

SPECIFICATION

- Type **A**: Output on one side
- Type **B**: Continuous operation

Housing

- Aluminum
- Sealed to prevent dust entry
- Anodized, natural color **AN**

Worm screw, steel

Worm wheel, brass

Ball bearing

- Steel
- Sealed (sealing disks 2RS)

Working temperature: from -20°C to +60°C.

FEATURES AND APPLICATIONS

Worm gear reducers GN 3975 can transmit high torque despite their very compact dimensions. They can readily be used for a multitude of applications, such as incline adjustments or to change the direction of shaft rotation.

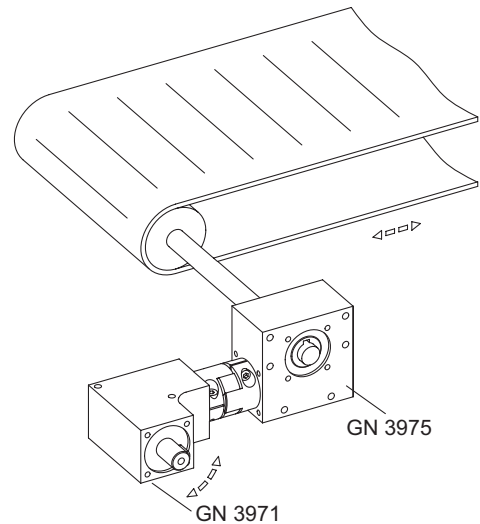
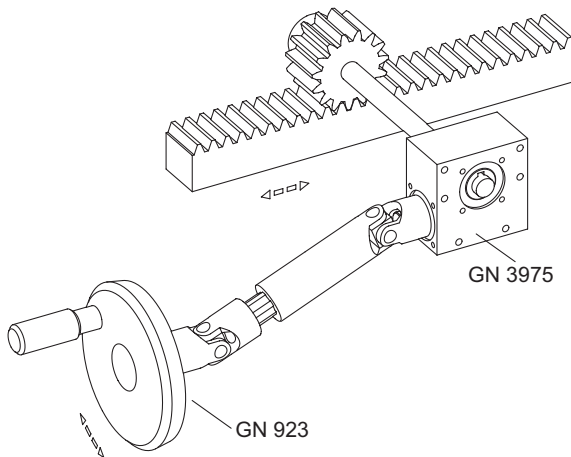
They can readily be used for a multitude of applications, such as height adjustments or to change the direction of shaft rotation. The parallel keys can take any angular positions.

Depending on the gear ratio, there may be no static self-braking between the worm screw and worm wheel, meaning that the worm wheel can be turned out of a resting state by a torque coming from the output end.

ASSEMBLY INSTRUCTION

Do not exert any forces onto the housing or into the bearings during assembly. Use of the threaded holes d8 in the shaft is recommended.

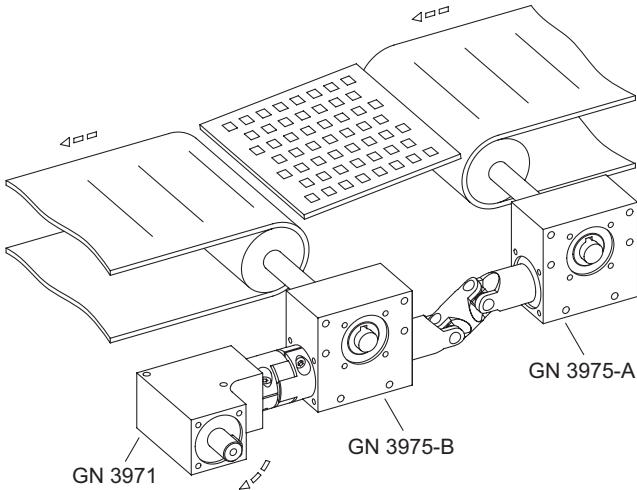
The use of a corresponding coupling is recommended to compensate for manufacturing-related shaft offsets and runout tolerances as well as for damping vibrations and shocks.



