

**LEROY SOMER TLDC DC MOTORS**

IN FRAME SIZES 132 TO 630  
POWER RATING 8 kW TO 1550 kW  
TORQUE RATING 50 Nm TO 40000 Nm  
TO IEC 60034-1, IS 4722 STANDARDS

**EMERSON INDUSTRIAL AUTOMATION  
ELECTRIC POWER GENERATION PVT. LTD.**



## ABOUT US

We are a part of Emerson Electric Company, USA, a \$ 24 Bn Fortune 500 company. Our reputation is omnipresent in the field of Rotating Electrical Machinery and Power Generation.

We have gained foothold in the Indian DC Machines market and established our brand successfully in the global market as well.

We have developed DC Motors up to 630 frame Laminated Yoke range and supplied for various applications like Steel rolling, Sugar, Cement, Paper, Rubber, Wire drawing, Test rigs, Material handling etc. The development and supply of Leroy Somer TLDC series DC motors has recorded phenomenal success and are known for highest quality and reliability.

Our Laminated yoke DC motors are available in the range from 8 to 1550 kW (torque ratings 50 Nm to 40000 Nm) in frame sizes 132 to 630 frames as per international standard IEC 60034 -1.

Solid Yoke mill duty series (split / non split type on request) in 802 to 818, 620, 622 & 624 frames to AISE std I are also available for steel mill and similar applications.

**We are capable of customization of DC Motors for any specific requirement. Our development centre can handle the replacement of DC motors of any brand or make.**

We are a ISO 9001 & ISO 14001 certified company and motors have CE conformity.

## SALIENT FEATURES

- Fully laminated magnetic circuit parts to be suitable for operation on 3ph, 6pulse Thyristor power supplies.
- Choice of identical shaft extensions at both Drive End (DE), Non Drive End (NDE) for 225 and higher frames.
- Class H insulation with temp rise limited to class F.
- Dual coated enamel wires of 200° C class / class H enamel fiber glass covered copper wires for windings.
- VPI impregnation of armatures with class H plus specially blended resin for superior electrical, thermal and mechanical strength to armature.
- Frames 280 and above are compensated type to take care of good commutation at overloads and large field weakening speeds.
- Dynamic balancing of armatures to precision grade, for low vibration levels.
- Armature slots are given with correct skew for low noise levels.
- Sturdy commutator and brush gear design with constant pressure brush holders. No need to disturb brush rocker during disassembly & reassembly.

PARAMETER	STANDARD	OPTIONAL
Armature voltage	up to 400 frame - 440 V 400 to 630 frames - 440 to 750V depends on design	132 frame - Up to 460V, 160 to 250 frame - Up to 600V 280 & above frames - Up to 800V
Field Voltage	220V	Up to 460V
Excitation type	Shunt, Shunt Compensated	Compound/series
Mounting type	Horizontal foot mounted IM - B3 / IM 1001	Vertical up to 355 frame
Shaft extension	Single (Cylindrical )	Double (cylindrical / taper)
Ambient	Up to 40 °C	Up to 60 °C
Altitude	Up to 1000M	Up to 4000M
Protection & cooling type	IP23 & IC06	As per application
		IP54/55 & IC0041 (TENV) - up to 250 Frames
		IP54/55 & IC0666 (CACA) - 250 Frames & above
		IP54/55 & IC86W6 (CACW) - 250 Frames & above
Overloads	160% for 15sec	IP23 & IC17, IP54/55 & IC37 - Duct ventilate
		Any other - Specify
FC unit position	On top at NDE	On top at DE or other position
T box position	RHS viewed from DE	LHS viewed from DE or Top
Tacho generator / encoder	Suitable mounting provision to suit Hubner tacho TDP 0.2 LT - 4 - B10	Any other Tacho generator / Encoder mounting provision- at extra cost
Accessories	Nil	Air filter, Space heaters, RTDs, Thermistors, Airflow, switch, water flow indicator, Dial thermometers, water leakage detector, brushware monitoring device etc.
Paint shade	RAL6000 - Patina Green	Any other shade - at extra cost

