

## 18420

LOCATING PINS

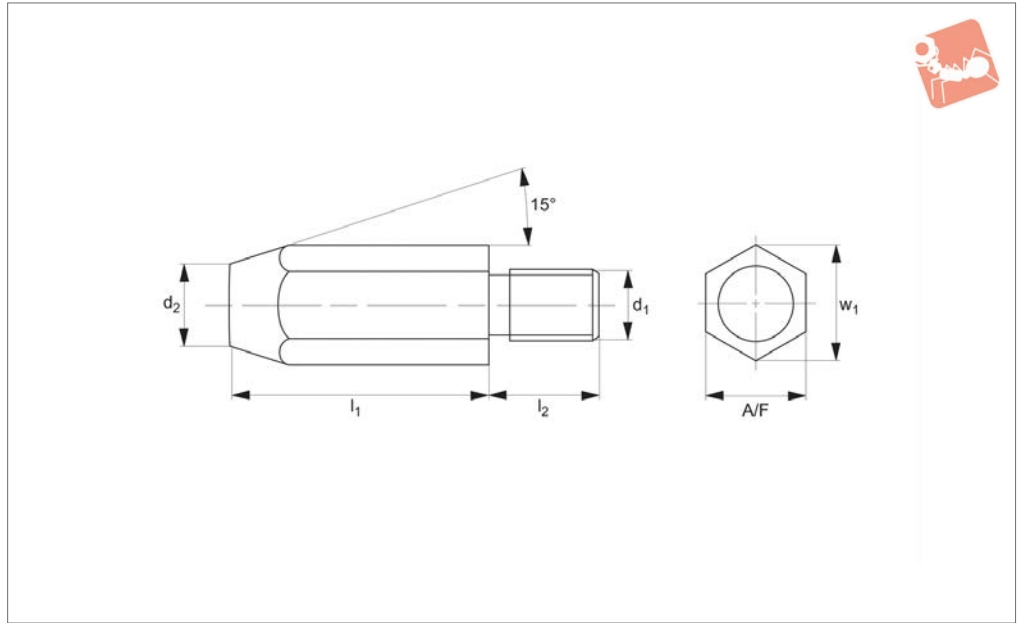
### Material

Steel, heat-treated.

Order No.	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	Weight g
18420.W0001	12	28	M12	46	8	58	70
18420.W0002	16	34	M16	57	9	72	150



**36000**



**Material**

Heat-treated steel (DIN 6320), blackened, turned, unhardened.

**Technical Notes**

Bearing surface without centre.  
Locating pins nos. 36220 and 36300 can

also be used as feet.

Order No.	d <sub>1</sub>	l <sub>1</sub>	d <sub>2</sub>	l <sub>2</sub>	w <sub>1</sub>	A/F	Torque to Nm max.	Weight g
36000.W0061	M 6	10	8	11	11.5	10	7	8
36000.W0062	M 6	20	6	11	11.5	10	7	13
36000.W0081	M 8	15	10	13	15.0	13	7	19
36000.W0082	M 8	30	9	13	15.0	13	18	35
36000.W0101	M10	20	13	16	19.6	17	32	41
36000.W0102	M10	40	13	16	19.6	17	32	81
36000.W0121	M12	25	15	20	21.9	19	60	70
36000.W0122	M12	50	15	20	21.9	19	60	129



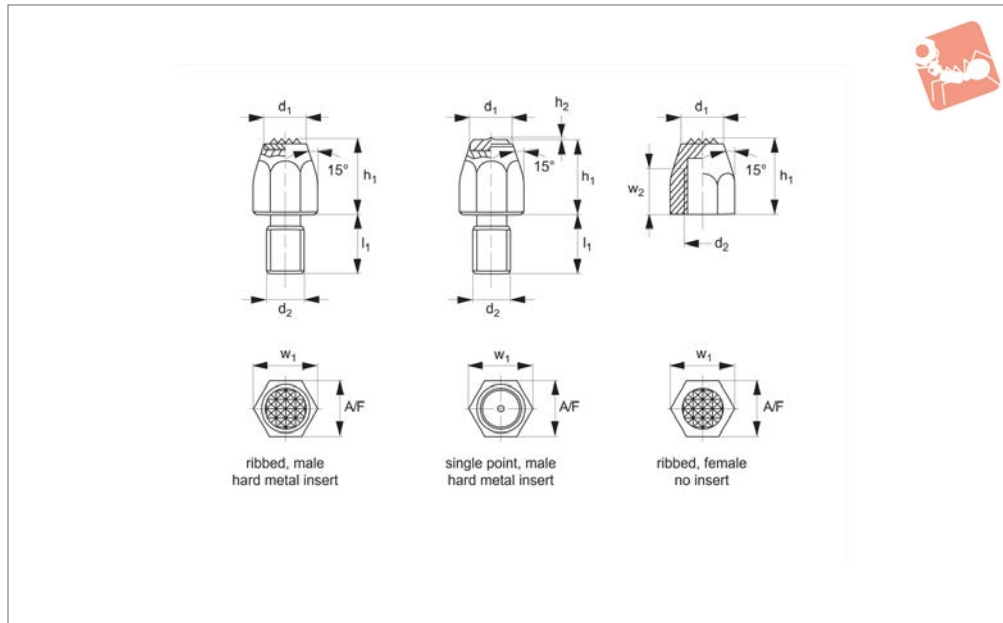


# Locating Pins

with and without hard metal insert



# Locating Pins



**36200**

LOCATING PINS

### Material

#### With hard metal insert:

Body: heat-treated steel, tempered, blackened.

