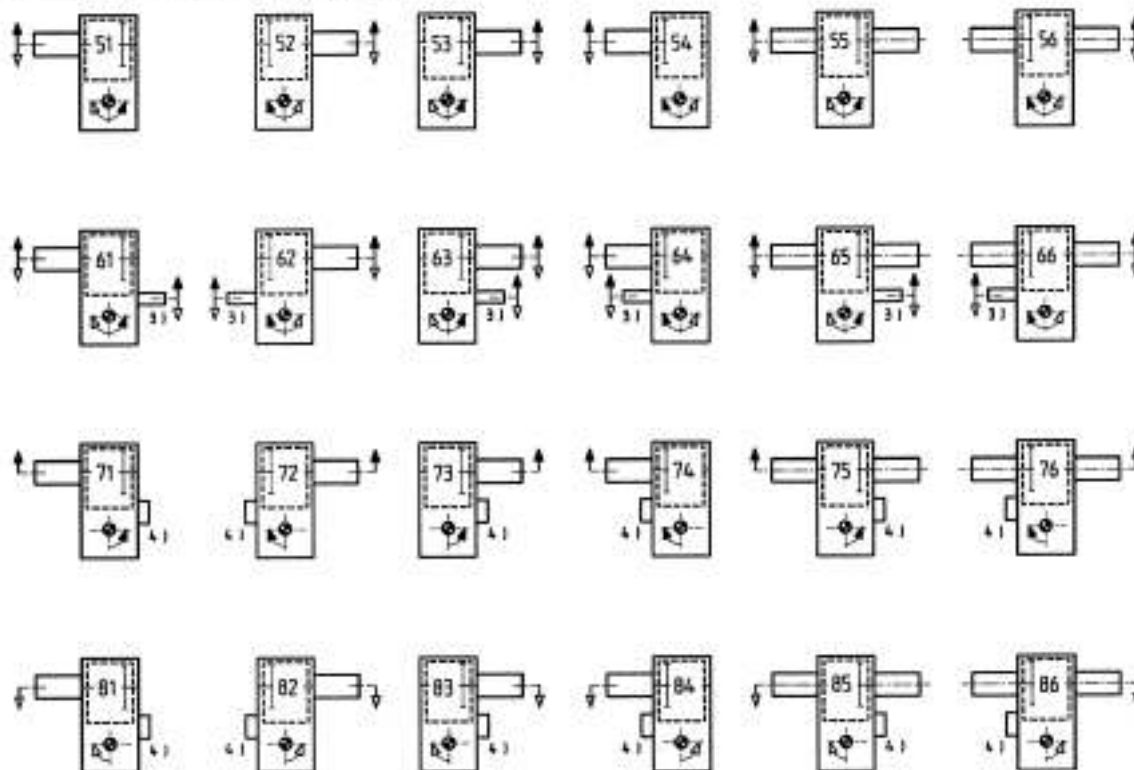




Location of input and output shafts

Directions of rotation viewing \vec{i}



- 3) Add. shaft extension (900-1200-...)
- 4) Backstop, see 900-1254-MB1

KPWD22-T66 -V51- 250- Z 0

Example

- [z] Add. cooling
- [0] Without add. cooling

Nominal ratio

Location of shafts
Permissible direction of rotation

Output shaft
[V] Solid shaft
[F] Flange shaft

Mounting arrangement

[H] Hollow shaft with key-way
[G] Hollow shaft with shrink disc

5)

- [0] Shaft mount. with torque arm
- [1] Wall mounted
- [3] Wall mounted
- [4] Wall mounted
- [6] Foot mounted

[T6] Vertical mounting gear unit with right angle shafts, high speed shaft below

Size

Bevel-helical gear unit, POSIRED 2, [WD] 4 stage

Motor attachment

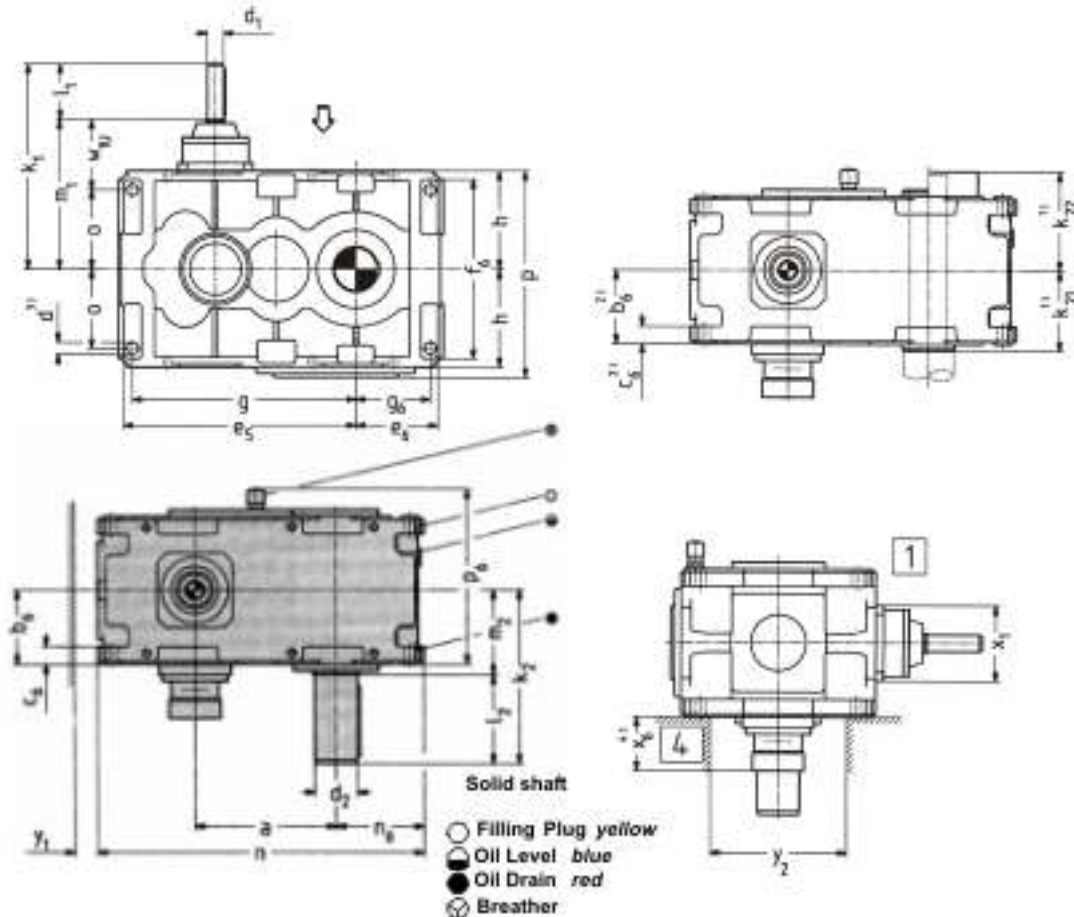
- [J] Motor bracket, base plate
- [K] Motor bell housing
- [M] Adjustable motor base



Dimensions

Type **PWC 14-U4 ... PWC 31-U4**

Add. lubrication required, please check-back



Type	Input shaft						Output shaft						Weight [kg]	Oil filling [l]
	d_1	k_1	l_1	m_1	x_1	y_1	d_2	k_2	l_2	m_2	x_2	y_2		
PWC 14	25 _{h6}	312	85	227	148	100	65	270	135	135	-	210	125	10
PWC 16	25 _{h6}	312	85	227	148	100	65	290	145	145	-	270	180	15
PWC 18	40 _{h6}	406	120	286	190	100	95	350	170	180	-	270	255	26
PWC 20	40 _{h6}	406	120	286	190	100	120	370	190	180	-	340	345	34
PWC 22	50 _{m6}	447	120	327	225	100	130	405	190	215	-	330	470	48
PWC 25	50 _{m6}	447	120	327	225	100	145	450	230	220	-	390	605	52
PWC 28	60 _{m6}	522	145	377	255	100	160	480	230	250	-	400	785	82
PWC 31	60 _{m6}	522	145	377	255	100	175	540	290	250	-	470	1075	93