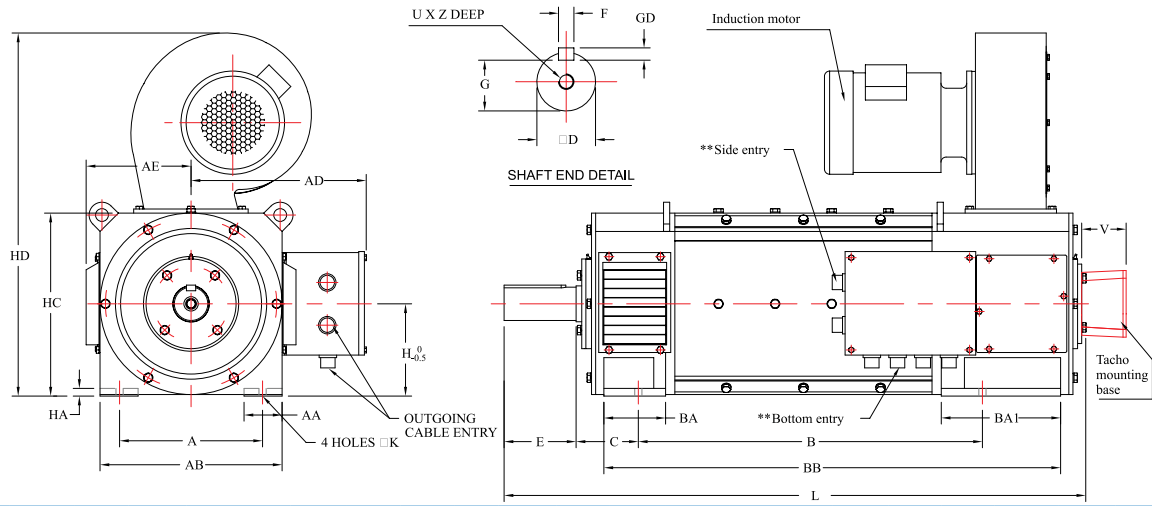
## TYPICAL RATING CHART FOR 132 TO 450 FRAMES WITH FORCE VENTILATION

F FRAME DESIGNATION	* TYPE	OUTPUT POWER kW	BASE SPEED rpm	RATED TORQUE Nm	ARM VOLTS V	ARM EFFY %	ARM AMPS A	SH FIELD POWER watts	MOMENT OF INERTIA Kgm sq	MAX SAFE SPEED rpm	TOTAL WEIGHT kg	AIR QTY REQD. cum/sec	FC UNIT POWER kW
TLDC 132Z	NC	8	1500	51	440	76	24	350	0.05	6000	100	0.14	0.18
TLDC 132A	NC	11	1500	70	440	78	32	400	0.07	6000	120	0.14	0.18
TLDC 132B	NC	15	1500	96	440	81.5	42	500	0.09	6000	140	0.14	0.18
TLDC 132C	NC	18.7	1500	119	440	82.5	52	600	0.12	6000	160	0.14	0.18
TLDC 132D	NC	22.5	1500	143	440	83.5	61	700	0.14	6000	195	0.25	0.55
TLDC 132E	NC	25	1500	159	440	84	68	800	0.16	6000	210	0.25	0.55
TLDC 160Z	NC	30	1500	191	440	86	79	1000	0.22	5000	245	0.45	1.1
TLDC 160A	NC	40	1500	255	440	87	104	1100	0.29	5000	270	0.45	1.1
TLDC 160B	NC	45	1500	287	440	87.5	117	1200	0.37	5000	290	0.45	1.1
TLDC 160C	NC	56	1500	357	440	88	145	1300	0.44	5000	330	0.45	1.1
TLDC 160D	NC	62	1500	395	440	88	160	1400	0.51	5000	375	0.45	1.1
TLDC160E	NC	68	1500	433	440	88.5	175	1650	0.58	5000	410	0.45	1.1
TLDC180C	NC	75	1500	478	440	89	192	1400	0.62	4500	445	0.55	1.5
TLDC180D	NC	90	1500	573	440	90	227	1600	0.76	4500	490	0.55	1.5
TLDC180E	NC	104	1500	662	440	90	263	1900	0.9	4500	555	0.55	1.5
TLDC200C	NC	115	1500	732	440	90.5	289	1700	1.1	4000	590	0.75	2.2
TLDC200D	NC	135	1500	860	440	91	337	1900	1.4	4000	695	0.75	2.2
TLDC200E	NC	150	1500	955	440	91	375	1950	1.5	4000	725	0.75	2.2
TLDC225C	NC	183	1500	1165	440	91	457	2100	1.8	3500	720	0.85	3.7