Insert: hard metal, brazed-in.

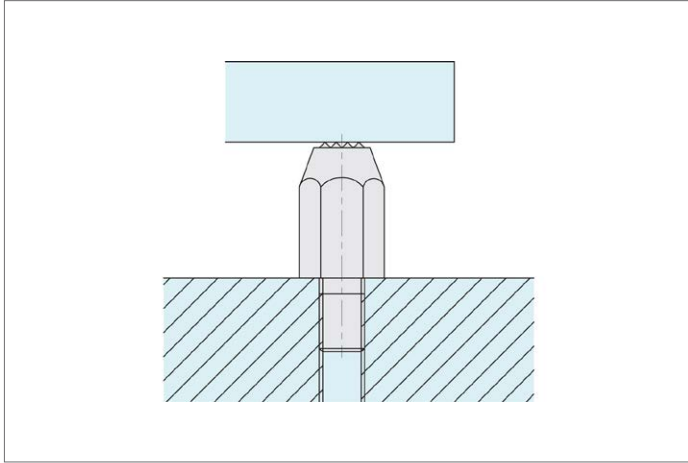
#### Without hard metal insert:

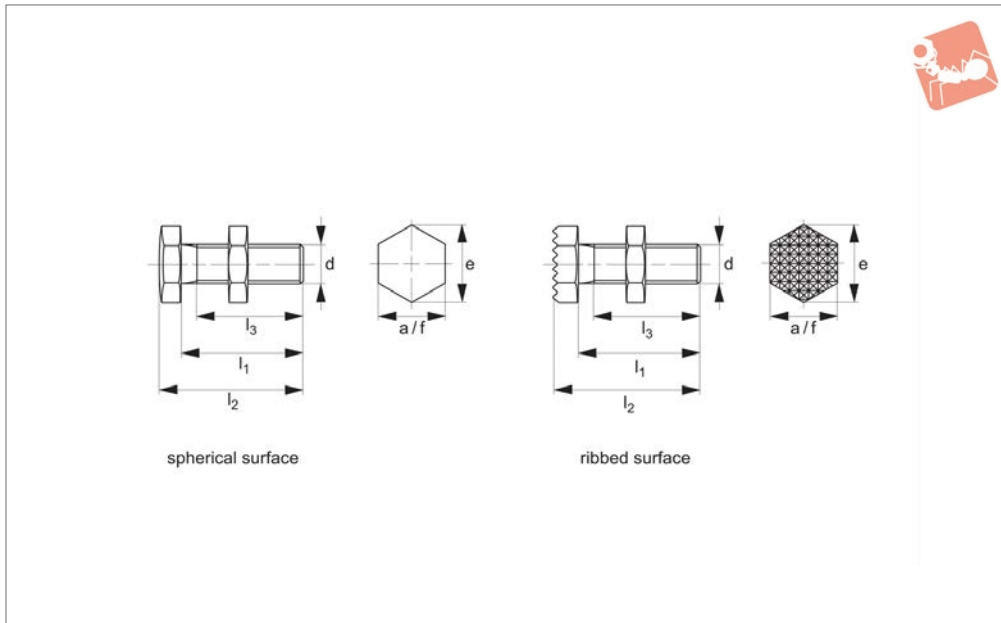
Body: free-cutting steel, case-hardened, blackened.

### Technical Notes

For workpieces having a rough surface. The single pointed type is ideal for cast parts.

Order No.	Type	Insert material	d <sub>1</sub>	l <sub>1</sub>	d <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	w <sub>1</sub>	w <sub>2</sub>	A/F	Torque to Nm max.	Weight g
36200.W0061	Ribbed, Male	Hard Metal	9.5	11	M 6	10	-	11.5	-	10	7	9
36200.W0081	Ribbed, Male	Hard Metal	12.5	13	M 8	15	-	15.0	-	13	18	22
36200.W0101	Ribbed, Male	Hard Metal	12.5	15	M10	20	-	19.6	-	17	32	40
36200.W0121	Ribbed, Male	Hard Metal	13.8	20	M12	25	-	21.9	-	19	60	64
36200.W0063	Single Point, Male	Hard Metal	9.5	11	M 6	10	0.8	11.5	-	10	7	9
36200.W0083	Single Point, Male	Hard Metal	12.5	13	M 8	15	0.8	15.0	-	13	18	23
36200.W0103	Single Point, Male	Hard Metal	12.5	15	M10	20	0.8	19.6	-	17	32	40
36200.W0123	Single Point, Male	Hard Metal	13.8	20	M12	25	0.8	21.9	-	19	60	65
36200.W0142	Ribbed, Female	W/O Insert	9.0	-	M 8	20	-	15.0	10	13	18	14
36200.W0144	Ribbed, Female	W/O Insert	9.0	-	M 8	25	-	15.0	10	13	18	20
36200.W0164	Ribbed, Female	W/O Insert	12.5	-	M10	25	-	19.6	13	17	32	1
36200.W0166	Ribbed, Female	W/O Insert	12.5	-	M10	30	-	19.6	13	17	32	40
36200.W0168	Ribbed, Female	W/O Insert	12.5	-	M10	40	-	19.6	13	17	32	60
36200.W0184	Ribbed, Female	W/O Insert	13.0	-	M12	25	-	21.9	15	19	60	33
36200.W0186	Ribbed, Female	W/O Insert	13.0	-	M12	30	-	21.9	15	19	60	44
36200.W0188	Ribbed, Female	W/O Insert	13.0	-	M12	40	-	21.9	15	19	60	69





