



## SPECIFICATIONS

<u>MODEL NUMBER</u> <b>5419-000-000</b>
<u>MAX TEMPERATURE RATING</u> <b>400° F (204.4° C)</b>
<u>PRESSURE RATING</u> <b>15,000 PSI (103 MPa)</b>
<u>MAKE UP LENGTH</u> <b>26.25" (66.68 cm)</b>
<u>WEIGHT</u> <b>6 lbs (2.7 kg)</b>
<u>DIAMETER</u> Min. I.D. Restriction: 2.00" (5.08 cm) Max. Hole O.D.: 5.00" (12.70 cm)
<u>APPLICATIONS</u> Centralizes CBL's and PLT tool strings in vertical and deviated wells, while minimizing mechanical noise
<u>FEATURES</u> <b>3 Bow Spring Design</b>



**1 3/8  
INCH**  
(3.49 CM)

**REN-1-ARR-1ZFC GZ-RPS WOB**

99CB13A0 Apr-05



## SPECIFICATIONS

<u>MODEL NUMBER</u> <b>5419-168-200</b>
<u>MAX TEMPERATURE RATING</u> <b>400° F (204.4° C)</b>
<u>PRESSURE RATING</u> <b>15,000 PSI (103 MPa)</b>
<u>MAKE UP LENGTH</u> <b>29.50" (74.93 cm)</b>
<u>WEIGHT</u> <b>11 lbs (4.9 kg)</b>
<u>DIAMETER</u> Min. I.D. Restriction: $\approx$ 1.75" (4.45 cm) Max. Hole O.D.: 8.00" (20.32 cm)
<u>APPLICATIONS</u> Centralizes CBL's and PLT tool strings in vertical and deviated wells, while minimizing mechanical noise
<u>FEATURES</u> <b>3 Bow Spring Design</b>



**1 11/16  
INCH  
(4.29 CM)**

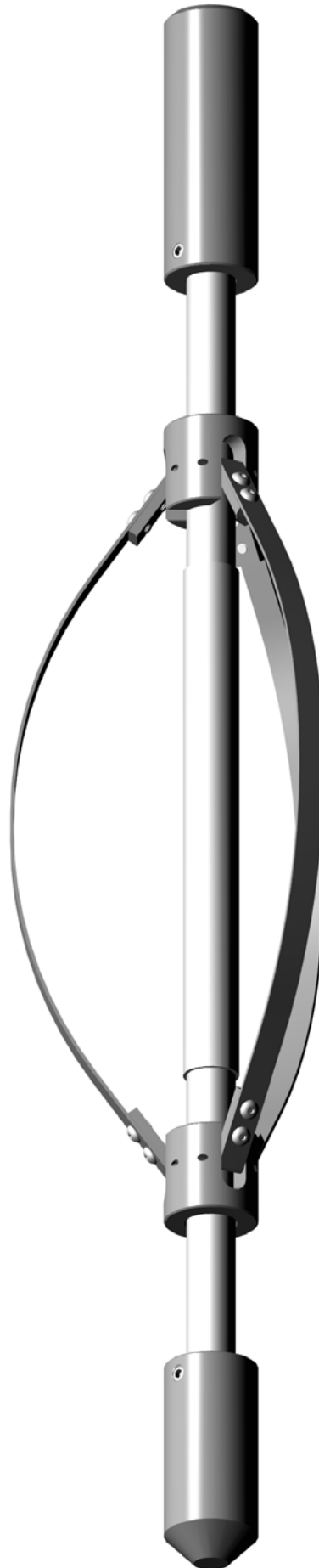
**UPPER  
CENTRALIZER**

99CB16AC Apr-05



## SPECIFICATIONS

<u>MODEL NUMBER</u> <b>5419-168-300</b>
<u>MAX TEMPERATURE RATING</u> <b>400° F (204.4° C)</b>
<u>PRESSURE RATING</u> <b>15,000 PSI (103 MPa)</b>
<u>MAKE UP LENGTH</u> <b>29.50" (74.93 cm)</b>
<u>WEIGHT</u> <b>12 lbs (5.4 kg)</b>
<u>DIAMETER</u> Min. I.D. Restriction: $\approx$ 1.75" (4.45 cm) Max. Hole O.D.: 8.00" (20.32 cm)
<u>APPLICATIONS</u> Centralizes CBL's and PLT tool strings in vertical and deviated wells, while minimizing mechanical noise
<u>FEATURES</u> <b>3 Bow Spring Design</b> <b>No electrical contacts</b>