TLDC225D	NC	200	1500	1273	440	92	494	2400	2.3	3500	840	0.85	3.7
TLDC225E	NC	225	1500	1433	440	92	556	2500	2.5	3500	890	0.85	3.7
TLDC250C	NC	270	1500	1719	440	93	660	2500	3.7	3200	1425	1.2	3.7
TLDC250D	NC	315	1500	2006	440	93	770	2800	4.5	3200	1575	1.2	3.7
TLDC250E	NC	335	1500	2133	440	93.5	814	2900	4.8	3200	1635	1.2	3.7
TLDC280C	C	390	1500	2483	440	93	953	2600	6.1	3000	1650	1.6	5.5
TLDC280D	C	450	1500	2865	440	93	1100	3000	7.4	3000	1850	1.6	5.5
TLDC280E	C	485	1500	3088	440	93.5	1179	3100	7.9	3000	1930	1.6	5.5
TLDC315C	C	440	1500	2801	440	93	1075	3000	7.3	2500	1950	1.8	7.5
TLDC315D	C	480	1300	3526	440	94	1161	3500	9.2	2500	2230	1.8	7.5
TLDC315E	C	485	1100	4211	440	94	1173	4000	11	2500	2500	1.8	7.5
TLDC 315F	C	495	1000	4727	440	94	1197	4500	12.8	2500	2750	1.8	7.5
TLDC355C	C	575	1500	3661	440	94	1390	3500	11	2200	2500	2	7.5
TLDC355D	C	575	1200	4576	440	94	1390	4000	13.7	2200	2800	2	7.5
TLDC355E	C	600	1000	5730	440	94	1451	4500	16.4	2200	3100	2	7.5
TLDC355F	C	610	900	6473	440	94	1475	5000	19.1	2200	3400	2	7.5
TLDC400C	C	700	1400	4775	440	94	1692	3500	22	2000	3100	2.2	7.5
TLDC400D	C	730	1150	6062	440	94	1765	4200	27	2000	3500	2.2	7.5
TLDC400E	C	730	950	7338	440	94	1765	4900	33	2000	3900	2.2	7.5
TLDC400F	C	730	810	8607	440	94	1765	5100	35.7	2000	4100	2.2	7.5
TLDC450B	C	830	1400	5662	600	94	1472	3500	24	1800	3700	2.8	9.3
TLDC450C	C	835	1050	7595	600	94.5	1473	4000	32	1800	4200	2.8	9.3
TLDC450D	C	835	850	9381	600	94.5	1473	4500	40	1800	4700	2.8	9.3
TLDC450E	C	835	710	11231	600	94.5	1473	5000	48	1800	5200	2.8	9.3
TLDC450F	C	835	620	12862	600	94.5	1473	5500	52	1800	5450	2.8	9.3

