

# DURST

Worldwide Leader in Gear Drives and Transmissions

Standard • Modified • Custom



Pump Drives and Heavy Duty Transfer Cases

# Pump Drives



Durst pump drives run cooler, last longer and are quick and easy to service. In the process of engineering these new modular drives, we went back to the drawing board and developed a product that is fundamentally better than any of the competition.

Our patented pump pad design keeps oil constantly flowing through the bearing and provides for wet spline operation, even at startup. All Durst pump drives incorporate class 10 spur gears that run on heavy-duty ball bearings. They also feature an internal spline, which, with a spline adaptor, are compatible with any pump shaft and offer quieter operation.

Our responsive engineering team can quickly modify our modular designs to fit a wide range of custom applications. Back that with top flight customer service and quick turnaround times, and you have a superior pump drive solution.

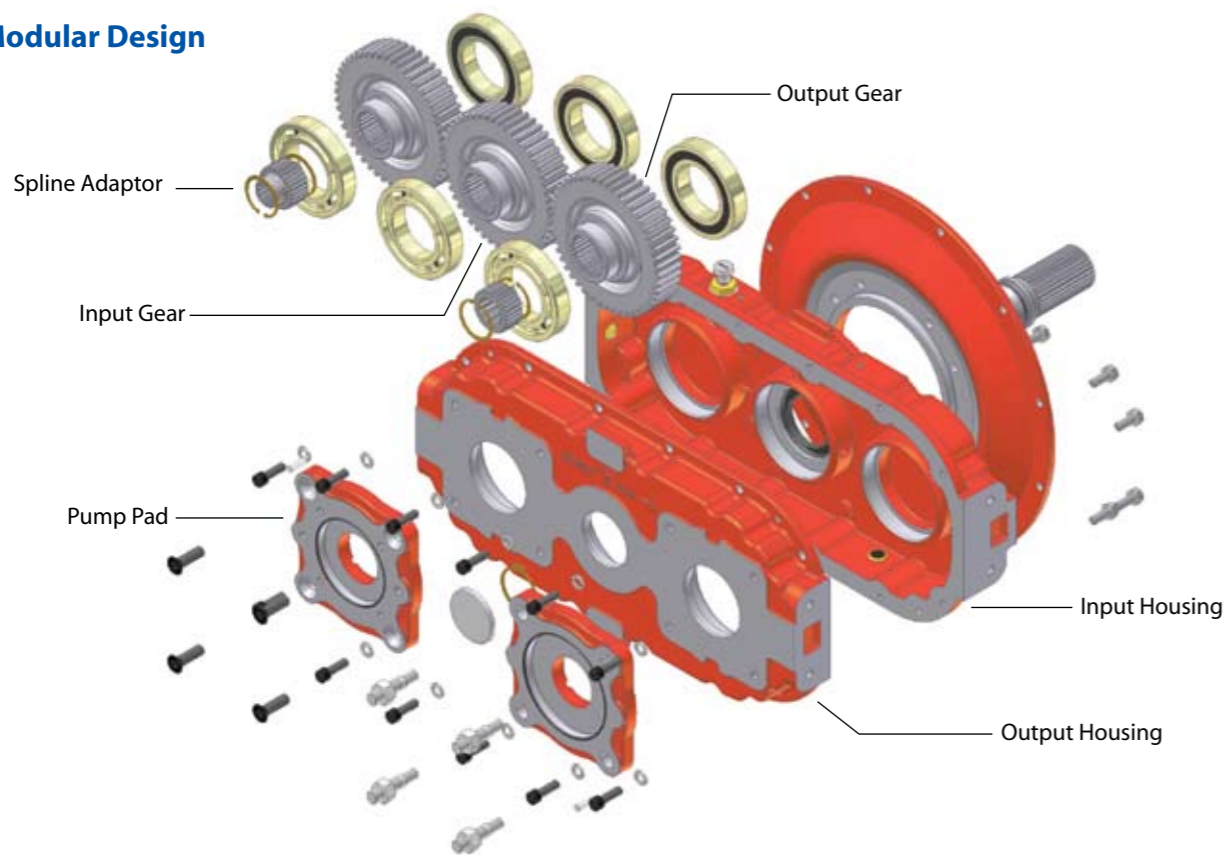
## Features

- Patented Modular Design
- Patented Spline lubrication feature built into cast iron housings
- AGMA Class 10 Gears for quieter operation
- All Viton Seals and O-rings
- One-piece Gear and Shaft (solid-on-shaft) Design
- Large Ball Bearings and SOS Gears simplify service
- Drop-in Replacement for competitors' drives
- Pump Pads and Spline Adaptors Available in SAE and DIN Standard
- Optional Equipment Available (Over Hung Load Adaptors and Oil Circulation Systems)