Tapped centre holes in shaft ends DIN 332 Form D8			
d_1, d_2			
25	40...50	60...85	> 85
M 10	M 16	M 20	M 24

Type of protection as per IP 55

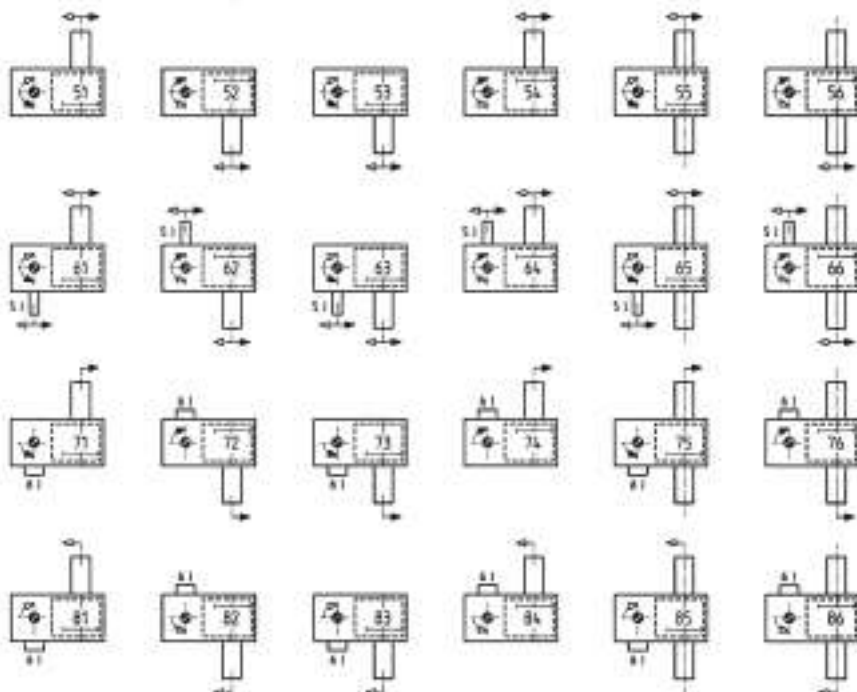
Type	a	$b_{-0.2}$	$c_{-0.2}$	d_{H9}	$e_{-0.2}$	$e_{-0.2}$	$f_{-0.2}$	g	$g_{-0.2}$	$h_{-0.2}$	n	$n_{-0.2}$	o	p	$p_{-0.2}$	$p_{-0.2}$	Fitting		W10	$x_{-0.2}$
																	d_{H9}	d_{sX} (max 3)		
PWC 14	216	113	27	16	357	126	274	344	113	150	500	134	121	333	-	270	16	M14x65	106	130
PWC 16	272	113	27	16	413	175	334	400	162	180	605	183	151	313	-	270	16	M14x85	76	130
PWC 18	293	147	32	22	475	162	348	458	145	190	654	171	155	419	-	340	22	M20x80	131	130
PWC 20	347	147	32	22	528	218	418	511	201	225	784	227	190	489	-	340	22	M20x80	96	130
PWC 22	376	179	41	26	600	200	426	580	180	235	826	215	190	513	-	416	26	M24x100	137	130
PWC 25	434	179	41	26	658	256	486	638	238	265	940	271	220	573	204	416	26	M24x100	107	130
PWC 28	464	210	48	33	731	245	508	706	221	280	1000	256	227	610	246	480	33	M30x120	160	130
PWC 31	532	210	48	33	798	307	578	773	282	315	1137	325	262	680	239	480	33	M30x120	115	130

- 1) Dimensions of hollow shaft and machine shaft on request
- 2) Torque arms see dimensions 900-0253-MB1
- 3) Holding down bolts of min. property class 10.9
- 4) Available for shaft d_1 : $n = 1000 \text{ min}^{-1}$; lower speed on request.



Location of input and output shafts

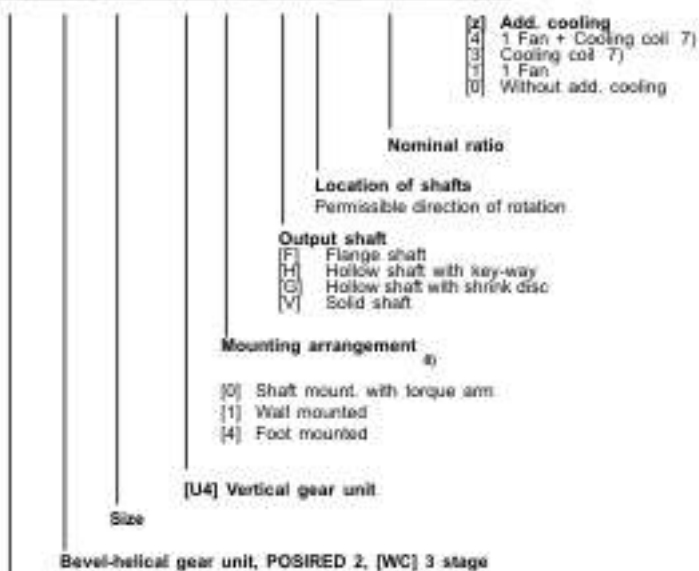
Directions of rotation viewing II



5) Add. shaft extension (900-1200-...)
6) Backstop, see 900-1254-MB1

KPWC22-U4 4-V51- 25 - Z 3

Example



Motor attachment

- [J] Motor bracket, base plate
- [M] Adjustable motor base
- [K] Motor bell housing

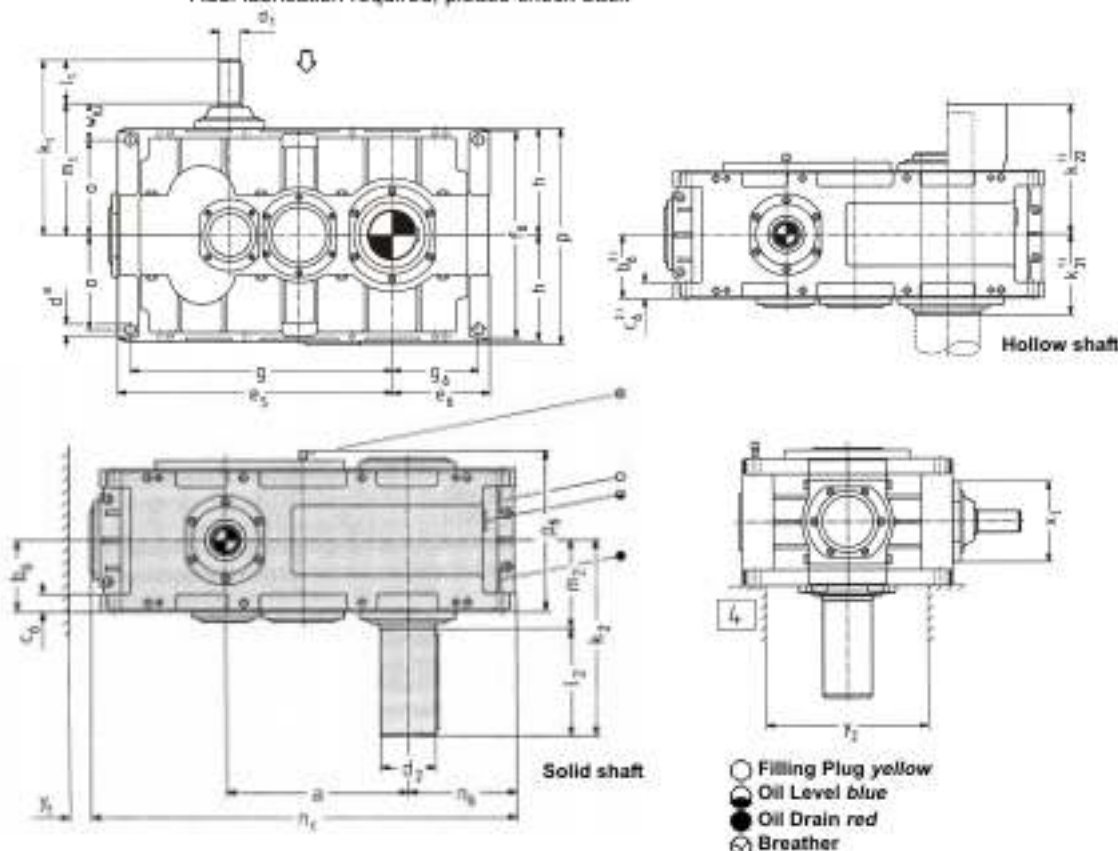
7) Only location of shafts : .2, .4 and .6
8) See dimension sheet 900-0220-MB9