## 36210

LOCATING PINS

### Material

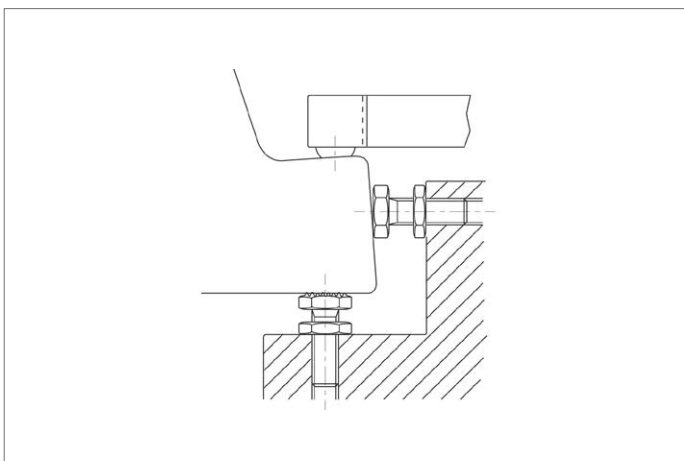
Body and nut: heat treated steel, tempered, blackened and support induc-

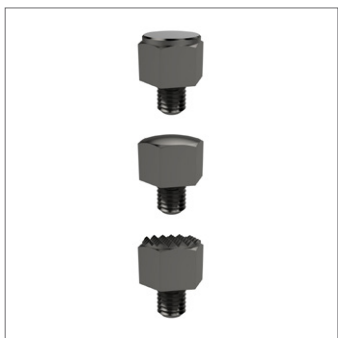
tion hardened, quality 10,9.

### Technical Notes

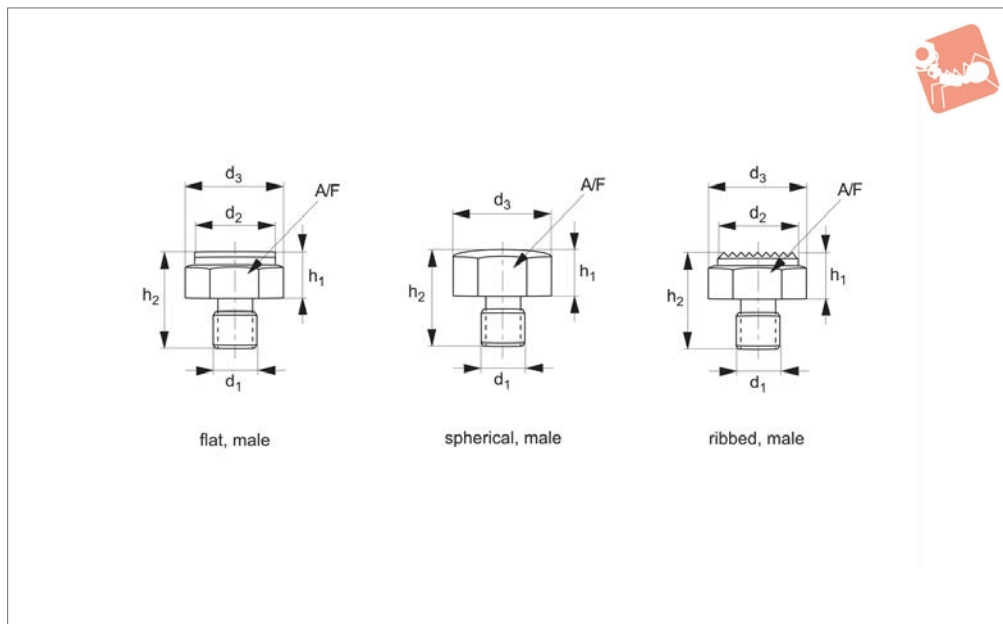
Ideal for use as seats and stops.

Order No.	Finish	d	$l_1$ $\pm 1.5$	$l_2$ $\pm 1.5$	$l_3$ min.	e	A/F	Weight g
36210.W0606	Spherical Surface	M 6	20	23.5	19.0	11.5	10	6.8
36210.W0608	Spherical Surface	M 8	25	30.0	21.0	14.5	13	15.0
36210.W0610	Spherical Surface	M10	30	36.0	25.5	19.6	17	31.0
36210.W0612	Spherical Surface	M12	35	42.0	29.7	21.9	19	48.0
36210.W0616	Spherical Surface	M16	40	49.5	34.0	27.7	24	99.0
36210.W0620	Spherical Surface	M20	45	57.0	37.0	34.6	30	179.0
36210.W0624	Spherical Surface	M24	50	64.0	40.0	41.6	36	294.0
36210.W0626	Ribbed Surface	M 6	20	23.5	19.0	11.5	10	6.7
36210.W0628	Ribbed Surface	M 8	25	30.0	21.0	14.5	13	15.0
36210.W0630	Ribbed Surface	M10	30	36.0	25.5	19.6	17	32.0
36210.W0632	Ribbed Surface	M12	35	42.0	29.7	21.9	19	49.0
36210.W0636	Ribbed Surface	M16	40	49.5	34.0	27.7	24	99.0
36210.W0640	Ribbed Surface	M20	45	57.0	37.0	34.6	30	177.0
36210.W0644	Ribbed Surface	M24	50	64.0	40.0	41.6	36	296.0





## 36401



### Material

Free-cutting steel, case-hardened and blackened. Thread not hardened.

