



HEX and PIPE Linkage Kits

Hex Linkage Kits include:

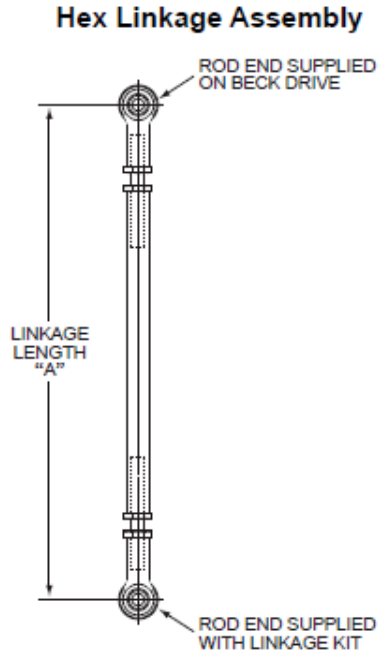
- Load lever rod end (the drive rod end is supplied with the Beck drive)
- Hex Linkage
- Threaded Stud (2)
- Jam Nuts (4)

The customer must supply the bolt for the load lever rod end. Use a bolt that results in the minimum clearance in the rod end. See dimension "D" in the bottommost table below.



Hex Linkage Kit Specifications

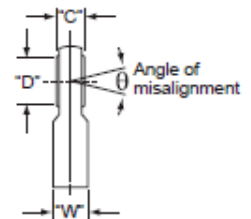
Model	Hex Size	Linkage Length Range ("A")		Linkage Kit Part No.	Approx. Weight (lbs.)
		Min.	Max.		
31-__	7/16	9	12	14-7990-22	1/2
		12	15	14-7990-24	1/2
		15	18	14-7990-26	3/4
		18	21	14-7990-10	1
11-15_	5/8	9.5	11.5	14-8300-22	1
		10.5	14.5	14-8300-32	1
		14.5	18.5	14-8300-04	1
		18	22	14-8300-06	2
		22	26	14-8300-16	2
11-20_	5/8	9.5	11.5	14-8300-22	1
		10.5	14.5	14-8300-32	1
		14.5	18.5	14-8300-04	1
		18	22	14-8300-06	2
		22	26	14-8300-16	2
11-30_	1	13.5	18	14-8860-24	2
		17.5	22	14-8860-08	3
		22	26.5	14-8860-02	4
		26.5	31	14-8860-04	5
11-40_	1	13.5	17.5	15-0110-26	3
		18	22	15-0110-20	4
		22	26	15-0110-03	5
		26	30	15-0110-22	6
		29	33	15-0110-01	6



Linkage Rod End Data

Model	31-__	11-15_	11-20_	11-30_	11-40_	11-43_	22-__
Thread Size	5/16-24	1/2-20	1/2-20	5/8-18	3/4-16	1 1/2-12	1 1/2-12
Dim. "C"	.437"	.625"	.625"	.750"	.875"	1.312"	1.312"
Dim. "D"	.3125"	.500"	.500"	.625"	.750"	1.500"	1.500"
Dim. "W"	.437"	.750"	.750"	.875"	1.000"	2.000"	2.000"
Angle θ	14°	12°	12°	16°	14°	6.5°	6.5°

Rod End Detail





PIPE Linkage Kits:

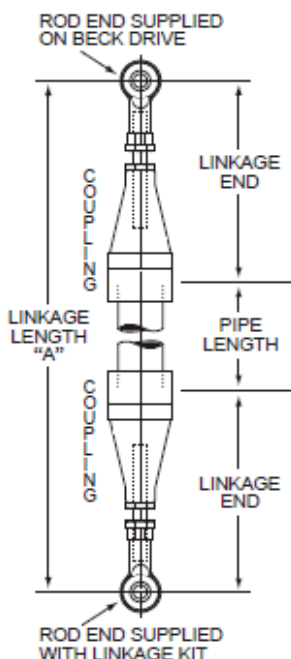
The customer must supply the bolt for the load lever rod end. Use a bolt that results in the minimum clearance in the rod end. See dimension “D” in the table at the bottom of page 66.

The customer must also supply the length of pipe (using Schedule 40 pipe), which can be cut and threaded in the field. Standard NPT right-hand threads must be used on both ends of the pipe length. This arrangement allows the required kit to be ordered even if the exact linkage length is not known until the drive and equipment are in place.

