

BRF - BRL

Orthogonal torque reaction arms

- ✘ **BRF**
Articulated orthogonal torque reaction arms
- ✘ **BRL**
Linear orthogonal torque reaction arms

BRF

Articulated orthogonal torque reaction arms

When useful?

- Perfect perpendicularity to the tightening floor
- Horizontal installation
- Wide working area
- Configurable inclination

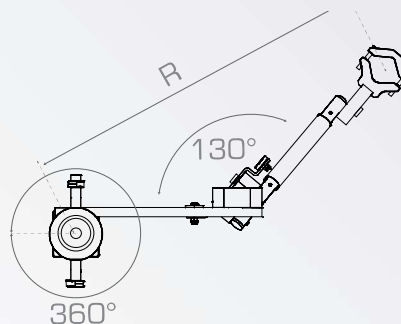


Features

- ✓ Carbon fiber
- ✓ Tilting front arm
- ✓ High smoothness

Complements:

- + Tool holder (included)
- + Balancers kit
- + Encoders kit
- + Downward kit
- + Positioning system



Arm	BNP p/n	Max torque		Min R		Max R		Max tool Weight	Weight to balance
		Nm	f.lb	mm	in	mm	in		
BRF10 450	040.0001.000	10	7,38	382	15,04	450	17,71	1,5 (3,31)	2 (4,41)
BRF10 600	040.0002.000	10	7,38	532	20,95	600	23,62	1,5 (3,31)	2,1 (4,63)
BRF15 450	040.0003.000	15	11,06	382	15,04	450	17,71	4 (8,82)	3 (6,62)
BRF15 600	040.0004.000	15	11,06	532	20,95	600	23,62	4 (8,82)	3,2 (7,06)
BRF40 600	040.0005.000	40	29,50	532	20,95	600	23,62	5 (11,03)	3,7 (8,16)
BRF40 800	040.0006.000	40	29,50	732	28,82	800	31,50	5 (11,03)	4 (8,82)
BRF80 800	040.0007.000	80	59,00	732	28,82	800	31,50	6 (13,23)	7 (15,44)
BRF80 1000	040.0008.000	80	59,00	932	36,70	1000	39,37	6 (13,23)	7,3 (16,10)

! Notes: BNP custom solutions can reach 300 Nm max torque

+
Balancers kit
Pag. FL6

+
Encoders kit
Pag. FL9

+
Downward kit
Pag. FL8

+
Positioning system
Pag. SP3

! Standard purchase order: BRF + balancers kit

BRL

Linear orthogonal torque reaction arms



When useful?

- Perfect perpendicularity to the tightening floor
- Horizontal installation
- Wide working area

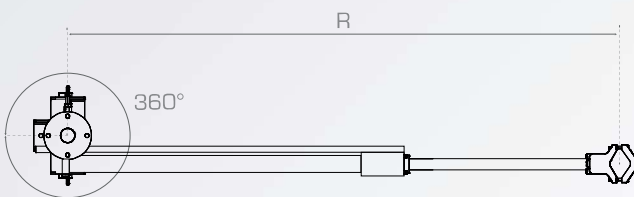


Features

- ✓ Single-arm technology with recirculating ball bushing
- ✓ High smoothness
- ✓ High precision

Complements:

- + Tool holder (included)
- + Balancers kit
- + Encoders kit
- + Downward kit
- + Positioning system



Descriptions	BNP p/n	Max torque		Min R		Max R		Max tool weight Kg (Lb)	Weight to balance Kg (Lb)
		Nm	f.b	mm	in	mm	in		
BRL10 450	040.0101.000	10	7,38	230	9,00	450	17,71	1,5 (3,31)	2 (4,41)
BRL10 750	040.0102.000	10	7,38	380	14,90	750	29,52	1,5 (3,31)	2,4 (5,29)
BRL15 450	040.0103.000	15	11,06	260	10,23	450	17,71	4 (8,82)	3 (6,62)
BRL15 750	040.0104.000	15	11,06	380	14,90	750	29,52	4 (8,82)	3,5 (7,72)
BRL40 600	040.0105.000	40	29,50	380	14,90	600	23,62	5 (11,03)	4 (8,82)
BRL40 900	040.0106.000	40	29,50	530	20,86	900	35,43	5 (11,03)	4,5 (9,92)
BRL80 800	040.0107.000	80	59,00	430	16,92	800	31,50	6 (13,23)	6,4 (14,11)
BRL80 1400	040.0108.000	80	59,00	670	26,37	1400	55,11	6 (13,23)	8 (17,64)