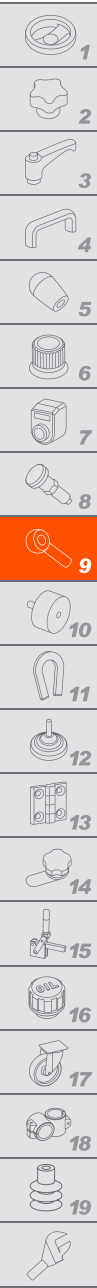
Circumferential backlash at the drive shaft	1° ± 0.5°
Shaft direction of rotation	Any
Worm wheel set design	Left-hand
Life expectancy (guideline)	1.000 hours under full load at a rotational speed of 500 rpm, assuming the gear box is operating for 20% of every 5 minutes (1 minute of operation + 4 minutes break) at an ambient temperature of 20 °C
Maintenance	Permanent lubrication with grease, maintenance-free

m1	Gear ratio	Max. input torque in Nm*			Max. output torque in Nm*			Input side		Output side		Efficiency in %	Selfbraking
		at 100 min-1	at 500 min-1	at 1000 min-1	at 100 min-1	at 500 min-1	at 1000 min-1	Max. radial force in N**	Max. axial force in N***	Max. radial force in N**	Max. axial force in N***		
20	5	2.9	2.3	1.7	10	8	6	200	200	500	500	70	-
20	13	2.1	1.8	1.5	15	13	11	200	200	500	500	56	-
20	15	1.5	1.3	1	12	10	8	250	250	500	500	52	-
20	18	1.1	0.9	0.7	11	9	7	250	250	500	500	55	-
20	23	0.9	0.7	0.5	10	8	6	250	250	500	500	50	-
20	30	0.6	0.5	0.4	8.5	7	5.5	350	350	500	500	45	-
20	40	0.35	0.31	0.31	5.5	4.8	4	400	400	500	500	39	x
20	65	0.24	0.2	0.2	4.5	3.8	3	500	500	500	500	29	x
30	5	5.4	4.9	4.3	19	17	15	400	300	800	800	70	-
30	10	3.4	3.1	2.8	20	18	16	400	300	800	800	58	-
30	17	2.2	1.9	1.8	17	15	14	400	400	800	800	46	-
30	20	1.7	1.6	1.4	15	13.5	12	800	400	800	800	43	-
30	25	1.3	1.2	1.1	13.5	12	11	800	800	800	800	41	-
30	34	1.2	1.1	1	12	11	10	600	800	800	800	29	-
30	45	0.9	0.8	0.8	10.5	9.5	9	700	600	800	800	25	-
30	64	0.5	0.4	0.3	8.5	7.5	6	700	600	800	800	27	x