Ordering and Assembly

- Obtain the approximate overall linkage length “A” (see illustration below).
- Identify the kit part number and required pipe size from the table below. For lengths beyond those listed, contact your Beck Sales Engineer.
- Determine the pipe length required by subtracting “Length of 2 Linkage Ends” (see table below) from linkage length “A”.
- The pipe length is to be cut and threaded in the field. The final linkage assembly permits $\pm 1 \frac{1}{2}$ ” adjustment in the field.

Pipe Linkage Assembly



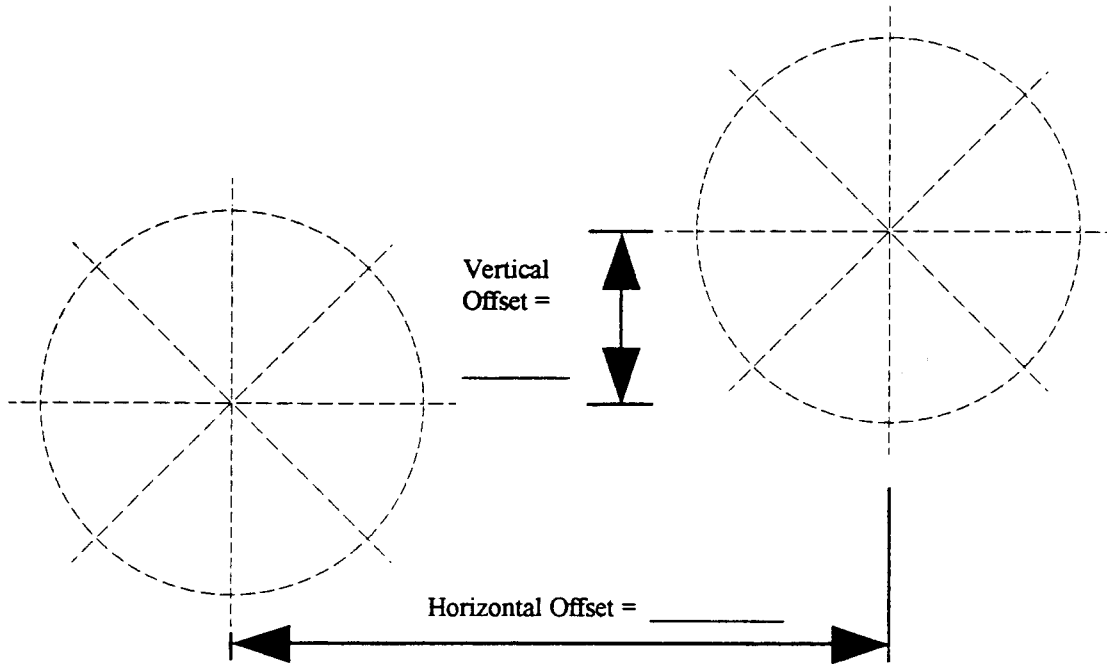
Pipe Linkage Kit Specifications

Model	Linkage Length Range ("A")		Linkage Kit Part No.	Pipe Size & NPT Thread	Min. Pipe Nipple Length	Approx. Weight (lbs.)	Length of 2 Linkage Ends (tot. adj. +/- 1 1/2")
	Min.	Max.					
11-15	22	84	20-1730-05	1	1 1/2	5	20 1/2
	31	120	20-1740-06	1 1/2	1 3/4	9	29 1/4
11-20	22	45	20-1730-05	1	1 1/2	5	20 1/2
	31	84	20-1740-06	1 1/2	1 3/4	9	29 1/4
	33 1/4	120	20-1750-05	2	2	13	31 1/4
	37	120	20-1760-05	2 1/2	2 1/2	22	34 1/2
11-30	22 1/2	36	20-1730-06	1	1 1/2	5	21
	31 1/2	72	20-1740-07	1 1/2	1 3/4	9	29 3/4
	33 3/4	96	20-1750-06	2	2	13	31 3/4
	37 1/2	120	20-1760-06	2 1/2	2 1/2	22	35
11-40	23 1/4	34	20-1730-07	1	1 1/2	5	21 3/4
	32 1/4	48	20-1740-08	1 1/2	1 3/4	9	30 1/2
	34 1/2	72	20-1750-07	2	2	13	32 1/2
	38 1/4	120	20-1760-07	2 1/2	2 1/2	22	35 3/4
11-43 & 22-	23 1/2	40	20-1760-13	2	2	28	21 1/2
	37 3/4	144	20-1760-10	3	2 5/8	32	35 1/8
	59 3/4	144	20-1760-09**	3	2 5/8	41	57 1/8