**1 11/16  
INCH  
(4.29 CM)**

**LOWER  
CENTRALIZER**

99CB16AD Apr-05



## SPECIFICATIONS

<u>MODEL NUMBER</u>	8170-168-100
<u>MAX TEMPERATURE RATING</u>	400° F (204.4° C)
<u>MAKE UP LENGTH</u>	29.875" (75.88 cm)
<u>WEIGHT</u>	11.4 lbs (5.2 kg)
<u>CENTRALIZING FORCE</u>	44 lbf in 5 1/2" Csg; 35 lbf in 7" Csg 25 lbf in 9 5/8" Csg  Actual centralizing force is dependent on hole size, condition, and tool string configuration
<u>MAX SERVICE PRESSURE</u>	15,000 PSI (103 MPa)
<u>DIAMETER</u>	Run through: 1.68" (4.29 cm) Operating: 2 - 9" (5.08 – 22.86 cm)
<u>APPLICATIONS</u>	Centralizes CBLs and PLT tool strings in vertical and deviated wells, while minimizing mechanical noise  Provides strong lifting force to facilitate tool string entry into deviated liner tops  Centralize setting tool strings when setting high expansion plugs and packers  Centralize the bottom end of high expansion plugs and packers during setting cycles
<u>FEATURES</u>	Staggered roller design eliminates centralizer sticking and jumping at casing couplings.  Provides maximum centralizing force and minimal re-entry force.  On retrieval, when the centralizer contacts the tubing and re-entry force is reached, the centralizer collapses and enters the tubing without further resistance.



**1 11/16  
INCH  
(4.29 CM)**

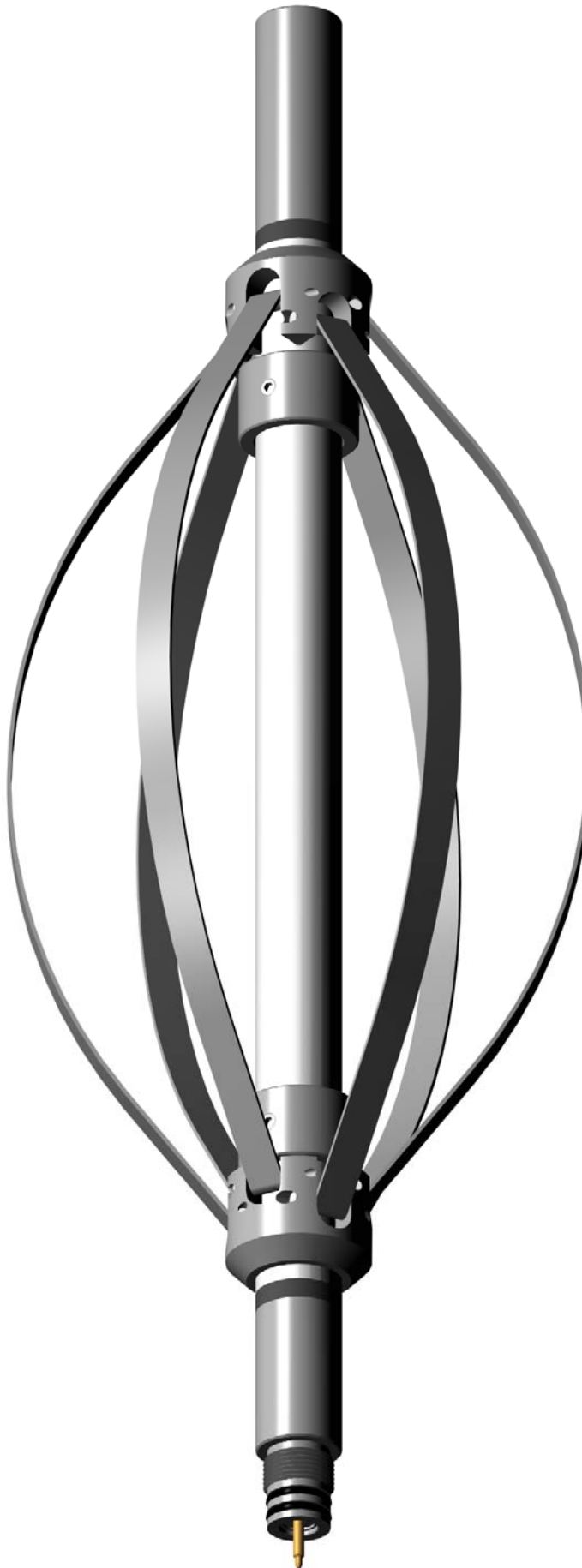
**ROLLER  
CENTRALIZER**

70CB16A0 Apr-05



## SPECIFICATIONS

<u>MODEL NUMBER</u> <b>8110-243-130</b>
<u>MAX TEMPERATURE RATING</u> <b>400° F (204.4° C)</b>
<u>PRESSURE RATING</u> <b>18,000 PSI (124 MPa)</b>
<u>MAKE UP LENGTH</u> <b>26.00" (66.04 cm)</b>
<u>WEIGHT</u> <b>20 lbs (9.1 kg)</b>
<u>APPLICATIONS</u> <b>Centralizes CBL's and PLT tool strings in vertical and deviated wells, while minimizing mechanical noise</b>
<u>FEATURES</u> <b>6 Bow Spring Design Special for Bond Tools 1 7/16" (3.65 cm) Body</b>



