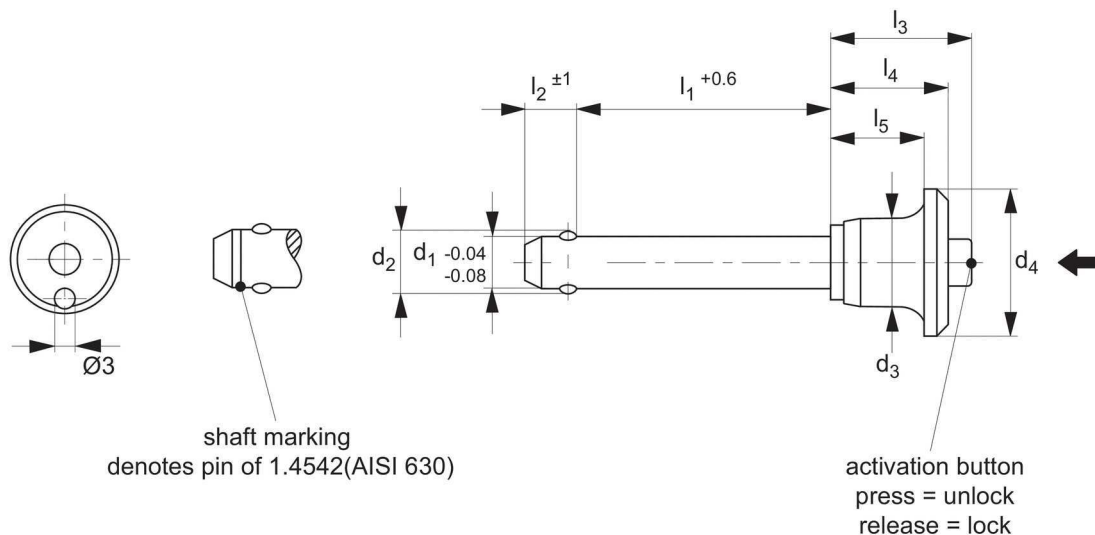


# Ball Lock Pins - Single Acting - Mushroom Handle

self-locking



# 33224



Order No. Type One Stainless 1.4305	Order No. Type Two Stainless 1.4542	d <sub>1</sub>	l <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	Location hole H11	Shear resistance kN min. 1.4305	Shear resistance kN min. 1.4542	g
33224.W0212	33224.W0512	5	10	5,5	11,3	20	6,0	20,7	17,6	14,6	5	14	24	12
33224.W0213	33224.W0513	5	15	5,5	11,3	20	6,0	20,7	17,6	14,6	5	14	24	12
33224.W0214	33224.W0514	5	20	5,5	11,3	20	6,0	20,7	17,6	14,6	5	14	24	13
33224.W0215	33224.W0515	5	25	5,5	11,3	20	6,0	20,7	17,6	14,6	5	14	24	14
33224.W0216	33224.W0516	5	30	5,5	11,3	20	6,0	20,7	17,6	14,6	5	14	24	15
33224.W0222	33224.W0522	6	10	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	13
33224.W0223	33224.W0523	6	15	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	14
33224.W0224	33224.W0524	6	20	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	15
33224.W0225	33224.W0525	6	25	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	16
33224.W0226	33224.W0526	6	30	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	17
33224.W0227	33224.W0527	6	35	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	18
33224.W0228	33224.W0528	6	40	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	19
33224.W0229	33224.W0529	6	45	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	20
33224.W0230	33224.W0530	6	50	7,0	11,3	20	7,0	20,7	17,6	14,6	6	21	35	21
33224.W0234	33224.W0534	8	20	9,5	14,1	25	8,2	27,3	22,6	18,6	8	38	63	28
33224.W0235	33224.W0535	8	25	9,5	14,1	25	8,2	27,3	22,6	18,6	8	38	63	30
33224.W0236	33224.W0536	8	30	9,5	14,1	25	8,2	27,3	22,6	18,6	8	38	63	32
33224.W0237	33224.W0537	8	35	9,5	14,1	25	8,2	27,3	22,6	18,6	8	38	63	34
33224.W0238	33224.W0538	8	40	9,5	14,1	25	8,2	27,3	22,6	18,6	8	38	63	36
33224.W0239	33224.W0539	8	45	9,5	14,1	25	8,2	27,3	22,6	18,6	8	38	63	38
33224.W0240	33224.W0540	8	50	9,5	14,1	25	8,2	27,3	22,6	18,6	8	38	63	40
33224.W0244	33224.W0544	10	20	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	35
33224.W0245	33224.W0545	10	25	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	38
33224.W0246	33224.W0546	10	30	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	40
33224.W0247	33224.W0547	10	35	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	44
33224.W0248	33224.W0548	10	40	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	47
33224.W0249	33224.W0549	10	45	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	50
33224.W0250	33224.W0550	10	50	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	53
33224.W0252	33224.W0552	10	60	12,0	14,1	25	9,6	27,3	22,6	18,6	10	60	100	59
33224.W0265	33224.W0565	12	25	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	69
33224.W0266	33224.W0566	12	30	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	73
33224.W0267	33224.W0567	12	35	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	78
33224.W0268	33224.W0568	12	40	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	82
33224.W0269	33224.W0569	12	45	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	86
33224.W0270	33224.W0570	12	50	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	90
33224.W0272	33224.W0572	12	60	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	99
33224.W0274	33224.W0574	12	70	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	108
33224.W0276	33224.W0576	12	80	14,5	17,7	35	10,6	33,2	27,3	22,3	12	87	144	116

