



A2000

Shaft mounted gear units

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STIEBEL Know-How

A2000 Shaft mounted gear units

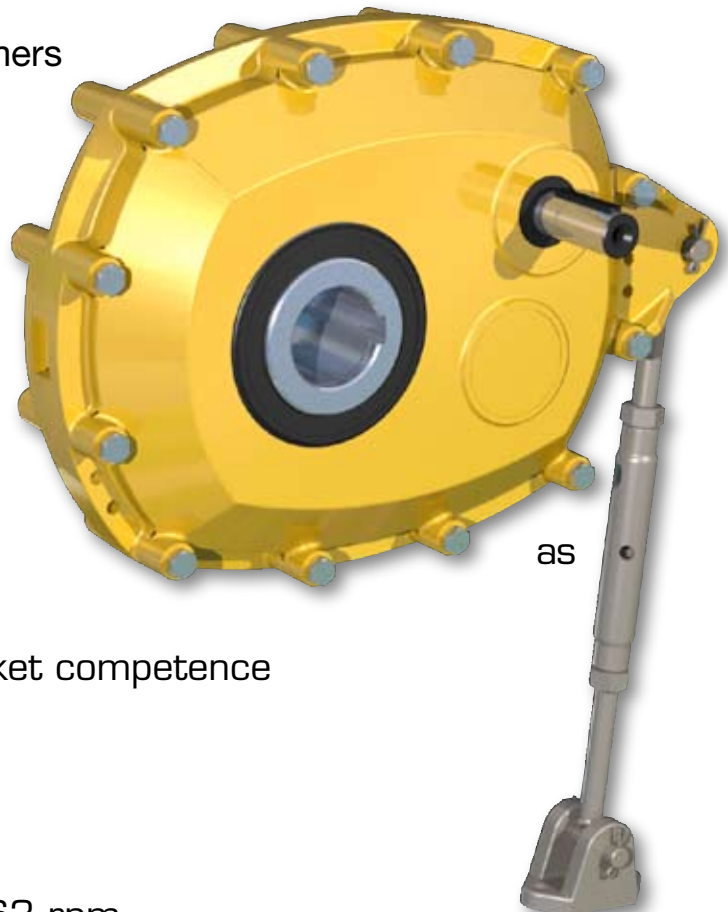
Stiebel gears have been well-known in power transmission for over 50 years. Our know-how ensures our customers products to the latest state of engineering.

Product highlights:

- compact construction, robust and reliable
- torque arm
- clamping linkage available accessory
- high safety due to Stiebel-market competence

Technical data:

- Power from 0,5 - 168 kW
- Number of revolutions 16 - 263 rpm
- Torque 150 - 20.000 Nm
- Ratios 5,7 / 7,3 / 12,5 / 20 or 31,5:1
- Backstop subsequently installable, change of rotation direction possible
- Hollow shaft diameter from 25 - 140 mm possible
- 6 possible installation positions
- V-belt drive



Baugröße 5041-5045

Documentation

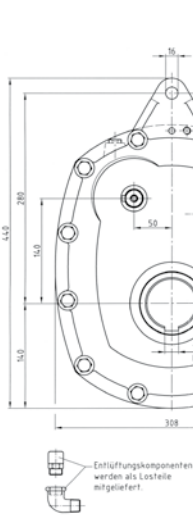
■ Spare parts list

Ersatzteilliste

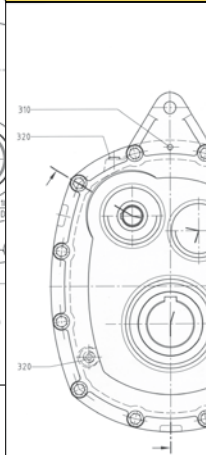
Artikel 49362 Aufsteckgetriebe 5039 00 00001

Pos.	Menge	Einheit	Ersatzteilnummer
10	1,000	STK	48668 5039 0
20	1,000	STK	48669 5039 0
40	1,000	STK	48661 5039 2
50	1,000	STK	48667 5039 2
60	1,000	STK	48662 5039 3
70	1,000	STK	48761 5039 3
80	1,000	STK	49199 5039 5
100	1,000	STK	02427 036 021
110	1,000	STK	00058 001 006
120	2,000	STK	43068 023 000
130	2,000	STK	00016 001 009
140	1,000	STK	03138 072 253
150	2,000	STK	03119 072 085
170	1,000	STK	03401 090 035
180	1,000	STK	03420 090 085
200	1,000	STK	03459 091 062
260	1,000	STK	03834 115 080
270	2,000	STK	03828 115 080
280	1,000	STK	48677 5039 6
290	12,000	STK	48684 135 010
300	12,000	STK	32191 219 000
310	2,000	STK	04730 280 008
320	4,000	STK	04985 306 166
330	1,000	STK	05148 325 166

■ Assembly drawing



■ Spare parts drawing



■ Operating instructions



Betriebsanleitung für Aufsteckgetriebe

Operating instructions
for
Shaft mounted gears

Instruction de service
de
Réducteurs à arbre creux

01



1:3.5
Aufsteckgetriebe
A2000 5033 - 5045

Gez. 01.07.03
Gepr. gb

STIEBEL-G
D-51545 Waldrath
Ausgabe



Certified quality

For more than 50 years



For more than 50 years Up-to-date production procedures and qualified staff members ensure execution in excellent quality for more than 50 years.

Reliable and stringent quality controls during the course of procedure ensure the high quality standard of our products.

Test results are determined and documented using most modern measuring instruments and testing equipment according to our standard.

The assistance of our ing.Service constantly optimizes our performance possibilities for the benefit of our customers.



The flexible run of orders as well as prompt quotations for inquiries guarantee short terms of delivery according to schedule.

Fax to +49 2291 791-298

Stiebel-Getriebebau GmbH & Co. KG

Industriestr. 12

D-51545 Waldbröl

Company:

Contact:

Street:

Postcode, Town:

Phone:

Fax:

E-Mail:

Technical Questionnaire

Type of drive

Type of driving motor:

Power: P

 kW

Revolutions: n_1

 min⁻¹

☐ Fluid coupling

☐ V-belt drive

☐ Other

☐ Shock-free

☐ Heavy shocks: k

Requested output speed: n_2

 min⁻¹

Drum Ø

 mm

Belt speed: v

 m/s

Additional input load

Axial force: F_a

 N

Radial Force: F_r

 N

applied to middle of shaft

Type of output

☐ Hollow shaft Ø

 mm

☐ Hollow shaft
shrink disk Ø

 mm

☐ Other

Required output torque

Nominal torque: T

 Nm

Maximum torque: T_{max}

 Nm

Additional output load

Axial force: F_a

 N

Radial Force: F_r

 N

applied to middle of hollow shaft

Operating conditions

Required
lifetime:

 h

Daily operating
time:

☐ 8 h

☐ 16 h

☐ 24 h

☐ or

 h

Duty factor: ED

 %

based on 8 h operation time

Environment:

☐ Normal

☐ Dusty

☐ Humid

☐ Other

Ambient temperature: Maximum

 °C

Minimum

 °C



Service factors

k1, factor for driven machine and daily operating time		
Prime mover: electric motor, turbine		
Driven machine	Daily operating time	
	up to 10 h	up to 24 h
Uniform load without shock, little inertia: continuous conveyors for bulk goods, light conveyors, centrifugal pumps	1,0	1,3
Uniform load with small shocks and little inertia: conveyors, fluid agitators, machine tools, mixers, textile machines, vanes and centrifugal pumps, compressors, fans	1,1	1,5
Moderate shock load with medium inertia: bucket conveyors, rotary furnaces, printing and dyeing machines, conveyor drums, centrifugal pumps and semifluid good agitators, grinding and wood working machines, generators, elevators	1,2	1,8
Medium shock load with medium inertia: concrete mixers, shapes and planers, piston compressors and pumps, cranes and cable winches, chain transports, passenger lifts	1,3	2,0
Heavy shock load with high inertia: beating mills, weaving looms, hammers, ramming machines, excavator drives, presses, cutter and punching machines without flywheel, small rolling mills, calenders	1,5	2,2
Heavy shock load with very high inertia: heavy duty rolling mills and stone crushers, piston compressors and piston pumps without flywheel	1,8	2,5

k2, factor for duty cycle ED					
Duty cycle per hour in %	100	80	60	40	20
k2	1,0	0,94	0,86	0,74	0,56

The starting torque should not exceed 2.5 times the nominal torque of the gearbox!

k3, factor for starts per hour						
starts per hour	≤ 10	11 - 25	26 - 50	51 - 100	101 - 250	251 - 600
k3	0,9	1,0	1,1	1,3	1,5	1,7

Survey of performances

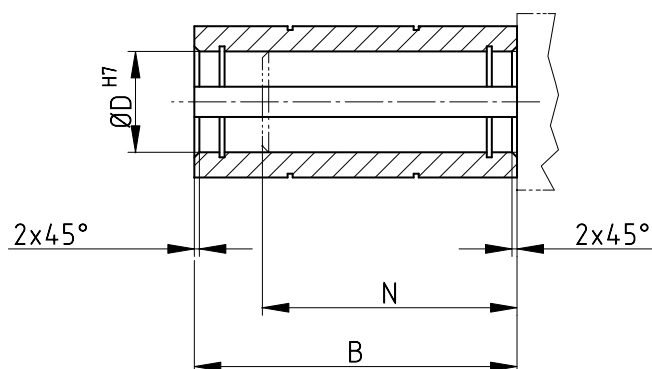
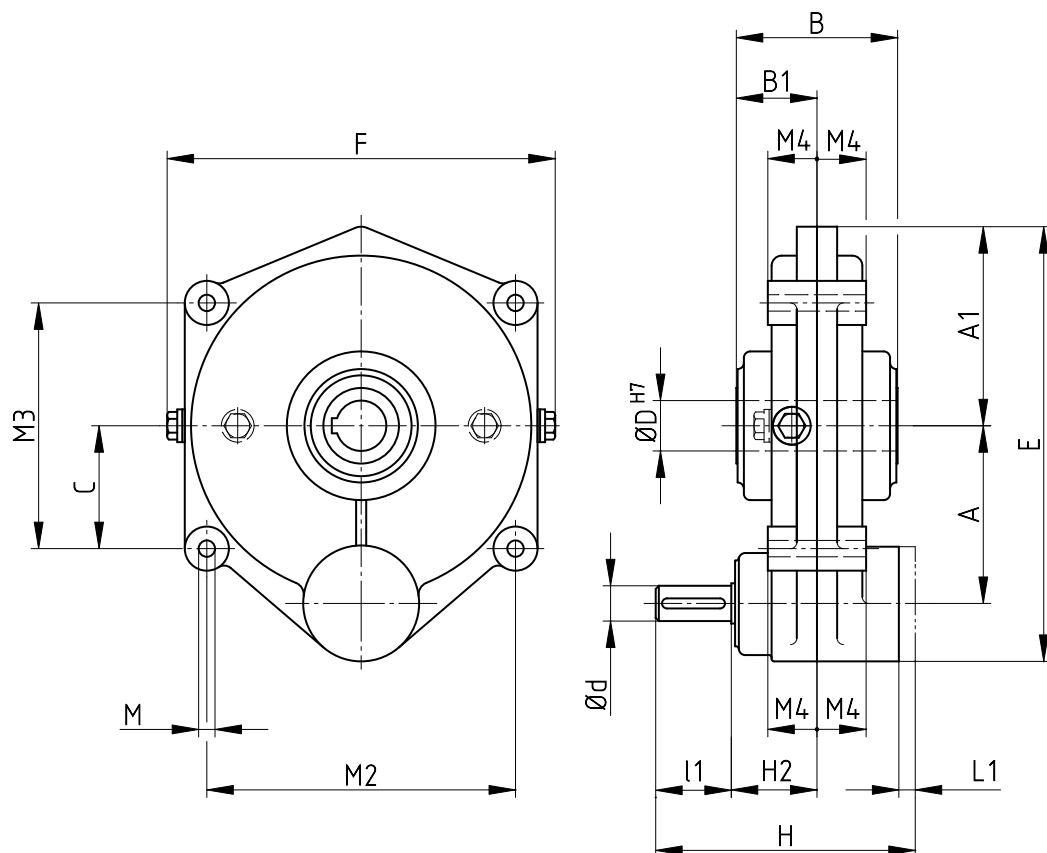
A2000 Shaft mounted gear units

i	Revs (n_1/n_2) min ⁻¹	Type	0010	0015	0016	0018	0020	0030	0040	0050	0060
		T _{2 max} [Nm]	150	450	600	800	1000	1300	2000	3500	6000
5,7		P _{max} [kW]									
	1500/263		4,1	12,4	16,5	22					
	1250/219		3,4	10,3	13,8	18,4					
	1000/175		2,8	8,3	11	14,7					
	750/131		2,1	6,2	8,3	11					
	600/105		1,7	5	6,6	8,8					
	500/88		1,4	4,1	5,5	7,3					
	400/70		1,1	3,3	4,4	5,9					
7,3		P _{max} [kW]									
	1500/205		3,2	9,7	12,9	17,2	21,5	28	43	75,3	129,1
	1250/171		2,7	8,1	10,8	14,3	17,9	23,3	35,9	62,8	107,6
	1000/137		2,2	6,5	8,6	11,5	14,3	18,6	28,7	50,2	86,1
	750/103		1,6	4,8	6,5	8,6	10,8	14	21,5	37,7	64,5
	600/82		1,3	3,9	5,2	6,9	8,6	11,2	17,2	30,1	51,6
	500/68		1,1	3,2	4,3	5,7	7,1	9,3	14,3	25,1	43
	400/55		0,9	2,6	3,4	4,6	5,8	7,5	11,5	20,1	34,4