Notes: BNP custom solutions can reach 300 Nm max torque

+
Balancers kit
Pag. FL6

+
Encoders kit
Pag. FL9

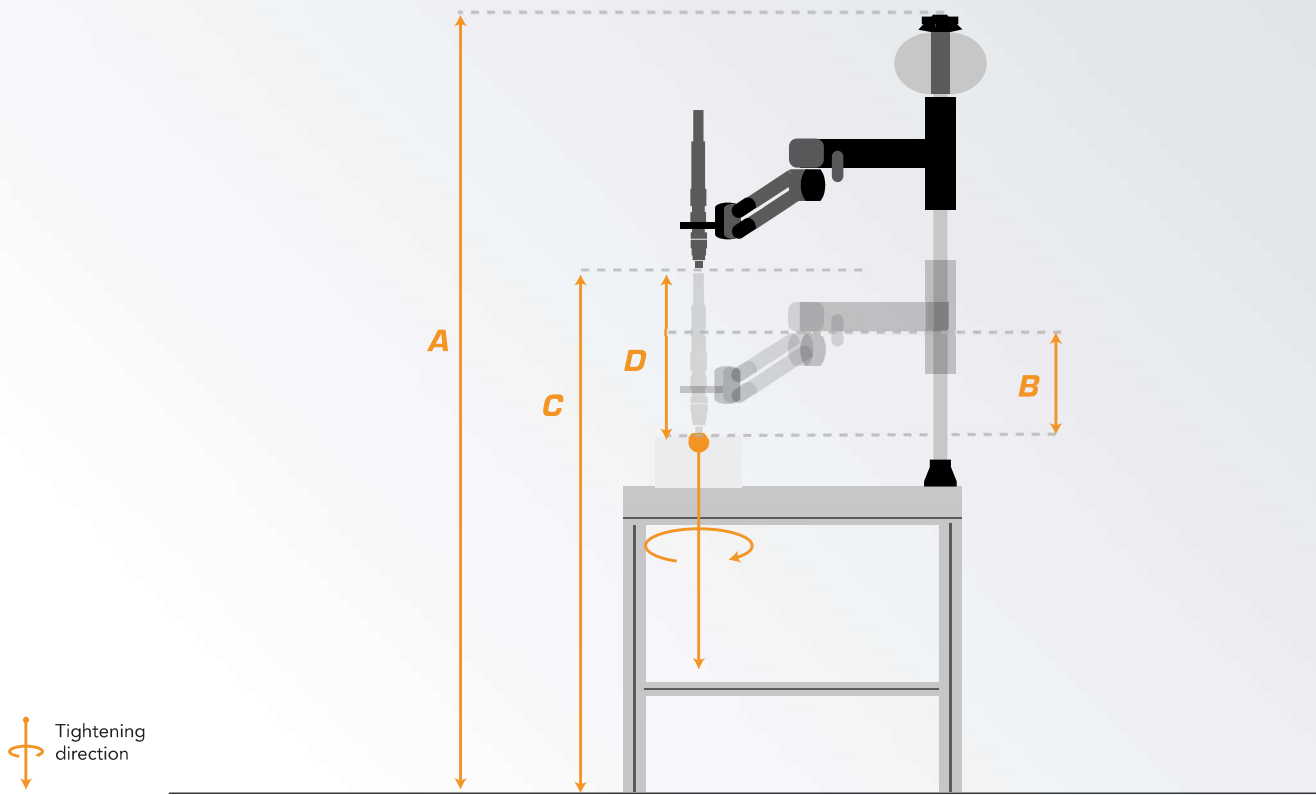
+
Downward kit
Pag. FL8

+
Positioning system
Pag. SP3

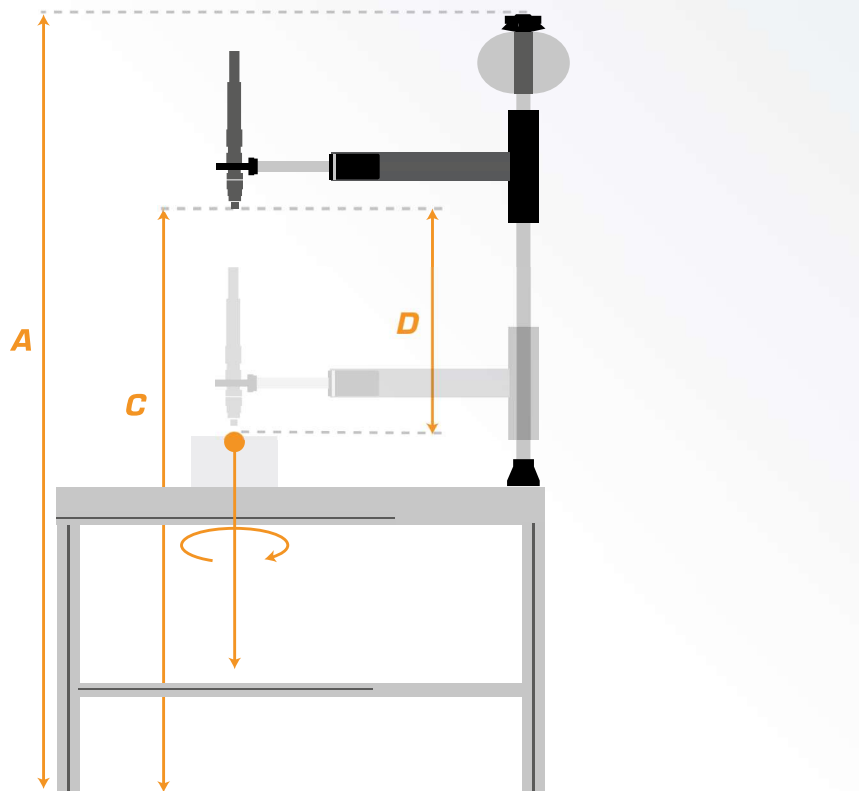
Standard purchase order: BRL + Balancers kit

Installation tips

Ex. 9: BRF with straight screwdriver



Ex. 10: BRL with straight screwdriver



BRF - BRL Complements

- ✘ **Balancers and retractors kit**
- ✘ **Balancers and retractors**
- ✘ **Dawnward kit**
- ✘ **Incremental encoders kit**
