

Known for durability. Trusted for quality.

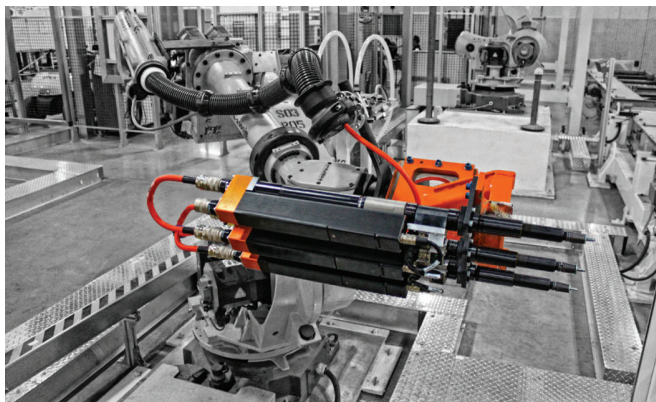
The ultimate **automated** tightening solutions.

Cleco DGD™ Intelligent Spindles are the exclusive fixtured assembly solution, combining reduced floor space, fewer cables and high-speed uptime availability for automated fastening applications. Intelligent spindles provide a wide range of torque capability and industry-leading free speeds.



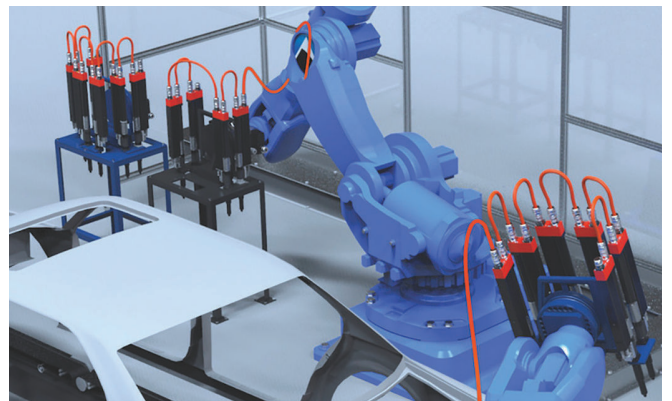
Reduce your **footprint and total cost of ownership** via our exclusive intelligent spindle cabling technology.

When you're looking to run robotic tightening applications, look to Cleco DGD intelligent spindle solutions. By utilizing our exclusive daisy-chain connectors, we offer the only solution in the industry that enables you to run multiple spindles using a daisy-chained cable solution. This results in reduced system complexity, simple cable management and smaller pay-load capacity.

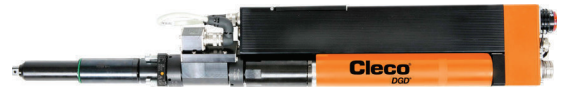


Same cell, same robot: **Intelli-Swap**, an industry first.

Combining Cleco DGD Intelligent Spindles and daisy-chain connectors with our patented Intelli-Swap system technology, plus an automatic, intelligent tool changer enables your system to rapidly switch from one group of spindles to another using the same controller. Cleco DGD solutions enable you to effortlessly manage multiple applications in a single cell.



Intelligent Spindle - BTS Size 1-4 (2-1600 Nm) - Straight Drive - Single Torque Transducer - Angle Encoder



On board servo module, Patented daisy chain, Torque transducer, Angle Encoder, modular construction

- Long Service Life, Maximum Precision, High Accuracy, World class free speed, On-Board trouble shooting
- Floating adapter not included with spindle

MODEL	TORQUE RANGE				FREE SPEED R/MIN	FLOAT MM	DRIVE TYPE	MIN CENTER TO CENTER MM	WEIGHT		LENGTH	
	MIN NM	MAX NM	MIN FT LB	MAX FT LB					LB	KG	IN	MM
1BTS-1B012A-1K3B-1ZB	2	12	1.48	8.9	1921	50	3/8" SQUARE DRIVE	43	10.6	4.8	19.1	486
1BTS-1B035A-1K1B-1ZB	5	35	3.69	25.8	727	50	3/8" SQUARE DRIVE	43	10.6	4.8	19.1	486
1BTS-1B060A-1K2B-1ZB	15	53	11.1	39.1	427	50	3/8" SQUARE DRIVE	43	10.6	4.8	19.1	486
2BTS-2B110A-2K1B-2ZB	25	110	18.5	81	890	50	1/2" SQUARE DRIVE	56	16.8	7.6	20.8	528
2BTS-2B200A-2K3B-2ZB	40	200	29.5	148	502	50	3/4" SQUARE DRIVE	56	16.8	7.6	20.8	528
3BTS-3B300A-3K2B-3ZB	50	300	36.9	221	453	50	3/4" SQUARE DRIVE	81	31.1	14.1	23.2	589
4BTS-4B500A-4K2B-4ZA	100	500	74	369	254	50	3/4" SQUARE DRIVE	91	46.3	21	28.3	719
4BTS-4B660A-4K3B-4ZA	130	660	96	487	174	50	1" SQUARE DRIVE	91	46.3	21	28.3	719
4BTS-4B360A-4K1B-4Z1250A	320	1250	236	921	86	50	1" SQUARE DRIVE	121	64	29	30.4	771
4BTS-4B500A-4K2B-4Z1600A	400	1600	295	1180	68	50	1-1/2" SQUARE DRIVE	121	64	29	30.4	771