i	Revs (n_1/n_2) min ⁻¹	Type	5033	5035	5037	5039	5041	5043	5045	5047	5049	5051	5053
		T _{2 max} [Nm]	300	600	900	1400	2050	3500	5100	7800	11.000	14.000	20.000
12,5		P _{max} [kW]											
	1800/144				13,6	21	30,9	35	45	75	100	126	192
	1500/120		3,8	7,5	11,3	17,6	25,8	32	45	65	95	120	175
	1000/80		2,5	5,1	7,5	11,7	17,2	29,3	40	60	92,2	117	168
	750/60		1,9	3,8	5,7	8,8	12,9	22	32	49	69,1	88,0	125,7
	500/40		1,3	2,5	3,8	5,9	8,6	14,7	21,4	32,7	46,1	58,6	83,7
20		P _{max} [kW]											
	1800/90		2,8	5,7	8,5	13,2	19,3	30	40	62	65	120	160
	1500/75		2,4	4,7	7,1	11	16,1	27,5	35	58	62	110	157
	1000/50		1,6	3,1	4,7	7,3	10,7	18,3	26,7	40,8	57,6	73,3	105
	750/37		1,2	2,3	3,5	5,4	7,9	13,6	19,8	30,2	42,6	54,3	77,5
	500/25		0,8	1,6	2,4	3,7	5,4	9,2	13,4	20,4	28,8	36,6	52,4
31,5		P _{max} [kW]											
	1800/57		1,8	3,6	5,4	8,4	12,2	20,9	26	40	58	83,6	119,4
	1500/47		1,5	3	4,4	6,9	10	17,2	25,1	38,4	54,1	68,9	98,4
	1000/31		1,0	2	2,9	4,6	6,7	11,4	16,6	25,3	35,7	45,5	64,9
	750/23		0,7	1,5	2,2	3,4	4,9	8,4	12,3	18,8	26,5	33,7	48,2
	500/16		0,5	1,0	1,5	2,4	3,4	5,9	8,6	13,1	18,4	23,5	33,5



Type 0010 - 0018



N = maximum shaft length

Shaft keyway for circlip
acc. to DIN 472

Tolerance for shaft ends:
 $\varnothing \leq 50\text{mm}$ ISO k6
 $\varnothing > 50\text{mm}$ ISO m6

Keyways acc. to DIN
6885 p. 1

Shaft centerings acc. to
DIN 332 p. 2

Housing material: aluminium alloy

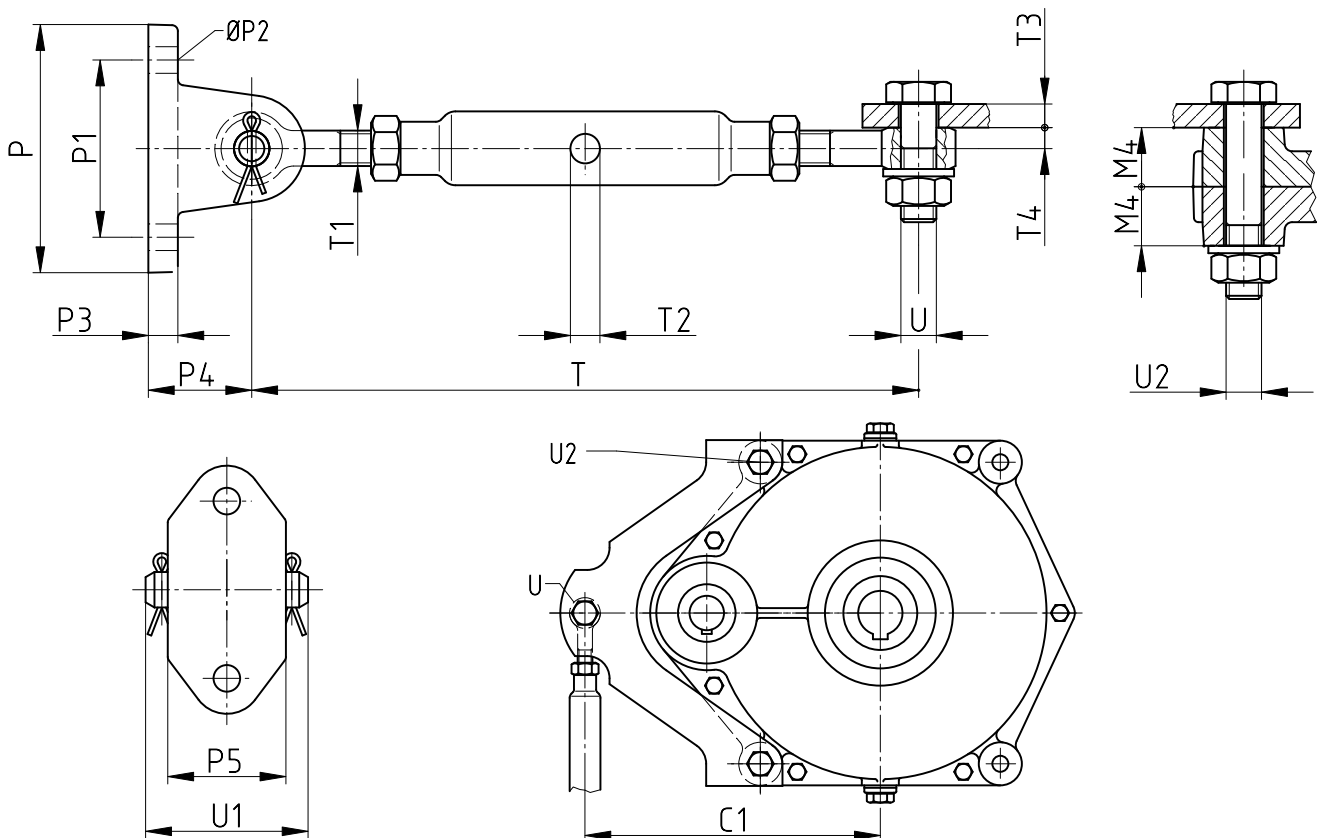
Type 0010 - 0018

**Dimensions gearbox
(in mm)**

Type	A	A1	B	B1	C	D	E	F	H	H2	L1	M	M2	M3	M4	N	d	l1	Weight. ~ kg
0010	90	106	82	41	65	25	233	190	132	43	19	9,5	170	130	20	--	18	30	5,5
0015	141	155	95	47,5	97,5	40/35/30	338	297	153	49	24	13	245	195	25	72	25	40	11,5
0016	141	158	128	64	97,5	45/40/35	345	306	206	68	13	13	245	195	39	101	28	60	17
0018	141	145	136	68	97,5	50/45/40	357	290	237	70	--	13	245	195	50	113	30	80	22

