

Cement
Chemicals
Defence
Fibre, paper & tissue
Food & beverage
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Metals
Mining & minerals
Oil & gas
Panelboard
Power generation
Rail
Rubber
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Yankee Cylinder Drives

Hollow shaft mounted 2-3 stage and
1-2 motor drive helical gear units

Engineered to fulfil the requirements of modern Yankee cylinder applications.

With more than 40 years' experience in engineering Yankee cylinder drives for tissue machines, David Brown Santasalo is the industry's premier supplier.

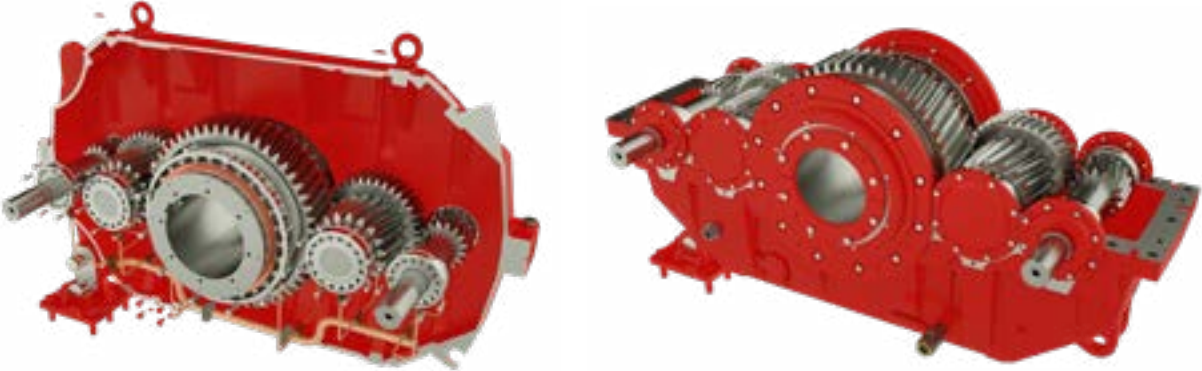
Our latest designs comprise; 2TMG, 3TMG and 2D2PHT gear units, which combine the best features of our previous models with the most modern materials and technological advances available today. All this has been accomplished to fulfil our customers' requirements for reliability and ease of maintenance.

Key benefits:

- Single and double input options available
- Optimal solution for production optimised tissue machines
- Turn-key delivery including all required accessories
- Cost-effective and maintenance friendly structure
- Low lifecycle costs due to easy maintenance

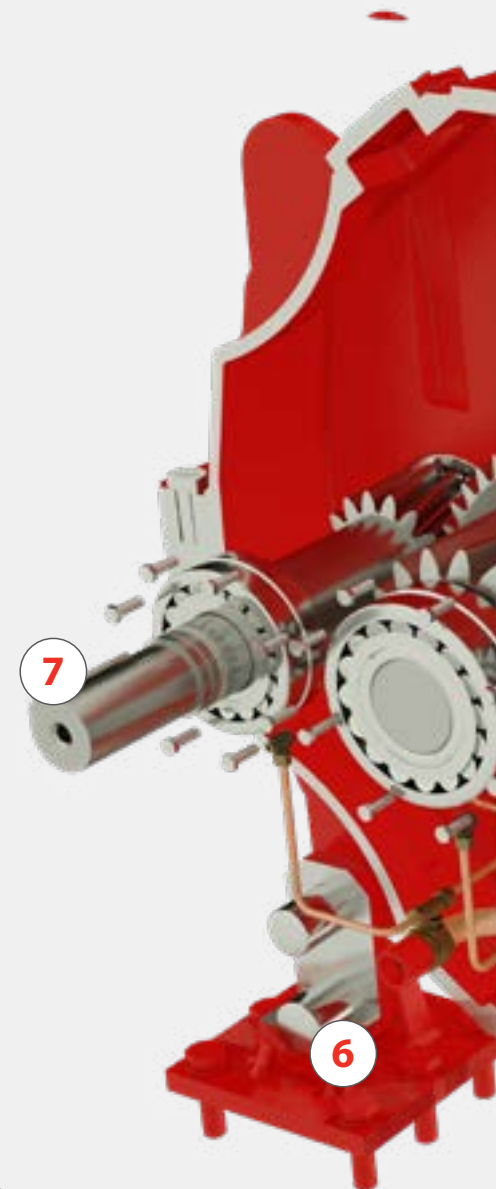
Technical data	
Design Sizes	8
Number of Stages	2 - 3
Transmission Ratio	5 - 140:1
Nominal Output Torque	220kNm



