



Quick Release Couplings

SPECIFICATION

Types

- Type **A**: With threaded stud
- Type **I**: With internal thread

Coding

- **F**: Fixed bearing
- **L**: Floating bearing

Housing
Aluminum
Black anodized **ASS**
Closure mechanism
Steel, tempered
Zinc plated, blue passivated
Fastening bushing (type I)
Stainless steel AISI 431
Tempered
Mounting screw (type A)
Socket cap screw DIN 7984
Property class 8.8

Other screws
Steel, zinc plated, blue passivated

Other parts
Stainless steel

Operating temperature -30 °C to 120 °C

INFORMATION

Quick release couplings GN 1050 position and connect components without tools using studs GN 1050.1 (see page) for a tight and repeatable fit. For repeated machine set ups or assemblies that require the inconvenient use of a screwdriver, quick release couplings can be used on fixtures or production lines to efficiently mount guide rails, covers or additional devices.

A safety locking button protects against accidental opening of the coupling. When pressing the button, the sleeve can be moved axially to unlock a stud inserted into the notch on the inside. At the same time, a red ring becomes visible on the outside to indicate the unlocked state.

The couplings do not transmit any torque. If multiple couplings are used on the same unit, coding L can be used to compensate for a radial and axial offset. The bores d_4 can hold cylinder or cam point pins to position the coupling, if needed. For coding L, the pin holes on the application must be proportionally larger to allow for radial adjustments.

Flanges GN 1050.2 (see page) are available as an accessory for the assembly of couplings and studs, and provide additional attachment options.



ACCESSORY

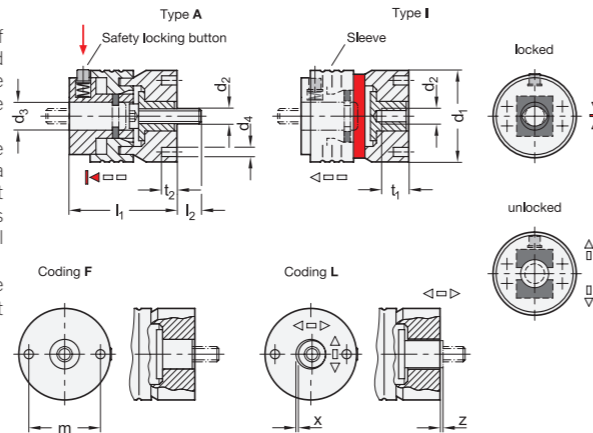
- Studs GN 1050.1 (see page)
- Flanges GN 1050.2 (see page)

ON REQUEST

- Other colors (anodized) or plain

TECHNICAL INFORMATION

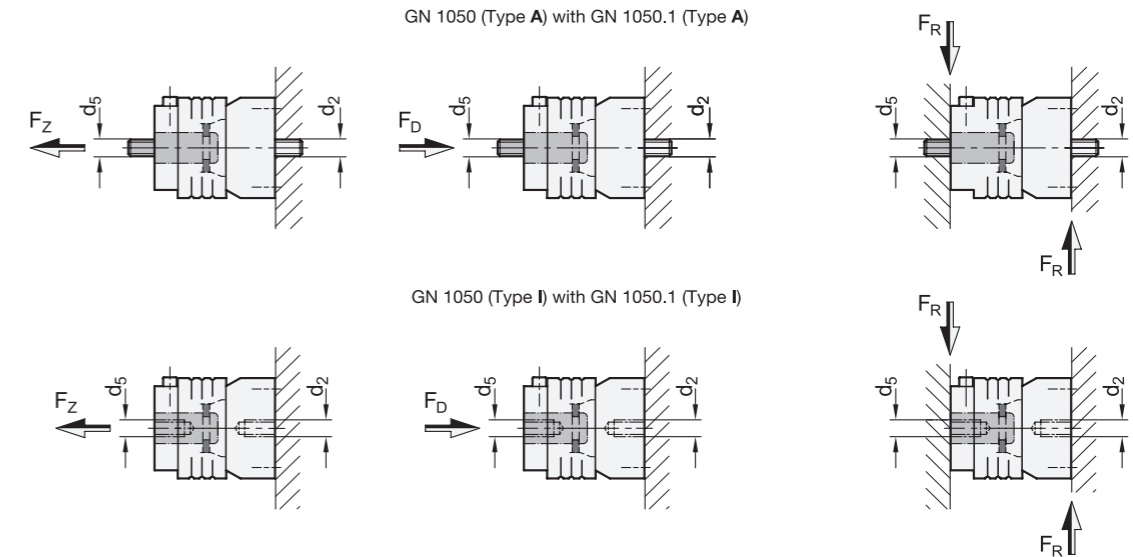
- Stainless Steel characteristics (see page A26)
- Strength values of screws / nuts (see page A20)