Dimensions

Type PWC 35-U4 ... PWC 67-U4

Add. lubrication required, please check-back



Type	Input shaft						Output shaft						Weight [kg]	Oil filling [l]
	d_1 mE	k_1	l_1	m_1	x_1	y_1	d_2 mE	k_2	l_2	m_2	x_2	y_2		
PWC 35	75	644	160	484	285	100	155	570	290	280	328	440	1530	95
PWC 40	75	644	160	484	285	100	175	570	290	280	348	590	1860	130
PWC 42	85	762	180	582	350	100	195	650	330	320	400	530	2230	155
PWC 45	85	762	180	582	350	100	210	730	410	320	440	670	2780	225
PWC 47	85	762	180	582	350	100	230	730	410	320	440	780	3330	305
PWC 50	100	935	215	720	440	100	250	795	410	385	480	590	4300	290
PWC 53	100	935	215	720	440	100	250	795	410	385	480	740	4900	400
PWC 56	100	935	215	720	440	100	270	845	460	385	540	940	5600	550
PWC 60														
PWC 63														
PWC 67														

d_1, d_2	75...85	100
Tapped centre holes in shaft ends DIN 332 Form DS	M 20	M 24

Type of protection as per IP 55

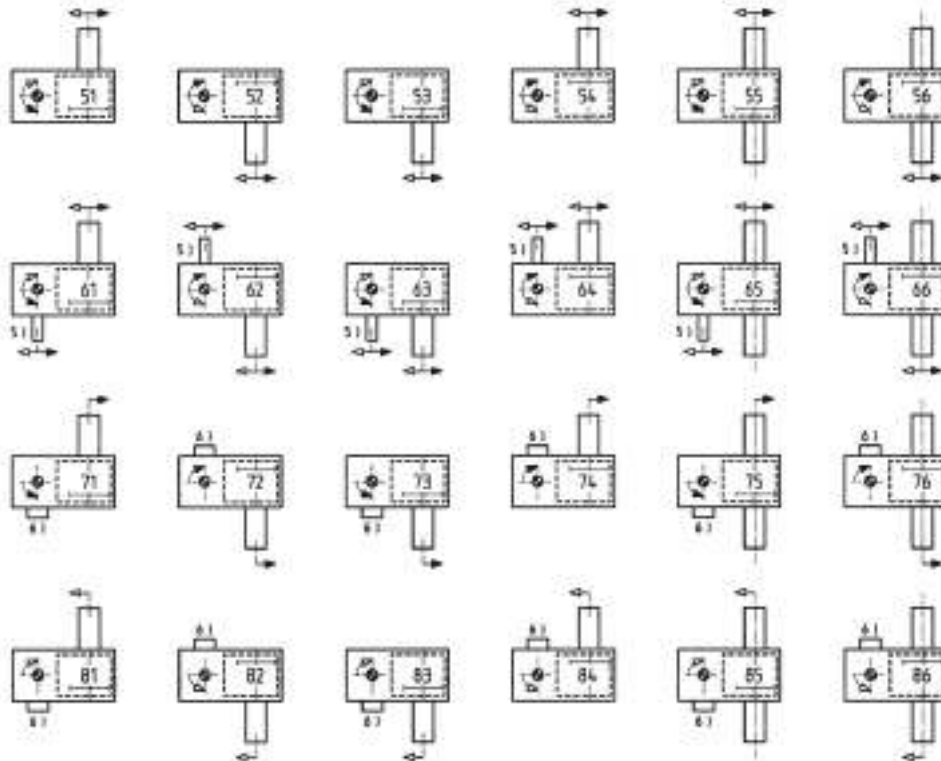
Type	a	$b_{-0.2}$	c _e	d_{H9}	e _s	e _c	f _s	g	g _s	h _{-0.2}	n _c	n _e	o	p	p _s	p _e	Fitting		WtU
																	d_{H9}	$d_{x \max}$ 3)	
PWC 35	570	225	55	40	970	345	578	925	305	300	1346	345	255	610	262	510	40	M36x330	229
PWC 40	647	225	55	40	1047	423	728	1002	382	375	1501	423	330	780	262	510	40	M36x330	154
PWC 42	693	265	62	45	1193	422	680	1134	372	355	1652	422	305	720	303	590	45	M42x400	277
PWC 45	759	265	62	45	1259	490	820	1200	440	425	1786	490	375	860	303	590	45	M42x400	207
PWC 47	845	265	62	52	1345	575	970	1285	525	500	1957	575	440	1010	303	590	52	M48x400	142
PWC 50	857	320	75	60	1457	505	820	1392	450	425	1962	505	360	910	358	710	60	M56x400	360
PWC 53	928	320	75	60	1528	580	970	1463	525	500	2108	580	435	1060	358	710	60	M56x400	285
PWC 56	1021	320	75	60	1621	680	1170	1556	625	600	2301	680	535	1260	365	715	60	M56x400	185
PWC 60																			
PWC 63																			
PWC 67																			

- 1) Dimensions of hollow shaft and machine shaft on request
- 2) Torque arms see dimensions 900-0253-MB1
- 3) Holding down bolts of min. property class 10.9
- 4) Available for shaft $d_1 : n \geq 1000 \text{ min}^{-1}$, lower speed on request



Location of input and output shafts

Directions of rotation viewing \vec{II}



- 5) Add. shaft extension
- 6) Backstop, see 900-1254-MB1

KPWC35-U44 -V51- 25 - Z 3

Example

[z] Add. cooling
 4) 1 Fan + Cooling coil 7)
 3) Cooling coil 7)
 1) 1 Fan
 0) Without add. cooling

Nominal ratio

Location of shafts
Permissible direction of rotation

Output shaft
 [V] Solid shaft
 [G] Hollow shaft with shrink disc
 [F] Flange shaft
 [H] Hollow shaft with key-way

Mounting arrangement
 [0] Shaft mount. with torque arm
 [1] Wall mounted
 [4] Foot mounted

[U4] Vertical gear unit

Size

Bevel-helical gear unit, POSIRE2, [WC] 3 stage

Motor attachment
 [J] Motor bracket, base plate
 [M] Adjustable motor base
 [K] Motor bell housing

