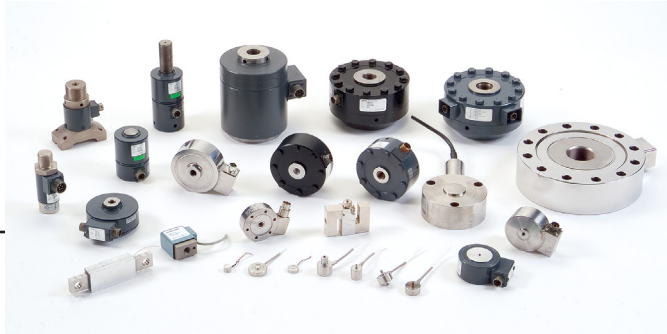
Honeywell

Load Accessories

Test & Measurement Sensors



DESCRIPTION

Honeywell provides a wide range of accessories for our test and measurement sensor products, which are designed to meet additional requirements for most customer applications.

Accessories available to complement Honeywell's test and measurement load sensors include load buttons, bearing rod ends, pull plates, tongue shackles, and yoke shackles.

If you don't see exactly what you need listed below, or have special requirements for your particular application or operating environment, please contact Honeywell for assistance.

PULL PLATE FEATURES

- Load cell attachment allows tension or compression force to be directed at the center line of a load cell through a threaded-center hole
- Attaches to low-profile load cells to give a true hard, flat surface for load cell installation. Recommended to be used, especially when used in tension mode of operation
- Model 41 (ranges from 5 lb up to 200K lb)
- Model 75 (ranges from 5 lb up to 200K lb)
- 3170 Series (ranges from 200 lb up to 200K lb)

LOAD BUTTON FEATURES

- The spherical like shape of the top surface of a load cell where the load is applied.
- Replacement load buttons to fit a variety of Honeywell load cells

BEARING ROD END FEATURES

- Also known as a heim joint (North America) or a rose joint (UK and elsewhere), is a mechanical articulating joint. Used on the ends of a load cell, control rod, steering link, tie rod, or anywhere a precision articulating joint is required. A ball swivel with an opening through which a bolt or other attaching hardware may pass is pressed in a circular casing with a male or female threaded housing attached
- Male and female rod end bearings

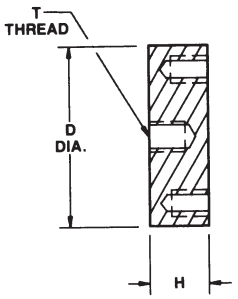
TONGUE SHACKLE FEATURES

- Mechanical piece of hardware that attaches to the load cell. Has a flat extension length "tongue" with a hole where the pin would be inserted. Used as an adapter piece for load cells that would be used in tension loading
- Stainless steel: 5,000 lb to 100,000 lb load rating
- Carbon steel: 4,900 lb to 120,000 lb load rating

YOKE SHACKLE FEATURES

- Mechanical piece of hardware that attaches to the load cell. Shaped like a yoke, sometimes referred to as a clevis attachment. Used as an adapter piece from load cell primarily for when a tension load will be applied to the load cell
- Stainless steel: 5,000 lb to 100,000 lb load rating
- Carbon steel: 4,900 lb to 120,000 lb load rating