GN 1050

Description	Nominal size	d2	d1	d3 Bore ±0.03	d3 Studs GN 1050.1 ±0.03	d4 H7	l1	l2	m	t1 Min.	t2	x +0.05 Radial offset	z ±0.1 Axial offset	△
GN 1050-2N-M10-A-F-ASS	2N	M 10	53	18.5	18.25	6	70.1	15	40	-	10	-	-	430
GN 1050-2N-M10-A-L-ASS	2N	M 10	53	18.5	18.25	6	70.1	15	40	-	10	0.75	0.4	397
GN 1050-2N-M12-A-F-ASS	2N	M 12	53	18.5	18.25	6	70.1	20	40	-	10	-	-	437
GN 1050-2N-M12-A-L-ASS	2N	M 12	53	18.5	18.25	6	70.1	20	40	-	10	0.75	0.4	390
GN 1050-2N-M10-I-F-ASS	2N	M 10	53	18.5	18.25	6	70.1	-	40	18	10	-	-	407
GN 1050-2N-M10-I-L-ASS	2N	M 10	53	18.5	18.25	6	70.1	-	40	18	10	0.75	0.4	404
GN 1050-2N-M12-I-F-ASS	2N	M 12	53	18.5	18.25	6	70.1	-	40	18	10	-	-	403
GN 1050-2N-M12-I-L-ASS	2N	M 12	53	18.5	18.25	6	70.1	-	40	18	10	0.75	0.4	397

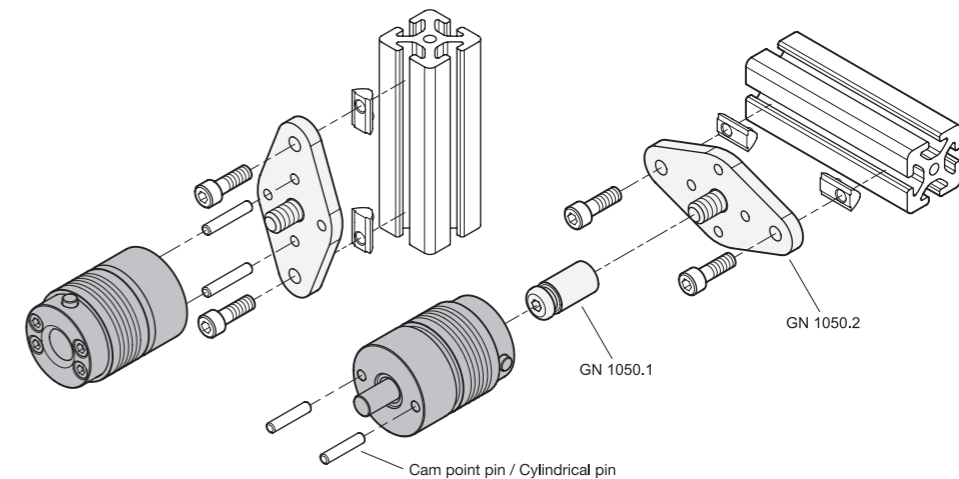
Mounting and load information



Nominal Size	d2 Mounting thread Quick release couplings	d5 Mounting thread Studs GN 1050.1	Fz Max. tensile load in kN	Fd Max. compressive load in kN	FR Max. shear load in kN
2N	M 10	M 10	25	25	19
2N	M 10	M 12	25	25	19
2N	M 12	M 10	25	25	19
2N	M 12	M 12	35	35	28

Safety instructions: The load capacities can only be achieved if the surrounding structure is capable of supporting these loads. Any threaded holes on the application or inserted nuts and screws require at least property class 8. Depending on the application, additional safety factors should be added.