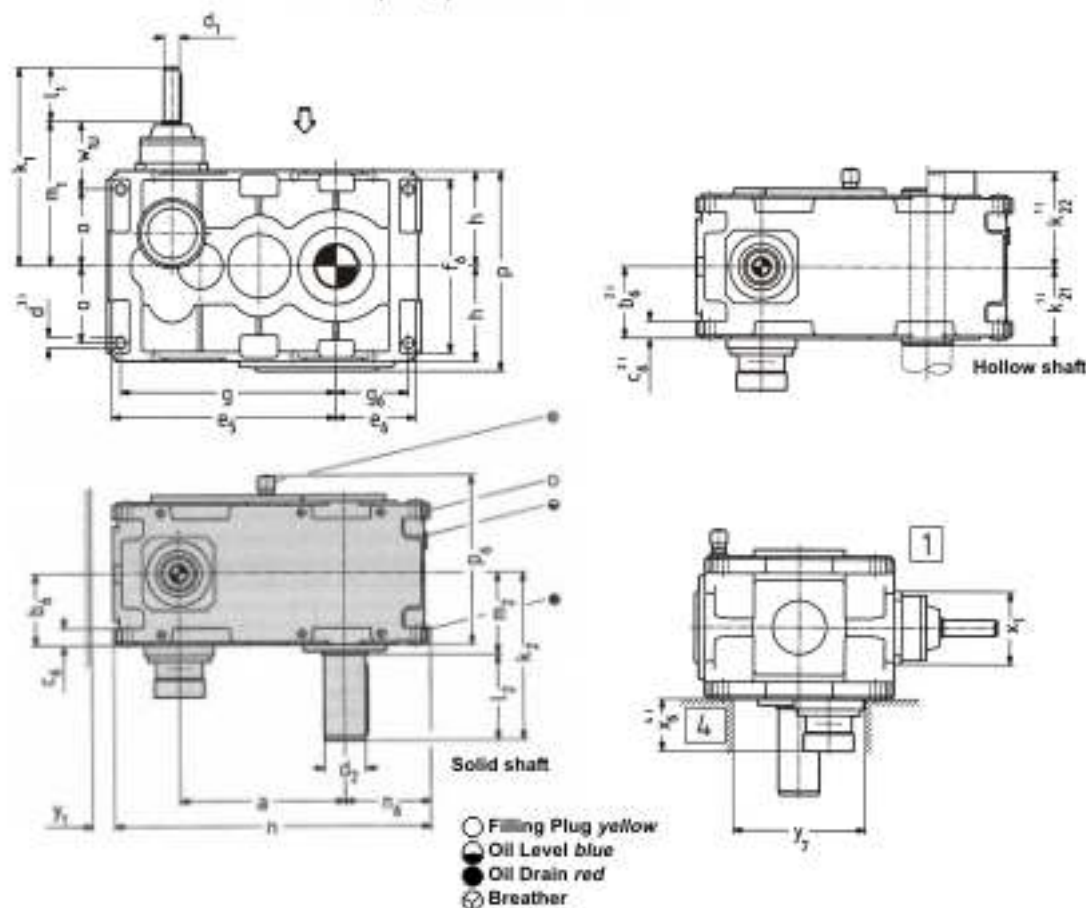
7) Only location of shafts : .2, .4 and .6
 *) Only types PWC35 and PWC40



Dimensions

Type PWD 14-U4 ... PWD 31-U4

Add. lubrication required, please check-back



Type	Input shaft						Output shaft						Weight [kg]	Oil filling [l]
	$\frac{d_1}{k_1}$	k_1	l_1	m_1	x_1	y_1	$\frac{d_2}{m_2}$	k_2	l_2	m_2	x_2	y_2		
PWD 14	20	319	80	239	132	100	65	270	135	135	-	210	115	11
PWD 16	20	319	80	239	132	100	85	290	145	145	-	270	180	16
PWD 18	25	378	85	293	148	100	95	350	170	180	-	270	285	25
PWD 20	25	387	85	302	148	100	120	370	190	180	-	340	345	34
PWD 22	40	497	120	377	190	100	130	405	190	215	-	330	475	49
PWD 25	40	482	120	362	190	100	145	450	230	220	-	390	610	53
PWD 28	40	497	120	377	190	100	160	480	230	250	-	400	780	83
PWD 31	40	497	120	377	190	100	175	540	290	250	-	470	1070	95

Tapped centre holes in shaft ends DIN 332 Form D8				
d_1, d_2				
20	25	40	65..85	> 85
M 6	M 10	M 16	M 20	M 24

Type of protection as per IP 55

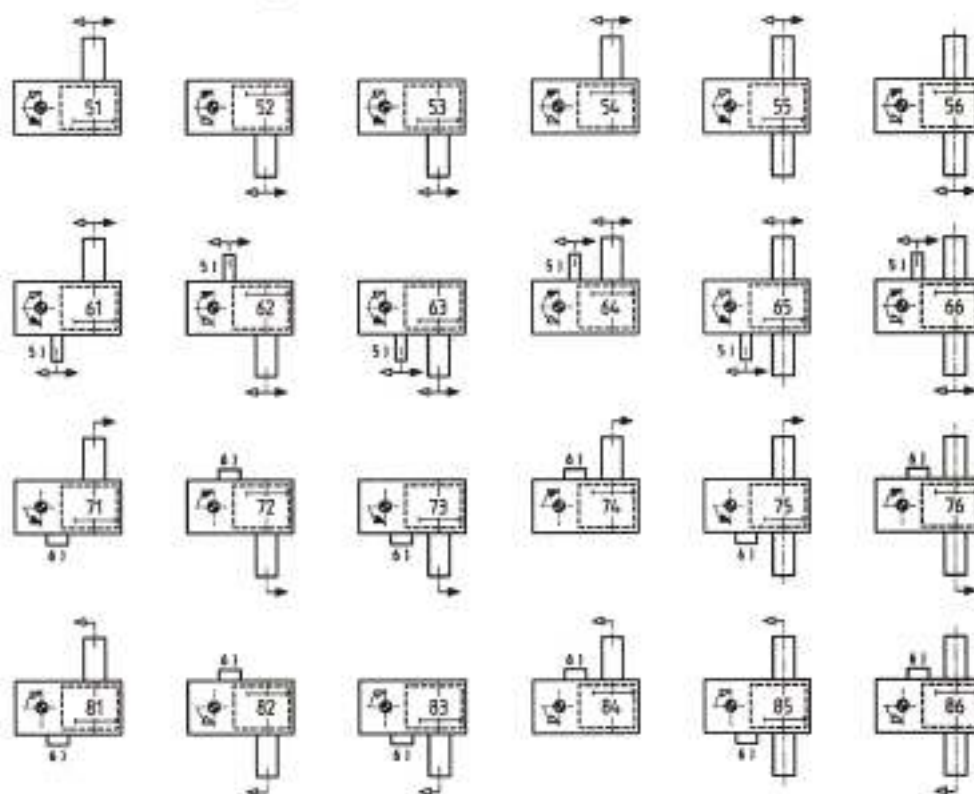
Type	a	$b_{-0.2}$	c_1	$\frac{d}{h_2}$	e_1	e_2	f_1	g	g_1	$h_{-0.2}$	n	n_1	o	p	p_1	p_2	Fitting		W1U	X1
																	$\frac{d}{h_2}$	$\frac{d_{x1} \text{ max}}{3}$		
PWD 14	262	113	27	16	357	126	274	344	113	150	500	134	121	333	-	270	16	M14x65	198	130
PWD 16	318	113	27	16	413	175	334	400	162	180	605	183	151	393	-	270	16	M14x65	88	130
PWD 18	366	147	32	22	475	162	348	458	145	190	654	171	155	419	-	340	22	M20x80	138	130
PWD 20	410	147	32	22	528	218	418	511	201	225	764	227	190	489	-	340	22	M20x80	152	130
PWD 22	464	179	41	26	600	200	426	580	180	235	826	215	190	513	-	416	26	M24x100	187	130
PWD 25	535	179	41	26	658	256	486	638	236	265	940	271	220	573	204	416	26	M24x100	142	130
PWD 28	585	210	48	33	731	245	508	706	221	280	1000	256	227	610	246	480	33	M30x120	150	130
PWD 31	653	210	48	33	798	307	578	773	282	315	1137	325	262	680	239	480	33	M30x120	195	130

- 1) Dimensions of hollow shaft and machine shaft on request
- 2) Torque arms see dimensions 900-0253-MB1
- 3) Holding down bolts of min. property class 10.9
- 4) Available for shaft $d_1: n > 1000 \text{ min}^{-1}$, lower speed on request



Location of input and output shafts

Directions of rotation viewing \vec{II}



5) Add. shaft extension (900-1200-...)