* Input side speed
** At axial force = 0
*** At radial force = 0

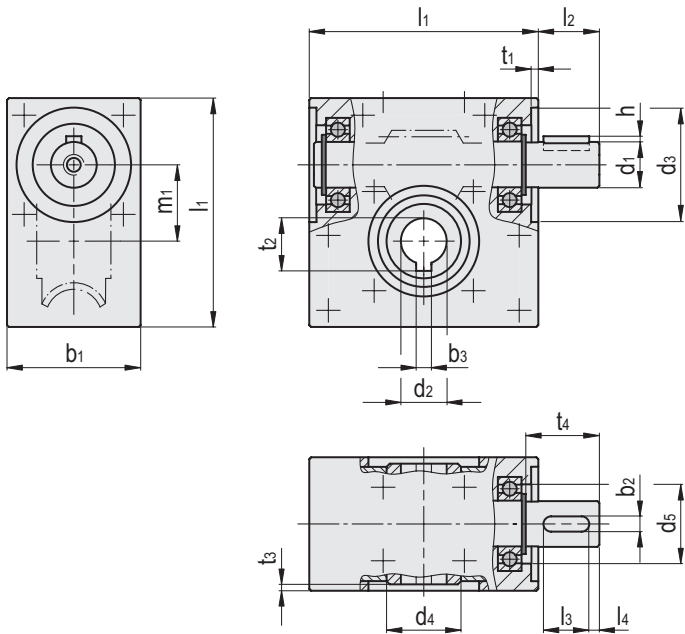


Standard machine parts



Standard machine parts

3

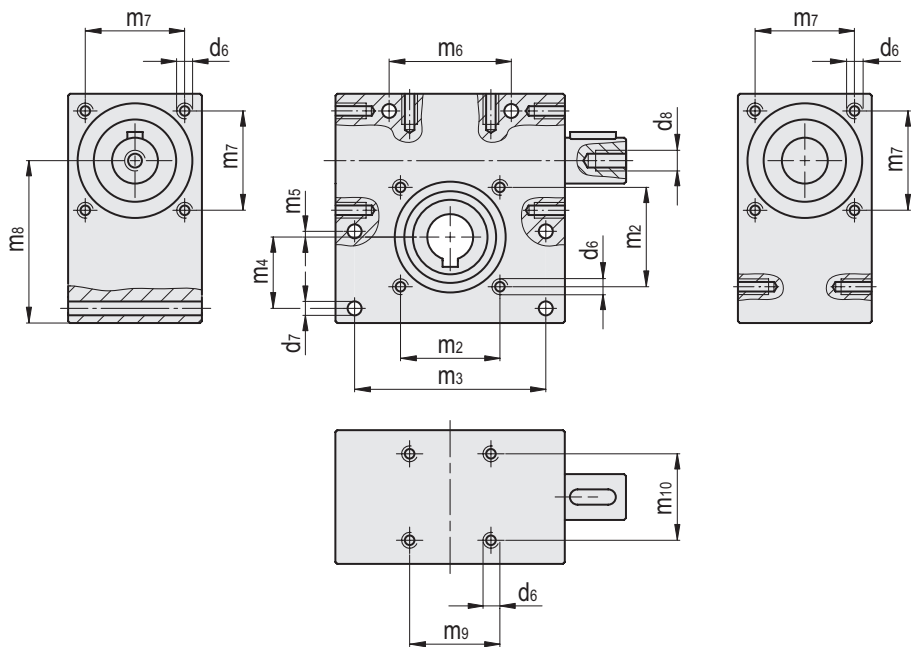


Conversion Table	
1 mm = 0.039 inch	
d1	
mm	inch
12	0.47

GN 3975-A

METRIC

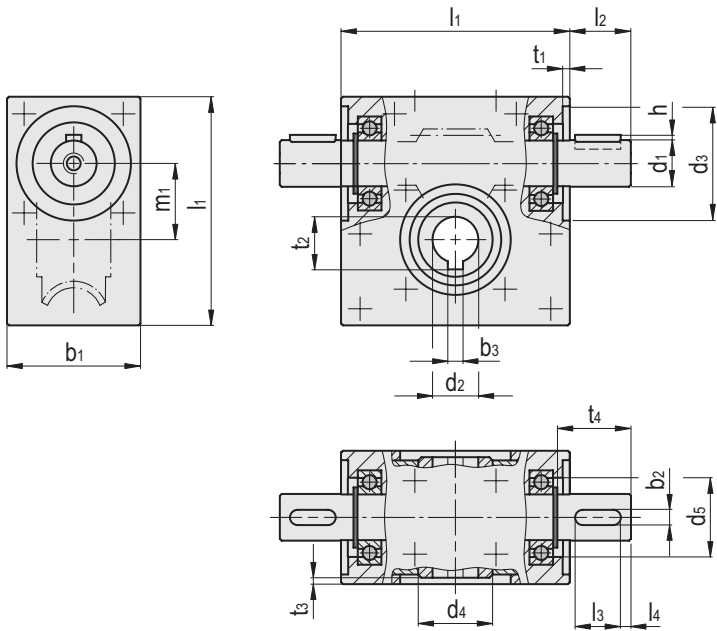
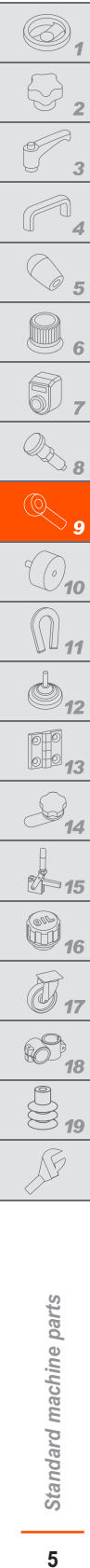
Code	Description	d1 j6	d2 H7	d3	d4	d5	b1	b2	b3 JS9	l1	l2	l3	l4	h	t1	t2	t3	t4	m1	△
GN.21919	GN 3975-20-A-12-5-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	434
GN.21921	GN 3975-20-A-12-13-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	422
GN.21923	GN 3975-20-A-12-15-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	425
GN.21925	GN 3975-20-A-12-18-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	426
GN.21927	GN 3975-20-A-12-23-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	428
GN.21929	GN 3975-20-A-12-30-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	438
GN.21931	GN 3975-20-A-12-40-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	426
GN.21933	GN 3975-20-A-12-65-AN	12	12	30	20	27.4	35	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	432
GN.21935	GN 3975-30-A-12-5-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	867
GN.21940	GN 3975-30-A-12-10-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	882
GN.21942	GN 3975-30-A-12-17-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	863
GN.21944	GN 3975-30-A-12-20-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	861
GN.21946	GN 3975-30-A-12-25-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	869
GN.21948	GN 3975-30-A-12-34-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	865
GN.21950	GN 3975-30-A-12-45-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	870
GN.21954	GN 3975-30-A-12-64-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	881



