

Known for durability. Trusted for quality.

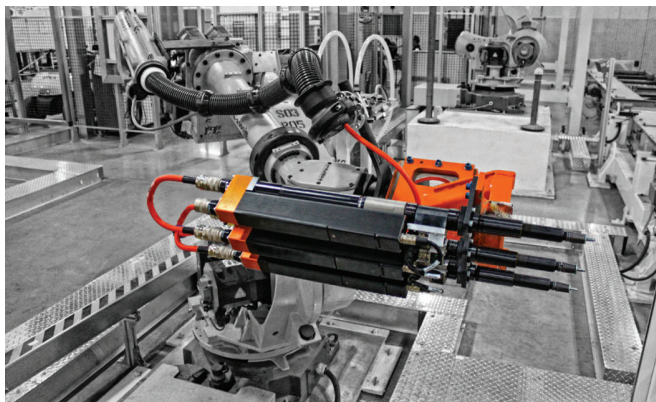
The ultimate **automated** tightening solutions.

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.



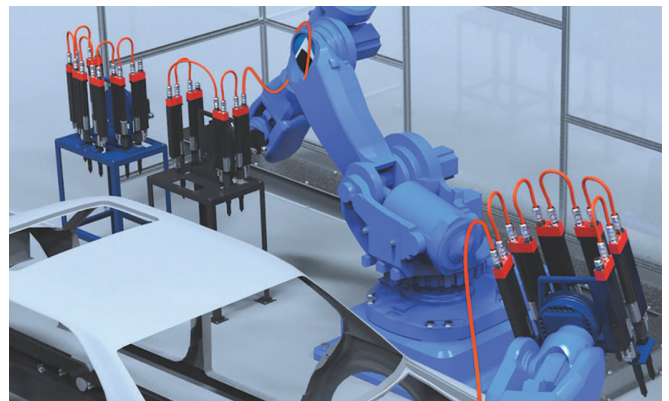
Reduce your **footprint and total cost of ownership** via our exclusive intelligent spindle cabling technology.

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.



Fixtured Spindles

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



- The transducer can be rotated for crowded multiple spindle arrangements (DGD 15° radial toothing).
- Floating adapter not included with spindle

MODEL	TORQUE RANGE				FREE SPEED R/MIN	FLOAT MM	DRIVE TYPE	MIN CENTER TO CENTER		WEIGHT		LENGTH	
	MIN NM	MAX NM	MIN FT LB	MAX FT LB				MM	LB	KG	IN	MM	
1BUTS-1B012A-1K3B-1ZB	2	12	1.48	8.9	1921	50	3/8" SQUARE DRIVE	43	11.7	5.3	15.5	393	
1BUTS-1B035A-1K1B-1ZB	5	35	3.69	25.8	727	50	3/8" SQUARE DRIVE	43	11.7	5.3	15.5	393	
1BUTS-1B060A-1K2B-1ZB	15	53	11.1	39.1	427	50	3/8" SQUARE DRIVE	43	11.7	5.3	15.5	393	
2BUTS-2B110A-2K1B-2ZB	25	110	18.5	81	890	50	1/2" SQUARE DRIVE	56	19.0	8.6	14.4	367	
2BUTS-2B200A-2K3B-2ZB	40	200	29.5	148	502	50	3/4" SQUARE DRIVE	56	19.0	8.6	14.4	367	
3BUTS-3B300A-3K2B-3ZB	50	300	36.9	221	453	50	3/4" SQUARE DRIVE	81	35.5	16.1	16.4	417	
4BUTS-4B500A-4K2B-4ZA	100	500	74	369	254	50	3/4" SQUARE DRIVE	91	50	22.5	21.5	546	
4BUTS-4B660A-4K3B-4ZA	130	660	96	487	174	50	1" SQUARE DRIVE	91	50	22.5	21.5	546	
4BUTS-4B360A-4K1B-4Z1250A	320	1250	236	922	86	50	1" SQUARE DRIVE	121	68	31	23.6	599	
4BUTS-4B500A-4K2B-4Z1600A	400	1600	295	1180	68	50	1-1/2" SQUARE DRIVE	121	68	31	23.6	599	