6) Backstop, see 900-1254-MB1

KPWD22-U44 -V51- 250- Z 3

Example

										[z] Add. cooling		
										[3] Cooling coil 7)		
										[0] Without add. cooling		
										Nominal ratio		
										Location of shafts Permissible direction of rotation		
											Output shaft	
											[H] Hollow shaft with key-way	
											[F] Flange shaft	
											[G] Hollow shaft with shrink disc	
[V] Solid shaft												
												Mounting arrangement ⁸⁾
												[0] Shaft mount. with torque arm
												[1] Wall mounted
												[4] Foot mounted
												[U4] Vertical gear unit
												Size
Bevel-helical gear unit, POSIRED 2, [WD] 4 stage												
Motor attachment												
[J]	Motor bracket, base plate											
[M]	Adjustable motor base											
[K]	Motor bell housing											

7) Only location of shafts : .2, .4 and .6

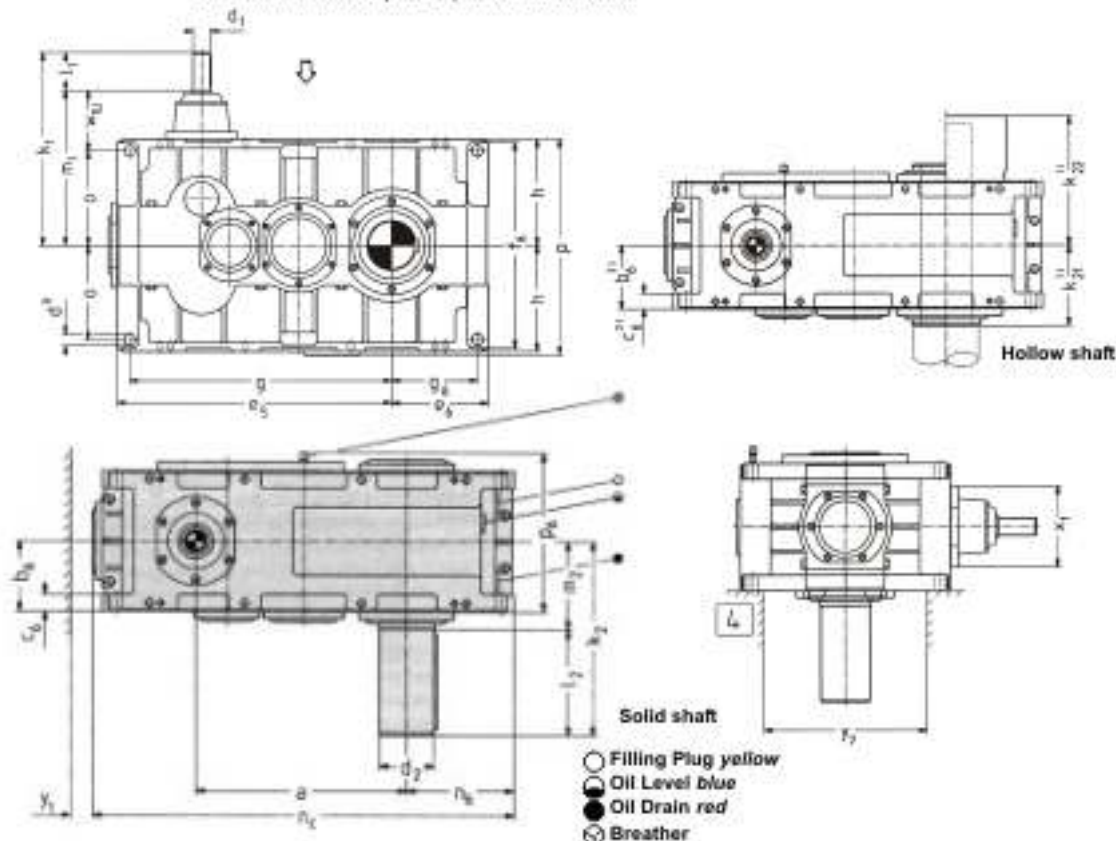
8) See dimension sheet 900-0220-MB9



Dimensions

Type PWD 35-U4 ... PWD 67-U4

Add. lubrication required, please check-back



Type	Input shaft						Output shaft						Weight [kg]	Oil filling [l]	
	d_1 mm	k_1	l_1	m_1	x_1	y_1	d_2 mm	k_2	l_2	m_2	x_2	y_2			
PWD 35	50	55	517	120	397	285	100	155	570	290	290	328	440	1530	100
PWD 40	50	55	593	120	473	285	100	175	570	290	280	348	590	1860	135
PWD 42	60	66	145	517	265	100	195	850	330	320	400	530	2230	170	
PWD 45	60	66	145	521	265	100	210	730	410	320	440	670	2780	240	
PWD 47	60	70	145	562	265	100	230	730	410	320	440	780	3330	325	
PWD 50	75	76	160	609	285	100	250	795	410	385	480	590	4300	290	
PWD 53	75	76	160	609	285	100	250	795	410	385	480	740	4900	400	
PWD 56	75	84	160	684	285	100	270	845	460	385	540	940	5600	550	
PWD 60															
PWD 63															
PWD 67															

d_1, d_2	50	60...85	155
Tapped centre holes in shaft ends DIN 332 Form D8	M 16	M 20	M 24

Type of protection as per IP 55

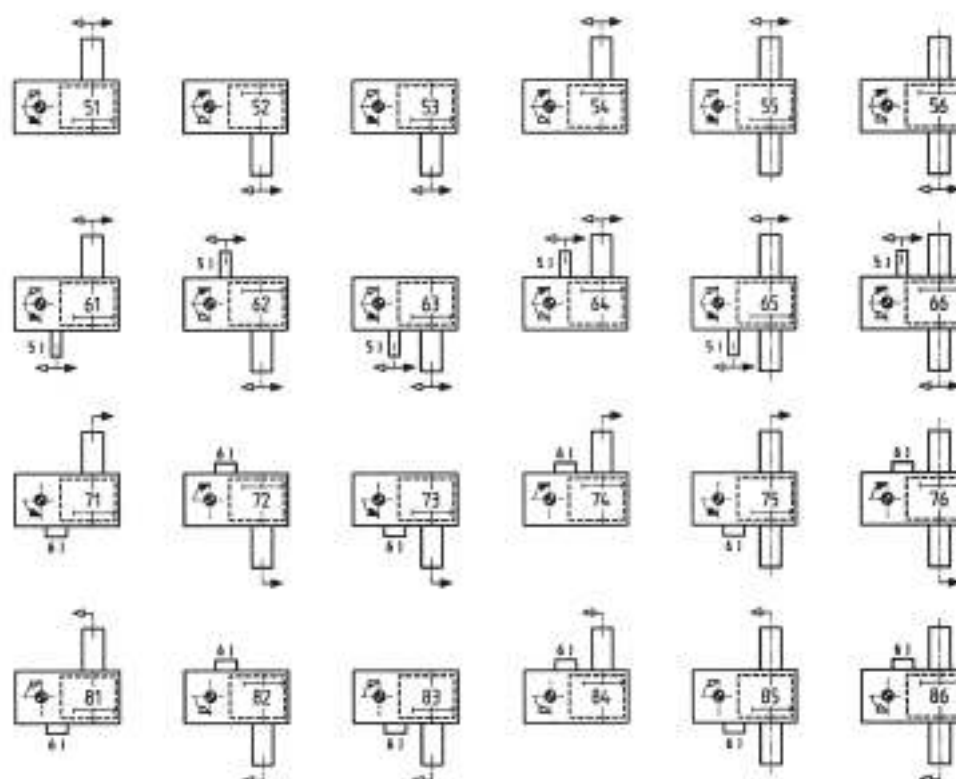
Type	a	$b_{-0.2}$	c_1	$d_{+0.1}$	e_1	e_2	f_1	g	g_1	$h_{-0.2}$	n_1	n_2	o	p	p_1	p_2	Fitting		W10	
																	$d_{+0.1}$	$d_{+0.1}$ max		
PWD 35	726	225	55	40	970	345	578	925	305	300	1346	345	255	610	262	510	40	M36x330	142	
PWD 40	736	225	55	40	1047	423	728	1002	382	375	1501	423	330	760	262	510	40	M36x330	143	
PWD 42	837	255	62	45	1193	422	680	1134	372	355	1652	422	305	720	303	590	45	M42x400	212	
PWD 45	889	255	62	45	1259	490	820	1200	440	425	1788	490	375	860	303	590	45	M42x400	146	
PWD 47	924	255	62	52	1345	575	970	1285	525	500	1957	575	440	1010	303	590	52	M48x400	122	
PWD 50	1070	320	75	60	1457	505	820	1392	450	425	1962	505	360	910	358	710	60	M56x400	249	
PWD 53	1141	320	75	60	1528	580	970	1463	525	500	2108	580	435	1060	358	710	60	M56x400	174	
PWD 56	1166	320	75	60	1621	680	1170	1556	625	600	2301	680	535	1260	358	715	60	M56x400	149	
PWD 60																				
PWD 63																				
PWD 67																				