**2 7/16  
INCH  
(6.19 CM)**

**BOW SPRING CENTRALIZER**

10CB24AB Apr-05



## SPECIFICATIONS

MODEL NUMBER

8110-243-140

MAX TEMPERATURE RATING

400° F (204.4° C)

PRESSURE RATING

18,000 PSI (124 MPa)

MAKE UP LENGTH

26.00" (66.04 cm)

WEIGHT

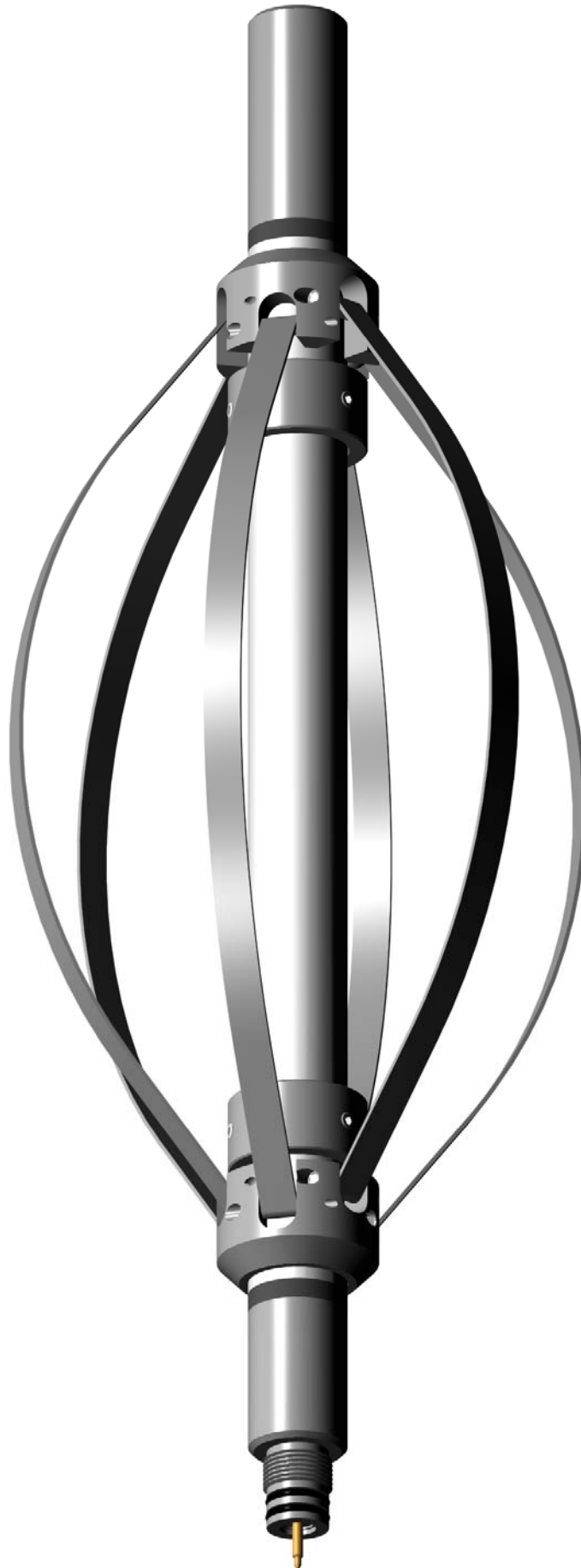
25 lbs (11.3 kg)

APPLICATIONS

Centralizes CBL's and PLT tool strings in vertical and deviated wells, while minimizing mechanical noise

FEATURES

6 Bow Spring Design  
Special for Bond Tools  
1 11/16" (4.29 cm) Body  
High Strength



2 7/16  
INCH  
(6.19 CM)

WOB  
S  
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R

10CB24AC Apr-05



## SPECIFICATIONS

MODEL NUMBER

**5419-275-100**

MAX TEMPERATURE RATING

**400° F (204.4° C)**

PRESSURE RATING

**20,000 PSI (138 MPa)**

MAKE UP LENGTH

**34.31" (87.16 cm)**

WEIGHT

**32 lbs (14.5 kg)**

APPLICATIONS

Centralizes CBL's and PLT tool strings in vertical and deviated wells, while minimizing mechanical noise

FEATURES

**4 Bow Spring Design  
Manually adjustable**



**2 3/4  
INCH  
(6.99 CM)**

**ADJUSTABLE  
CENTRALIZER**

99CB27AO Apr-05