Application example for profile systems





Studs

for Quick Release Couplings GN 1050 and Flanges GN 1050.2

SPECIFICATION

Types

- Type **A**: With threaded stud
- Type **I**: With internal thread

Steel **ST**

- Tempered
- Zinc plated, blue passivated

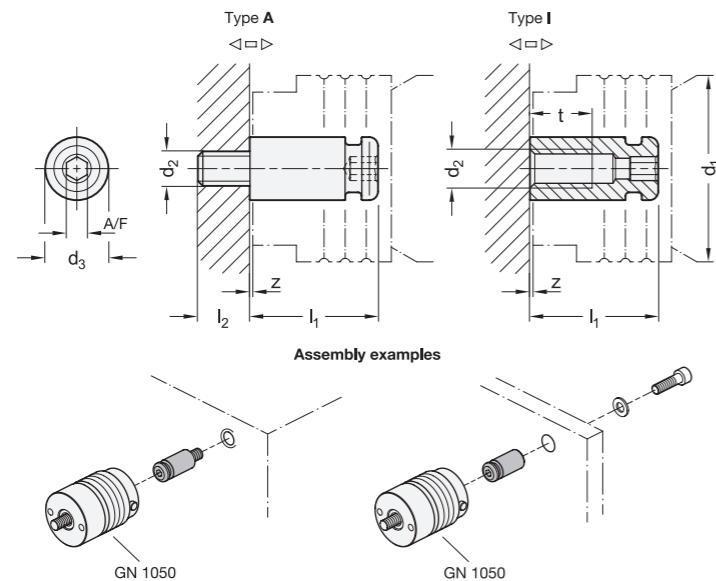
INFORMATION

Studs GN 1050.1 position and attach components without tools using quick release couplings GN 1050 (see page) for a tight and repeatable fit. The dimensions and material properties of the studs have been precisely adapted to the couplings to ensure proper functionality.

The studs can be purchased individually so that multiple studs can be paired with a coupling in alternation, such as to efficiently position fixtures in different locations depending on the workpiece. The studs are fastened with threaded stud or internal thread, depending on the type.

To achieve the indicated load capacities, threaded holes on the application or inserted nuts and screws must meet at least property class 8.

Flanges GN 1050.2 (see page) are available as an accessory for mounting the studs and provide additional attachment options.



GN 1050.1

Description	Nominal size Quick release Coupling GN 1050	d2	d1	d3 ±0.03	l1	l2	A/F	t Min.	z ±0.1 Axial offset	⚖
GN 1050.1-2-M10-A-ST	2	M 10	53	18.25	37.1	15	6	-	0.4	80
GN 1050.1-2-M12-A-ST	2	M 12	53	18.25	37.1	18	6	-	0.4	85
GN 1050.1-2-M10-I-ST	2	M 10	53	18.25	37.1	-	6	18	0.4	60
GN 1050.1-2-M12-I-ST	2	M 12	53	18.25	37.1	-	6	18	0.4	55



Flanges

for Quick Release Couplings GN 1050 and Studs GN 1050.1

SPECIFICATION

Coding

- **F**: Fixed bearing
- **L**: Floating bearing

Steel **ST**

Zinc plated, blue passivated **ZB**

Countersunk screw ISO 10642

Steel, property class 8.8

Zinc plated, blue passivated



INFORMATION

Flanges GN 1050.2 are available as accessories for mounting quick release couplings GN 1050 (see page) and studs GN 1050.1 (see page) to expand the attachment options of both fastening elements.

They are used wherever the standard fastening method of the couplings or studs using the central internal thread or threaded stud is not possible or suboptimal due to the surrounding structure. This can happen with aluminum profile systems or thinwalled parts that have insufficient strength to bear a point load.