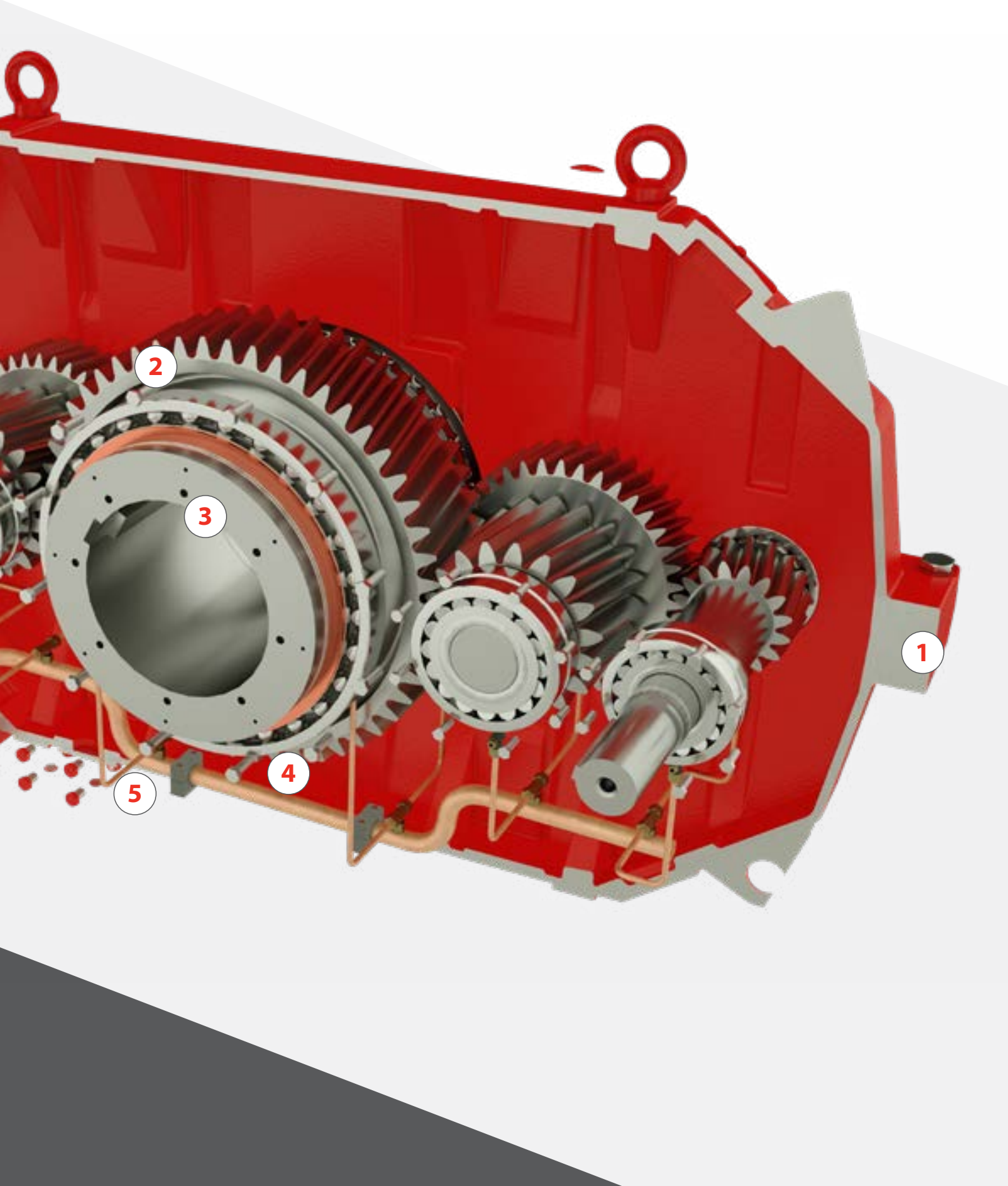


Yankee Drive

1. Horizontal split lane for easy maintenance
2. Precision quality gearing
3. Hollow shaft bore, engineered to fit Yankee cylinder journal exactly
4. Adjustable pre-load system in low speed bearings for stable operation
5. Lubrication piping to all bearings and gear meshes
6. Spherical plain bearings in torque arm
7. Double and single input designs