## Applications

- Construction
- Mining
- Agricultural
- Forestry
- Rail of Way Maintenance
- Oil Exploration Equipment
- Material Handling

## Modular Design



## Product Details

### Pump Pads

Durst pump pads do not contain bearing cups. The advantage of this approach is that pump pads can be removed without disrupting the internal workings and alignment of the bearings and gears inside the gearbox.

### Drive Plates

Durst pump drives now use a four-disk drive plate. By using four thin disks, the drive plate becomes slightly wider and increases the rating. Thin disks are much more flexible. When put together, multiple disks absorb more engine vibrations than a single thick disk. The drive plate is no longer captured on the input shaft; instead, it is able to automatically adjust if any engine flywheel misalignment occurs, resulting in smoother operation and longer gearbox life.

### Splines

Durst pump drives have a 29T-12/24 internal spline on the gears, allowing a spline adaptor to be used on any SAE or DIN pump shaft. Since the pump shaft mating spline is not integral to the output gear, the mating pump shaft spline adaptor can be replaced without the need to remove or replace the output gear. Plus the 29T-12/24 spline significantly reduces wear on both gears and spline adapters.

### Oil Circulation

Durst pump drives feature special oil port locations and oil directing ribs that cause the oil to flow into the pump pad area, lubricating the spline adapters and bearings without the need for external pumps. Oil flows into the pump pad area, and then our patented cast-in recesses cause the oil to flow across the spline for wet spline operation.

### Input Shaft

The Durst pump drive input shaft engages the input gear through a 29T-12/24 spline. The input shaft is retained within the gearbox and allows the drive plate or torsional coupling hub to ride free on the input shaft, reducing misalignment stresses from the engine flywheel and the gearbox. It can be removed or replaced without disturbing the internal workings of the gearbox.

### Heavy Duty Ball Bearings

The heavy-duty ball bearings placed directly in the housing halves don't require shimming, which drastically simplifies assembly. Any adaptor can be easily attached without disturbing the gears or bearings in the gearbox. The gearbox can easily be split for servicing without removing the adapters.



SINGLE PUMP DRIVE (DIRECT)											
MODEL	RATIO	MAX KW	MAX HP	MAX INPUT TORQUE (Nm)	MAX INPUT TORQUE (FT-LB)	INPUT STYLE	FLYWHEEL HSG. STYLE	RATIO INC. OR DEC.	PUMP ADAPTERS	PUMP CENTER DISTANCE (mm)	PUMP CENTER DISTANCE (in)
ZODD	1	444	595	1695	1250	P	2,3,4,5,6	N/A (direct)	A,B,C,D,E	N/A	N/A
1751D	1	444	595	1695	1250	P	1,2,3,4,5	N/A (direct)	A,B,C,D,E	N/A	N/A

SINGLE PUMP DRIVE (GEARED)											
MODEL	RATIO	MAX KW	MAX HP	MAX INPUT TORQUE (Nm)	MAX INPUT TORQUE (FT-LB)	INPUT STYLE	FLYWHEEL HSG. STYLE	RATIO INC. OR DEC.	PUMP ADAPTERS	PUMP CENTER DISTANCE (mm)	PUMP CENTER DISTANCE (in)
1PD06	1	369	495	1410	1040	P,C,S	0,1,2,3,4	1:1, 1.06, 1.18, 1.25, 1.32, 1.40, 1.48, 1.57, 1.67	A,B,C,D,E,F	152.4	6.0
1PD09	1	608	815	2319	1710	P,C,S	0,1,2,3,4	1:1, 1.12, 1.20, 1.30, 1.40, 1.70, 2.00	A,B,C,D,E,F	228.6	9.0