### Technical Notes

The buttons are used as seats, stops and

thrust pads in jigs and fixtures as well as machine and equipment design. Dimension  $h_1$  tolerance of  $\pm 0,01$  for flat face type only, other types have  $h_1$  tolerance of  $\pm 0,1$ . Stated starting torque for female thread is

based on use of bolt of strength class 8 or greater and with full engagement of female thread.

### Tips

For female thread see 36402.

Order No.	Type	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	h <sub>1</sub>	h <sub>2</sub>	A/F	Torque to Nm max.	Weight g
36401.W0021	Flat Face	M 8	17	19.4	10	20	17	18	21
36401.W0031	Flat Face	M10	19	21.9	10	22	19	32	28
36401.W0032	Flat Face	M10	19	21.9	15	27	19	32	40
36401.W0001	Flat Face	M12	22	25.2	10	24	22	60	34
36401.W0002	Flat Face	M12	22	25.2	15	29	22	60	56
36401.W0042	Flat Face	M16	30	33.0	15	34	30	140	110
36401.W0043	Flat Face	M16	30	33.0	20	39	30	140	140
36401.W0052	Flat Face	M20	36	40.0	20	44	36	290	214
36401.W0053	Flat Face	M20	36	40.0	25	49	36	290	257
36401.W0062	Flat Face	M24	41	46.0	20	49	41	498	300
36401.W0063	Flat Face	M24	41	46.0	25	54	41	498	356
36401.W0064	Flat Face	M24	41	46.0	30	59	41	498	412
36401.W0121	Spherical Face	M 8	-	19.4	10	20	17	18	20
36401.W0131	Spherical Face	M10	-	21.9	10	22	19	32	30
36401.W0132	Spherical Face	M10	-	21.9	15	27	19	32	40
36401.W0101	Spherical Face	M12	-	25.2	10	24	22	60	38
36401.W0102	Spherical Face	M12	-	25.2	15	29	22	60	53
36401.W0142	Spherical Face	M16	-	33.0	15	34	30	140	105
36401.W0143	Spherical Face	M16	-	33.0	20	39	30	140	135
36401.W0152	Spherical Face	M20	-	40.0	20	44	36	290	206
36401.W0153	Spherical Face	M20	-	40.0	25	49	36	290	249
36401.W0162	Spherical Face	M24	-	46.0	20	49	41	498	258
36401.W0163	Spherical Face	M24	-	46.0	25	54	41	498	342
36401.W0164	Spherical Face	M24	-	46.0	30	59	41	498	398
36401.W0221	Ribbed Face	M 8	17	19.4	10	20	17	18	21
36401.W0231	Ribbed Face	M10	19	21.9	10	22	19	32	30
36401.W0232	Ribbed Face	M10	19	21.9	15	27	19	32	41
36401.W0201	Ribbed Face	M12	22	25.2	10	24	22	60	38
36401.W0202	Ribbed Face	M12	22	25.2	15	29	22	60	54
36401.W0242	Ribbed Face	M16	30	33.0	15	34	30	140	106
36401.W0243	Ribbed Face	M16	30	33.0	20	39	30	140	136