METRIC

Code	Description	d6*	d7	d8*	m2	m3	m4	m5	m6	m7	m8	m9	m10	Gear ratio i	⚖
GN.21919	GN 3975-20-A-12-5-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	5	434
GN.21921	GN 3975-20-A-12-13-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	13	422
GN.21923	GN 3975-20-A-12-15-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	15	425
GN.21925	GN 3975-20-A-12-18-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	18	426
GN.21927	GN 3975-20-A-12-23-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	23	428
GN.21929	GN 3975-20-A-12-30-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	30	438
GN.21931	GN 3975-20-A-12-40-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	40	426
GN.21933	GN 3975-20-A-12-65-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	65	432
GN.21935	GN 3975-30-A-12-5-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	5	867
GN.21940	GN 3975-30-A-12-10-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	10	882
GN.21942	GN 3975-30-A-12-17-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	17	863
GN.21944	GN 3975-30-A-12-20-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	20	861
GN.21946	GN 3975-30-A-12-25-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	25	869
GN.21948	GN 3975-30-A-12-34-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	34	865
GN.21950	GN 3975-30-A-12-45-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	45	870
GN.21954	GN 3975-30-A-12-64-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	64	881

* Usable thread depth: min. 1.6 x d6 / d8

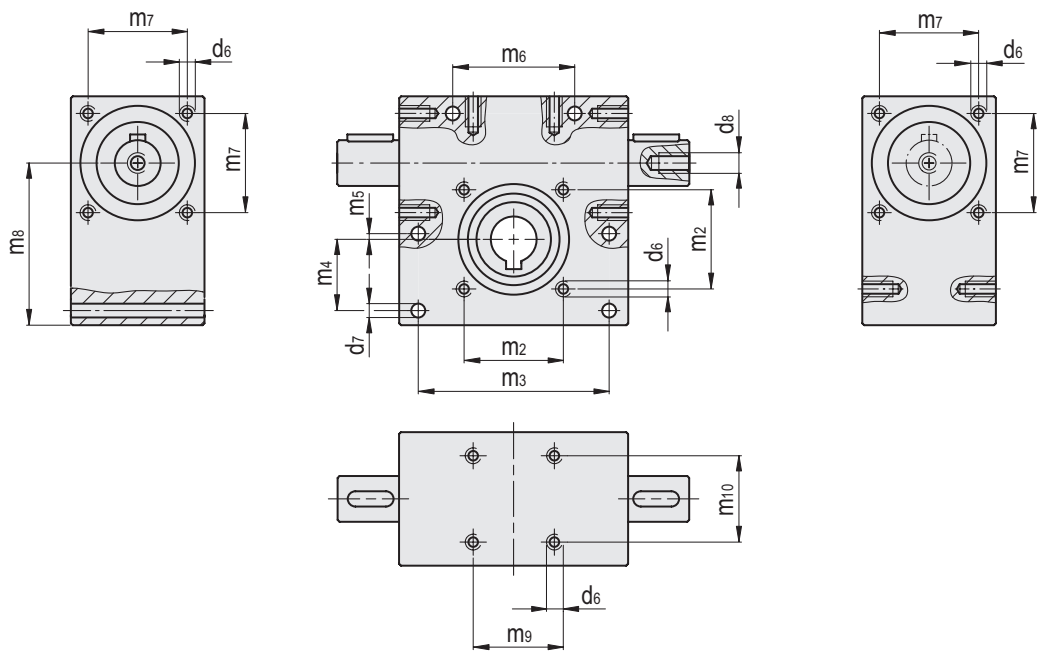


Conversion Table	
1 mm = 0.039 inch	
d1	
mm	inch
12	0.47

GN 3975-B

METRIC

Code	Description	d1	j6	d2	H7	d3	d4	d5	b1	b2	b3 JS9	l1	l2	l3	l4	h	t1	t2	t3	t4	m1	⚖️
GN.21920	GN 3975-20-B-12-5-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	434	
GN.21924	GN 3975-20-B-12-13-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	432	
GN.21926	GN 3975-20-B-12-15-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	440	
GN.21928	GN 3975-20-B-12-18-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	411	
GN.21930	GN 3975-20-B-12-23-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	414	
GN.21932	GN 3975-20-B-12-30-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	452	
GN.21934	GN 3975-20-B-12-40-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	440	
GN.21937	GN 3975-20-B-12-65-AN	12	12	30	20	27.4	35	4	4	4	60	16	12	3	1.5	2	13.8	1.6	18.3	20	447	
GN.21936	GN 3975-30-B-12-5-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	883		
GN.21939	GN 3975-30-B-12-10-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	903		
GN.21941	GN 3975-30-B-12-17-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	880		
GN.21943	GN 3975-30-B-12-20-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	877		
GN.21945	GN 3975-30-B-12-25-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	885		
GN.21947	GN 3975-30-B-12-34-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	881		
GN.21949	GN 3975-30-B-12-45-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	885		
GN.21955	GN 3975-30-B-12-64-AN	12	14	30	25	27.4	40	4	5	80	16	12	3	1.5	4	16.3	2	20.5	30	897		



METRIC

Code	Description	d6*	d7	d8*	m2	m3	m4	m5	m6	m7	m8	m9	m10	Gear ratio i	⚖
GN.21920	GN 3975-20-B-12-5-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	5	434
GN.21924	GN 3975-20-B-12-13-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	13	432
GN.21926	GN 3975-20-B-12-15-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	15	440
GN.21928	GN 3975-20-B-12-18-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	18	411
GN.21930	GN 3975-20-B-12-23-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	23	414
GN.21932	GN 3975-20-B-12-30-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	30	452
GN.21934	GN 3975-20-B-12-40-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	40	440
GN.21937	GN 3975-20-B-12-65-AN	M 4	4.2	M 5	26	50	17.5	1.5	31	26	42.5	22.5	26	65	447
GN.21936	GN 3975-30-B-12-5-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	5	883
GN.21939	GN 3975-30-B-12-10-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	10	903
GN.21941	GN 3975-30-B-12-17-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	17	880
GN.21943	GN 3975-30-B-12-20-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	20	877
GN.21945	GN 3975-30-B-12-25-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	25	885
GN.21947	GN 3975-30-B-12-34-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	34	881
GN.21949	GN 3975-30-B-12-45-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	45	885
GN.21955	GN 3975-30-B-12-64-AN	M 5	5.5	M 5	40	60	20	10	15	26	57.5	30	30	64	897

* Usable thread depth: min. 1.6 x d6 / d8