TWO PUMP DRIVE											
MODEL	RATIO	MAX KW	MAX HP	MAX INPUT TORQUE (Nm)	MAX INPUT TORQUE (FT-LB)	INPUT STYLE	FLYWHEEL HSG. STYLE	RATIO INC. OR DEC.	PUMP ADAPTERS	PUMP CENTER DISTANCE (mm)	PUMP CENTER DISTANCE (in)
2PD05	1	276	370	949	700	PS	2,3,4	1:1, 1.14, 1.40, 1.61, 2.00	A,B,C,D	254.0	10.0
2PD06	1	369	495	1410	1040	P,C,S	0,1,2,3,4	1:1, 1.06, 1.18, 1.25, 1.32, 1.40, 1.48, 1.57, 1.67	A,B,C,D,E,F	304.8	12.0
2PD08	1	541	725	2068	1525	P,C,S	0,1,2,3,4	1:1, 1.13, 1.23, 1.34, 1.40, 1.53 INC	A,B,C,D,E,F	406.4	16.0
2PD10	1	708	950	2705	1995	P,C,S	0,1,2,3,4	1:1, 1.21, 1.29, 1.38	A,B,C,D,E,F	533.4	21.0

THREE PUMP DRIVE											
MODEL	RATIO	MAX KW	MAX HP	MAX INPUT TORQUE (Nm)	MAX INPUT TORQUE (FT-LB)	INPUT STYLE	FLYWHEEL HSG. STYLE	RATIO INC. OR DEC.	PUMP ADAPTERS	PUMP CENTER DISTANCE (mm)	PUMP CENTER DISTANCE (in)
3PD06	1	369	495	1410	1040	P,C,S	0,1,2,3,4	1:1, 1.17, 1.29, 1.36, 1.52 INC, 1.67 INC	A,B,C,D	304.8	12.0
3PD08	1	541	725	2068	1525	P,C,S	0,1,2,3,4	1:1, 1.13, 1.23, 1.34, 1.40, 1.53 INC	A,B,C,D,E,F	337.6 x 304.8	13.29 x 12.0
3PD10	1	708	950	2705	1995	P,C,S	0,1,2,3,4	1:1, 1.21, 1.29, 1.33, 1.38	A,B,C,D,E,F	404.1 x 457.2	15.91 x 18.0

FOUR PUMP DRIVE											
MODEL	RATIO	MAX KW	MAX HP	MAX INPUT TORQUE (Nm)	MAX INPUT TORQUE (FT-LB)	INPUT STYLE	FLYWHEEL HSG. STYLE	RATIO INC. OR DEC.	PUMP ADAPTERS	PUMP CENTER DISTANCE (mm)	PUMP CENTER DISTANCE (in)
4PD08	1	541	725	2068	1525	P,C,S	0,1,2,3,4	1:1, 1.13, 1.23, 1.34, 1.40, 1.53 INC	A,B,C,D,E,F	299.7 x 293.1	11.8 x 11.54
4PD09	1	608	815	2319	1710	P,C,S	0,1,2,3,4	1:1, 1.12, 1.20, 1.30, 1.40, 1.70 INC	A,B,C,D,E,F	309.4 x 336.6	12.18 x 13.25
4PD11	1	764	1025	2915	2150	P,C,S	0,1,2,3,4	1:1, 1.16, 1.31, 1.39, 1.57 INC	A,B,C,D,E,F	407.7 x 406.4	16.05 x 16.0