Load Accessories

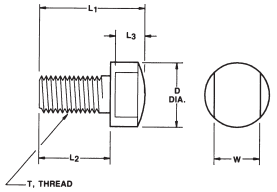


PULL PLATES

Order code	Used with models 41 (range)	Used with model 75 (range)	T thread	D diameter	H	# bolt holes	Size	Outer bolt depth
AA221	5 lb to 25 lb	N/A	1/4-28 UNF	63,5 mm [2.5 in]	19,05 mm [0.75 in]	6	8-32	8,38 mm [0.33 in]
AA222	50 lb to 1000 lb	50 lb to 500 lb	3/8-24 UNF	76,2 mm [3.00 in]	25,4 mm [1.00 in]	6	1/4-28	12,5 mm [0.5 in]
AA223	2K lb to 5 K lb	1K lb to 2K lb	1/2-20 UNF	88,9 mm [3.50 in]	25,4 mm [1.00 in]	6	5/16-24	12,5 mm [0.5 in]
AA224	7500 lb to 15K lb	3K lb to 7500 lb	1-14 UNS	137,9 [5.50 in]	38,1 mm [1.50 in]	8	3/8-24	17,78 mm [0.70]
AA225	20K lb to 50K lb	10K lb to 20K lb	1½-12 UNF	152,4 [6.00 in]	45,72 mm [1.80 in]	8	1/2-13	19,05 mm [0.75 in]
AA233	N/A	30K lb to 50K lb	2-12 UNC	190,5 mm [7.50 in]	63,5 mm [2.50 in]	8	3/4-16	44,45 mm [1.75 in]
AA234	N/A	75K lb to 100K lb	2½-12 UNC	228,6 mm [9.00 in]	76,2 mm [3.00 in]	12	5/8-18	25,4 mm [1.0 in]
AA226	75K lb to 100K lb	N/A	2-12 UNC	228,6 mm [9.00 in]	76,2 mm [3.00 in]	12	5/8-18	25,4 mm [1.0 in]
AA227	150K lb to 200K lb	N/A	2½-12 UN	279,4 mm [11.00 in]	88,9 mm [3.50 in]	12	3/4-16	31,75 mm [1.25 in]
AA228	300K lb to 500K lb	150K lb to 200K lb	3½-8	355,6 mm [14.00 in]	107,95 mm [4.25 in]	12	1-8	57,15 mm [2.25 in]

NOTE: Mounting bolts included with pull plates

Order code	Used with
064-LW31684-1	Model 3173 with 5/8-18 UNF
064-LW30774-1	Model 3174 with 1¼-12 UNF
064-LW31496-1	Model 3175 with 1¾-12 UNF
064-LW31496-2	Model 3176 and 3177 with 2¾-8 UNF



LOAD BUTTONS

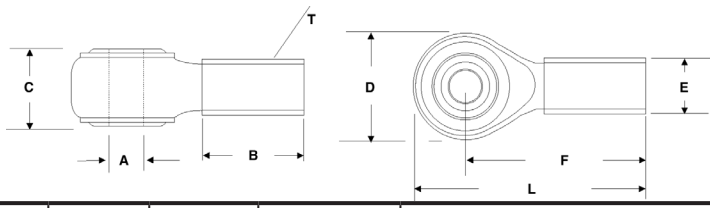
Order code	Model 41 range	Model 75 range	T thread	L1 mm[in]	L2 mm[in]	L3 mm[in]	D mm[in]	W mm[in]
AA241	22,2 N to 111,2 N [5 lb to 25 lb]	N/A	1/4-28 UNF	28,57 [1.125]	19,05 [0.750]	6,35 [0.250]	12,50 [0.500]	9,53 [0.375]
AA242	222 N to 4K N [50 lb to 1K lb]	222 N to 444,8 N [50 lb to 100 lb]	3/8-24 UNF	31,75 [1.250]	22,23 [0.875]	6,35 [0.250]	19,05 [0.750]	15,88 [0.625]
AA243	8K N to 22K N [2K lb to 5K lb]	4K N to 8K N [1K lb to 2K lb]	1/2-20 UNF	34,93 [1.375]	22,23 [0.875]	9,53 [0.375]	19,05 [0.750]	15,88 [0.625]
AA244	33K N to 66K N [7500 lb to 15K lb]	13K N to 33K N [3K lb to 7.5 K lb]	1-14 UNS	60,33 [2.375]	41,28 [1.625]	14,27 [0.562]	38,1 [1.500]	31,75 [1.250]
AA245	88K N to 222K N [20K lb to 50K lb]	44K N to 88K N [10K lb to 20K lb]	1½-12 UNF	66,68 [2.625]	41,28 [1.625]	19,05 [0.750]	57,15 [2.250]	50,8 [2.000]
AA246	333K N to 444K N [75K lb to 100K lb]	133K N to 222K N [30K lb to 50K lb]	2-12 UN	76,2 [3.000]	47,63 [1.875]	23,83 [0.938]	76,2 [3.000]	69,85 [2.750]
AA247	667K N to 889K N [150K lb to 200K lb]	333K N to 444K N [75K lb to 100K lb]	2½-12 UN	107,95 [4.250]	63,5 [2.500]	28,58 [1.125]	88,9 [3.500]	82,55 [3.250]
AA248	1334K N to 2224K N [300K lb to 500K lb]	667K N to 889K N [150K lb to 200K lb]	3½-8 UN	152,4 [6.000]	101,6 [4.000]	38,1 [1.500]	152,4 [6.000]	127 [5.000]