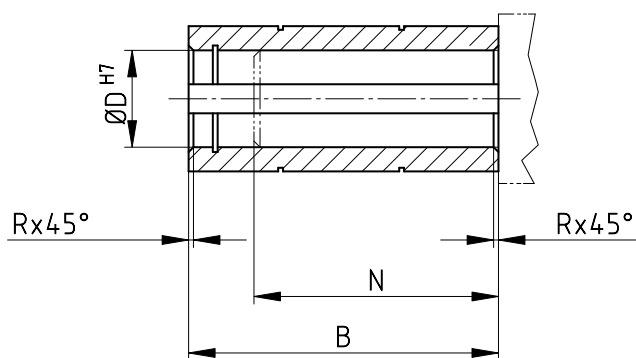
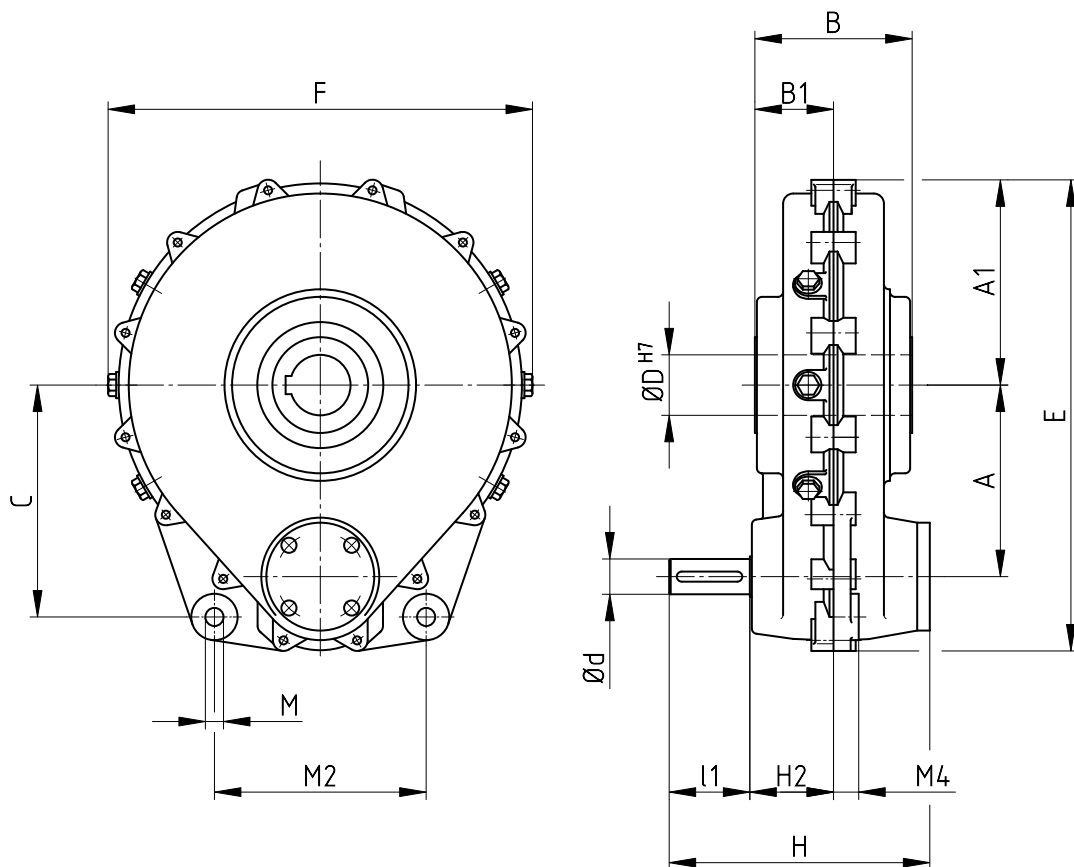
**Dimensions clamping linkage
(in mm)**

Gearbox size	Order no. clamp- ling linkage	C1	P	P1	P2	P3	P4	P5	T	T1	T2	T3	T4	U	U1	U2
0010	8010.07	240	84	60	9	10	35	40	240-320	M12	10	6	7	M12	55	M8
0015	8010.08	240	84	60	9	10	35	40	240-320	M12	10	8	7	M12	55	M12
0016	8010.09	240	84	60	9	10	35	40	240-320	M12	10	8	7	M12	55	M12
0018	8010.10	240	84	60	9	10	35	40	240-320	M12	10	8	7	M12	55	M12





Type 0020 - 0060



N = maximum shaft length

Shaft keyway for circlip
acc. to DIN 472

Tolerance for shaft ends:
 $\varnothing \leq 50\text{mm}$ ISO k6
 $\varnothing > 50\text{mm}$ ISO m6

Keyways acc. to DIN
6885 p. 1

Shaft centerings acc. to
DIN 332 p. 2

Housing material: aluminium alloy

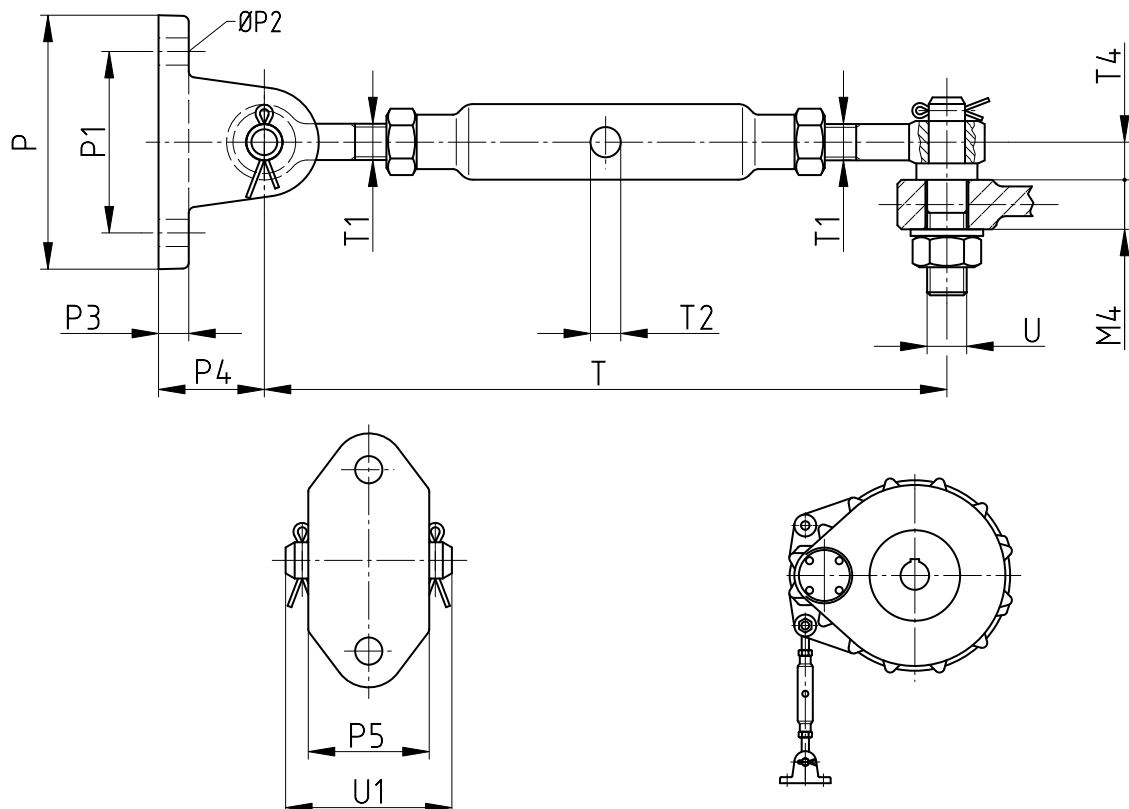
Type 0020 - 0060

**Dimensions gearbox
(in mm)**

Type	A	A1	B	B1	C	D	E	F	H	H2	M	M2	M4	N	R	d	l1	Weight. ~kg
0020	141	148	136	68	170	50/45/40	350	310	237	70	15	170	20	113	2	30	80	22
0030	190	204	156	78	230	65/60/50	468	436	259	83	18	210	25	156	2	35	80	45
0040	210	223	184	92	260	70/65/60	517	475	306	95	22	225	30	184	2	40	100	65
0050	240	253	220	110	300	90/85/70	590	530	362	115	26	280	30	220	3	50	110	102
0060	280	300	250	125	350	100/95/85	700	600	445	140	26	280	45	250	3	50	110	160