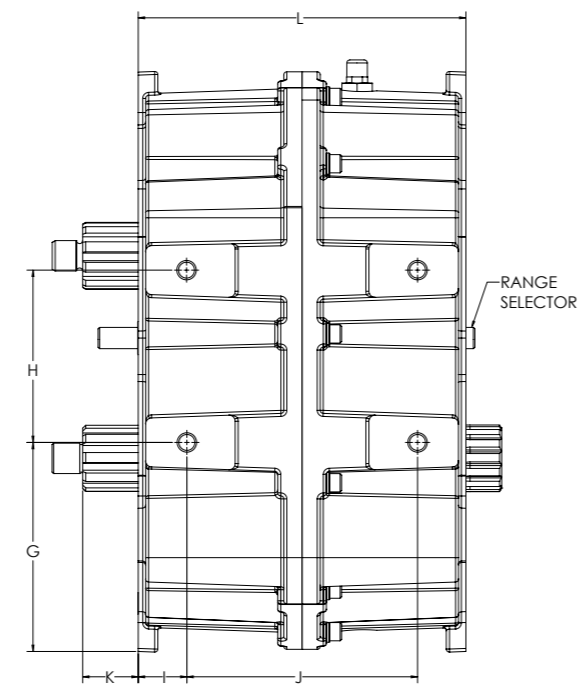
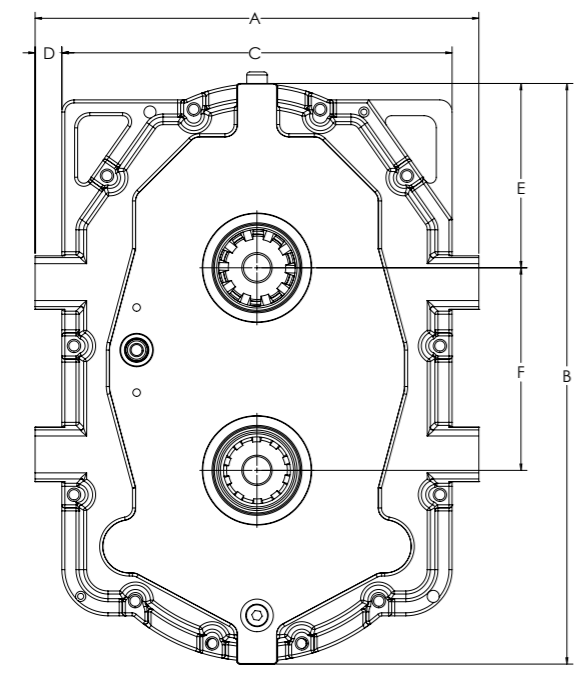
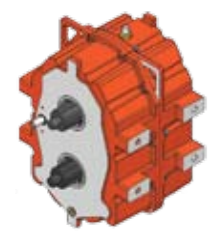
INLINE FOUR PUMP DRIVE											
MODEL	RATIO	MAX KW	MAX HP	MAX INPUT TORQUE (Nm)	MAX INPUT TORQUE (FT-LB)	INPUT STYLE	FLYWHEEL HSG. STYLE	RATIO INC. OR DEC.	PUMP ADAPTERS	PUMP CENTER DISTANCE (mm)	PUMP CENTER DISTANCE (in)
4PD10L	1	708	950	2705	1995	S	N/A	1:1, 1.14, 1.21, 1.29, 1.38	A,B,C,D,E,F	533.4	21.0



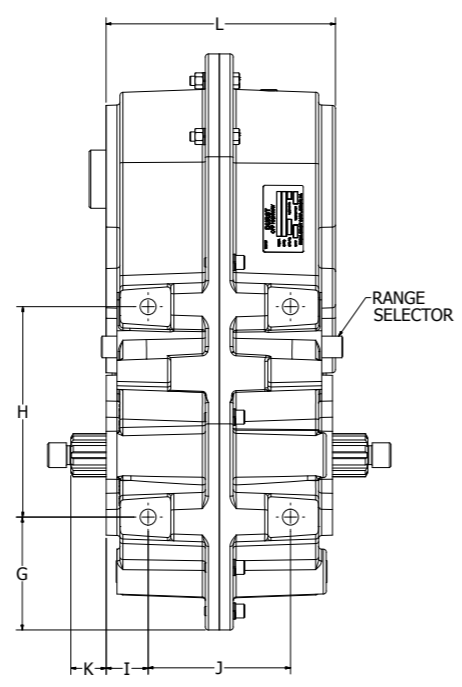
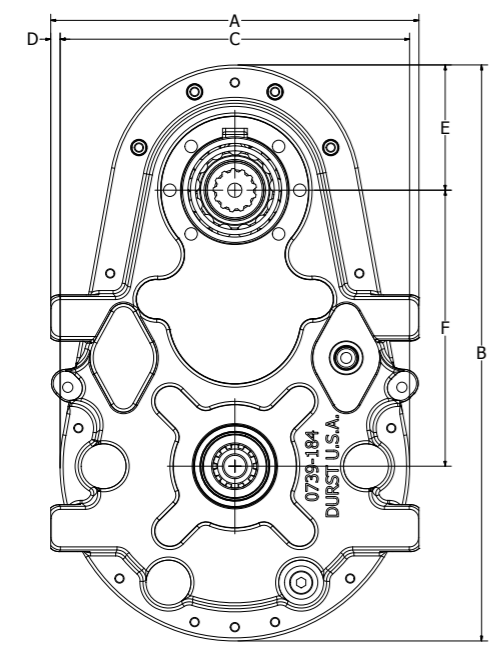
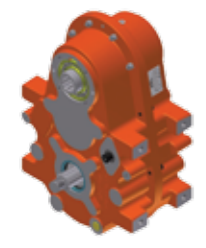