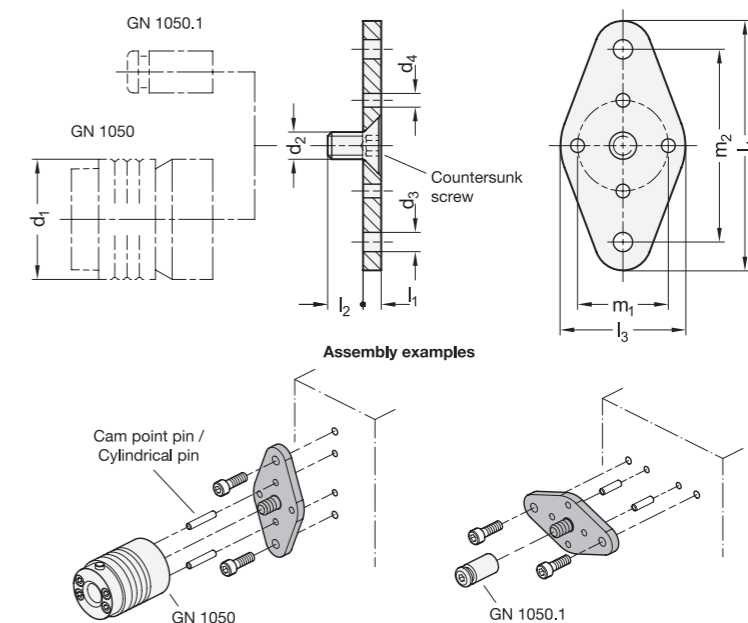
Both the flange and the coupling can be positioned by inserting cam point pins or cylinder pins into the bores d3 to prevent unintended twisting. For coding L (floating bearing), the pin holes are designed to avoid restricting the radial offset of the coupling.

ON REQUEST

- Other finishes e.g. powder coated

TECHNICAL INFORMATION

- Strength values of screws / nuts (see page A20)



GN 1050.2

Description	Nominal size Quick release Coupling GN 1050	d1	d2	d3	d4	l1	l2	l3	l4	m1	m2	⚖
GN 1050.2-2-F-ST-ZB	2	53	M 12	8.5	6.05	10	15	55	110	40	85	240
GN 1050.2-2-L-ST-ZB	2	53	M 12	8.5	8.5	10	15	55	110	40	85	240



Quick-fit couplings with radial off-set compensation

SPECIFICATION

Types

- Type **A**: with male thread
- Type **B**: with female thread

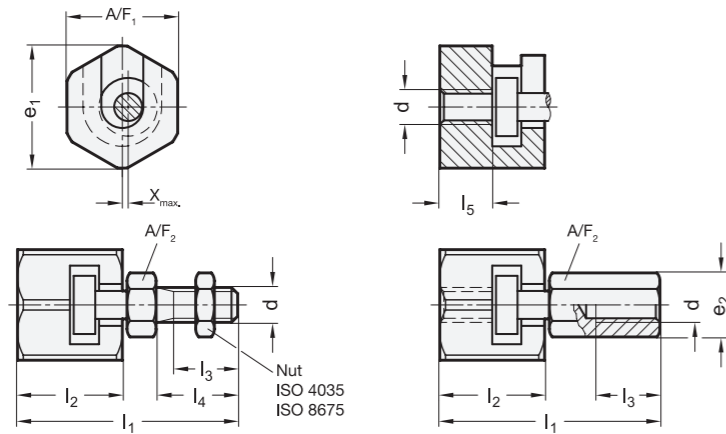
Steel

- tempered
- phosphated

INFORMATION

Quick-fit couplings GN 240 have been designed for the purpose of compensating a radial shaft off-set (x). A typical application is the axial link to a piston rod of a cylinder operating in any type of fixture or system.

The coupling is **not** designed for the transfer of torque.



