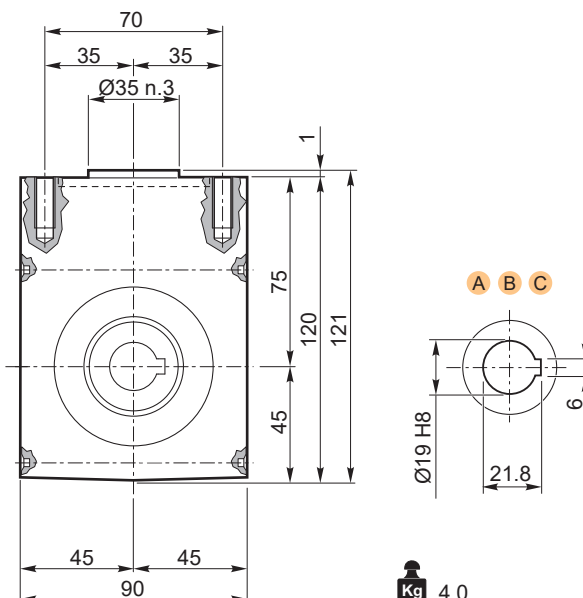
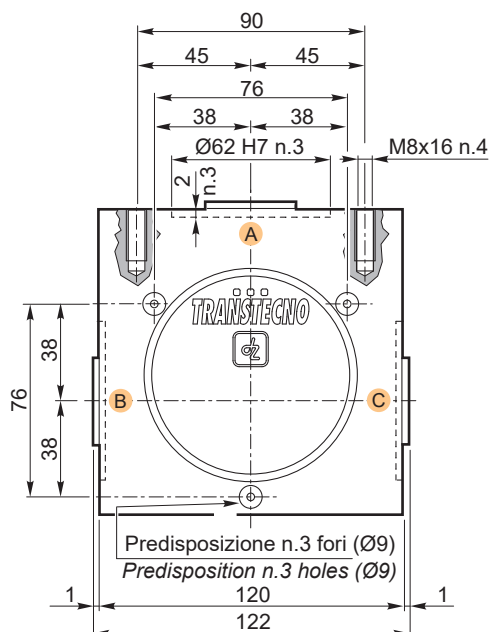


BB Rinvii angolari Right-angle bevel gearboxes

Dimensioni

Dimensions

BB 903 U...

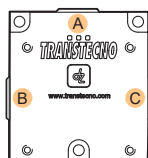


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

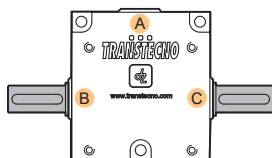
The keyways in hollow shafts as in solid shafts can assume any angular position.

Versione

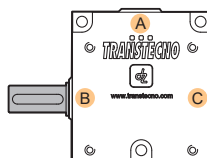
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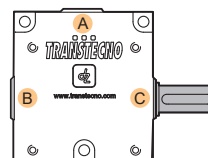
BB..3U..



BB..3BC..



BB..3B..



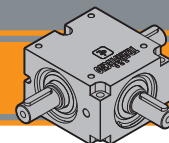
BB..3C..