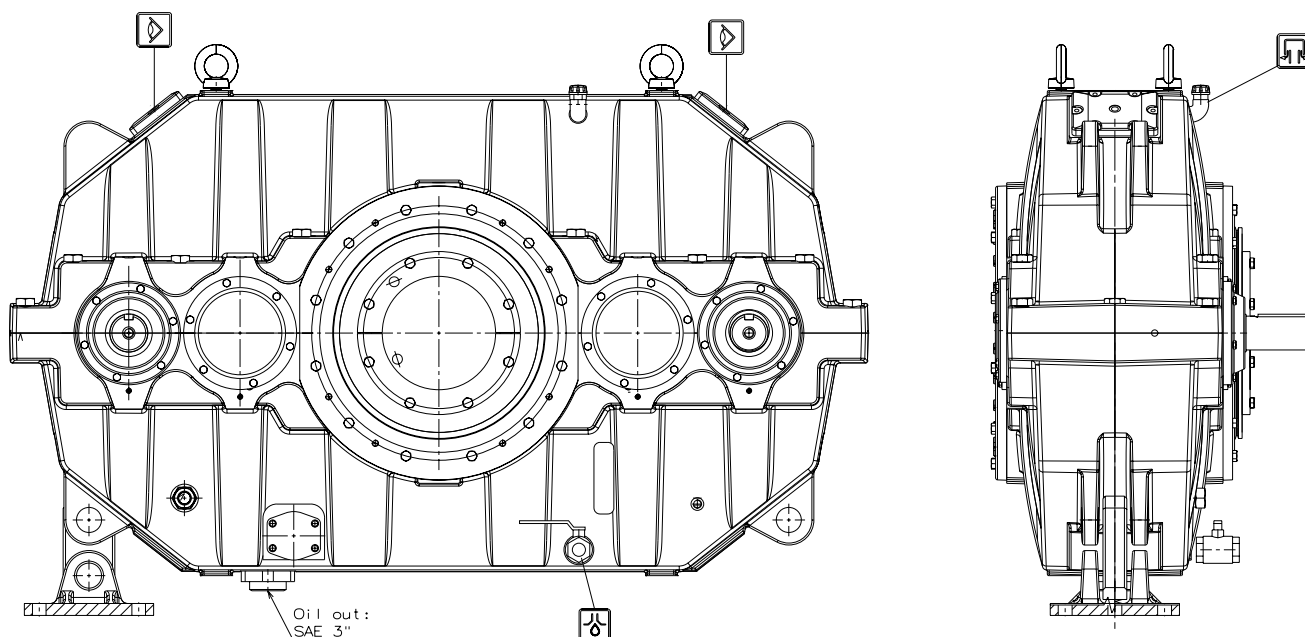


A cost effective and maintenance friendly structure delivers maximum availability and lowers the total cost of ownership