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

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



- 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
1BUTS-1B012A-2/1K3B-1ZB	2	12	1.48	8.9	1921	50	3/8" SQUARE DRIVE	43	13.0	5.9	15.5	393
1BUTS-1B035A-2/1K1B-1ZB	5	35	3.69	25.8	727	50	3/8" SQUARE DRIVE	43	13.0	5.9	15.5	393
1BUTS-1B060A-2/1K2B-1ZB	15	53	11.1	39.1	427	50	3/8" SQUARE DRIVE	43	13.0	5.9	15.5	393
2BUTS-2B110A-2/2K1B-2ZB	25	110	18.5	81	890	50	1/2" SQUARE DRIVE	56	21.4	9.7	18.3	464
2BUTS-2B200A-2/2K3B-2ZB	40	200	29.5	148	502	50	3/4" SQUARE DRIVE	56	21.4	9.7	18.3	464
3BUTS-3B300A-2/3K2B-3ZB	50	300	36.9	221	453	50	3/4" SQUARE DRIVE	81	40.1	18.2	20.8	528
4BUTS-4B500A-2/4K2B-4ZA	100	500	74	369	254	50	3/4" SQUARE DRIVE	91	56	25.5	26.5	674
4BUTS-4B660A-2/4K3B-4ZA	130	660	96	487	174	50	1" SQUARE DRIVE	91	56	25.5	26.5	674
4BUTS-4B360A-2/4K1B-4Z1250A	320	1250	236	922	86	50	1" SQUARE DRIVE	121	75	34	28.6	726
4BUTS-4B500A-2/4K2B-4Z1600A	400	1600	295	1180	68	50	1-1/2" SQUARE DRIVE	121	75	34	28.6	726

Intelligent Spindle - BUTSE Size 1-4 (2-1600 Nm) - Straight Drive - Reversible Gears - Single Torque Transducer

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



- The transducer can be rotated for crowded multiple spindle arrangements (DGD 15° radial toothing).
- Floating adapter not included with spindle

MODEL	TORQUE RANGE				FREE SPEED	FLOAT	DRIVE TYPE	MIN CENTER TO CENTER	WEIGHT		LENGTH	LENGTH
	MIN NM	MAX NM	MIN FT LB	MAX FT LB	R/MIN	MM		MM	LB	KG	IN	MM
1BUTSE-1B035A-1M1B-1ZB	5	5	3.69	3.69	727	50	3/8" SQUARE DRIVE	43	11.7	5.3	15.5	393
1BUTSE-1B012A-1M3B-1ZB	2	12	1.48	8.85	1921	50	3/8" SQUARE DRIVE	43	11.7	5.3	15.5	393
1BUTSE-1B060A-1M2B-1ZB	15	53	11.1	39.1	427	50	3/8" SQUARE DRIVE	43	11.7	5.3	15.5	393
2BUTSE-2B110A-2M1B-2ZB	25	110	18.4	81.1	890	50	1/2" SQUARE DRIVE	56	19.0	8.6	14.4	367
2BUTSE-2B200A-2M3B-2ZB	40	200	29.5	146	502	50	3/4" SQUARE DRIVE	56	19.0	8.6	14.4	367
3BUTSE-3B300A-3M2B-3ZB	50	300	36.9	221	453	50	3/4" SQUARE DRIVE	81	35.5	16.1	16.4	417
4BUTSE-4B500A-4M2B-4ZA	100	500	73.8	369	254	50	3/4" SQUARE DRIVE	91	50	22.5	21.5	546
4BUTSE-4B660A-4M3B-4ZA	130	660	95.9	487	174	50	1" SQUARE DRIVE	91	50	22.5	21.5	546
4BUTSE-4B360A-4M1B-4Z1250A	320	1250	236	922	86	50	1" SQUARE DRIVE	121	68	31	23.6	599
4BUTSE-4B500A-4M2B-4Z1600A	400	1600	295	1180	68	50	1-1/2" SQUARE DRIVE	121	68	31	23.6	599