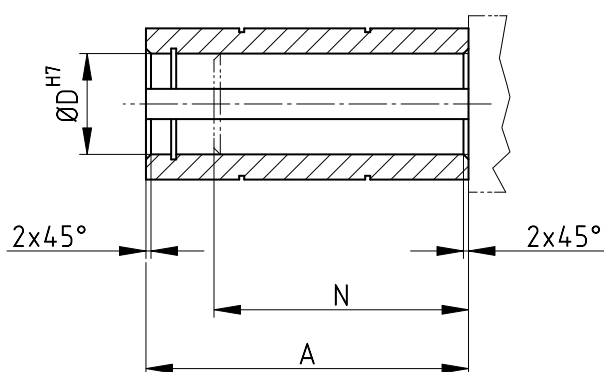
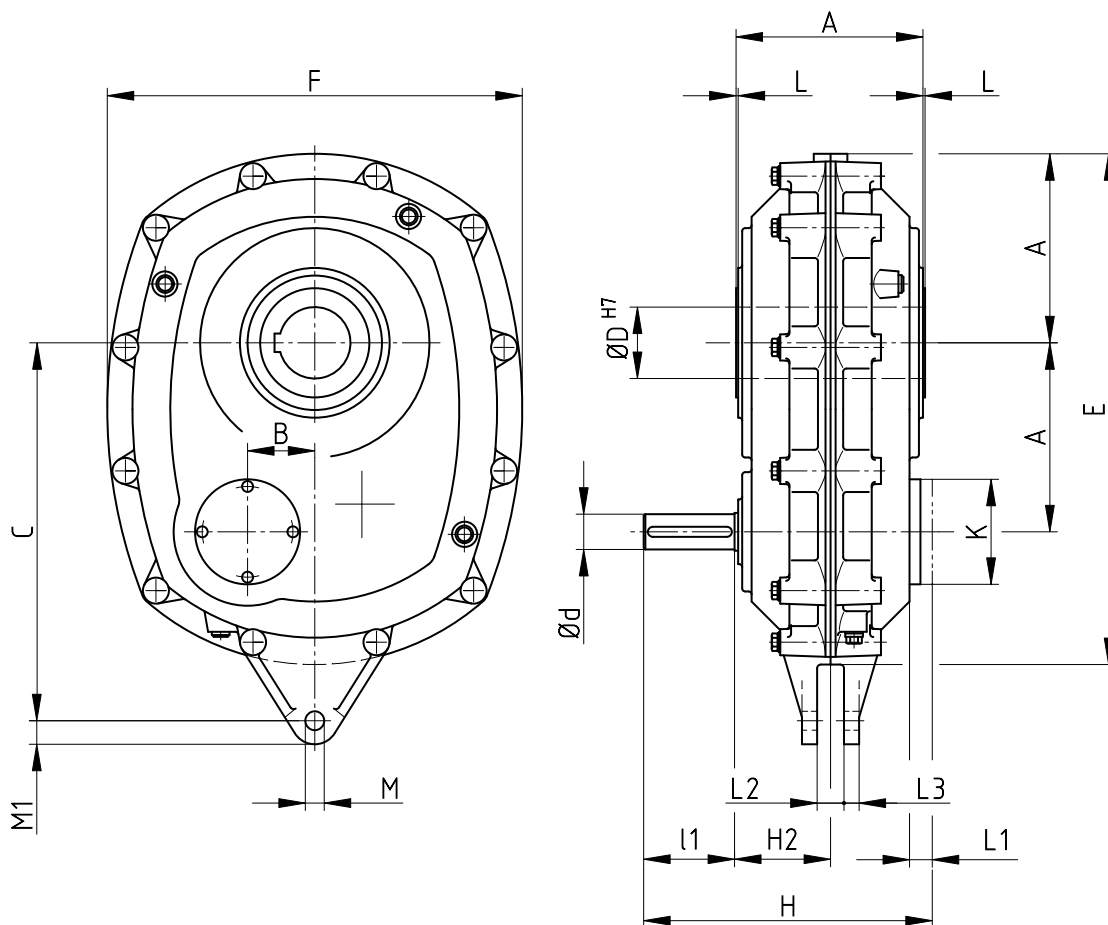
**Dimensions clamping linkage
(in mm)**

Gearbox size	Order no. clamping linkage	P	P1	P2	P3	P4	P5	T	T1	T2	T4	U	U1
0020	8010.11	94	70	11	12	42	50	300-400	M16	10	16,5	M14	70
0030	8010.12	94	70	11	12	42	50	300-400	M16	10	16,5	M16	70
0040	8010.13	115	85	13	15	50	60	400-500	M20	12	21	M20	85
0050	8010.14	136	100	17	20	60	70	500-650	M24	12	22,5	M24	100
0060	8010.14	136	100	17	20	60	70	500-650	M24	12	22,5	M24	100





Type 5033 - 5045



N = maximum shaft length

Shaft keyway for circlip
acc. to DIN 472

Tolerance for shaft ends:
 $\varnothing \leq 50\text{mm}$ ISO k6
 $\varnothing > 50\text{mm}$ ISO m6

Keyways acc. to DIN
6885 p. 1

Shaft centerings acc. to
DIN 332 p. 2

Housing material: grey cast iron

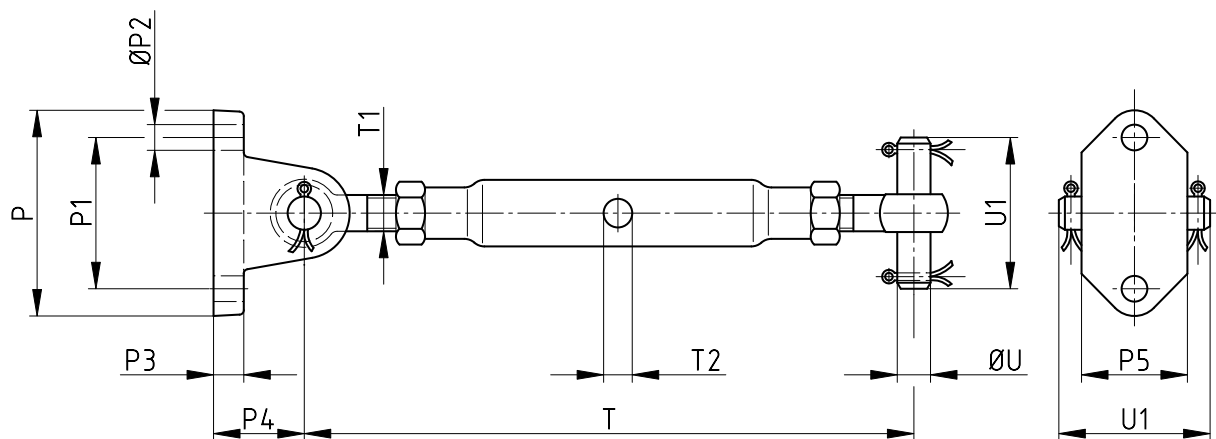
Type 5033 - 5045

**Dimensions gearbox
(in mm)**

Type	A	B	C	D	E	F	H	H2	K	L	L1	L2	L3	M	M1	N	d	l1	Weight. ~kg
5033	100	35	200	25/30	270	220	148	50	65	2	8	17	10	12	15	80	15	40	17
5035	112	40	225	40/35/30	302	246	160	56	75	2	8	17	10	12	16	92	19	40	23
5037	125	45	250	50/45/35	338	275	183	62,5	75	2	8	21	12	16	20	98	22	50	30
5039	140	50	280	65/60/55	378	308	197	70	100	3	5	21	12	16	20	113	24	50	48
5041	160	56	315	75/70/65	430	352	216	80	--	2	--	27	14	18	25	130	28	60	71
5043	180	63	355	80/75/70	486	396	258	90	--	2	--	27	14	18	25	150	32	80	100
5045	200	70	400	85/80/75	540	440	275	100	--	2	--	32	16	22	28	170	38	80	130