### Notes:

- 1) \* NC implies non compensated type and C implies compensated type.
- 2) The above rating chart data is typical and valid for standard operating conditions only .ie., Ambient up to 40 degc, Altitude up to 1000metres, cooling types IC06, IC17, IC37, IC86W6, S1 duty, overloads upto 160% for 15 sec. Insulation class is H and Temp rise restricted to class F limit.
- 3) For other operating conditions, suitable derating factors to be taken in to account for output kW and base speed values, please refer to us with details.
- 4) Contractual Technical data will be given at the time of order acceptance. Refer Emerson marketing department for any clarifications.
- 5) Maximum permissible operating speed advised is atleast 20% less than the maximum safe speed mentioned in view of the life of rotating parts, safety of the operating personnel and equipment.
- 6)  $GD^2 = 4 \times \text{Moment of Inertia}$ .

# OVERALL DIMENSIONS FOR 132 TO 450 FRAMES



FRAME	A	B	C	D	E	F	G	GD	H	K	L	AA	AB	BB	AE	AD	BA	BAI	HC	HD	HA	U	Z	(V)*
TLDC 132Z	216	336	89	38	80	10	33	8	132	12	556	49	258	422	160	230	117	179	264	620	15	M12	28	100
TLDC 132A	216	381	89	38	80	10	33	8	132	12	601	49	258	467	160	230	117	179	264	620	15	M12	28	100
TLDC 132B	216	426	89	38	80	10	33	8	132	12	646	49	258	512	160	230	117	179	264	620	15	M12	28	100
TLDC 132C	216	471	89	38	80	10	33	8	132	12	691	49	258	557	160	230	117	179	264	620	15	M12	28	100
TLDC 132D	216	516	89	38	80	10	33	8	132	12	736	49	258	602	160	230	117	179	264	620	15	M12	28	100
TLDC 132E	216	556	89	38	80	10	33	8	132	12	776	49	258	642	160	230	117	179	264	620	15	M12	28	100
TLDC 160Z	254	350	108	55	110	16	49	10	160	14	724	57	316	542	191	258	108	238	320	700	15	M16	32	100
TLDC 160A	254	400	108	55	110	16	49	10	160	14	774	57	316	592	191	258	108	238	320	700	15	M16	32	100
TLDC 160B	254	450	108	55	110	16	49	10	160	14	824	57	316	642	191	258	108	238	320	700	15	M16	32	100
TLDC 160C	254	500	108	55	110	16	49	10	160	14	874	57	316	692	191	258	108	238	320	700	15	M16	32	100
TLDC 160D	254	550	108	55	110	16	49	10	160	14	924	57	316	742	191	258	108	238	320	700	15	M16	32	100
TLDC 160E	254	600	108	55	110	16	49	10	160	14	974	57	316	792	191	258	108	238	320	700	15	M16	32	100
TLDC 180C	279	560	121	60	140	18	53	11	180	14	985	74	354	748	204	340	120	232	360	770	15	M16	32	100
TLDC 180D	279	630	121	60	140	18	53	11	180	14	1055	74	354	818	204	340	120	232	360	770	15	M16	32	100
TLDC 180E	279	700	121	60	140	18	53	11	180	14	1125	74	354	888	204	340	120	232	360	770	15	M16	32	100
TLDC 200C	318	630	133	75	140	20	67.5	12	200	18	1060	80	394	803	224	360	169	278	397	840	18	M16	32	100
TLDC 200D	318	730	133	75	140	20	67.5	12	200	18	1160	80	394	903	224	360	169	278	397	840	18	M16	32	100
TLDC 200E	318	760	133	75	140	20	67.5	12	200	18	1190	80	394	933	224	360	169	278	397	840	18	M16	32	100