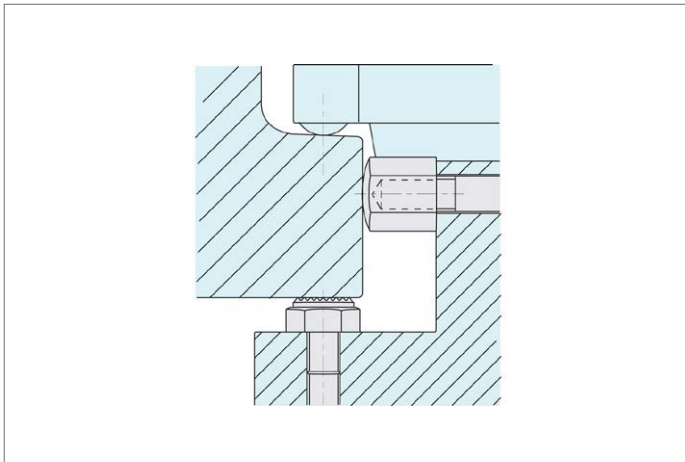
# Threaded Rest Buttons

male thread

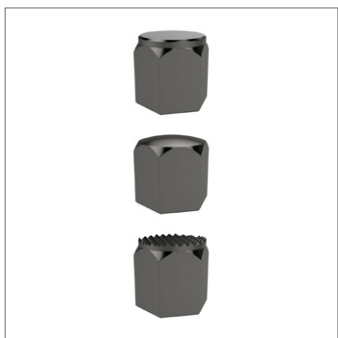


## Locating Pins

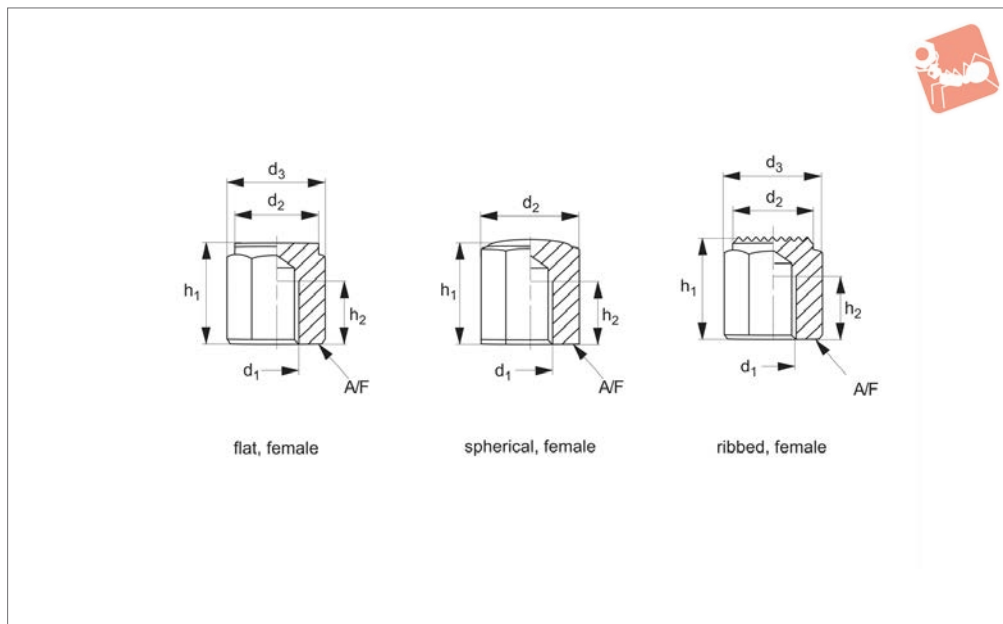
Order No.	Type	$d_1$	$d_2$	$d_3$	$h_1$	$h_2$	A/F	Torque to Nm max.	Weight g
<b>36401.W0252</b>	Ribbed Face	M20	36	40.0	20	44	36	290	206
<b>36401.W0253</b>	Ribbed Face	M20	36	40.0	25	49	36	290	253
<b>36401.W0262</b>	Ribbed Face	M24	41	46.0	20	49	41	498	297
<b>36401.W0263</b>	Ribbed Face	M24	41	46.0	25	54	41	498	353
<b>36401.W0264</b>	Ribbed Face	M24	41	46.0	30	59	41	498	410



LOCATING PINS



## 36402



### Material

Free-cutting steel, case-hardened and blackened. Thread not hardened.

### Technical Notes

The buttons are used as seats, stops and thrust pads in jigs and fixtures as well as

machine and equipment design. Dimension  $h_1$  tolerance of  $\pm 0,01$  for flat face type only, other types have  $h_1$  tolerance of  $\pm 0,1$ . Stated starting torque for female thread is based on use of bolt strength class 8 or greater and with full engagement of female

thread.

### Tips

For male thread see 36401.

Order No.	Type	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	h <sub>1</sub>	h <sub>2</sub>	A/F	Torque to Nm max.	Weight g
36402.W0321	Flat Face	M 8	17	19.4	15	6	17	25	25
36402.W0323	Flat Face	M 8	17	19.4	25	12	17	25	42
36402.W0333	Flat Face	M10	19	21.9	20	10	19	46	40
36402.W0335	Flat Face	M10	19	21.9	30	15	19	46	61
36402.W0337	Flat Face	M10	19	21.9	40	15	19	46	85
36402.W0301	Flat Face	M12	22	25.2	20	10	22	82	52
36402.W0302	Flat Face	M12	22	25.2	25	15	22	82	65
36402.W0303	Flat Face	M12	22	25.2	30	18	22	82	79
36402.W0304	Flat Face	M12	22	25.2	40	18	22	82	111
36402.W0305	Flat Face	M12	22	25.2	50	18	22	82	142
36402.W0343	Flat Face	M16	30	33.0	30	20	30	206	140
36402.W0345	Flat Face	M16	30	33.0	50	24	30	206	257
36402.W0353	Flat Face	M20	36	40.0	40	26	36	407	279
36402.W0355	Flat Face	M20	36	40.0	60	38	36	407	431
36402.W0363	Flat Face	M24	41	46.0	40	26	41	698	341
36402.W0365	Flat Face	M24	41	46.0	60	38	41	698	530
36402.W0421	Spherical Face	M 8	-	19.4	15	6	17	25	23
36402.W0423	Spherical Face	M 8	-	19.4	25	12	17	25	41
36402.W0433	Spherical Face	M10	-	21.9	20	10	19	46	38
36402.W0435	Spherical Face	M10	-	21.9	30	15	19	46	60
36402.W0437	Spherical Face	M10	-	21.9	40	15	19	46	84
36402.W0401	Spherical Face	M12	-	25.2	20	10	22	82	50
36402.W0402	Spherical Face	M12	-	25.2	25	15	22	82	62
36402.W0403	Spherical Face	M12	-	25.2	30	18	22	82	76
36402.W0404	Spherical Face	M12	-	25.2	40	18	22	82	109
36402.W0405	Spherical Face	M12	-	25.2	50	18	22	82	141
36402.W0443	Spherical Face	M16	-	33.0	30	20	30	206	136
36402.W0445	Spherical Face	M16	-	33.0	50	24	30	206	252
36402.W0453	Spherical Face	M20	-	40.0	40	26	36	407	272
36402.W0455	Spherical Face	M20	-	40.0	60	38	36	407	423