- ✘ **Absolute encoders kit**



Retractor and Balancers kit

Functionality

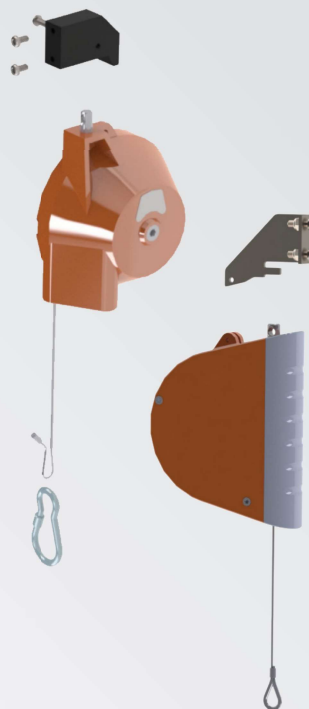
Retractors exert a return force on the tool. After use, the tool will be retracted to its initial position.

- Tool retraction

Balancers ensure a constant return force that scales the tool weight. After use, the tool remains in the same position it was left.

- Tool suspension

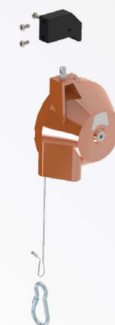
Kit includes the balancer or the retractor and the fixing bracket.