### Material

**Type One -**  
Pin: Stainless steel 1.4305 (AISI 303).

Spring: stainless steel.

**Type Two -**  
Pin: Stainless steel 1.4542 (AISI 630), precipitation hardened, blast finish. Offering extreme load capacity. (Marked at end of shaft to denote 1.4542 material).  
Spring: stainless steel.  
Handle: aluminium, black (RAL9003).

### Technical Notes

Pressing = unlocking.  
Releasing = locking.  
Temperature resistance -30°C to +150°C  
For quick fastening and locking of frequently repeated connections.

### Tips

For lanyards & retaining cables see part no. 33250. Easy install locating bushes available see part no. 33248.

### Important Notes

\*Shearing resistance similar to DIN 50141.



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self-locking



# 33224



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**33060  
-33250**

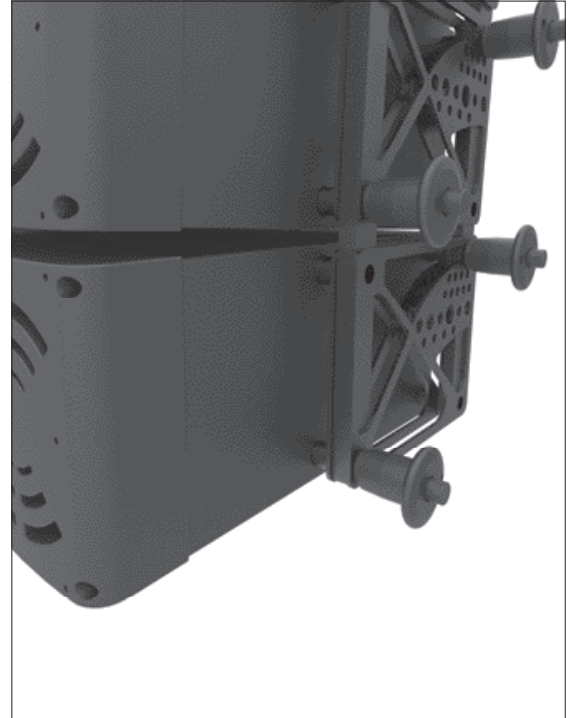
**Wixroyd Ball Lock Pins**  
applications



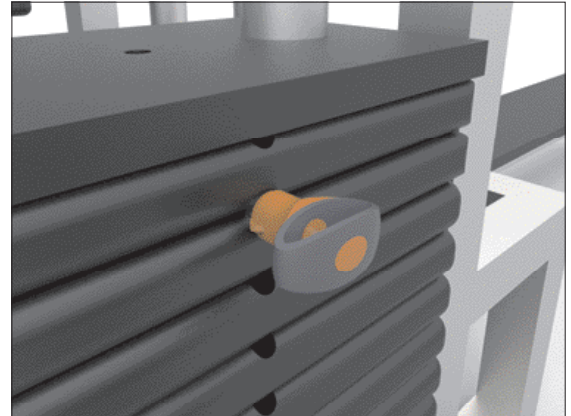
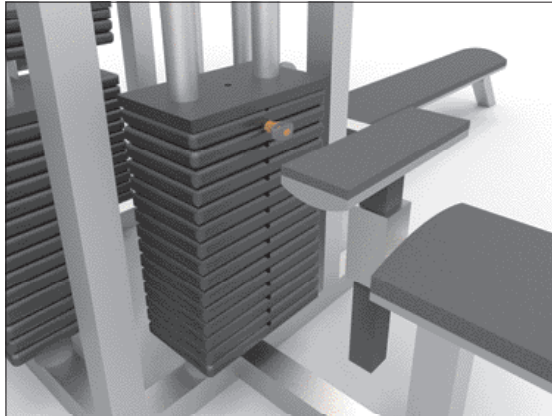
### Sound rigging systems

Ball lock pins on a sound rigging system. Offering secure fixing with high shear forces and easy fitting for operators at heights.