TLDC 225C	356	725	149	85	170	22	76	14	225	18	1185	90	440	889	250	425	183	310	445	960	18	M16	40	100
TLDC 225D	356	825	149	85	170	22	76	14	225	18	1285	90	440	989	250	425	183	310	445	960	18	M16	40	100
TLDC 225E	356	865	149	85	170	22	76	14	225	18	1325	90	440	1029	250	425	183	310	445	960	18	M16	40	100
TLDC 250C	406	750	168	100	210	28	90	16	250	24	1440	95	490	1100	280	465	195	400	495	1010	22	M20	40	100
TLDC 250D	406	850	168	100	210	28	90	16	250	24	1540	95	490	1200	280	465	195	400	495	1010	22	M20	40	100
TLDC 250E	406	890	168	100	210	28	90	16	250	24	1580	95	490	1240	280	465	195	400	495	1010	22	M20	40	100
TLDC 280C	457	914	190	110	210	28	100	16	280	24	1500	110	550	1157	310	500	193	460	555	1110	25	M20	40	100
TLDC 280D	457	1014	190	110	210	28	100	16	280	24	1600	110	550	1257	310	500	193	460	555	1110	25	M20	40	100
TLDC 280E	457	1054	190	110	210	28	100	16	280	24	1640	110	550	1297	310	500	193	460	555	1110	25	M20	40	100
TLDC 315C	508	800	216	110	210	28	100	16	315	28	1520	120	620	1140	350	725	205	476	630	1250	30	M20	40	100
TLDC 315D	508	900	216	110	210	28	100	16	315	28	1620	120	620	1240	350	725	205	476	630	1250	30	M20	40	100
TLDC 315E	508	1000	216	110	210	28	100	16	315	28	1720	120	620	1340	350	725	205	476	630	1250	30	M20	40	100
TLDC 315F	508	1100	216	110	210	28	100	16	315	28	1820	120	620	1440	350	725	205	476	630	1250	30	M20	40	100
TLDC 355C	610	770	254	130	250	32	119	18	355	28	1650	120	700	1263	400	765	274	533	705	1320	30	M24	50	100
TLDC 355D	610	870	254	130	250	32	119	18	355	28	1750	120	700	1363	400	765	274	533	705	1320	30	M24	50	100
TLDC 355E	610	970	254	130	250	32	119	18	355	28	1850	120	700	1463	400	765	274	533	705	1320	30	M24	50	100
TLDC 355F	610	1070	254	130	250	32	119	18	355	28	1950	120	700	1563	400	765	274	533	705	1320	30	M24	50	100
TLDC 400C	686	800	280	140	250	36	128	20	400	35	1660	150	790	1263	450	810	274	533	795	1410	30	M24	50	100
TLDC 400D	686	900	280	140	250	36	128	20	400	35	1760	150	790	1363	450	810	274	533	795	1410	30	M24	50	100
TLDC 400E	686	1000	280	140	250	36	128	20	400	35	1860	150	790	1463	450	810	274	533	795	1410	30	M24	50	100
TLDC 400F	686	1100	280	140	250	36	128	20	400	35	1960	150	790	1563	450	810	274	533	795	1410	30	M24	50	100
TLDC 450B	800	900	315	150	250	36	138	20	450	35	1750	160	890	1284	510	860	310	614	895	1600	40	M24	50	100
TLDC 450C	800	1000	315	150	250	36	138	20	450	35	1850	160	890	1384	510	860	310	614	895	1600	40	M24	50	100
TLDC 450D	800	1200	315	150	250	36	138	20	450	35	1950	160	890	1484	510	860	310	614	895	1600	40	M24	50	100
TLDC 450E	800	1300	315	150	250	36	138	20	450	35	2050	160	890	1584	510	860	310	614	895	1600	40	M24	50	100
TLDC 450F	800	1400	315	150	250	36	138	20	450	35	2150	160	890	1684	510	860	310	614	895	1600	40	M24	50	100