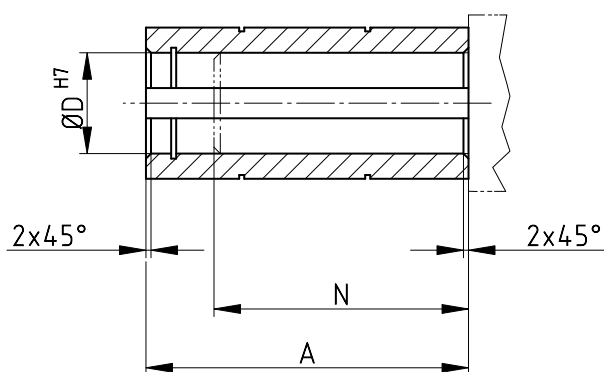
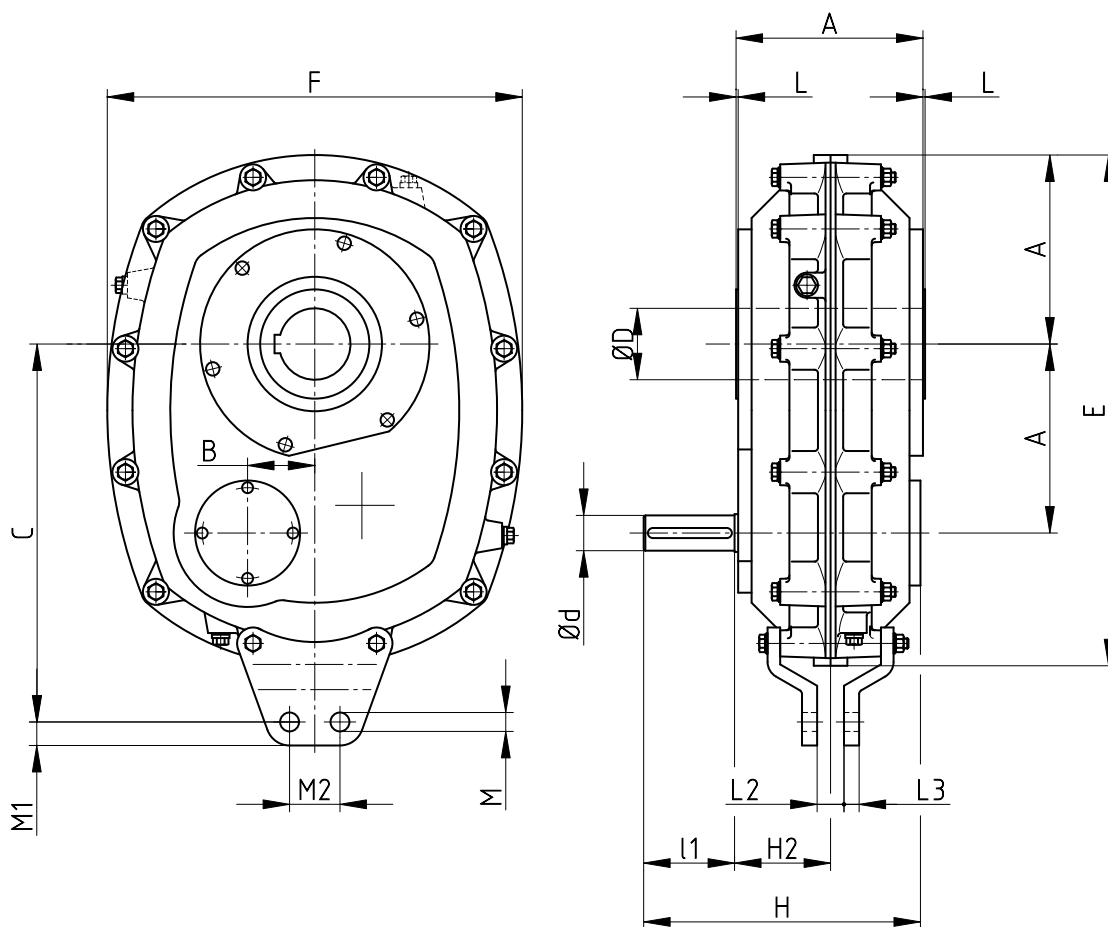
**Dimensions clamping linkage
(in mm)**

Gearbox size	Order no. clamping linkage	P	P1	P2	P3	P4	P5	T	T1	T2	U	U1
5033/5035	8010.01	84	60	9	10	35	40	240-320	M12	10	12	55
5037/5039	8010.02	94	70	11	12	42	50	300-400	M16	10	16	70
5041/5043	8010.03	115	85	13	15	50	60	400-500	M20	12	18	85
5045	8010.04	136	100	17	20	60	70	500-650	M24	12	22	100





Type 5047 - 5053



N = maximum shaft length

Shaft keyway for circlip
acc. to DIN 472

Tolerance for shaft ends:
 $\varnothing \leq 50\text{mm}$ ISO k6
 $\varnothing > 50\text{mm}$ ISO m6

Keyways acc. to DIN
6885 p. 1

Shaft centerings acc. to
DIN 332 p. 2

Housing material: nodular cast iron

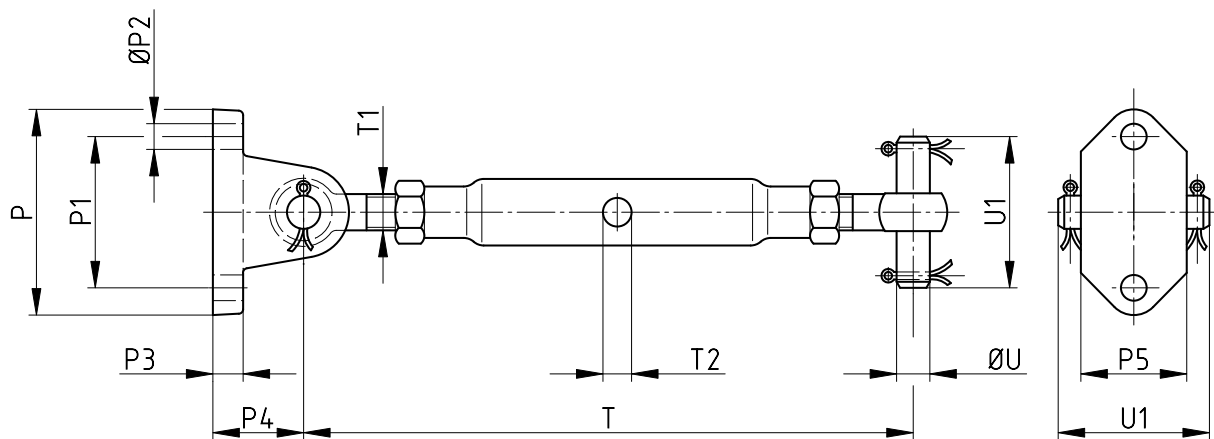
Type 5047 - 5053

**Dimensions gearbox
(in mm)**

Type	A	B	C	D	E	F	H	H2	L	L2	L3	M	M1	M2	N	d	l1	Weight. ~kg
5047	225	80	450	90/85/80	608	494	330	112,5	2,5	32	18	22	28	60	185	42	110	172
5049	250	90	500	110/100/90	675	550	356	125	3	38	20	28	32	70	210	48	110	247
5051	280	100	560	130/120 110/100	758	618	385	140	4	38	22	28	32	70	240	55	110	333
5053	310	110	630	140/130 125/120	842	686	445	155	5	48	24	32	36	90	270	60	140	460

**Dimensions clamping linkage
(in mm)**

Gearbox size	Order no. clamping linkage	P	P1	P2	P3	P4	P5	T	T1	T2	U	U1
5047	8010.04	136	100	17	20	60	70	500-650	M24	12	22	100
5049/5051	8010.05	164	120	22	25	75	90	600-750	M30	16	28	120
5053	8010.06	164	120	22	25	75	90	700-850	M36	16	32	140





Additional loads

The following table lists the additional forces applied to the midpoint of the shaft / hollow shaft center. The listed values are based on service factor $k_1 = 1$. For shock loading applications the appropriate service factor has to be taken into consideration also here.