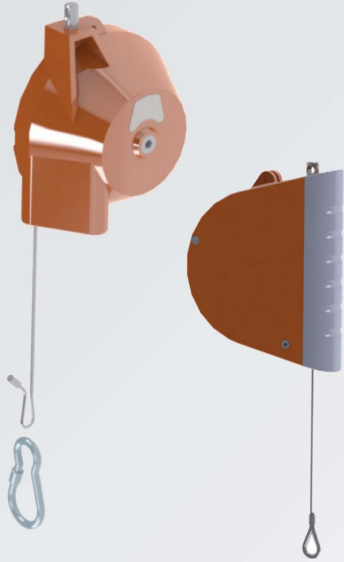
Retractors kit - BRF BRL	Compatibility	BNP p/n	Model	Cable length	Payload	Amount
				mm	Kg (lb)	
	BRF; BRL	070.0321.000	Kit 7211080001	2500	1-4 (2,2-8,8)	Paired
	BRF; BRL	070.0322.000	Kit 7211080002	2500	3-6 (6,6-13,2)	Paired
	BRF; BRL	070.0323.000	Kit 7211080005	1400	6-11 (13,2-24,3)	Paired
	BRF; BRL	070.0324.000	Kit 7221080001	3000	4-10 (8,8-22,1)	Paired
	BRF; BRL	070.0325.000	Kit 7221080002	3000	8-16 (17,6-35,9)	Paired
	BRF; BRL	070.0326.000	Kit 7221080003	3000	14-20 (30,9-44,1)	Paired
	BRF; BRL	070.0327.000	Kit 7221080004	3000	20-28 (44,1-61,8)	Paired



Balancers kit - BRF BRL				mm	Kg (lb)	
		BRF; BRL	070.0328.000	KIT 7228000001	1600	0,8-2,4 (1,76-5,3)
	BRF; BRL	070.0329.000	KIT 7228000002	1600	2,4-4, (5,29-9)	Paired
	BRF; BRL	070.0330.000	KIT 7228000003	1600	5,2-7,6 (11,47-16,7)	Paired
	BRF; BRL	070.0331.000	KIT 7228000004	1600	7,6-10,4 (16,76-23)	Paired
	BRF; BRL	070.0332.000	KIT 7228000005	1600	10,4-13 (22,93-28,7)	Paired
	BRF; BRL	070.0333.000	KIT 7230000003	2000	26-34 (57,33-75)	Paired
	BRF; BRL	070.0334.000	KIT 7230000004	2000	32- 42 (70,56-92,6)	Paired



Retractors and Balancers



Functionality

BRT arms can be associated with both retractors and balancers.

Installation bracket is required for BRT-V and BRT-P telescopic arms.

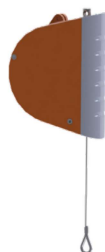
Retractors exert a return force on the tool. After use, the tool will be retracted to its initial position.

Balancers ensure a constant return force that scales the tool weight. After use, the tool will remain in the same position it was left.

Retractors (A) - BRF BRL	BNP p/n	Payload	Cable length	Weight	P/n Kromer	Bracket
		Kg (lb)	mm	Kg (lb)		Image page FL8
	070.0918.000	0,3-1,5 (0,66-3,51)	1600	0,5 (1,10)	7200 0800 01	-
	070.0919.000	1,2-2,5 (2,65-5,51)	1600	0,6 (1,32)	7200 0800 02	-
	070.0920.000	0,5-2,0 (1,10-4,4)	2500	0,8 (1,76)	7211 0800 01	G (BRL-BRF)
	070.0921.000	1,5-3,0 (3,31-6,62)	2500	0,9 (1,98)	7211 0800 02	G (BRL-BRF)
	070.0922.000	3,0-5,5 (6,62-12,3)	1400	1 (2,21)	7211 0800 05	G (BRL-BRF)
	070.0923.000	2,0-5,0 (4,4-11,03)	3000	3,5 (7,72)	7221 0800 01	H (BRL-BRF)
	070.0924.000	4,0-8,0 (8,82-17,64)	3000	3,8 (8,38)	7221 0800 02	H (BRL-BRF)
	070.0925.000	7,0-10,0 (15,4-22,05)	3000	3,8 (8,38)	7221 0800 03	H (BRL-BRF)
	070.0926.000	10,0-14,0 (22,05-30,87)	3000	4 (8,82)	7221 0800 04	H (BRL-BRF)

