

## Manufacturing

All ThyssenKrupp kellys are made from AISI 4145 modified alloy steel and machined from a unique shaped, integral forging. Straightness is checked before, during and after each machining operation. Kellys are rough turned, straightened, bored with specially designed equipment, drifted, straightened, finish turned on specially designed full length kelly turning lathes, straightened, joints are threaded on NC equipment and phosphated.

## Milling

The next process is the critical milling operation. All milling is performed on specially designed rigid kelly mills. Smooth radii are machined on both ends of each flat to assure the least possible stress concentration. The flats are precision milled to a tolerance stricter than API specifications. The kellys are straightened one more time prior to serializing, painting and inserting in ThyssenKrupp standard kelly scabbards for shipping and storage.

## Heat treatment

The forged, heat treated alloy steel used in our kellys has a Brinell hardness range of 285-341 and can withstand virtually all drilling conditions. All ThyssenKrupp kellys are shipped in a protective steel scabbard. Rat hole scabbards can be supplied on request. Connections are cold rolled and supplied with pressed steel thread protectors. Other thread protectors can be supplied on request.

### Square kelly specifications

Nominal Size in.	Overall Lengths <sup>(1)</sup> ft L	Top connection		Bottom connection		Bore A	Drive section		Approx. Wt. of 40 ft (kg) kelly
		API Box Thread LH	OD in.	Right Hand Connections	OD in.		Across Corners B	Across Flats C	
2 1/2	40	6 5/8 REG 4 1/2 REG	7 3/4 5 3/4	NC26 (2 3/8 IF)	3 3/8	1 7/16	3.250	2 1/2	412 363
3	40,46	6 5/8 REG 4 1/2 REG	7 3/4 5 3/4	NC31 (2 7/8 IF)	4 1/8	1 3/4	3.875	3	500 449
3 1/2	40,46	6 5/8 REG	7 3/4	NC38 (3 1/2 IF)	4 3/4	2 1/4	4.437	3 1/2	608
4 1/4	40,46,54	6 5/8 REG	7 3/4	NC46 (4 IF) NC50 (4 1/2 IF)	6 1/4 - 6 3/8	2 13/16	5.500	4 1/4	835
5 1/4	40,46,54	6 5/8 REG	7 3/4	NC50 (4 1/2 IF) 5 1/2 FH	6 1/4 - 7	3	6.750	5 1/4	1 270
6	40,46,54	6 5/8 REG	7 3/4	6 5/8 REG	7 3/4	3	7.875	6	1 688