- Hollow shaft and machine shaft see dimensions 900-0212-MB 1 and 900-0213-MB1
- Torque arms see dimensions 900-0253-MB1



Location of input and output shafts

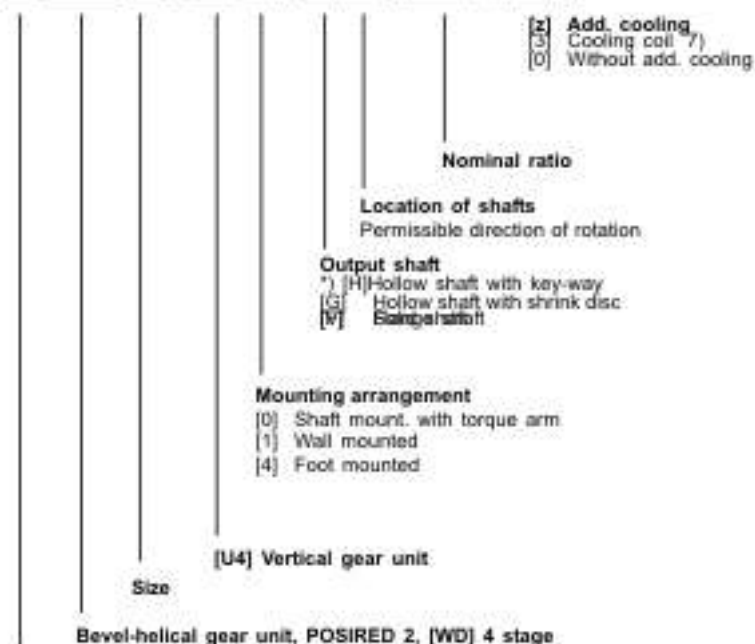
Directions of rotation viewing ||



- 5) Add. shaft extension
- 6) Backstop, see 900-1254-MB1

KPWD35-U44 -V51- 250- Z 3

Example



7) Only location of shafts : .2, .4 and .6
 *) Only types PWD35 and PWD40



Exact ratios

Helical Gear Units, one-stage

Type **PB**

IN	Gearbox Size							
	10	12	16	20	25	31	40	45
1.25	1.25	1.26	1.26	1.26	1.27	1.25		
1.4	1.40	1.41	1.41	1.41	1.43	1.40		
1.6	1.57	1.59	1.59	1.59	1.62	1.57		
1.8	1.77	1.80	1.80	1.80	1.83	1.77		
2	2.00	2.00	2.00	2.00	2.00	2.00		
2.24	2.27	2.29	2.29	2.29	2.29	2.27		
2.5	2.48	2.50	2.50	2.50	2.45	2.48		
2.8	2.79	2.83	2.83	2.83	2.78	2.79		
3.15	3.18	3.12	3.12	3.12	3.19	3.18		
3.55	3.50	3.60	3.60	3.60	3.47	3.50		
4	4.07	4.00	4.00	4.00	4.08	4.07	4.07	4.07
4.5	4.54	4.46	4.46	4.46	4.58	4.54	4.54	4.54
5	5.07	5.06	5.00	5.07	5.07	4.94	5.00	5.07
5.6	5.57	5.60	5.50	5.69	5.69	5.63	5.50	5.69

Helical Gear Units, two-stage

Type **PC**

IN	Gearbox Size																			
	14	16	18	20	22	25	28	31	35	40	42	45	47	50	53	56	60	63	67	
4	3.98		4.00		3.95		4.03		3.97		3.92									
4.5	4.46		4.49		4.44		4.52		4.48		4.39									
5	5.01		5.06		5.01		5.10		5.08	5.24	4.92	4.83								
5.6	5.64		5.72	5.77	5.66	5.39	5.76	5.45	5.74	5.90	5.54	5.41								
6.3	6.38	6.48	6.35	6.49	6.29	6.06	6.40	6.13	6.27	6.68	6.27	6.08	6.00							
7.1	7.24	7.26	7.26	7.31	7.18	6.83	7.31	6.90	7.16	7.58	7.12	6.84	6.72							
8	7.89	8.15	7.94	8.26	7.86	7.71	8.00	7.80	7.68	8.27	7.76	7.73	7.54							
9	8.89	9.18	9.00	9.18	8.91	8.57	9.07	8.67	8.70	9.45	8.74	8.79	8.49							
10	10.1	10.4	9.90	10.5	9.80	9.80	9.98	9.90	9.99	10.1	9.95	9.58	9.60							
11.2	11.2	11.8	11.4	11.5	11.3	10.7	11.5	10.8	10.9	11.5	11.0	10.8	10.9							
12.5	13.0	12.9	12.7	13.0	12.6	12.1	12.8	12.3	12.8	13.2	12.8	12.3	11.9	12.7						
14	14.5	14.5	14.2	14.3	14.0	13.4	14.3	13.5	14.4	14.3	14.2	13.5	13.4	14.2	15.3					
16	16.2	16.5	16.1	16.5	15.7	15.4	16.2	15.6	15.9	16.9	15.5	15.7	15.3	15.6	17.0	18.6				
18	17.8	18.2	17.8	18.4	17.3	17.1	18.2	17.3	17.8	18.9	17.6	17.6	16.8	17.2	18.8	20.7				
20		21.1		20.5		19.1		19.3		21.0		19.1	19.5		20.6	22.8				
22.4		23.5		23.2		21.4		22.0		23.5		21.8	21.8			25.1				
25		26.3		25.7		23.6		24.7					23.7							
28		28.9											27.0							