# Threaded Rest Buttons

female thread



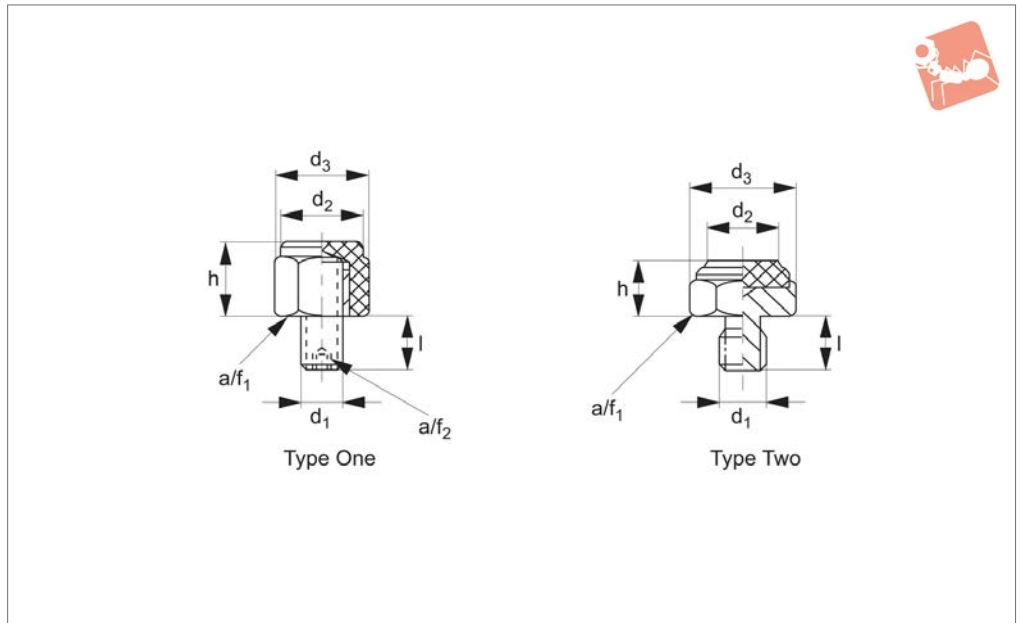
## Locating Pins

Order No.	Type	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	h <sub>1</sub>	h <sub>2</sub>	A/F	Torque to Nm max.	Weight g
<b>36402.W0463</b>	Spherical Face	M24	-	46.0	40	26	41	698	340
<b>36402.W0465</b>	Spherical Face	M24	-	46.0	60	38	41	698	530
<b>36402.W0521</b>	Ribbed Face	M 8	17	19.4	15	6	17	25	24
<b>36402.W0523</b>	Ribbed Face	M 8	17	19.4	25	12	17	25	41
<b>36402.W0533</b>	Ribbed Face	M10	19	21.9	20	10	19	46	38
<b>36402.W0535</b>	Ribbed Face	M10	19	21.9	30	15	19	46	60
<b>36402.W0537</b>	Ribbed Face	M10	19	21.9	40	15	19	46	84
<b>36402.W0501</b>	Ribbed Face	M12	22	25.2	20	10	22	82	50
<b>36402.W0502</b>	Ribbed Face	M12	22	25.2	25	15	22	82	63
<b>36402.W0503</b>	Ribbed Face	M12	22	25.2	30	18	22	82	77
<b>36402.W0504</b>	Ribbed Face	M12	22	25.2	40	18	22	82	109
<b>36402.W0505</b>	Ribbed Face	M12	22	25.2	50	18	22	82	141
<b>36402.W0543</b>	Ribbed Face	M16	30	33.0	30	20	30	206	137
<b>36402.W0545</b>	Ribbed Face	M16	30	33.0	50	24	30	206	254
<b>36402.W0553</b>	Ribbed Face	M20	36	40.0	40	26	36	407	266
<b>36402.W0555</b>	Ribbed Face	M20	36	40.0	60	38	36	407	418
<b>36402.W0563</b>	Ribbed Face	M24	41	46.0	40	26	41	698	338
<b>36402.W0565</b>	Ribbed Face	M24	41	46.0	60	38	41	698	528

LOCATING PINS



**36403**



**Material**

Body: stainless steel 1.4305  
Pad: plastic (PEEK), blue

supports and thrust pads in jigs and fixtures as well as machine and equipment design.  
Temperature range -60 to +250°C.

**Tips**

For female thread see 36404.