GN 240

Description	d	e1	e2 ≈	l1 ≈	l2	l3 min.	l4	l5 +1.0	A/F 1	A/F 2	x	Max. pull-/push load in kN	⚖
GN 240-M6-A	M6	21	11	37.5	18	11	14	9	19	10	0.6	2.5	42
GN 240-M8-A	M8	26	14.5	45	22.5	13.5	17	11.5	24	13	0.7	4.5	84
GN 240-M10-A	M10	30	19	56	29	16	20	16	27	17	0.7	6.5	144
GN 240-M10x1.25-A	M10x1.25	30	19	56	29	16	20	16	27	17	0.7	6.5	144
GN 240-M12-A	M12	32.5	21	66.5	34	21	25	17	30	19	0.8	10	205
GN 240-M12x1.25-A	M12x1.25	32.5	21	66.5	34	21	25	17	30	19	0.8	10	205
GN 240-M16-A	M16	39	27	83	42	25	30	23	36	24	1	18	384
GN 240-M16x1.5-A	M16x1.5	39	27	83	42	25	30	23	36	24	1	18	385
GN 240-M20-A	M20	44	34	93.5	45.5	29	35	23.5	41	30	1	30	568
GN 240-M20x1.5-A	M20x1.5	44	34	93.5	45.5	29	35	23.5	41	30	1	30	568
GN 240-M6-B	M6	21	11	37.5	18	11	14	9	19	10	0.6	2.5	45
GN 240-M8-B	M8	26	14.5	45	22.5	13.5	17	11.5	24	13	0.7	4.5	89
GN 240-M10-B	M10	30	19	56	29	16	20	16	27	17	0.7	6.5	155
GN 240-M10x1.25-B	M10x1.25	30	19	56	29	16	20	16	27	17	0.7	6.5	155
GN 240-M12-B	M12	32.5	21	66.5	34	21	25	17	30	19	0.8	10	220
GN 240-M12x1.25-B	M12x1.25	32.5	21	66.5	34	21	25	17	30	19	0.8	10	220
GN 240-M16-B	M16	39	27	83	42	25	30	23	36	24	1	18	397
GN 240-M16x1.5-B	M16x1.5	39	27	83	42	25	30	23	36	24	1	18	398
GN 240-M20-B	M20	44	34	93.5	45.5	29	35	23.5	41	30	1	30	599
GN 240-M20x1.5-B	M20x1.5	44	34	93.5	45.5	29	35	23.5	41	30	1	30	594



Quick-fit couplings with radial off-set compensation

SPECIFICATION

Types

- Type **A**: with male thread
- Type **B**: with female thread

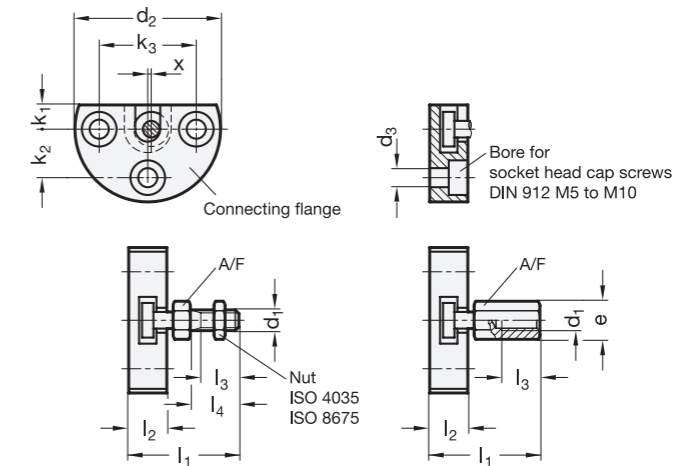
Steel

- tempered
- phosphated

INFORMATION

Quick-fit couplings GN 240.1 have been designed for the purpose of compensating a radial shaft off-set (x). A typical application is the axial link to a piston rod of a cylinder operating in any type of fixture or system.

The coupling is **not** designed for the transfer of torque.



GN 240.1

Description	d1	d2	d3	e ≈	k1	k2	k3	l1 ≈	l2	l3 min.	l4	A/F	x Max. shaft off set	Max. pull-/push load in kN	⚖
GN 240.1-M6-A	M6	42	5.5	-	7	14	28	30.5	11	11	14	10	0.6	2.5	73
GN 240.1-M8-A	M8	48	6.5	-	8	16	32	35.5	13	13.5	17	13	0.7	4.5	116
GN 240.1-M10-A	M10	50	6.5	-	9	17	34	43	16	16	20	17	0.7	6.5	173
GN 240.1-M10x1.25-A	M10x1.25	50	6.5	-	9	17	34	43	16	16	20	17	0.7	6.5	174
GN 240.1-M12-A	M12	55	6.5	-	10	19	38	53	20.5	21	25	19	0.8	10	261
GN 240.1-M12x1.25-A	M12x1.25	55	6.5	-	10	19	38	53	20.5	21	25	19	0.8	10	262
GN 240.1-M16-A	M16	65	9	-	12.5	22.5	45	64	23	25	30	24	1	18	431
GN 240.1-M16x1.5-A	M16x1.5	65	9	-	12.5	22.5	45	64	23	25	30	24	1	18	433
GN 240.1-M20-A	M20	80	11	-	17	28	56	74	26	29	35	30	1	30	815
GN 240.1-M20x1.5-A	M20x1.5	80	11	-	17	28	56	74	26	29	35	30	1	30	816
GN 240.1-M6-B	M6	42	5.5	11	7	14	28	30.5	11	11	-	10	0.6	2.5	76
GN 240.1-M8-B	M8	48	6.5	14.5	8	16	32	35.5	13	13.5	-	13	0.7	4.5	122
GN 240.1-M10-B	M10	50	6.5	19	9	17	34	43	16	15	-	17	0.7	6.5	184
GN 240.1-M10x1.25-B	M10x1.25	50	6.5	19	9	17	34	43	16	15	-	17	0.7	6.5	184
GN 240.1-M12-B	M12	55	6.5	21	10	19	38	53	20.5	17.5	-	19	0.8	10	276
GN 240.1-M12x1.25-B	M12x1.25	55	6.5	21	10	19	38	53	20.5	17.5	-	19	0.8	10	276
GN 240.1-M16-B	M16	65	9	27	12.5	22.5	45	64	23	22	-	24	1	18	449
GN 240.1-M16x1.5-B	M16x1.5	65	9	27	12.5	22.5	45	64	23	22	-	24	1	18	449
GN 240.1-M20-B	M20	80	11	34	17	28	56	74	26	25	-	30	1	30	845
GN 240.1-M20x1.5-B	M20x1.5	80	11	34	17	28	56	74	26	25	-	30	1	30	845