IN = Nominal ratio



Exact ratios

Helical Gear Units, three-stage

Type PD

in	Gearbox Size																		
	14	16	18	20	22	25	28	31	35	40	42	45	47	50	53	56	60	63	67
16			15.9				16.1		16.1		16.1			16.1			16.0		
18			17.7				18.0		18.1		17.9			18.0			17.8	18.7	
20	20.8		20.1		19.6		20.4		20.0	21.2	19.5	19.8		19.8	19.3		19.9	20.8	21.4
22.4	23.2		22.5	22.9	21.9		23.0	21.8	23.0	23.8	23.0	22.1		23.3	21.6	23.5	22.6	23.2	23.8
25	25.8		25.1	25.6	24.5	26.7	25.7	24.3	25.9	26.4	25.6	24.1	24.6	26.0	23.8	26.2	25.2	26.4	26.6
28	28.4		28.5	29.0	27.0	29.8	29.2	27.7	28.6	30.3	27.9	28.3	27.4	28.7	28.0	28.9	28.1	29.4	30.3
31.5	32.1	33.8	31.5	32.5	31.4	33.4	32.8	31.2	32.1	34.1	31.7	31.6	29.9	31.5	31.2	34.1	31.6	32.9	33.7
35.5	35.8	37.7	35.1	36.2	35.1	36.8	35.7	34.8	35.9	37.7	35.6	34.4	35.2	34.8	34.4	38.0	35.2	36.9	37.7
40	40.0	42.1	39.8	41.1	39.3	42.9	40.6	39.6	39.7	42.4	38.7	39.2	39.2	38.3	37.8	41.8	39.4	41.2	42.3
45	43.9	46.2	44.0	45.5	43.2	47.8	45.5	44.4	44.6	47.4	44.1	43.9	42.7	42.1	41.7	46.0	44.2	46.1	47.2
50	51.9	52.3	51.7	50.7	49.3	53.6	51.2	48.3	51.1	52.4	51.0	47.8	48.6	51.9	45.9	50.7	51.9	51.7	52.7
56	57.9	58.2	57.7	57.5	55.0	58.9	57.1	54.9	57.4	58.8	56.9	54.4	54.5	57.8	50.5	55.9	57.9	60.8	59.2
63	64.6	65.0	65.5	63.6	61.7	67.3	64.9	61.7	63.6	67.4	62.0	63.0	59.3	63.7	62.3	61.5	64.7	67.8	69.6
71	71.0	71.5	72.4	74.7	67.8	75.0	72.9	69.3	71.3	75.8	70.5	70.2	67.5	70.1	69.4	75.7	72.6	75.7	77.6
80		84.5	79.0	83.3		84.1	80.0	77.3	79.0	83.9	80.9	76.5	78.2	80.7	76.4	84.4	80.0	85.0	86.7
90		94.2	89.6	94.6		92.5	90.9	87.9	87.4	94.1	88.2	87.0	87.1	88.9	84.1	93.0	89.4	93.6	97.3
100		105	99.1	105		102	98.7	98.1	104	100	99.9	94.9	97.8	96.9	102	100	105	107	
112		116		114				108		115		109	108		107	118		117	120
125				129				123		129		124	124		117	130			135
140				143				138					135			143			
160													154						

Helical Gear Units, four-stage

Type PE

in	Gearbox Size																		
	14	16	18	20	22	25	28	31	35	40	42	45	47	50	53	56	60	63	67
71					67.6		72.6		72.8		71.6			73.4			72.8		
80					75.4		81.0		81.8		79.8			81.8			81.2	85.2	
90			93.3		84.6	92.2	92.1		90.6		87.0	88.4		90.1	88.0		90.7	95.0	
100			104		95.7	103	103	98.3	104	96.0	102	96.5		105	98.1	107	104	106	97.6
112			118		107	115	115	110	117	108	114	107	110	117	108	119	116	122	109
125			131	135	120	131	130	125	130	119	124	126	122	129	126	132	130	136	122
140			144	150	132	146	146	139	145	137	142	141	133	142	140	153	146	152	140
160			161	171	150	163	160	155	163	155	158	154	157	163	155	171	161	171	158
180			183	189	168	180	182	176	180	171	173	175	175	179	170	188	180	189	174
200			202	208	184	204	205	198	202	192	197	196	191	197	195	207	202	211	195
224			233	232	220	228	237	217	231	215	228	213	217	233	215	237	232	237	216
250			260	264	246	251	264	247	260	237	254	243	243	260	236	261	258	271	242
280			295	292	275	300	300	277	288	266	277	281	265	286	280	288	288	302	271
315			327	337	303	335	337	320	323	305	315	313	301	315	312	341	324	338	310
355				376	336	376	381	357	364	343	355	341	349	358	344	380	367	379	346
400				426	377	413	410	406	403	380	387	388	389	394	378	418	411	430	387
450				472	415	459	461	456	452	426	440	438	424	433	429	460	461	480	434
500						514		489		481		478	482		473	522		539	492
560						565		556		532		543	544		520	575			550
630								624		597					633				618
710														675					

in = Nominal ratio



Exact ratios

Bevel-Helical Gear Units, two-stage

Type **PLB**

i _N	Gearbox Size							
	10	12	16	20	25	31	40	45
5.6	5.67	5.57	5.57	5.57	5.68	5.67	5.67	5.67
6.3	6.32	6.21	6.21	6.21	6.38	6.32	6.32	6.32
7.1	7.06	7.05	6.96	7.06	7.06	6.89	6.96	7.06
8	8.14	8.00	8.00	8.00	8.15	8.14	8.14	8.14
9	9.08	8.92	8.92	8.92	9.17	9.08	9.08	9.08
10	10.1	10.1	10.0	10.1	10.1	9.89	10.0	10.1
11.2	11.3	11.1	11.1	11.1	11.4	11.3	11.3	11.3
12.5	12.6	12.4	12.4	12.4	12.8	12.6	12.6	12.6
14	14.1	14.1	13.9	14.1	14.1	13.8	13.9	14.1
16	16.3	16.0	16.0	16.0	16.3	16.3	16.3	16.3
18	18.2	17.9	17.9	17.9	18.3	18.2	18.2	18.2
20	20.3	20.3	20.0	20.3	20.3	19.8	20.0	20.3
22.4	22.3	22.4	22.0	22.8	22.8	22.5	22.0	22.8

Type

Bevel-Helical Gear Units, three-stage

PLC

i _N	Gearbox Size																		
	14	16	18	20	22	25	28	31	35	40	42	45	47	50	53	56	60	63	67
18	18.1		17.7		17.5		17.8		17.8		17.8			17.7			17.8		
20	20.2		19.7		19.5		19.9		20.0		19.8			19.8			19.8	20.8	
22.4	22.5		22.4		21.9	23.9	22.6		22.1	23.5	21.6	21.9		21.8	21.3		22.1	23.2	23.8
25	26.0		25.4	25.6	25.1	26.6	25.6	24.1	25.6	26.4	25.5	24.4		25.5	23.7	25.9	25.5	25.9	26.6
28	28.9	29.4	28.3	28.5	28.0	29.9	28.6	26.9	28.7	29.2	28.4	26.6	27.2	28.4	26.1	28.8	28.4	29.9	29.7
31.5	32.3	32.8	32.2	32.4	31.4	34.3	32.5	30.6	31.8	33.7	31.0	31.5	30.3	31.3	30.5	31.8	31.8	33.3	34.2
35.5	36.2	36.6	35.4	36.7	35.0	38.2	35.7	34.7	35.6	37.9	35.5	35.1	33.1	35.4	34.0	37.2	35.5	37.2	38.1
40	40.3	42.2	39.5	40.9	39.1	42.9	39.8	38.7	40.0	41.9	39.6	38.2	39.1	39.5	37.5	41.4	39.6	41.6	42.6
45	45.0	47.1	44.8	46.5	43.8	47.8	45.2	44.0	44.3	46.9	43.2	43.9	43.6	43.5	42.5	45.6	44.3	46.4	47.6
50	51.9	52.6	50.8	51.1	50.3	53.3	51.2	48.3	51.1	52.8	51.0	48.9	47.5	50.9	47.4	51.8	51.0	51.8	53.1
56	57.9	58.8	56.7	57.0	56.1	59.7	57.1	53.9	57.4	58.4	56.9	53.3	54.4	56.7	52.2	57.7	56.9	59.7	59.3
63	64.6	65.6	64.3	64.7	62.9	68.6	64.9	61.2	63.6	67.4	62.0	63.0	60.7	62.5	61.1	63.6	63.6	66.6	68.4
71	71.0	73.2	71.2	73.4	69.1	76.5	72.9	69.3	71.3	75.8	70.5	70.2	65.7	68.8	68.1	74.3	71.3	74.4	76.3
80		84.5		81.9		85.7		77.3		83.9		76.5	78.2		75.0	82.8		83.5	85.2
90		94.2		92.9		94.3		87.9		94.1		87.0	87.1		82.5	91.3			95.6
100		105		103				98.7					94.9			100			
112		116											108						