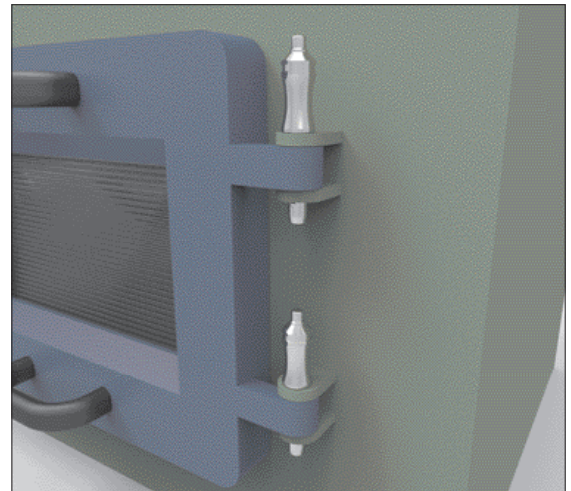
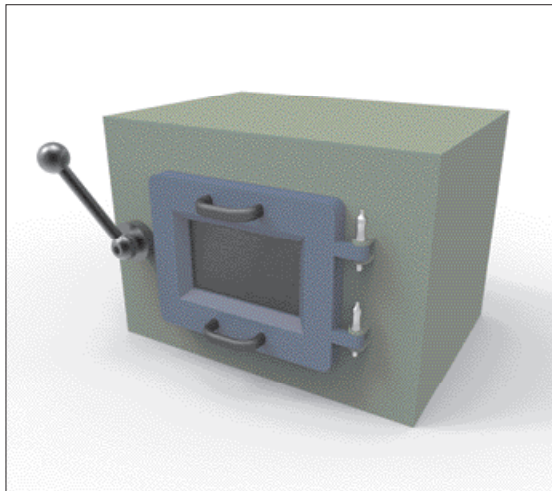
In addition full black powder coating of grip and actuation button eliminates glare from other stage lighting.



### Gym equipment



### Scientific and medical

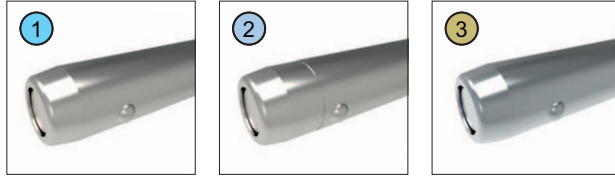


# Wixroyd Ball Lock Pins

features



- ① 1.4305 (AISI 303) - shear force approx. 60% of higher material version 1.4542
- ② 1.4542 (AISI 630) - identified by the ridge on the pin
- ③ CRES 17-4PH (AMS 5643) aviation standard

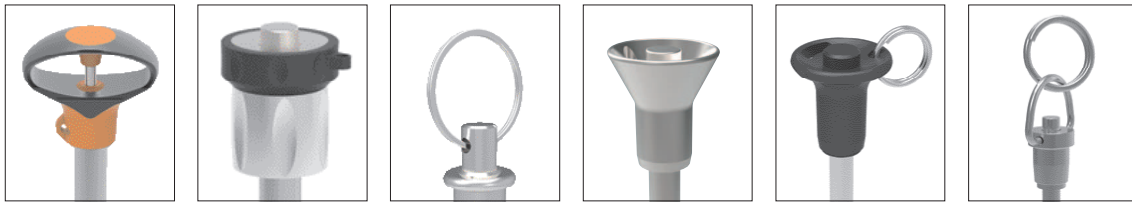


## Pin material



Plastic tri-star      T-handled, metal      L-handled, metal      Mushroom, metal      Single piece metal, contoured

## Handle style

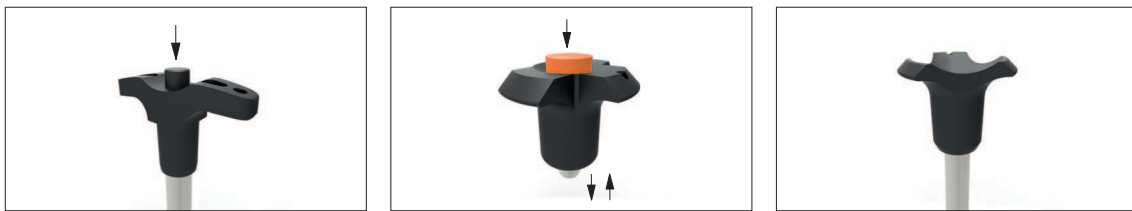


Special plastic self-spring      Adjustable grip length, plastic      Key ring      Safety, metal      Mushroom Type B aviation      Type R aviation



Stainless wire - (coated) - 2 x key ring      Stainless wire - Key ring and fixing loop      Plastic - 2 x cable tie      Steel wire - (coated) - 2 x key ring      Stainless bead chain - 2 x key ring      Locating bushes