Quick-fit couplings

with angle- and radial off-set compensation

SPECIFICATION

Steel

- tempered
- phosphated

Retaining ring (spring)

Stainless Steel AISI 631

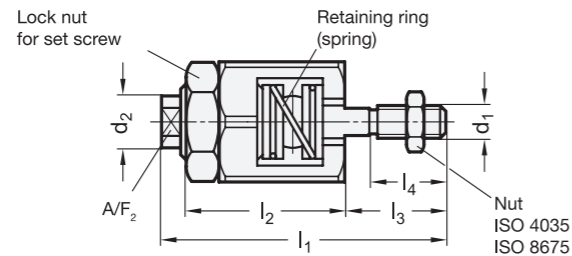
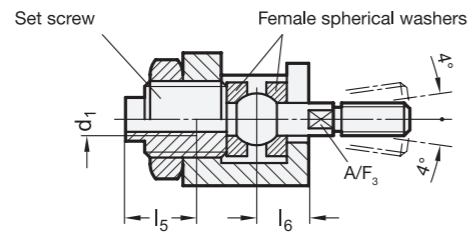
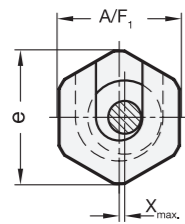
INFORMATION

Quick-fit couplings GN 240.2 have been designed to compensate a **radial** and **angular** off-set. Furthermore they are axially freely adjustable via the set screw.

A typical application is the axial link to a piston rod of a cylinder operating in any type of fixture or system.

The coupling is renowned by its very compact construction without any loose components.

It is **not** designed for the transfer of torque.



GN 240.2

Description	d1	d2	e	l1 ≈	l2	l3	l4	l5 min.	l6	A/F 1	A/F 2	A/F 3	x	Max. pull-/push load in kN	⚖
GN 240.2-M6	M6	9.5	24.5	52	29	18.5	14	13	9.5	22	8	5	0.6	2.5	75
GN 240.2-M8	M8	15	30	63	33	23.5	18	16	11.5	27	13	7	0.7	4.5	135
GN 240.2-M10	M10	21	44	81	43	30.5	22	24	16	41	18	12	0.7	6.5	400
GN 240.2-M10x1,25	M10x1.25	21	44	81	43	30.5	22	24	16	41	18	12	0.7	6.5	403
GN 240.2-M12	M12	21	44	85	43	34.5	26	24	16	41	18	12	0.8	10	405
GN 240.2-M12x1,25	M12x1.25	21	44	85	43	34.5	26	24	16	41	18	12	0.8	10	409
GN 240.2-M16	M16	32	60	121	62	45	34	34	26	55	27	18	1	18	1090
GN 240.2-M16x1,5	M16x1.5	32	60	121	62	45	34	34	26	55	27	18	1	18	1094
GN 240.2-M20	M20	32	60	129	62	53	42	34	26	55	27	18	1	30	1136
GN 240.2-M20x1,5	M20x1.5	32	60	129	62	53	42	34	26	55	27	18	1	30	1143