Order code	Model UG range	T thread	L1 mm[in]	L2 mm[in]	L3 mm[in]	D mm[in]	W mm[in]
AA251	222 N to 2224 N [50 lb to 500 lb]	3/8-24 UNF	19,05 [0.750]	9,53 [0.375]	6,35 [0.250]	19,05 [0.750]	15,88 [0.625]
AA252	4K N to 17K N [1K lb to 4K lb]	1/2-20 UNF	25,4 [1.000]	12,50 [0.500]	9,53 [0.375]	19,05 [0.750]	15,88 [0.625]
AA253	22K N to 44K N [5K lb to 10K lb]	1-14 UNS	44,45 [1.750]	25,4 [1.000]	14,27 [0.562]	38,1 [1.500]	31,75 [1.250]
AA254	66K N to 133K N [15K lb to 30K lb]	1½-12 UNF	63,5 [2.500]	38,1 [1.500]	19,05 [0.750]	57,15 [2.250]	50,8 [2.000]
AA255	222K N to 333K N [50K lb to 75K lb]	2-12 UN	79,38 [3.125]	50,8 [2.000]	23,83 [0.938]	76,2 [3.000]	69,85 [2.750]
AA256	444K N to 667K N [100K lb to 150K lb]	3-8 UN	127 [5.000]	76,2 [3.000]	38,1 [1.500]	114,3[4.500]	101,6 [4.000]
AA257	889K N [200K lb]	4-8 UN	152,4 [6.000]	101,6 [4.000]	38,1 [1.500]	139,7 [5.500]	127 [5.000]

Order code	Models 45 & 47 range	T thread	L1 mm[in]	L2 mm[in]	L3 mm[in]	D mm[in]	W mm[in]
AA290	1112 N, 2224 N, 4K N, 11K N, 22K N [250 lb, 500 lb, 1K lb, 2.5K lb, 5K lb]	5/8-18 UNF	32,51 [1.28]	25,4 [1.00]	7,11 [0.28]	26,92 [1.06]	23,88 [0.94]
AA291	55K N, 111K N [12.5K lb, 25K lb]	1¼-12 UNF	39,62 [1.56]	17,53 [0.69]	22,10 [0.87]	44,45 [1.75]	31,75 [1.25]
AA292	222K N [50K lb]	1¾-12 UNF	91,69 [3.61]	50,29 [1.98]	25,40 [1.00]	63,5 [2.50]	50,80 [2.00]
AA293	444K N [100K lb]	2¾-8 UNF	127 [5.00]	79,25 [3.12]	47,75 [1.88]	101,6 [4.00]	69,85 [2.75]

Part number	Description	Used on	Part number	Description	Used on
050-LW11277	1/4-28 UNF	Models 3167/3397	050-LW27237	5/8-18 UNF	Model 3173
050-LW11748-1	1/2-20 UNF	Models 3132/3169	050-LW29857-1	1 1/4-12 UNF	Model 3174
050-LW18434	1-14 UNF	Model 3116	050-LW19078-1	1 3/4-12 UNF	Model 3175
050-LW12311	2-12 UNF	Models 3117/3156	050-LW31499-1	2 3/4-8 UNF	Models 3176/3177