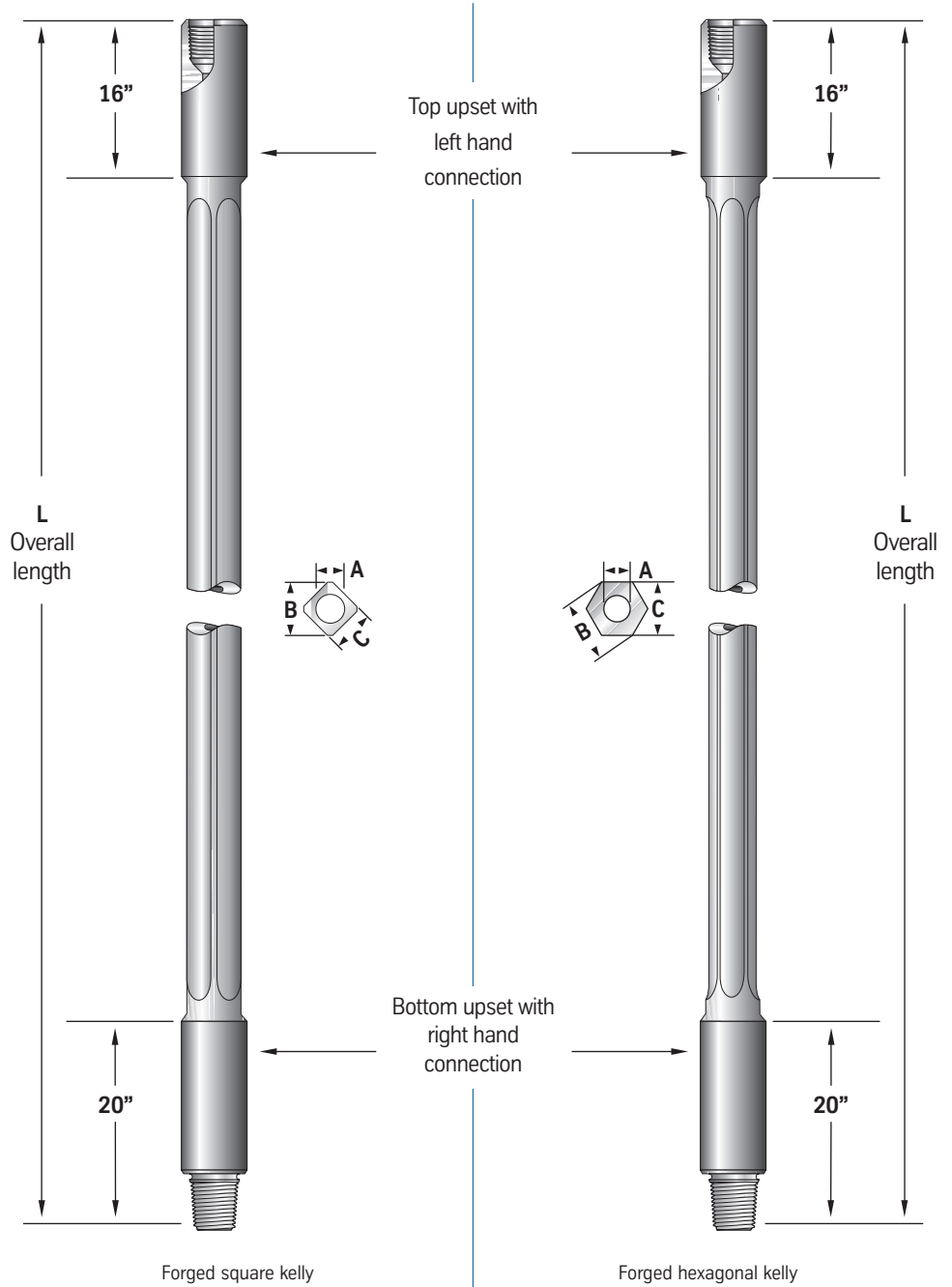
(1) ThyssenKrupp can manufacture special kellys to customer specifications.

### Hexagon kelly specifications

Nominal Size in.	Overall Lengths <sup>(1)</sup> ft L	Top connection		Bottom connection		Bore A	Drive section		Approx. Wt. of 40 ft (kg) kelly
		API Box Thread LH	OD in.	Right Hand Connections	OD in.		Across Corners B	Across Flats C	
3	40	6 5/8 REG 4 1/2 REG	7 3/4 5 3/4	NC26 (2 3/8 IF)	3 3/8	1 7/16	3.375	3	449 400
3 1/2	40,46	6 5/8 REG 4 1/2 REG	7 3/4 5 3/4	NC31 (2 7/8 IF)	4 1/8	1 3/4	3.937	3 1/2	600 549
4 1/4	40,46	6 5/8 REG	7 3/4	NC38 (3 1/2 IF)	4 3/4	2 1/4	4.781	4 1/4	798
5 1/4	40,46,54	6 5/8 REG	7 3/4	NC46 (4 IF) NC 50 (4 1/2 IF)	6-6 1/4 6 1/4-6 3/8	2 13/16 3	5.900	5 1/4	1 166
6	40,46,54	6 5/8 REG	7 3/4	5 1/2 FH	7	3	6.812	6	1 388

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# Forged square and hexagonal kellys



**On inquiries and orders please specify**

- Kelly type (hexagonal or square)
- Nominal size
- Overall length
- Bore-A
- Size and type of top connection
- Size and type of bottom connection
- Plain Shipping Scabbard or Rathole Drilling Scabbard