Gearbox type	Admissible additional force F_w [N]	
	Input	Output
0010	600	6000
0015	900	7500
0016	1200	9000
0018	1500	10.000
0020	1500	10.000
0030	2000	12.000
0040	3000	16.000
0050	4000	20.000
0060	5000	25.000
5033	710	3780
5035	900	4800
5037	1100	6000
5039	1280	7560
5041	1790	10.800
5043	2800	13.440
5045	2370	16.800
5047	4470	21.600
5049	5670	26.880
5051	6360	33.600
5053	7875	42.600

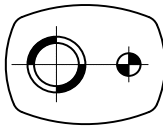
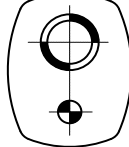
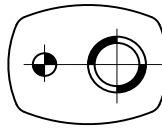
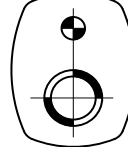
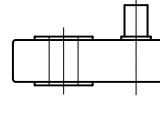
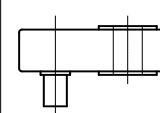
The intended application of the gears of the series A2000 comprises the drive of:

- continuous and discontinuous materials handling equipment
- handling equipment
- automation technology
- general drive technology

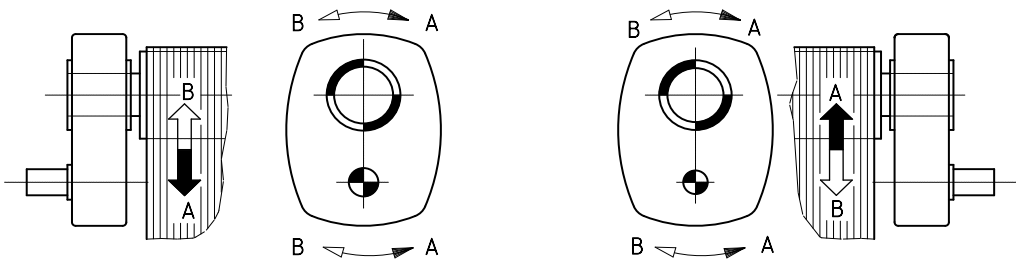
The gearboxes are operated in free ambient air. In the event of different applications, high-wear and/or corrosive materials and ambient conditions, special design features may be required in individual cases. Please consult us in such cases.