## Lanyards and locating bushes



Press = unlock  
Release = lock (standard)

Press = unlock and position  
Release = lock and simultaneous clamp

Simple spring loaded balls "pullout pin"

## Actuation

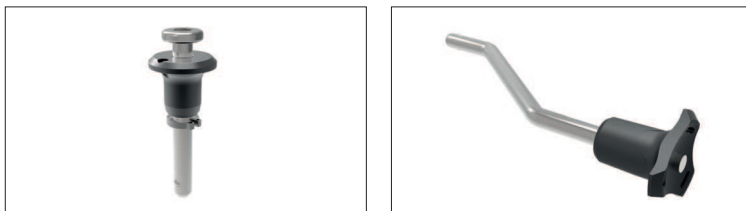
**Important Note: Ball lock pins are not suited to lifting applications!**  
**For quick release lifting pins, see part 33400.**



Shear force

Lifting force

## Important note



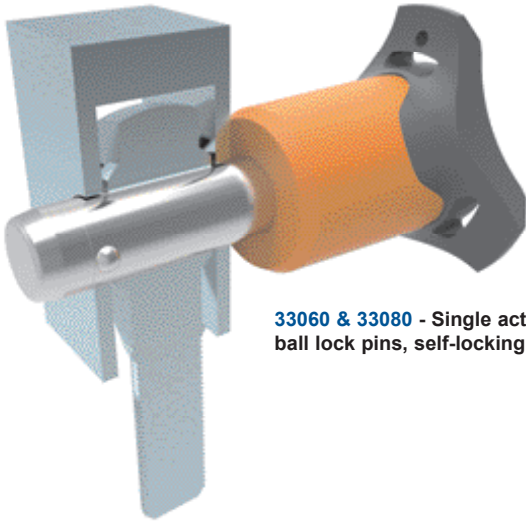
Variations on our standard designs are possible, please contact our sales team for technical assistance. Quick production on specials can be as little as 3 weeks.

## Special variations



## Applications

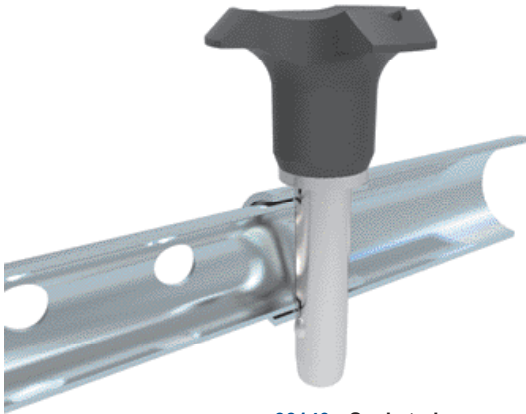
- Positioning.
- Lifting.
- Locking.
- Indexing.
- Joining.



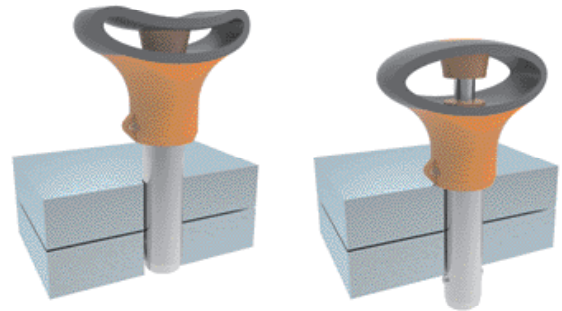
**33060 & 33080** - Single acting ball lock pins, self-locking.



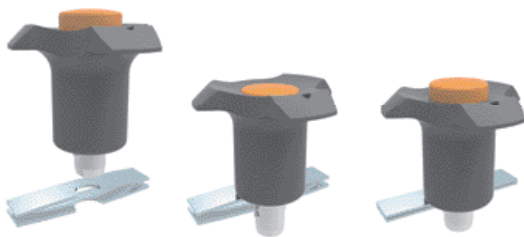
**33194** - Single acting ball lock pins, self locking, simple finish.



**33140** - Socket pins, non-locking, spring loaded balls.



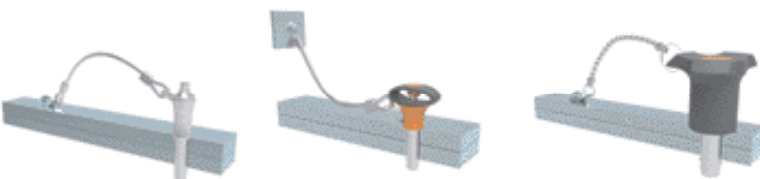
**33100** - Single acting ball lock pin, self locking.



**33180** - Clamping pins, with span compensation, self-locking.



**33220** - Ball lock pins, single acting - L-handle



**33250 & 33270** - Lanyards.