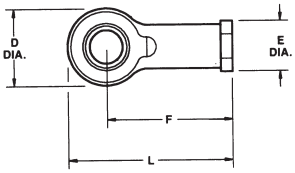
Load Accessories

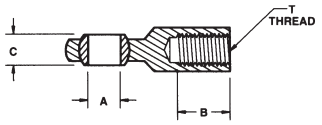


BEARING ROD ENDS (MALE)

Order code	A mm [in]	B mm [in]	C mm [in]	D dia. mm [in]	E dia. mm [in]	F mm [in]	L mm [in]	T Thread	Approx. weight (lb)	Static load rating (based on 3:1 load factor)
AA275	6,35 [0.25]	25,4 [1.00]	9,53 [0.375]	19,05 [0.75]	6,35 [0.25]	39,67 [1.562]	49,2 [1.937]	¼-28 UNF	0.043	7561 K [1700 lb]
AA276	9,53 [0.375]	31,75 [1.25]	12,5 [0.500]	25,4 [1.00]	9,53 [0.375]	49,23 [1.938]	61,93 [2.438]	3/8-24 UNF	0.112	13K N [3100 lb]
AA277	12,5 [0.500]	38,1 [1.50]	15,88 [0.625]	33,32 [1.312]	12,5 [0.500]	61,93 [2.438]	78,59 [3.094]	½-20 UNF	0.249	24K N [5400 lb]
AA278	19,05 [0.75]	44,45 [1.75]	22,23 [0.875]	44,45 [1.750]	19,05 [0.75]	73,03 [2.875]	95,25 [3.750]	¾-16 UNF	0.602	41K N [9300 lb]

Part number	Description	Part number	Description
032-1326-01	1/4-28 UNF rod end bearing (static load rating: 2300 lb)	064-LW26096	1/4-28 UNF rod end bearing (static load rating: 2300 lb)
032-1326-02	3/8-24 UNF rod end bearing (static load rating: 3600 lb)	064-LW26095	1/2-20 UNF rod end bearing (static load rating: 6300 lb)
032-1326-03	1/2-20 UNF rod end bearing (static load rating: 6300 lb)	064-LW25608	5/8-18 UNF rod end bearing
032-1326-04	3/4-16 UNF rod end bearing (static load rating: 10K lb)	050-LW30472	1-14 UNF rod end bearing

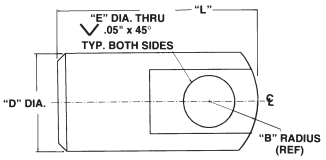


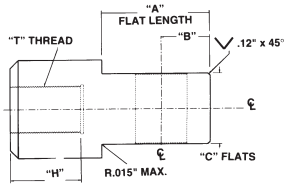


BEARING ROD ENDS (FEMALE)

Order code	A mm [in]	B mm [in]	C mm [in]	D dia. mm [in]	E dia. mm [in]	F mm [in]	L mm [in]	T Thread	Approx. weight (lb)	Static load rating (based on 3:1 load factor)
AA271	6,35 [0.25]	17,45 [0.687]	9,53 [0.375]	19,05 [0.75]	12,5 [0.500]	33,32 [1.312]	42,85 [1.687]	¼-28 UNF	0.05	10K N [2300 lb]
AA272	9,53 [0.375]	20,62 [0.812]	12,5 [0.500]	25,4 [1.00]	17,45 [0.687]	41,28 [1.625]	53,98 [2.125]	3/8-24 UNF	0.13	16K N [3600 lb]
AA273	12,5 [0.500]	26,97 [1.062]	15,88 [0.625]	33,32 [1.312]	22,23 [0.875]	53,98 [2.125]	70,64 [2.781]	½-20 UNF	0.29	28K N [6300 lb]
AA274	19,05 [0.75]	39,67 [1.562]	22,23 [0.875]	44,45 [1.750]	28,58 [1.125]	73,03 [2.875]	95,25 [3.750]	¾-16 UNF	0.63	44K N [10000 lb]