# Transfer Case Line Drawings

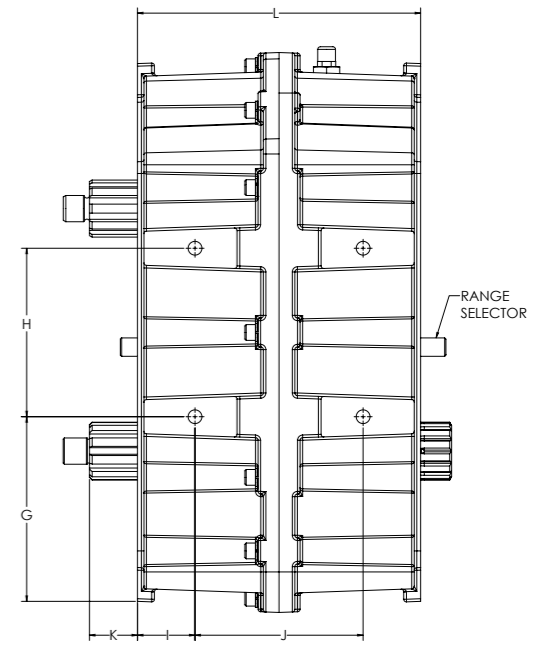
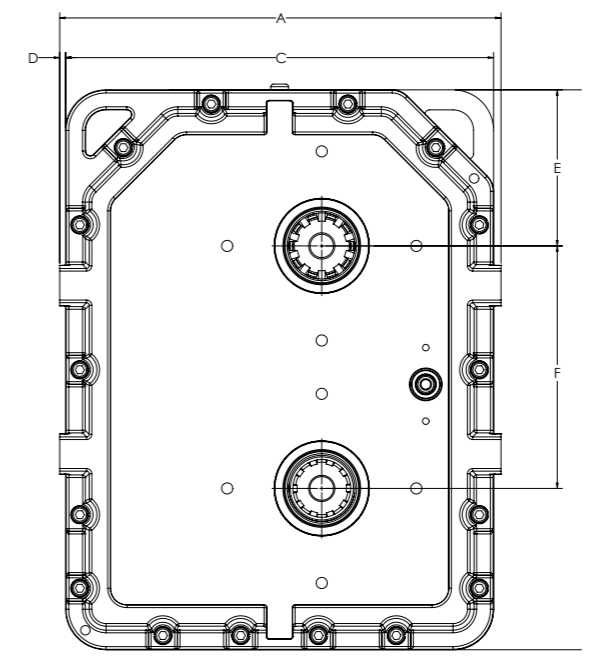
**9D**  
TWO SPEED



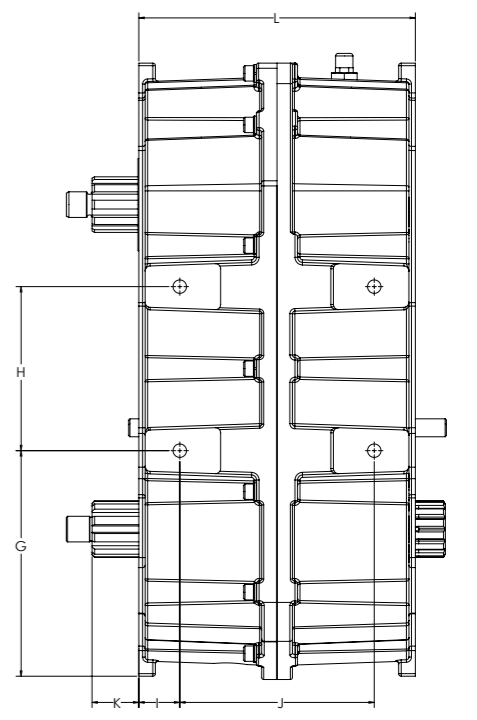
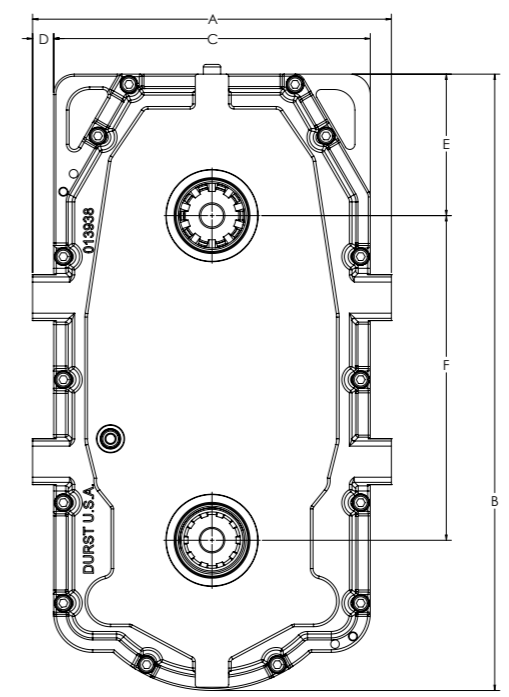
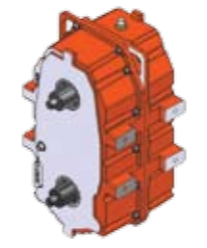
**11D**  
TWO SPEED