## BEARING DETAILS:

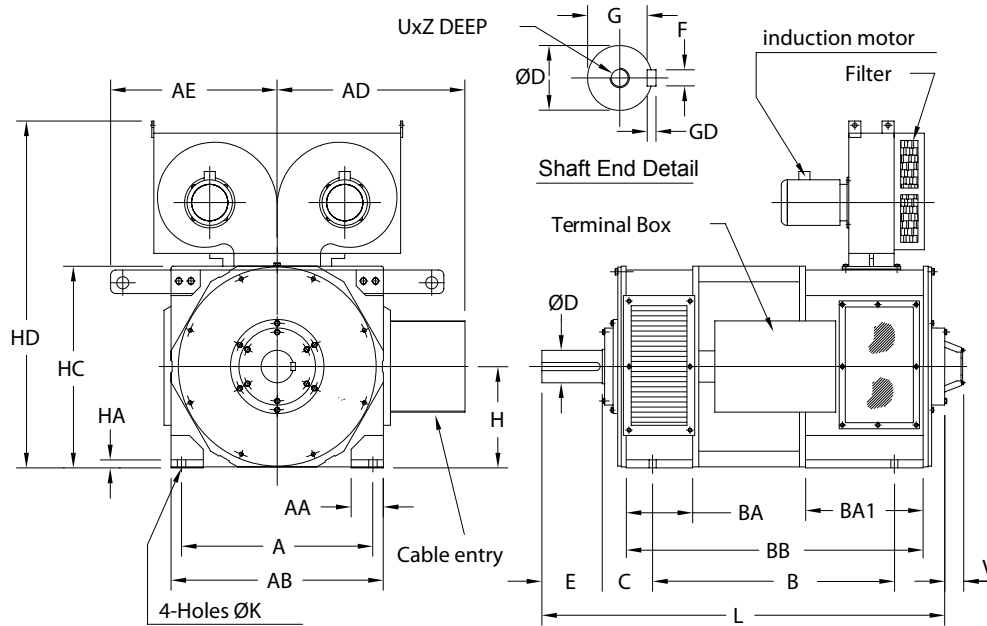
TLDC 132	DE-63092Z NDE-63072Z	TLDC 160	DE-6312C3 NDE-6308C3	TLDC 180	DE-6214C3 NDE-6212C3	TLDC 200	DE-6216C3 NDE-6214C3	TLDC 225	DE-6218C3 NDE-6218C3	TLDC 250	DE-6222C3 NDE-6222C3
TLDC 280	DE-6224C3 NDE-6224C3	TLDC 315	DE-NU224C3 NDE-6224C3	TLDC 355	DE-NU228C3 NDE-6228C3	TLDC 400	DE-NU230C3 NDE-6230C3	TLDC 450	DE-NU232C3 NDE-6232C3		

Note : (V)\* Dimension varies depending on the Tacho / Encoder specified by the customer.



FRAME DESIGNATION	* TYPE	OUTPUT POWER kW	SPEED rpm	RATED TORQUE Nm	ARM VOLTS	ARM EFFY %	ARM AMPS	SH FIELD POWER watts	MOMENT OF INERTIA Kgm sq	MAX SAFE SPEED rpm	TOTAL WEIGHT kg	AIR QTY cum/sec	FC UNIT POWER kW
TLDC500B	C	1025	1350	7251	550	94.5	1972	5000	47	1700	4300	3	2X5.5
TLDC500C	C	1100	1100	9550	600	94.5	1940	6000	63	1700	4800	3	2X5.5
TLDC500D	C	1180	900	12521	700	95	1774	7000	78	1700	5300	3	2X5.5
TLDC500E	C	1180	750	15025	700	95	1774	8000	94	1700	5800	3	2X5.5
TLDC500F	C	1180	650	17337	700	95.5	1765	9000	110	1700	6300	3	2X5.5
TLDC560B	C	1000	1200	7958	550	94.5	1924	5000	75	1600	5600	3.5	2X7.5
TLDC560C	C	1100	900	11672	600	94.5	1940	6000	100	1600	6500	3.5	2X7.5
TLDC560D	C	1300	750	16553	700	95	1955	7000	125	1600	7400	3.5	2X7.5
TLDC560E	C	1300	600	20692	700	95	1955	8000	150	1600	8300	3.5	2X7.5
TLDC560F	C	1400	525	25467	750	95.5	1955	9000	174	1600	9200	3.5	2X7.5
TLDC630B	C	1300	800	15519	700	95	1955	6000	175	1500	7500	4	2X7.5
TLDC630C	C	1400	625	21392	700	95.5	2094	7000	219	1500	8500	4	2X7.5
TLDC630D	C	1525	500	29128	750	96	2118	8000	262	1500	9500	4	2X7.5
TLDC630E	C	1550	450	32894	750	96	2153	9000	306	1500	10500	4	2X7.5
TLDC630F	C	1550	375	39473	750	96	2153	10000	350	1500	11500	4	2X7.5