Part number	Description
032-0084-01	1/4-28 UNF rod end bearing (static load rating: 2300 lb)
032-0084-02	3/8-24 UNF rod end bearing (static load rating: 3600 lb)
032-0084-03	1/2-20 UNF rod end bearing (static load rating: 6300 lb)
032-0084-04	3/4-16 UNF rod end bearing (static load rating: 10K lb)
064-LW25607	5/8-18 UNF rod end bearing (used for Model 6214 overload protector)





TONGUE SHACKLES - STAINLESS STEEL

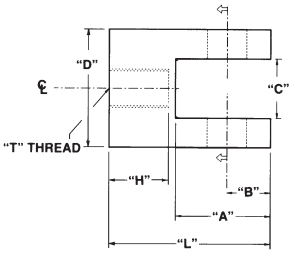
Order code	Static load rating*	T thread	A flat length mm[in]	B mm[in]	C flats mm[in]	D dia. mm[in]	E dia. mm[in]	L length mm [in]	H mm[in]
AA380	444K N [100000 lb]	2½-8 UN	162,05 [6.38]	76,2 [3.00]	76,2 [3.00]	114,3 [4.50]	76,45 [3.01]	247,65 [9.75]	90,42 [3.56]
AA381	444K N [100000 lb]	2½-12 UN	162,05 [6.38]	76,2 [3.00]	76,2 [3.00]	114,3 [4.50]	76,45 [3.01]	247,65 [9.75]	90,42 [3.56]
AA382	222K N [50000 lb]	1½-12 UNF	107,19 [4.22]	51,56 [2.03]	63,5 [2.50]	76,2 [3.00]	44,70 [1.76]	177,8 [7.00]	66,55 [2.62]
AA383	89K N [20000 lb]	1-14 UNF	64,52 [2.54]	29,46 [1.16]	38,1 [1.50]	50,8 [2.00]	25,65 [1.01]	101,6 [4.00]	31,75 [1.25]
AA384	44K N [10000 lb]	¾-16 UNF	52,58 [2.07]	23,88 [0.94]	31,75 [1.25]	38,1 [1.50]	19,30 [0.76]	82,55 [3.25]	33,27 [1.31]
AA385	22K N [5000 lb]	½-20 UNF	33,02 [1.30]	13,97 [0.55]	19,05 [0.75]	25,4 [1.00]	12,95 [0.51]	50,8 [2.00]	17,78 [0.70]

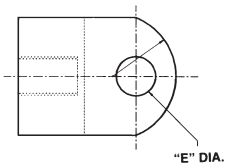
TONGUE SHACKLES - CARBON STEEL

Order code	Static load rating*	T thread	A flat length mm[in]	B mm[in]	C flats mm[in]	W width mm[in]	E dia. mm[in]	L length mm [in]	H mm[in]
AA390	489K N [110000 lb]	2½-12 UN	231,90 [9.13]	76,2 [3.00]	76,2 [3.00]	152,4 [6.00]	76,2 [3.00]	231,90 [9.13]	88,9 [3.50]
AA391	200K N [45000 lb]	1½-12 UNF	146,05 [5.75]	44,45 [1.75]	63,5 [2.50]	88,9 [3.50]	44,45 [1.75]	146,05 [5.75]	57,15 [2.25]
AA392	96K N [21700 lb]	1-14 UNF	96,77 [3.81]	25,4 [1.00]	38,1 [1.50]	50,8 [2.00]	25,4 [1.00]	96,77 [3.81]	41,40 [1.63]
AA393	53K N [12000 lb]	¾-16 UNF	71,37 [2.81]	19,05 [0.75]	31,75 [1.25]	38,1 [1.50]	19,05 [0.75]	71,37 [2.81]	28,70 [1.13]
AA394	25K N [5700 lb]	½-20 UNF	50,8 [2.00]	12,50 [0.50]	19,05 [0.75]	25,4 [1.00]	12,50 [0.50]	50,8 [2.00]	19,05 [0.75]