i_N = Nominal ratio



Exact ratios

Bevel-Helical Gear Units, four-stage

Type **PLD**

i _N	Gearbox Size																			
	14	16	18	20	22	25	28	31	35	40	42	45	47	50	53	56	60	63	67	
71	72.3																			
80	80.6		81.2		75.4		80.8		80.6		79.3			81.2			80.6			
90	90.0		90.6		84.1		90.2		90.6		88.4			90.5			89.9	94.4		
100	104		103		94.3	103	103		100	106	96.3	97.8		99.8	97.5		100	105	108	
112	116	118	117	117	108	115	116	109	116	120	114	109		117	109	119	116	118	120	
125	129	131	130	131	121	129	129	122	130	132	127	119	121	130	120	132	129	136	135	
140	145	146	148	148	135	148	147	139	144	153	138	141	135	143	140	146	144	151	155	
160	161	169	162	168	151	165	162	157	161	172	159	157	148	162	156	170	161	169	173	
180	180	188	181	188	168	185	180	175	181	190	177	171	174	181	172	190	180	189	193	
200	208	210	206	213	189	206	205	199	201	213	193	196	194	200	195	209	201	210	216	
224	232	235	233	235	217	230	232	219	231	239	228	218	212	233	217	237	232	235	241	
250	258	262	260	262	242	257	259	244	260	265	254	238	243	260	239	264	258	271	269	
280	284	293	295	297	271	295	294	278	288	305	277	281	271	286	280	291	288	302	310	
315		338	327	337	298	330	330	314	323	343	315	313	295	315	312	341	324	338	346	
355		377		376		369		351		380		341	349		344	380		379	387	
400		421		426		406		399		426		388	389		378	418			434	
450		462		472				447					424			460				
500													482							



Compact Drive (Bevel-Helical), three-stage

Type **PWC**

in	Gearbox Size																		
	14	16	18	20	22	25	28	31	35	40	42	45	47	50	53	56	60	63	67
25	26.0		25.4		25.1		25.6		25.6		25.5			25.5			25.5		
28	28.9		28.3		28.0		28.6		28.7		28.4			28.4			28.4	29.9	
31.5	32.3		32.2		31.4	34.3	32.5		31.8	33.7	31.0	31.5		31.3	30.5		31.8	33.3	34.2
35.5	36.2		35.4	36.7	35.0	38.2	35.7	34.7	35.6	37.9	35.5	35.1		35.4	34.0	37.2	35.5	37.2	38.1
40	40.3	42.2	39.5	40.9	39.1	42.9	39.8	38.7	40.0	41.9	39.6	38.2	39.1	39.5	37.5	41.4	39.6	41.6	42.6
45	45.0	47.1	44.8	46.5	43.8	47.8	45.2	44.0	44.3	46.9	43.2	43.9	43.6	43.5	42.5	45.6	44.3	46.6	47.6
50	51.9	52.6	50.8	51.1	50.3	53.3	51.2	48.3	51.1	52.8	51.0	48.9	47.5	50.9	47.4	51.8	51.0	51.8	53.1
56	57.9	58.8	56.7	57.0	56.1	59.7	57.1	53.9	57.4	58.4	56.9	53.3	54.4	56.7	52.2	57.7	56.9	59.7	59.3
63	64.6	65.6	64.3	64.7	62.9	68.6	64.9	61.2	63.6	67.4	62.0	63.0	60.7	62.5	61.1	63.6	63.6	66.6	68.4
71	71.0	73.2	71.2	73.4	69.1	76.5	72.9	69.3	71.3	75.8	70.5	70.2	65.7	68.8	68.1	74.3	71.3	74.4	76.3
80		84.5		81.9		85.7		77.3		83.9		76.5	78.2		75.0	82.8		83.5	85.2
90		94.2		92.9		94.3		87.9		94.1		87.0	87.1		82.5	91.3			95.6
100		105		103				98.7					94.9			100			
112		116											108						

Type

Compact Drive (Bevel-Helical), four-stage

Type **PWD**

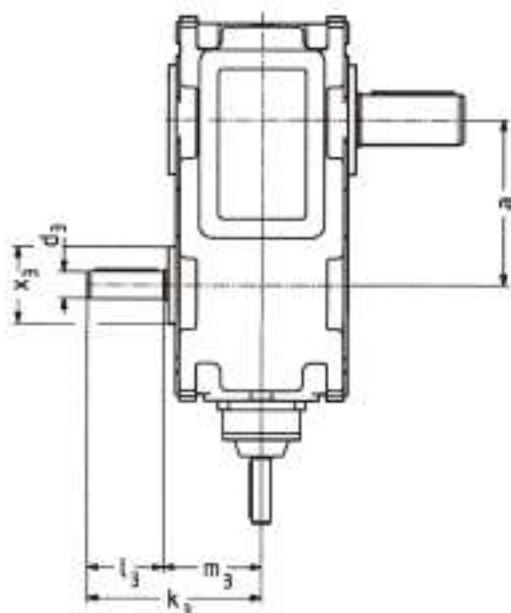
in	Gearbox Size																		
	14	16	18	20	22	25	28	31	35	40	42	45	47	50	53	56	60	63	67
71	72.3																		
80	80.6		81.2		75.4		80.8		80.6		79.3			81.2			80.6		
90	90.0		90.6		84.1		90.2		90.6		88.4			90.5			89.9	94.4	
100	104		103		94.3	103	103		100	106	96.3	97.8		99.8	97.5		100	105	108
112	116	118	117	117	108	115	116	109	116	120	114	109		117	109	119	116	118	120
125	129	131	130	131	121	129	129	122	130	132	127	119	121	130	120	132	129	136	135
140	145	146	148	148	135	148	147	139	144	153	138	141	135	143	140	146	144	151	155
160	161	169	162	168	151	165	162	157	161	172	159	157	148	162	156	170	161	169	173
180	180	188	181	188	168	185	180	175	181	190	177	171	174	181	172	190	180	189	193
200	208	210	206	213	189	206	205	199	201	213	193	196	194	200	195	209	201	210	216
224	232	235	233	235	217	230	232	219	231	239	228	218	212	233	217	237	232	235	241
250	258	262	260	262	242	257	259	244	260	265	254	238	243	260	239	264	258	271	269
280	284	293	295	297	271	295	294	278	288	305	277	281	271	286	280	291	288	302	310
315		338	327	337	298	330	330	314	323	343	315	313	295	315	312	341	324	338	346
355		377		376		369		351		380		341	349		344	380		379	387
400		421		426		406		399		426		388	389		378	418			434
450		462		472				447					424			460			
500													482						



Dimensions

Additional shaft for bevel-helical gear units

Type PLB, PLC, PLD



Tapped centre holes in shaft ends DIN 332 Form DS			
— d ₃			
35	45	60...70	> 85
M 12	M 16	M 20	M 24

Size	a	— d ₃	k ₃	l ₃	m ₃	— x ₃
14	216	35 k6	218	100	118	-
16	272					
18	293					
20	347	45 k6	275	120	155	-
22	376	60 m6	337	140	197	195
25	434					
28	464					
31	532	70 m6	369	140	229	205
35	570	90 m6	446	180	266	255
40	647					
42	693					
45	759	100 m6	537	215	322	328
47	845	120 m6	600	215	385	348
50	857					
53	928					
56	1021	150 m6	725	250	475	440
60	1032					
63	1105					
67	1176					
PLB10	94	35 k6	218	100	118	-
PLB12	127	45 k6	275	120	155	-
PLB16	164	60 m6	337	140	197	195
PLB20	201	70 m6	369	140	229	205
PLB25	247	90 m6	446	180	266	255
PLB31	302	100 m6	537	215	322	328
PLB40	374	120 m6	600	215	385	348
PLB45	449	150 m6	725	250	475	440