**Use when the angle between the linkage and crank arm is less than 25°.

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Linkage Configuration



_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

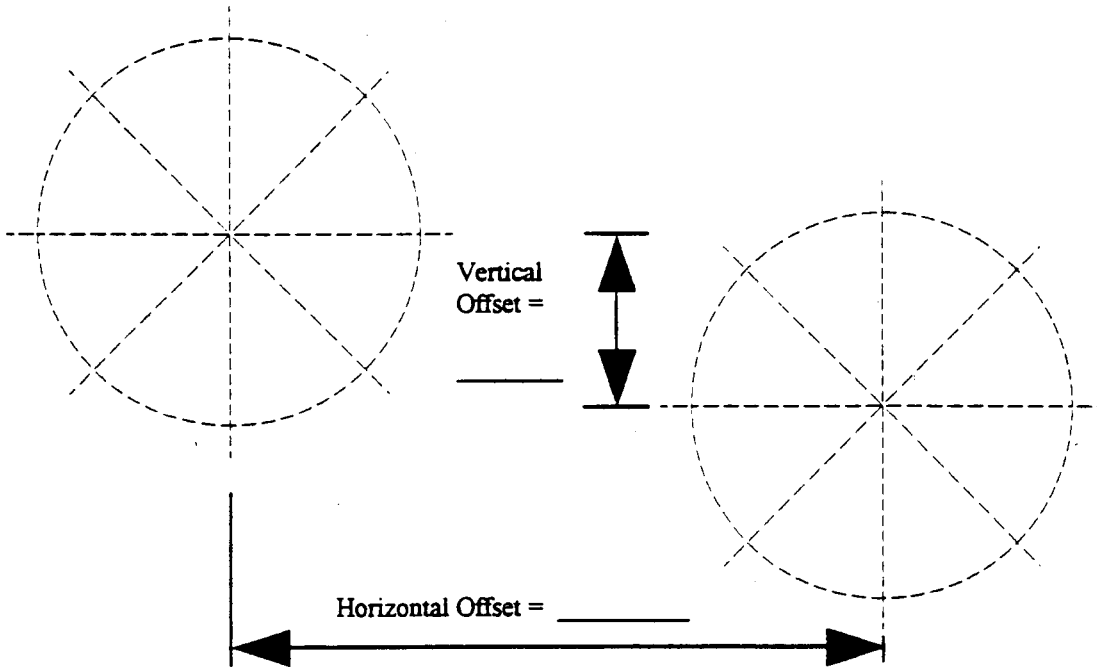
<u>Linkage Data</u>
Calculated Linkage Length (in) _____
Recommended Linkage Kit _____
for _____ inch Customer Pipe

Beck Model No. _____
Torque Rating (lb-ft) _____
Timing for 100° Rotation _____
Rotation on Incr. Signal _____
Sales Engineer _____ Date _____

Customer _____
End User _____
Project _____
Application _____
Quote Number _____

BECK

Linkage Configuration



_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

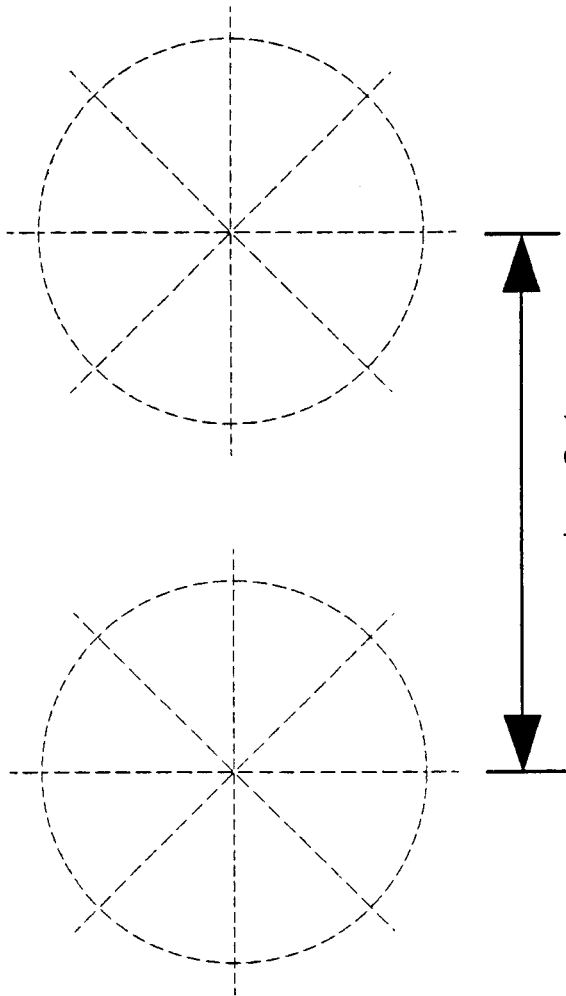
<u>Linkage Data</u>
Calculated Linkage Length (in) _____
Recommended Linkage Kit _____
for _____ inch Customer Pipe