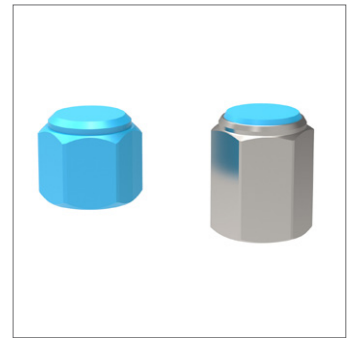
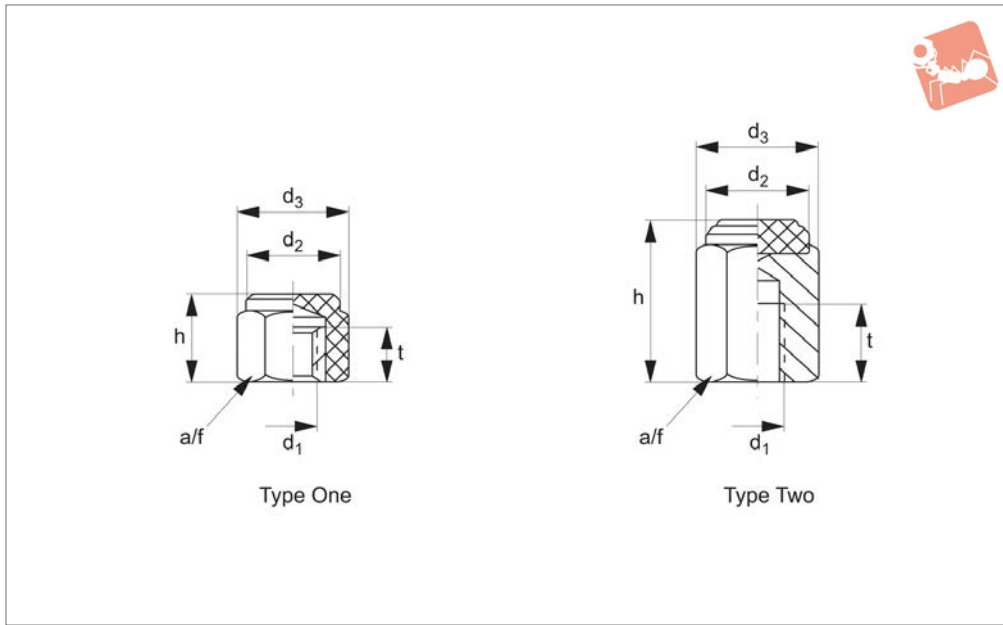
**Technical Notes**

The buttons are used as seats, stops,

Order No.	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	h ±0.1	l	A/F <sub>1</sub>	A/F <sub>2</sub>	Static load kN max.	Tightening torque Nm max.	Weight g
36403.W0122	M 8	17.0	19.0	15	8	17	4	2.1	10	12
36403.W0133	M10	19.0	21.5	20	10	19	5	2.4	10	18
36403.W0143	M12	22.0	25.0	20	14	22	6	3.4	10	24
36403.W0021	M 8	12.5	19.4	10	10	17	-	2.8	18	15
36403.W0031	M10	14.5	21.9	10	12	19	-	3.8	2	21
36403.W0032	M10	14.5	21.9	15	12	19	-	3.8	32	33
36403.W0041	M12	17.5	25.2	10	14	22	-	5.5	60	30
36403.W0042	M12	17.5	25.2	15	14	22	-	5.5	60	46



# Screwed Rest Buttons - Plastic female thread



**36404**

LOCATING PINS

**Material**

Body: stainless steel 1.4305  
Pad: plastic (PEEK), blue

**Technical Notes**

The buttons are used as seats, stops,

supports and thrust pads in jigs and fixtures as well as machine and equipment design.

Stated starting torque for female thread is based on use of bolt strength class 8 or

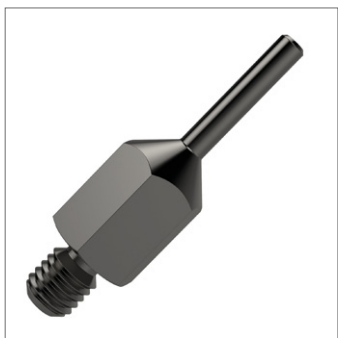
greater, and with full engagement of female thread.

Temperature range -60 to +250°C.

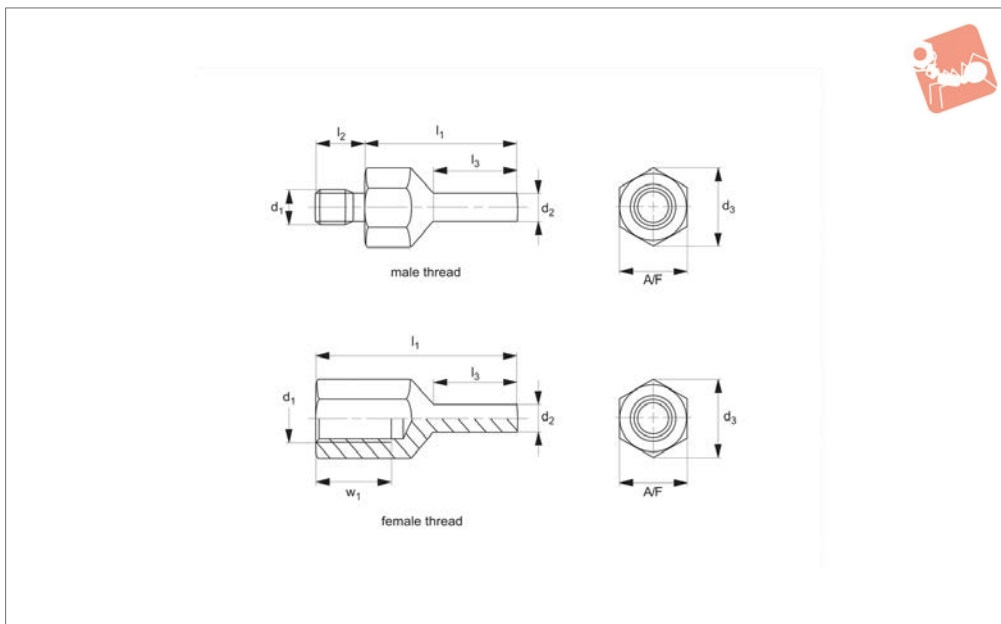
**Tips**

For male thread see 36403.