2D2PHT

2-stage helical gear unit with dual input

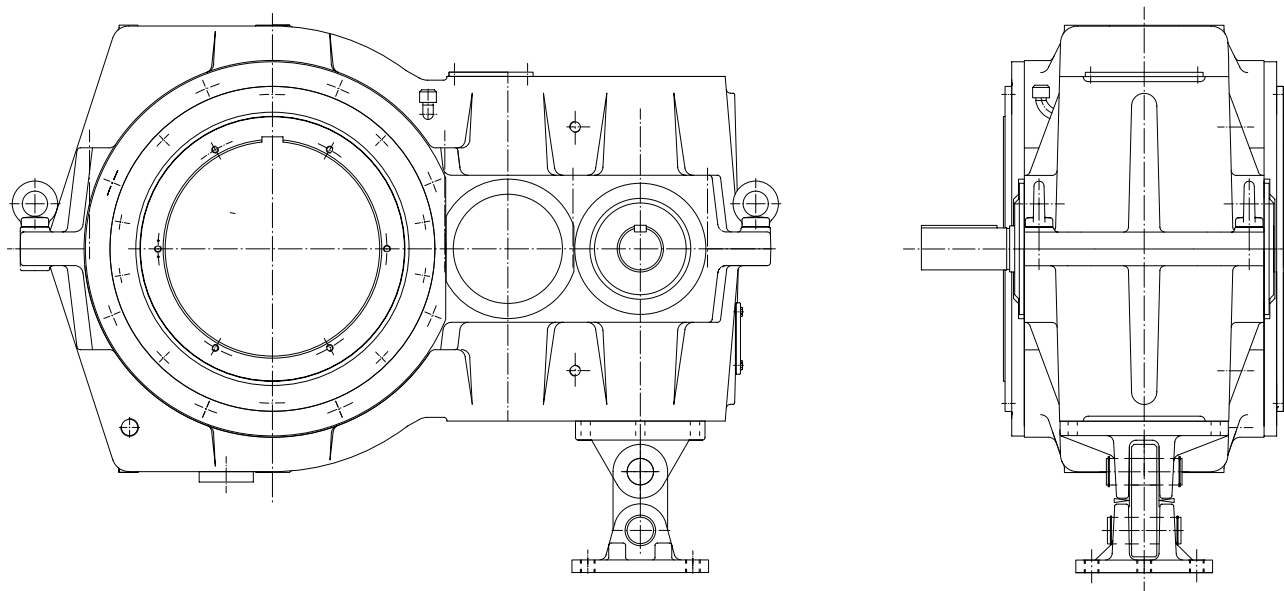


Size	n min ⁻¹	Nominal mechanical power rating / drive shaft in kW														
		Nominal ratio i_N														
2D2PHT		4.9	5.5	6.2	7.1	7.8	9.1	10.3	11.4	12.8	14.2	15.9	18.1	20.2	22.4	25.5
100	1800	1906	1730	1600	1442	1340	1210	1106	1040	962	894	828	742	664	584	482
	1500	1734	1560	1430	1306	1206	1088	996	930	860	796	710	614	528	458	422
	1200	1520	1376	1270	1150	1060	958	870	804	720	636	546	460	430	394	348
	1000	1315	1240	1130	1034	952	860	758	682	586	496	450	412	368	332	293
		5.2	5.8	6.5	7.2	8.2	9.1	10.3	11.4	12.7	14.6	16.4	18.3	20.6	23.4	26
110	1800	2543	2402	2262	2129	1968	1844	1711	1597	1500	1368	1269	1150	1024	862	777
	1500	2238	2114	1991	1874	1732	1623	1506	1405	1317	1178	1074	963	857	721	650
	1200	1915	1808	1703	1603	1482	1388	1284	1182	1080	950	864	774	689	579	552
	1000	1685	1592	1499	1411	1295	1213	1092	991	908	801	722	647	576	484	436

Size	Exact ratios i_{ex}														
	Nominal ratio i_N														
Gear Unit	5	5.6	6.3	7.1	8	9	10	11.2	12.5	14	16	18	20	22.5	25
2D2PHT100	4.900	5.545	6.189	7.056	7.840	9.091	10.303	11.364	12.762	14.205	15.938	18.063	20.168	22.409	25.500
2D2PHT110	5.1722	5.8333	6.4915	7.1734	8.1667	9.0909	10.2639	11.442	12.6263	14.5833	16.3625	18.3136	20.6318	23.3737	26