Beck Model No. _____
Torque Rating (lb-ft) _____
Timing for 100° Rotation _____
Rotation on Incr. Signal _____
Sales Engineer _____ Date _____

Customer _____
End User _____
Project _____
Application _____
Quote Number _____

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Linkage Configuration



_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

Vertical
Offset =

_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

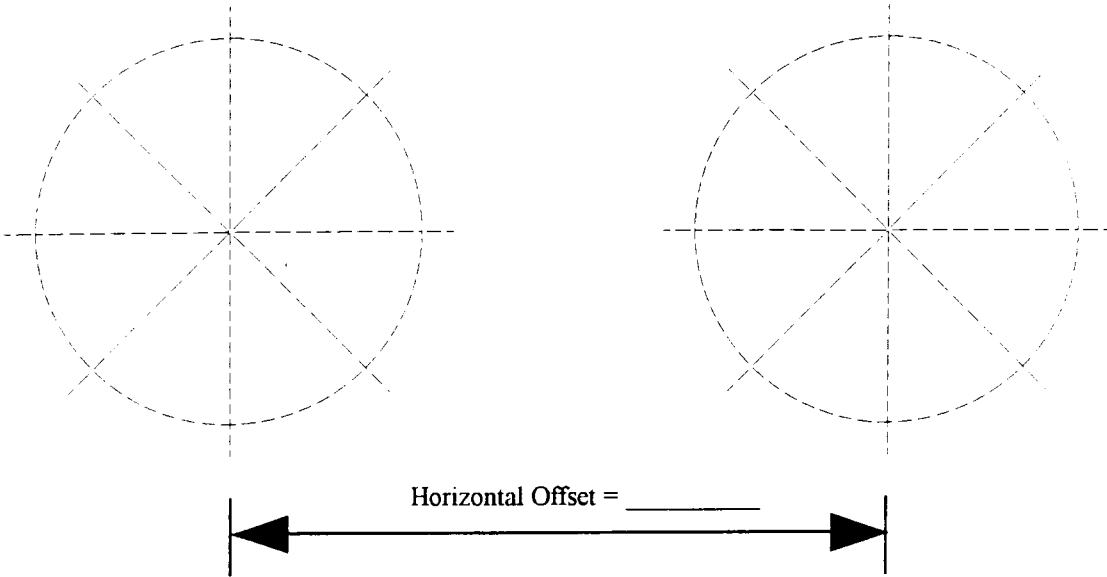
<u>Linkage Data</u>
Calculated Linkage Length (in) _____
Recommended Linkage Kit _____
for _____ inch Customer Pipe

Beck Model No. _____
Torque Rating (lb-ft) _____
Timing for 100° Rotation _____
Rotation on Incr. Signal _____
Sales Engineer _____ Date _____

Customer _____
End User _____
Project _____
Application _____
Quote Number _____

BECK®

Linkage Configuration



_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

_____ Arm Data
Radius (in) _____
Degrees Rotation _____
Closed Angle _____
Open Angle _____

<u>Linkage Data</u>
Calculated Linkage Length (in) _____
Recommended Linkage Kit _____
for _____ inch Customer Pipe

Beck Model No. _____
Torque Rating (lb-ft) _____
Timing for 100° Rotation _____
Rotation on Incr. Signal _____
Sales Engineer _____ Date _____

Customer _____
End User _____
Project _____
Application _____
Quote Number _____