Order No.	Type	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	h <sub>1</sub> ±0.1	t <sub>1</sub>	A/F <sub>1</sub>	Static load kN	Tightening torque Nm max.	Weight g
<b>36404.W0222</b>	One	M 8	17.0	19.0	15	9	-	2.1	10	7
<b>36404.W0233</b>	One	M10	19.0	21.5	20	10	-	2.4	10	11
<b>36404.W0243</b>	One	M12	22.0	25.0	20	12	-	3.4	10	16
<b>36404.W0324</b>	Two	M 8	12.5	19.4	25	12	17	2.8	18	36
<b>36404.W0335</b>	Two	M10	14.5	21.9	30	15	19	3.8	32	54
<b>36404.W0345</b>	Two	M12	17.5	25.2	30	18	22	5.5	60	71



## 36440



### Material

Heat-treated steel, blackened. Surface induction hardened and ground.

### Technical Notes

To be used as solid and precise seat and stop. The pin-shaped form of this locating

pin allows an application in components with narrow seating points.

Order No.	Finish	d <sub>1</sub>	l <sub>1</sub> ±0.01	d <sub>2</sub>	l <sub>2</sub>	d <sub>3</sub>	l <sub>3</sub>	w <sub>1</sub>	A/F	Torque to Nm max.	Weight g
36440.W0402	Male Thread	M 6	20	4	8	11.0	10.0	-	10	7	8
36440.W0404	Male Thread	M 6	30	4	8	11.0	15.0	-	10	7	12
36440.W0412	Male Thread	M 8	30	4	10	14.4	15.0	-	13	18	17
36440.W0414	Male Thread	M 8	40	4	10	14.4	20.0	-	13	18	23
36440.W0416	Male Thread	M 8	30	6	10	14.4	15.0	-	13	18	20
36440.W0418	Male Thread	M 8	40	6	10	14.4	20.0	-	13	18	27
36440.W0422	Male Thread	M10	30	6	14	19.0	15.0	-	17	32	30
36440.W0424	Male Thread	M10	50	6	14	19.0	25.0	-	17	32	51
36440.W0426	Male Thread	M10	30	8	14	19.0	15.0	-	17	32	35
36440.W0428	Male Thread	M10	50	8	14	19.0	25.0	-	17	32	58
36440.W0432	Male Thread	M12	40	6	14	21.2	20.0	-	19	60	48
36440.W0434	Male Thread	M12	60	6	14	21.2	30.0	-	19	60	75
36440.W0436	Male Thread	M12	40	8	14	21.2	20.0	-	19	60	56
36440.W0438	Male Thread	M12	60	8	14	21.2	30.0	-	19	60	83
36440.W0452	Female Thread	M 6	20	4	-	11.0	8.5	6	10	7	6
36440.W0454	Female Thread	M 6	30	4	-	11.0	13.5	9	10	7	9
36440.W0462	Female Thread	M 8	30	4	-	14.4	13.0	10	13	18	13
36440.W0464	Female Thread	M 8	40	4	-	14.4	18.0	14	13	18	18
36440.W0466	Female Thread	M 8	30	6	-	14.4	13.0	10	13	18	16
36440.W0468	Female Thread	M 8	40	6	-	14.4	18.0	14	13	18	21
36440.W0472	Female Thread	M10	30	6	-	19.0	12.0	10	17	32	24
36440.W0474	Female Thread	M10	50	6	-	19.0	25.0	15	17	32	38
36440.W0476	Female Thread	M10	30	8	-	19.0	12.0	10	17	32	28
36440.W0478	Female Thread	M10	50	8	-	19.0	25.0	15	17	32	44
36440.W0482	Female Thread	M12	40	6	-	21.2	18.0	12	19	60	36
36440.W0484	Female Thread	M12	60	6	-	21.2	28.0	18	19	60	56
36440.W0486	Female Thread	M12	40	8	-	21.2	18.0	12	19	60	41
36440.W0488	Female Thread	M12	60	8	-	21.2	28.0	18	19	60	63

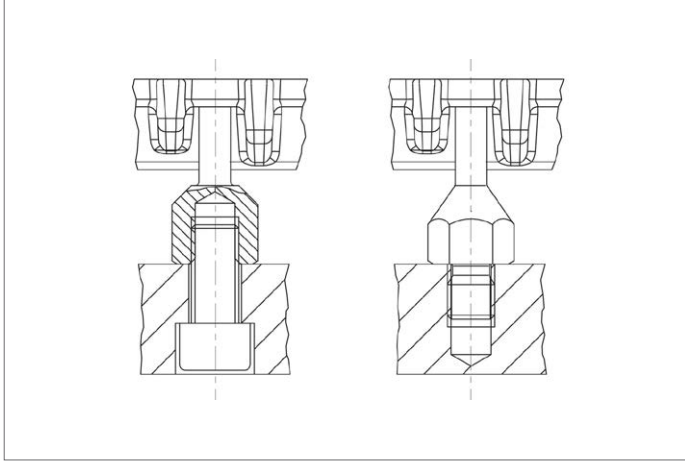


# Locating Pins

pin shaped



# Locating Pins



LOCATING PINS