Installation positions

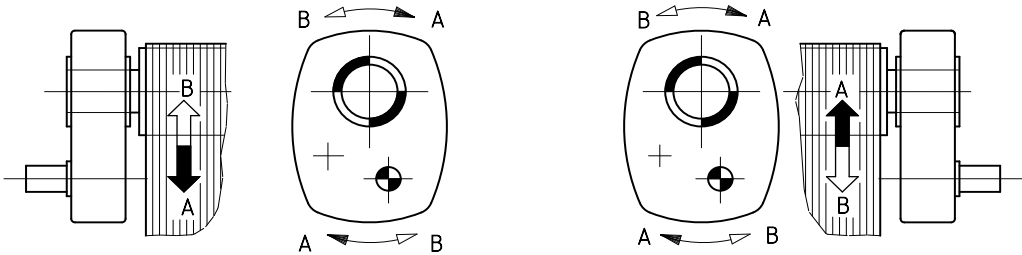
classification number

					
0	1	2	3	4	5
Special installation position, on request without backstop					

stop direction 0010-0060

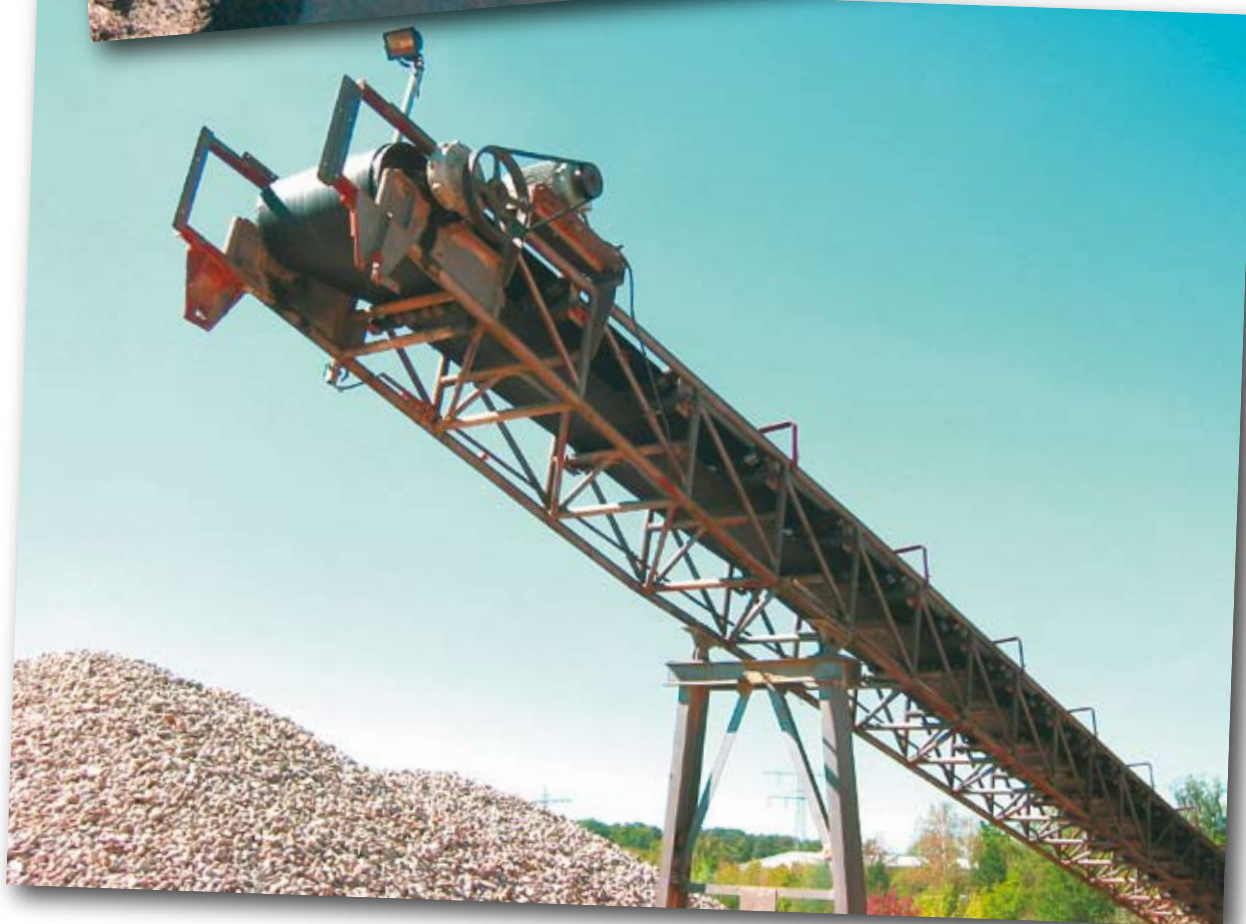


stop direction 5033 - 5053



A = stop direction A
B = stop direction B

L = backstop as loose piece for supplementary installation

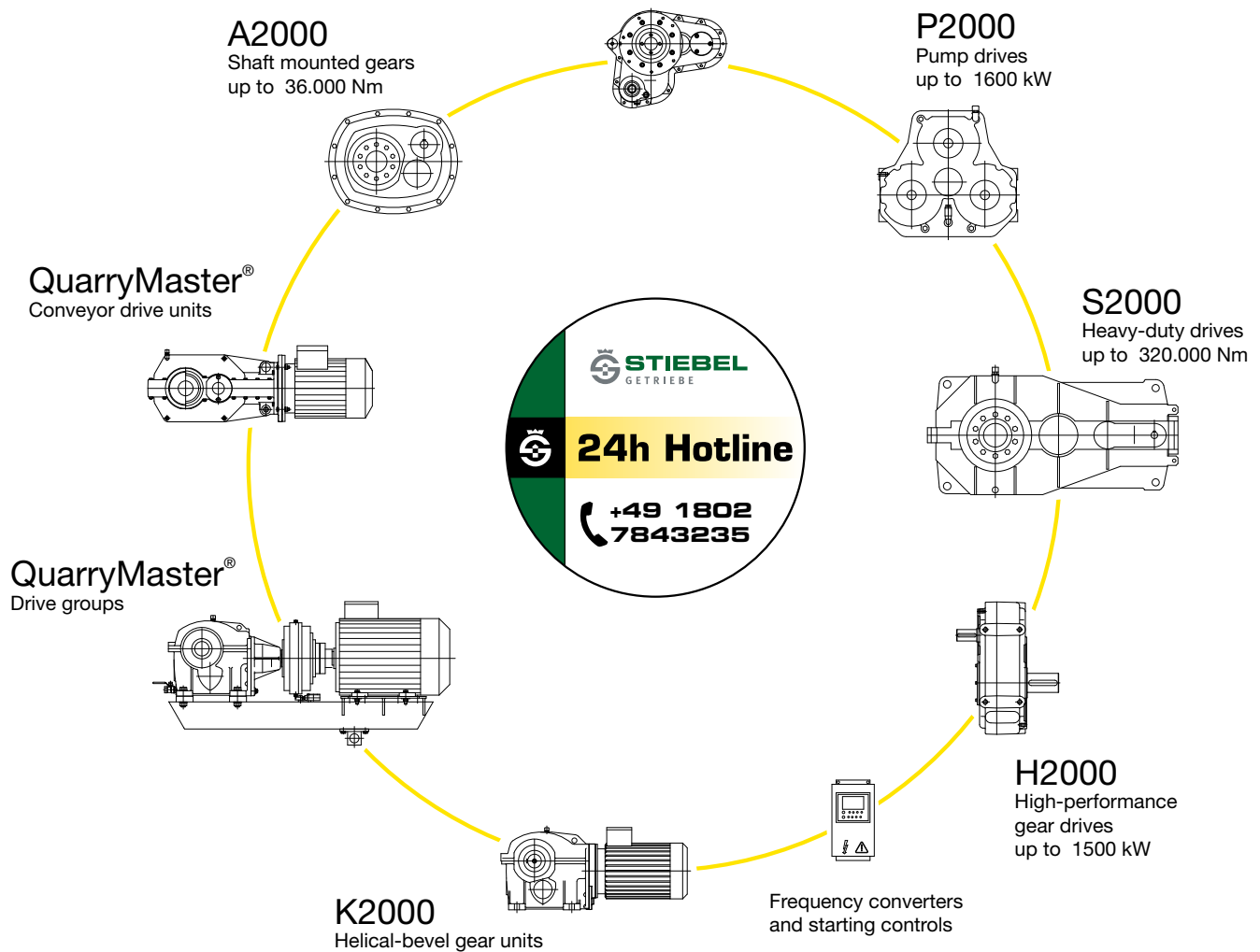


Type of lubricant	Mineral oil		Synthetic oil				Grease	
	CLP DIN 51517		PAO		PGLP		Fluid Grease	Roller bearings
Kinem. viscosity at 40°C mm²/s	220	100	220	100	220	100		
Ambient temp. in [°C]	-5 to 35	-15 to 25	-25 to 80	-35 to 60	-25 to 80	-35 to 60	-35 to 100	-35 to 100
	Degol BG 220	Degol BG 100	Degol PAS 220	-	Degol GS 220	-	Aralub MFL 00	Aralub HL2
	Energol GR-XP 220	Energol GR-XP 100	Energol HTX 220	-	Energol SG-XP 220	-	Energol LS EP 00	Energol LS2
	Alpha MW 220 SP 220	Alpha MW 100 SP 100	Alphasyn T 220	Alphasyn T 100	Alphasyn PG 220	-	CLS-Grease	Spheerol AP2
	Carter EP 220	Carter EP 100	Carter SH 220	Carter SH 100	Carter SY 220	Carter SY 100	-	-
	Falcon CLP 220	Falcon CLP 150	Intor HCLP 220	-	Polydea CLP 220	-	-	Glissando 20
	Spartan EP 220	Spartan EP 100	Spartan Synthetic EP 220	-	Glycolube 220	-	Fibrax EP 370	Unirex N2
	Renolin CLP 220 Plus	Renolin CLP 100 Plus	Renolin Unisyn CLP HC 220	Renolin Unisyn CLP HC 100	Renolin PG 220	Renolin PG 100	-	-
	Mobilgear 630 Mobilgear XMP 220	Mobilgear 627 Mobilgear XMP 100	Mobilgear SHC XMP 220	Mobilgear SHC XMP 100	Mobilgear Glygoyle 30	Mobilgear Glygoyle 11	Mobilux EP004	Mobilux 2
	Klüberoil GEM 1-220	Klüberoil GEM 1-100	Klübersynth EG 4-220	-	Klübersynth GH 6-220	Klübersynth GH 6-100	Klübersynth GE 46-200	Isoflex Topas NB52
	Agip Blasias 220	Agip Blasias 100	Agip Blasias SX 220	Agip Blasias SX 100	Agip Blasias S 220	Agip Blasias S 150	GR MU EPO (GPOK-40)	Longtime Grease 2 (KPE2N-40)
	Gear Compound EP 220	Gear Compound EP 100	Synthetic Gear Lubricant Tegra 220	-	-	-	Dura-Lith Grease EP0	Ulti-Plex Synthetic Grease EP
	Shell Omala Oil 220	Shell Omala Oil 100	Shell Omala Oil HD 200	-	Shell Tivela Oil WB 220	Shell Tivela Oil WA 150	Tivela Compound A	Aeroshell Grease 7
	Ultra 220 Optigear BM 220	Ultra 100 Optigear BM 100	Synthetic A 200	Synthetic A 100	Optiflex A 220	Optiflex A 100	Longtime PD00	Olit 2EP



Products

Special gear units





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