Fixtured Spindles

Intelligent Spindle - BTSE Size 1-4 (2-2800 Nm) - Straight Drive - Single Torque Transducer

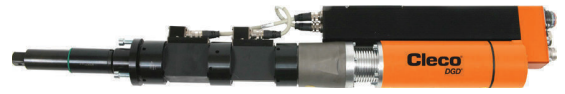


On board servo module, Patented daisy chain, Torque transducer, modular construction

- Long Service Life, Maximum Precision, High Accuracy, World class free speed, On-Board trouble shooting
- Floating adapter not included with spindle

MODEL	TORQUE RANGE				FREE SPEED R/MIN	FLOAT MM	DRIVE TYPE	MIN CENTER TO CENTER MM	WEIGHT		LENGTH	
	MIN NM	MAX NM	MIN FT LB	MAX FT LB					LB	KG	IN	MM
1BTSE-1B012A-1M3B-1ZB	2	12	1.48	8.85	1921	50	3/8" SQUARE DRIVE	43	10.6	4.8	19.1	486
1BTSE-1B035A-1M1B-1ZB	5	35	1.48	25.8	727	50	3/8" SQUARE DRIVE	43	10.6	4.8	19.1	486
1BTSE-1B060A-1M2B-1ZB	15	53	11.1	39.1	427	50	3/8" SQUARE DRIVE	43	10.6	4.8	19.1	486
2BTSE-2B110A-2M1B-2ZB	25	110	18.4	81.1	890	50	3/8" SQUARE DRIVE	56	16.8	7.6	20.8	528
2BTSE-2B200A-2M3B-2ZB	40	200	29.5	146	502	50	3/8" SQUARE DRIVE	56	16.8	7.6	20.8	528
3BTSE-3B300A-3M2B-3ZB	50	300	36.9	221	453	50	3/8" SQUARE DRIVE	81	31.1	14.1	23.2	589
4BTSE-4B500A-4M2B-4ZA	100	500	73.8	369	254	50	3/8" SQUARE DRIVE	91	46.3	21	28.3	719
4BTSE-4B660A-4M3B-4ZA	130	660	95.9	487	174	50	3/8" SQUARE DRIVE	91	46.3	21	28.3	719
4BTSE-4B360A-4M1B-4Z1250A	320	1250	236	922	86	50	3/8" SQUARE DRIVE	121	64	29	30.4	771
4BTSE-4B500A-4M2B-4Z1600A	400	1600	295	1180	68	50	3/8" SQUARE DRIVE	121	64	29	30.4	771
4BTSE-4B660A-4M3B-4Z2800G	980	2800	773	2065	37	50	3/8" SQUARE DRIVE	160	88	39.73	31.1	790

Intelligent Spindle - BTS Size 1-4 (2-1600 Nm) - Straight Drive - Twin Torque Transducer - Twin Angle Encoder



On board servo module, Patented daisy chain, Twin Torque transducer, Angle Encoder, Modular construction

- Long Service Life, Maximum Precision, High Accuracy, World class free speed, On-Board trouble shooting
- Floating adapter not included with spindle

MODEL	TORQUE RANGE				FREE SPEED R/MIN	FLOAT MM	DRIVE TYPE	MIN CENTER TO CENTER MM	WEIGHT		LENGTH	
	MIN NM	MAX NM	MIN FT LB	MAX FT LB					LB	KG	IN	MM
1BTS-1B012A-2/1K3B-1ZB	2	12	1.48	8.9	1921	50	3/8" SQUARE DRIVE	43	11.9	5.4	22.3	566
1BTS-1B035A-2/1K1B-1ZB	5	35	3.69	25.8	727	50	3/8" SQUARE DRIVE	43	11.9	5.4	22.3	566
1BTS-1B060A-2/1K2B-1ZB	15	53	11.1	39.1	427	50	3/8" SQUARE DRIVE	43	11.9	5.4	22.3	566
2BTS-2B110A-2/2K1B-2ZB	25	110	18.5	81	890	50	1/2" SQUARE DRIVE	56	19.2	8.7	24.6	625
2BTS-2B200A-2/2K3B-2ZB	40	200	29.5	148	502	50	3/4" SQUARE DRIVE	56	19.2	8.7	24.6	625
3BTS-3B300A-2/3K2B-3ZB	50	300	36.9	221	453	50	3/4" SQUARE DRIVE	81	35.7	16.2	27.6	701
4BTS-4B500A-2/4K2B-4ZA	100	500	74	369	254	50	3/4" SQUARE DRIVE	91	53	24	33.3	846
4BTS-4B660A-2/4K3B-4ZA	130	660	96	487	174	50	1" SQUARE DRIVE	91	53	24	33.3	846
4BTS-4B360A-2/4K1B-4Z1250A	320	1250	236	922	86	50	1" SQUARE DRIVE	121	71	32	35.4	899
4BTS-4B500A-2/4K2B-4Z1600A	400	1600	295	1180	68	50	1-1/2" SQUARE DRIVE	121	71	32	35.4	899