OVERALL DIMENSIONS FOR 500, 560 & 630 FRAMES (for IP23, IC 06 and IM 100I version)



FRAME	A	B	C	D	E	F	G	GD	H	K	L	AA	AB	BB	AE	AD	BA	BA1	HC	HD	HA	U	Z	(V)*
TLDC 500B	950	900	250	160	300	40	147	22	500	42	1800	160	1054	1274	830	940	330	584	995	1720	40	M30	65	100
TLDC 500C	950	1000	250	160	300	40	147	22	500	42	1900	160	1054	1374	830	940	330	584	995	1720	40	M30	65	100
TLDC 500D	950	1100	250	160	300	40	147	22	500	42	2000	160	1054	1474	830	940	330	584	995	1720	40	M30	65	100
TLDC 500E	950	1200	250	160	300	40	147	22	500	42	2100	160	1054	1574	830	940	330	584	995	1720	40	M30	65	100
TLDC 500F	950	1300	250	160	300	40	147	22	500	42	2200	160	1054	1674	830	940	330	584	995	1720	40	M30	65	100
TLDC 560B	1060	1000	315	180	300	45	165	25	560	42	2000	180	1182	1481	770	1070	374	648	1120	2010	40	M30	65	100
TLDC 560C	1060	1100	315	180	300	45	165	25	560	42	2100	180	1182	1581	770	1070	374	648	1120	2010	40	M30	65	100
TLDC 560D	1060	1200	315	180	300	45	165	25	560	42	2200	180	1182	1681	770	1070	374	648	1120	2010	40	M30	65	100
TLDC 560E	1060	1300	315	180	300	45	165	25	560	42	2300	180	1182	1781	770	1070	374	648	1120	2010	40	M30	65	100
TLDC 560F	1060	1400	315	180	300	45	165	25	560	42	2400	180	1182	1881	770	1070	374	648	1120	2010	40	M30	65	100
TLDC 630B	1180	1000	315	200	350	45	185	25	630	42	2100	200	1364	1496	770	1160	374	658	1255	2130	40	M36	65	100
TLDC 630C	1180	1100	315	200	350	45	185	25	630	42	2200	200	1364	1596	770	1160	374	658	1255	2130	40	M36	65	100
TLDC 630D	1180	1200	315	200	350	45	185	25	630	42	2300	200	1364	1696	770	1160	374	658	1255	2130	40	M36	65	100
TLDC 630E	1180	1300	315	200	350	45	185	25	630	42	2400	200	1364	1796	770	1160	374	658	1255	2130	40	M36	65	100
TLDC 630F	1180	1400	315	200	350	45	185	25	630	42	2500	200	1364	1896	770	1160	374	658	1255	2130	40	M36	65	100

BEARING DETAILS:

TLDC 500	DE-NU234 C3 NDE-6234 C3	TLDC 560	DE-NU238 C3 NDE-6238 C3	TLDC 630	DE-NU244 C3 NDE-6244 C3
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Note : (V)\* Dimension varies depending on the Tacho / Encoder specified by the customer.