**12D**  
TWO SPEED



**16D**  
TWO SPEED



	DURST HEAVY DUTY GEARBOX MODEL							
	9D		11D		12D		16D	
	IN	MM	IN	MM	IN	MM	IN	MM
A	18.25	463.6	14.88	378.0	21.00	533.4	17.50	444.5
B	23.88	606.6	23.27	591.1	26.64	676.7	30.06	763.5
C	16.05	407.7	14.11	358.4	20.37	517.4	15.44	392.2
D	1.10	27.9	0.38	9.7	0.28	7.1	1.03	26.2
E	7.58	192.5	5.06	128.5	7.43	188.7	6.90	175.3
F	8.33	211.6	11.15	283.2	11.54	293.1	15.83	402.1
G	8.60	218.4	4.56	115.8	8.79	223.3	11.00	279.4
H	7.09	180.1	8.50	215.9	8.00	203.2	8.00	203.2
I	2.00	50.8	1.70	43.2	2.74	69.6	2.00	50.8
J	9.49	241.0	5.75	146.1	6.00	152.4	9.49	241.0
K	2.28	57.9	1.43	36.3	2.28	57.9	2.28	57.9
L	13.48	342.4	9.27	235.5	13.48	342.4	13.49	342.6
	<b>LB</b>	<b>KG</b>	<b>LB</b>	<b>KG</b>	<b>LB</b>	<b>KG</b>	<b>LB</b>	<b>KG</b>
Weight Single Speed (lb)	280	127	-	-	395	179	371	168
Weight Two Speed (lb)	346	157	242	110	472	214	455	206

# An Introduction to Durst

Durst is a division of Regal Beloit Corporation, a leading manufacturer of electric motors, mechanical and electrical motion controls and power generation products serving several markets throughout the world for which sales are projected to be in excess of 3 billion euros in 2012. Durst boasts one of the most comprehensive mechanical power transmission product offerings for off-highway, agriculture

and material handling equipment. With over 75 years experience, Durst offers full design, development and test capabilities, three-dimensional solid modeling and four-square testing. Whether standard, modified or custom, our products are designed and manufactured to customer specifications.

## The Durst Product Family



Pump Drives



Zero Offset Direct Drives



Heavy Duty Transfer Cases



Mechanical Transmissions



Velvet Drive Transmissions



Worm Drives



Parallel Shafts



Bevel Drives



Custom Gearing



Wheel and Center Pivot Drives



Turning Gears



Custom Gearboxes

Standard • Modified • Custom

# DURST

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[www.durstdrives.com](http://www.durstdrives.com)

### Headquarters:

5560 E. Buss Road,  
Clinton, WI 53525  
+1(800)-356-0775

# REGAL

[www.regalbeloit.com](http://www.regalbeloit.com)

### European Headquarters:

Djon Hulshof  
Hambridge Lane, Newbury,  
Berkshire, RG14 5TS, United Kingdom  
T: +49 (0) 173 5641 469  
E: [djon.hulshof@durstdrives.eu](mailto:djon.hulshof@durstdrives.eu)