Balancers (B) - BRF BRL		Payload	Cable length	Weight	P/n Kromer	Bracket
		Kg (lb)	mm	Kg (lb)		Image page FL8
	070.0927.000	0,4-1,2 (0,88-2,65)	1600	1,3 (2,87)	7228 0000 01	I (BRL-BRF)
	070.0928.000	1,2-2,6 (2,65-5,73)	1600	1,4 (3,09)	7228 0000 02	I (BRL-BRF)
	070.0929.000	2,6-3,8 (5,73-8,38)	1600	1,5 (3,31)	7228 0000 03	I (BRL-BRF)
	070.0930.000	3,8-5,2 (8,38-11,47)	1600	1,5 (3,31)	7228 0000 04	I (BRL-BRF)
	070.0931.000	5,2-6,5 (11,47-14,33)	1600	1,5 (3,31)	7228 0000 05	I (BRL-BRF)
	070.0932.000	4,5-7,0 (9,92-15,44)	2000	3,3 (7,28)	7230 0000 02	-
	070.0933.000	6,0-10,0 (13,23-22,05)	2000	3,4 (7,50)	7230 0000 03	L (BRL-BRF)
	070.0934.000	9,0-14,0 (19,85-30,87)	2000	3,6 (7,94)	7230 0000 04	L (BRT)
	070.0935.000	13,0-17,0 (28,6-37,49)	2000	3,8 (8,38)	7230 0000 05	-

A



B



Brackets

Installation brackets

Functionality

BNP arm Installation brackets for Kromer balancer and retractor.



	Compatibility	Image	BNP p/n
BRV	BRF - BRL	G	070.1032.000
	BRF - BRL	H	070.1033.000
	BRF - BRL	I	070.1034.000
	BRF - BRL	L	070.1035.000

G



I



H



L



Downward kit

Pneumatic downward assistance kit

Functionality

It supplies additional push force to the operator hand, especially for tightening with self tapping screw.

- Provides additional thrust to the operator's manual force



Features

- ✓ Increases the tightening process quality

Compatibility	Descriptions	BNP p/n	Push force		Weight
			kg	(lb)	kg (lb)
BRF; BRL15-40	KIT AS BR15-40	040.0201.000	5	(11,03)	2,2 (4,85)
BRF; BRL 80	KIT AS BR 80	040.0202.000	9	(19,85)	2,5 (5,51)

Incremental encoders kit (for POSIX)



Functionality

If it is installed on BRF and BRL arms, it allows to detect the tool position

- X and Y axis position detections (2 encoders):
- X, Y and Z axis position detection (3 encoders)



Compatibility

- ✓ Orthogonal arms BRF - BRL
- ✓ Posix positioning system

	Compatibility	Kit	BNP p/n
BRF	BRF 15-40	2 encoders kit	040.0301.000
	BRF 80	2 encoders kit	040.0302.000
	BRF 15-40	3 encoders kit	040.0303.000
	BRF 80	3 encoders kit	040.0304.000

	Compatibility	kit	BNP p/n
BRL	BRL 15	2 encoders kit	040.0351.000
	BRL 40	2 encoders kit	040.0352.000
	BRL 80	2 encoders kit	040.0353.000
	BRL 15	3 encoders kit	040.0354.000
	BRL 40	3 encoders kit	040.0355.000
	BRL 80	3 encoders kit	040.0356.000

Absolute encoders kit for POSIX PRO



Functionality

If it is installed on BRF and BRL arms, it allows to detect the tool position:

- X and Y axis position detections (2 encoders)
- X, Y and Z axis position detections (3 encoders)



Compatibility

- ✓ Posix PRO compatible
- ✓ Ensures correct tightening sequences
- ✓ Tool position detection by absolute encoders



	Kit	BNP p/n
BRF	2 encoders	
	BRF 15 - 2 abs. encoders kit	040.0320.000
	BRF 40 - 2 abs. encoders kit	040.0321.000
	BRF 80 - 2 abs. encoders kit	040.0322.000
	3 encoders	
	BRF 15 - 3 abs. encoders kit	040.0323.000
	BRF 40 - 3 abs. encoders kit	040.0324.000
	BRF 180 - 3 abs. encoders kit	040.0325.000

	Kit	BNP p/n
BRL	2 encoders	
	BRL 15 - 2 abs. encoders kit	040.0370.000
	BRL 40 - 2 abs. encoders kit	040.0371.000
	BRL 80 - 2 abs. encoders kit	040.0372.000
	3 encoders	
	BRL 15 - 3 abs. encoders kit	040.0373.000
	BRL 40 - 3 abs. encoders kit	040.0374.000
	BRL 80 - 3 abs. encoders kit	040.0375.000