2TMG

2-stage helical gear unit

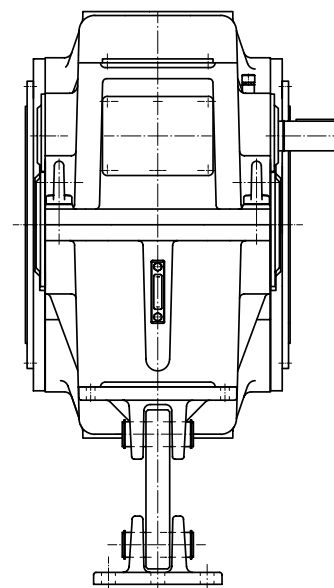
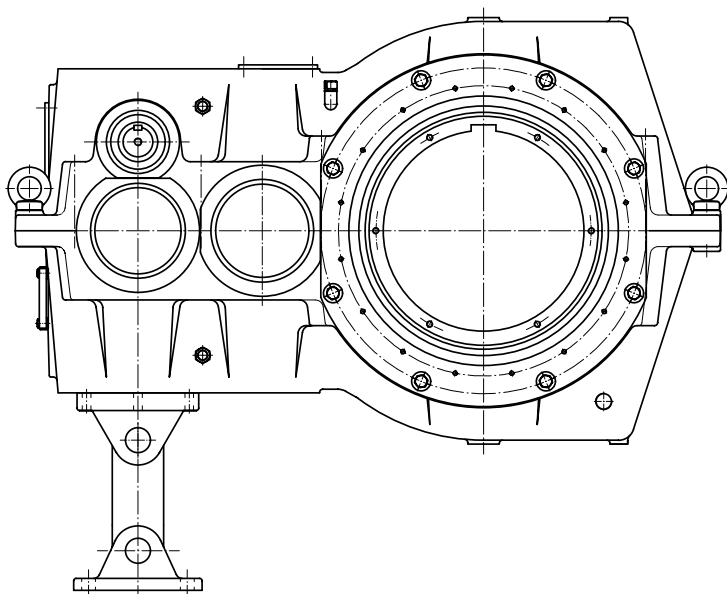


Size	n min ⁻¹	Nominal mechanical power ratings P _{N1} in kW														
		Nominal ratio i _N														
2TMG		5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0	20.0	22.5	25.0
450	1800	1237	1153	1070	1011	928	928	869	808	728	679	651	604	545	501	464
	1500	1018	1014	942	890	817	817	765	711	640	598	573	531	479	440	399
	1200	827	827	806	761	699	699	654	608	548	511	490	454	408	358	324
	1000	689	689	689	670	615	615	576	536	482	450	431	395	347	302	274
500	1800	1598	1491	1483	1368	1288	1288	1176	1098	1018	941	893	816	754	668	609
	1500	1406	1312	1221	1204	1134	1134	1035	967	896	828	786	718	664	588	536
	1200	1182	1123	1045	1030	970	970	885	827	767	708	673	614	568	494	439
	1000	985	985	919	907	854	854	779	728	675	623	592	539	488	417	371
560	1800	2674	2446	2260	2094	1901	1724	1578	1456	1355	1222	1108	1022	937	839	778
	1500	2348	2153	1989	1843	1673	1517	1389	1282	1193	1076	975	899	825	739	685
	1200	1879	1842	1701	1576	1431	1298	1188	1096	1020	920	834	769	706	632	583
	1000	1566	1566	1498	1387	1260	1142	1046	965	898	810	734	677	609	546	496

Size	Exact ratios i _{ex}														
	Nominal ratio i _N														
Gear Unit	5.0	5.6	6.3	7.1	8.0	9.0	10.0	11.2	12.5	14.0	16.0	18.0	20.0	22.5	25.0
2TMG450	5.0893	5.7750	6.4623	7.1789	8.1053	8.7778	9.8019	10.9014	12.4644	13.8419	15.9663	17.7188	20.4609	22.5482	25.1053
2TMG500	4.8864	5.5229	6.1722	7.0364	7.8182	8.8000	9.9733	11.0000	12.3538	13.7500	15.6250	17.7083	19.7727	22.4915	25.5938
2TMG560	5.0667	5.7143	6.3590	7.0270	8.0000	9.0000	10.1613	11.3276	12.5000	14.4375	16.0417	17.9545	20.2273	22.9242	25.5000

3TMG

3-stage helical gear units, vertical LSS



Size	n min ⁻¹	Nominal mechanical power ratings P _{N1} in kW															
		Nominal ratio i _N															
3TMG		25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	112	125	140
450	1800	477	434	395	371	331	303	272	238	220	187	167	155	140	124	112	97
	1500	410	369	336	316	282	258	232	199	187	156	140	132	120	104	94	82
	1200	337	304	276	280	232	212	191	159	154	126	113	108	97	84	76	57
	1000	287	299	236	221	197	181	162	133	131	105	95	91	81	70	63	57
500	1800	640	587	550	499	444	404	373	337	299	271	242	216	198	174	143	130
	1500	563	517	471	425	378	344	318	288	255	231	206	184	168	146	121	111
	1200	474	426	387	349	311	283	261	236	209	190	169	149	135	118	99	89
	1000	404	363	330	298	265	241	222	201	178	161	144	125	114	99	84	76
560	1800	819	751	682	619	558	501	452	406	375	336	306	278	251	228	204	163
	1500	712	640	581	527	475	427	385	346	319	287	261	237	214	194	174	137
	1200	585	526	477	434	390	351	317	284	262	236	214	194	176	160	143	110
	1000	498	448	407	369	333	299	270	242	224	201	183	166	150	136	122	92