* The static load rating is the maximum capacity in lbs for that part based on a 4:1 load factor (in tension)

Load Accessories





YOKE SHACKLES - STAINLESS STEEL

Order code	Static load rating*	T thread	A mm[in]	B mm[in]	C mm[in]	D dia. mm [in]	E dia. mm[in]	L length mm [in]	H mm[in]
AA360	444K N [100000 lb]	2½-8 UN	165,10 [6.50]	76,2 [3.00]	77,22 [3.04]	152,4 [6.00]	76,45 [3.01]	260,35 [10.25]	88,9 [3.50]
AA361	444K N [100000 lb]	2½-12 UN	165,10 [6.50]	76,2 [3.00]	77,22 [3.04]	152,4 [6.00]	76,45 [3.01]	260,35 [10.25]	88,9 [3.50]
AA362	222K N [50000 lb]	1½-12 UNF	110,49 [4.35]	45,98 [1.81]	64,52 [2.54]	127 [5.00]	44,70 [1.76]	177,8 [7.00]	57,15 [2.25]
AA363	89K N [20000 lb]	1-14 UNF	69,09 [2.72]	28,19 [1.11]	38,61 [1.52]	76,2 [3.00]	25,65 [1.01]	115,57 [4.55]	38,1 [1.50]
AA364	44K N [10000 lb]	¾-16 UNF	59,44 [2.34]	23,88 [0.94]	32,51 [1.28]	63,5 [2.50]	19,30 [0.76]	99,06 [3.90]	31,75 [1.25]
AA365	22K N [5000 lb]	½-20 UNF	33,02 [1.30]	13,97 [0.55]	19,81 [0.78]	44,45 [1.75]	12,95 [0.51]	50,8 [2.00]	17,78 [0.70]

CARBON STEEL

Order code	Static load rating*	T thread	A mm[in]	B mm[in]	C mm[in]	D dia. mm[in]	E dia. mm[in]	L length mm [in]	H mm[in]
AA370	534K N [120000 lb]	2½-12 UN	152,4 [6.00]	69,85 [2.75]	76,2 [3.00]	152,4 [6.00]	76,2 [3.00]	241,3 [9.50]	88,9 [3.50]
AA371	203K N [45600 lb]	1½-12 UNF	101,6 [4.00]	44,45 [1.75]	63,5 [2.50]	127 [5.00]	44,45 [1.75]	158,78 [6.25]	57,15 [2.25]
AA372	96K N [21700 lb]	1-14 UNF	58,67 [2.31]	25,4 [1.00]	38,1 [1.50]	76,2 [3.00]	25,4 [1.00]	100,08 [3.94]	41,40 [1.63]
AA373	49K N [11200 lb]	¾-16 UNF	44,45 [1.75]	19,05 [0.75]	31,75 [1.25]	63,5 [2.50]	19,05 [0.75]	73,15 [2.88]	28,70 [1.13]
AA374	22K N [4900 lb]	½-20 UNF	31,75 [1.25]	12,50 [0.50]	19,05 [0.75]	44,45 [1.75]	12,50 [0.50]	50,8 [2.00]	19,05 [0.75]

* The static load rating is the maximum capacity in lbs for that part based on a 4:1 load factor (in tension)

Warranty. Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

⚠ WARNING

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING

MISUSE OF DOCUMENTATION

- The information presented in this datasheet is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

Find out more

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office. To learn more about Honeywell's test and measurement products, call **+1-614-850-5000**, visit **www.honeywell.com/sensotec,** or e-mail inquiries to **info.tm@honeywell.com**

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