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i	Code
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i	Code
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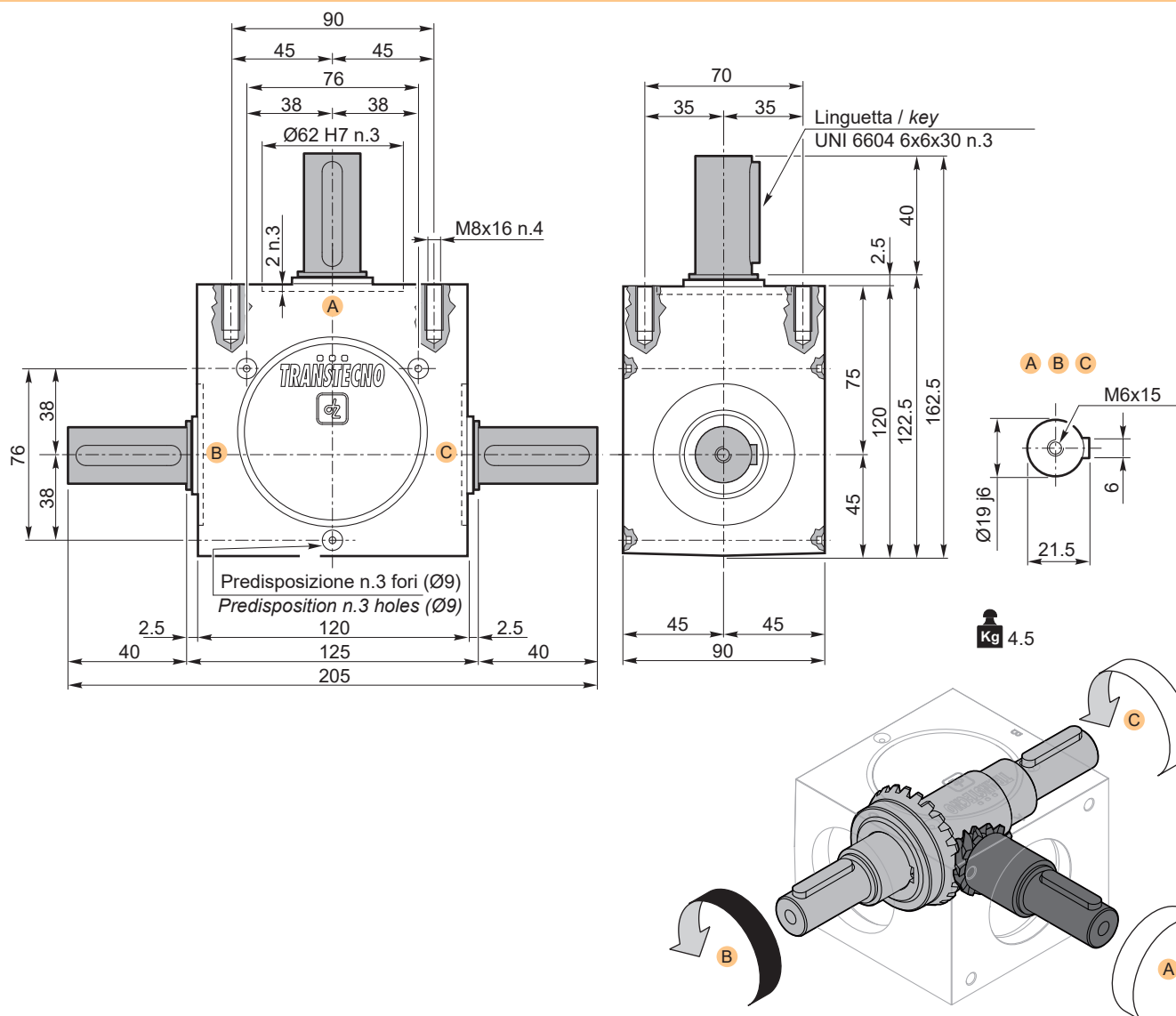
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Dimensioni

Dimensions

BBIS 903 BC...

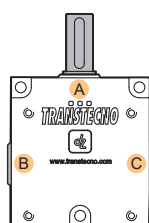


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

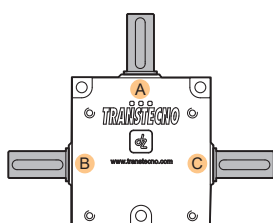
The keyways in hollow shafts as in solid shafts can assume any angular position.

Versione

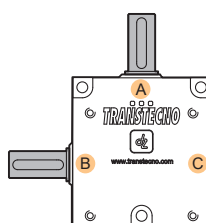
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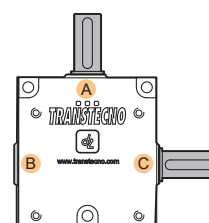
BBIS..3U..



BBIS..3BC..



BBIS..3B..



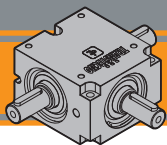
BBIS..3C..

i	Code
1	BBIS903U10 TTN

i	Code
1	BBIS903BC10 TTN

i	Code
1	BBIS903B10 TTN

i	Code
1	BBIS903C10 TTN



BB

Rinvii angolari
Right-angle bevel gearboxes

Note/Notes



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