Size	Exact ratios i _{ex}															
	Nominal ratio i _N															
Gear Unit	25	28	31.5	35.5	40	45	50	56	63	71	80	90	100	112	125	140
3TMG450	25.2164	28.3664	31.5713	34.1908	38.9514	43.1292	48.6435	56.1716	62.1123	71.7249	80.2084	92.5189	103.0108	115.6011	129.0455	142.2099
3TMG500	24.5249	27.6894	30.9198	34.8027	39.7123	44.2566	48.4814	54.1333	62.3333	69.6000	79.0909	90.0000	99.3749	114.6428	130.4062	144.8958
3TMG560	25.4441	28.7273	32.0788	36.0885	40.6583	45.8918	51.5848	58.1145	63.9018	71.9907	80.0795	88.9772	99.7826	111.4285	126.2856	142.5624



Maximum low speed shaft bore diameters

Maximum low speed shaft bore diameter	
2D2PHT100	430mm
2D2PHT110	540mm

Maximum low speed shaft bore diameter	
2TMG450	340mm
2TMG500	430mm
2TMG560	510mm

Lubrication, cooling and locking

Heat generated by the steam used in a typical Yankee cylinder raises the operating temperature of the gear unit and puts additional demands on cooling and lubrication requirements. David Brown Santasalo gear units can be connected to a centralised lubrication and cooling system, or supplied with a separate lubrication system as per our customers' requirements.

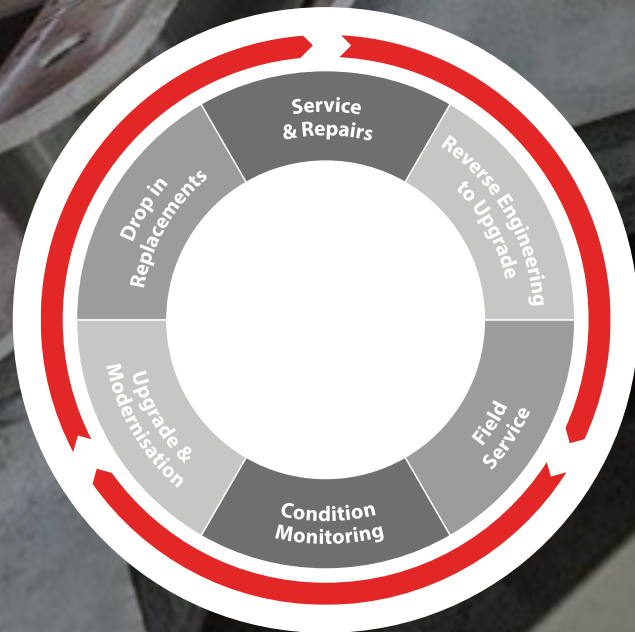
Key features of our overall system:

- Internal oil piping in the gear unit, which lubricates as well as removes heat from bearings and gears

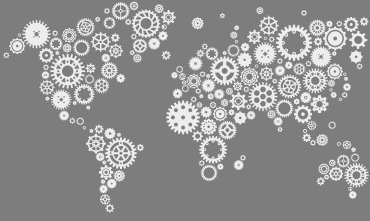
Benefits of a David Brown Santasalo lubrication system:

- A water cooled oil cooler provides heat exchange on the lubrication unit
- Dual pumps, lubrication systems and motors with one available to act as a back up in cases of low oil pressure or failure of a pump or motor
- Dual filter design enables one filter to be replaced without affecting the operation of the full system





David Brown Santasalo understands how to service mission-critical gear units to ensure optimal results and long gear unit life



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GearWatch Condition
Monitoring:

