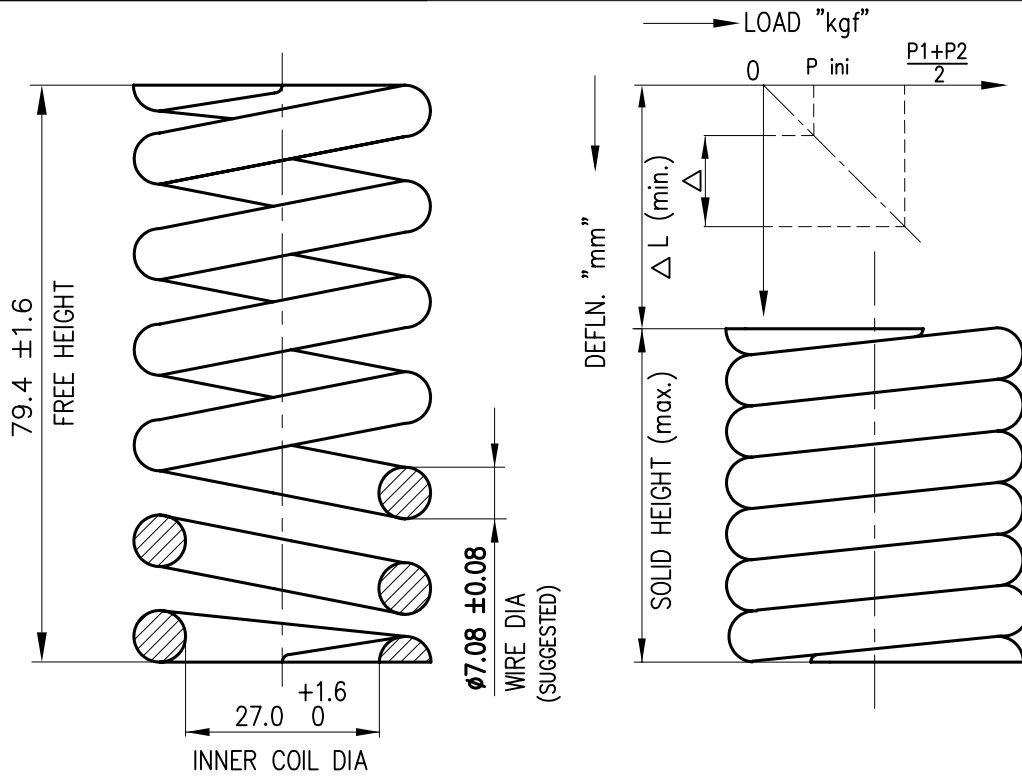


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| ROW | DESCRIPTION | UNITS | VALUE |
|-----|---------------------------------------|------------------|-------------|
| 01 | SPRING NUMBER | 0101180CR | |
| 02 | MAX. OUTSIDE DIA | (mm) | 50.8 |
| 03 | SPRING RATE | (Kg/mm) | 10.784 |
| 04 | AVERAGE DEFLECTION ΔL min. | (mm) | 27.6 |
| 05 | INITIAL LOADING P_{ini} | (Kgs) | 44.7 |
| 06 | TEST DEFLECTION Δ | (mm) | 19.4 |
| 07 | LOAD AT TEST | P_1 MIN. | (Kgs) 242.9 |
| | DEFLECTION | P_2 MAX. | (Kgs) 263.8 |
| 08 | TILT DEFLECTION | (mm) | 23.5 |

| ROW | DESCRIPTION | UNITS | VALUE |
|-----|---------------------------|---------------------------------------|----------------|
| 09 | EFFECTIVE NO. OF COILS | NOS | 6.0 -0.5 |
| 10 | SPRING WEIGHT | (Kgs) | 0.214 |
| 11 | PITCH | (mm) | 12.0 ± 0.7 |
| 12 | DEVELOPED LENGTH OF ROD | (mm) | 693 |
| 13 | RAW MATERIAL DIA x LENGTH | (mm) | -- |
| 14 | RAW MATERIAL WEIGHT | (Kgs) | -- |
| 15 | RAW MATERIAL CODE | -- | |
| 16 | SPRING CODE | 974623310000/ 964156920000 | |
| 17 | PROCESS OF MANUFACTURE | HOT/COLD COILING (NOTE-4) | |

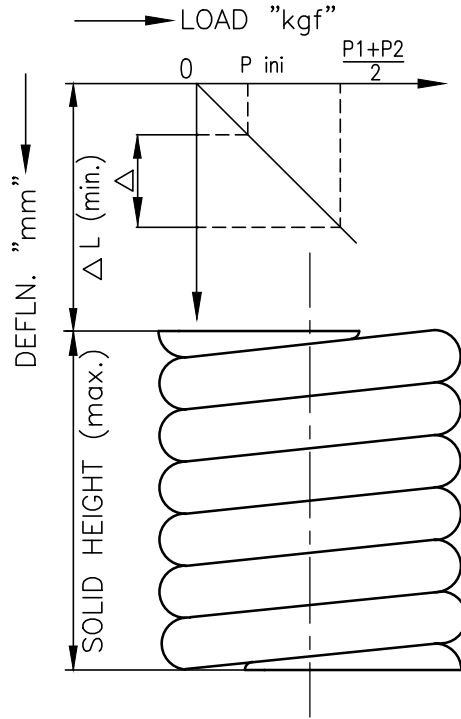
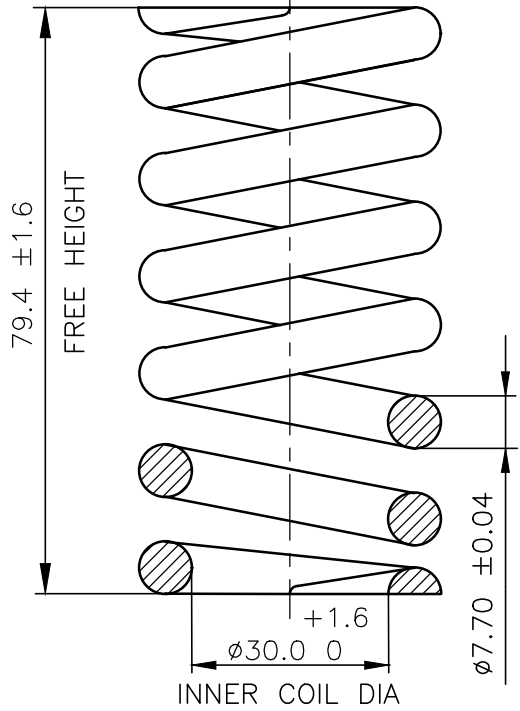
NOTES:

1. MANUFACTURE & WORKMANSHIP SHALL BE IN ACCORDANCE WITH APPLICABLE PROCEDURE FOR **NON IBR** SPRINGS.
2. DATA GIVEN IN ROWS 11 TO 14 ARE FOR REFERENCE ONLY. SPRING VENDOR TO DECIDE SUITABILITY.
3. ACCEPTABLE SPRING MATERIALS TO **PRODUCT ATTEST**:
ASTM A304-6150H, ASTM A322-6150, BS970/2-735A51, BS970/2-735H51, BS2803-735A50, BS2803-685A55.
4. SPRING VENDOR IS RESPONSIBLE FOR STRESS RELIEVING, TEMPERING AND OTHER HEAT TREATMENTS AND CONTROLS TO INSURE MINIMUM STRESSED SPRINGS.

| | | | | | | | | | |
|---|-------|------------|-----------|----------|-------------------------------|----------|------------------|----------|----------|
| REV. 03 | ALTD: | REV. 02 | ALTD: G.V | 06.06.08 | | DRAWN | G.VENKATESWARALU | SIGN | 06.06.08 |
| | CHKD: | | CHKD: E.A | 06.06.08 | | CHECKED | E.Athiannavi | 06.06.08 | |
| | APPD: | | APPD: E.A | 06.06.08 | | APPROVED | E.Athiannavi | 06.06.08 | |
| TITLE SPRING | | | | | DRG No. 4-V-J118-21276 | | | | |
| DRG. UPDATED REDRAWN IN CAD. DCP.NO.800783 DT.07.01.08 | | | | | REV. 02 | | | | |



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| ROW | DESCRIPTION | UNITS | VALUE |
|-----|-----------------------------|---------|-------------|
| 01 | SPRING NUMBER | | 0301200CR |
| 02 | OUTSIDE DIA MAX.LIMIT | (mm) | 50.8 |
| 03 | SPRING RATE | (Kg/mm) | 12.945 |
| 04 | AVERAGE DEFLECTION Δ L min. | (mm) | 27.3 |
| 05 | INITIAL LOADING P ini | (Kgs) | 53.0 |
| 06 | TEST DEFLECTION Δ | (mm) | 19.1 |
| 07 | LOAD AT TEST | P1 MIN. | (Kgs) 288.1 |
| | DEFLECTION | P2 MAX. | (Kgs) 312.7 |
| 08 | TILT DEFLECTION | (mm) | 23.2 |

| ROW | DESCRIPTION | UNITS | VALUE |
|-----|-------------------------|---------------------------|-----------------------|
| 09 | EFFECTIVE NO.OF COILS | NOS | 5.1 ⁰ -0.5 |
| 10 | SPRING WEIGHT | (Kgs) | 0.3 |
| 11 | PITCH | (mm) | 13.7±0.7 |
| 12 | DEVELOPED LENGTH OF ROD | (mm) | 796 |
| 13 | SPRING CODE | 964165190000 | |
| 14 | PROCESS OF MANUFACTURE | HOT/COLD COILING (NOTE-4) | |

NOTES:

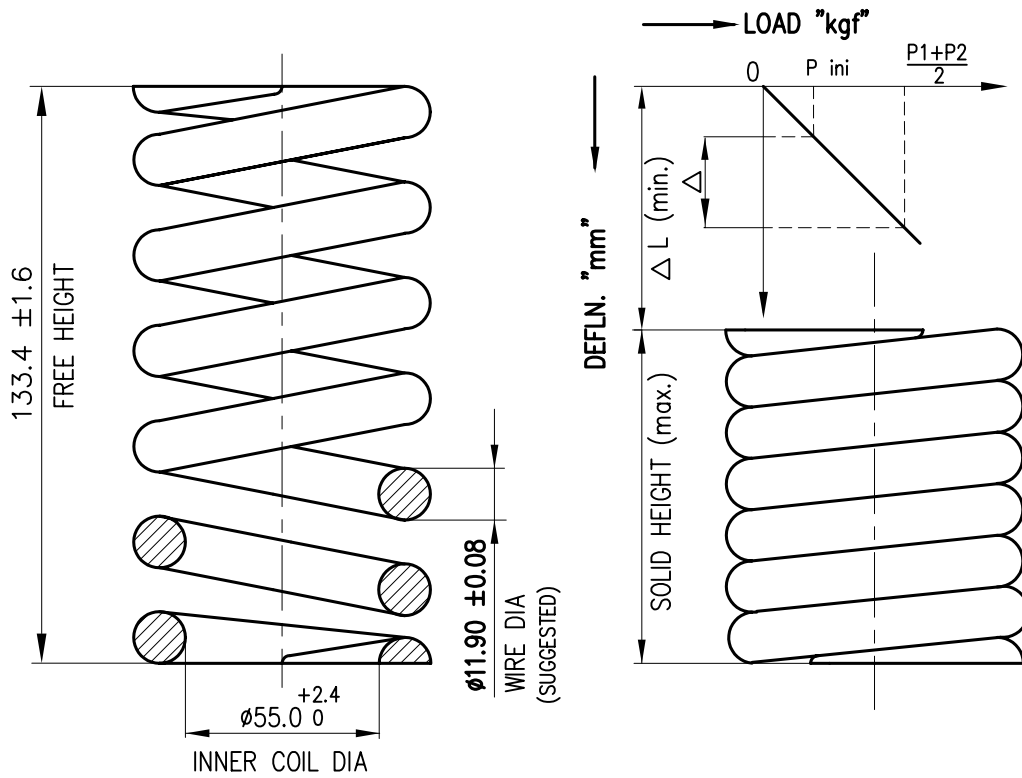
- MANUFACTURE & WORKMANSHIP SHALL BE IN ACCORDANCE WITH APPLICABLE PROCEDURE FOR **NON IBR** SPRINGS.
- DATA GIVEN IN ROWS 11 TO 12 ARE FOR REFERENCE ONLY. SPRING VENDOR TO DECIDE SUITABILITY.
- ACCEPTABLE SPRING MATERIALS TO **PRODUCT ATTEST** :
ASTM A689/A322 GR.5160/6150, ASTM A401, ASTM A689/A304 GR.5160H/6150H/4161H, BS PT2-735A50/735A51/735H51, BS 2803-735A50/685A55, DIN 17221 GR.51CrMoV4.
- SPRING VENDOR IS RESPONSIBLE FOR STRESS RELIEVING, TEMPERING AND OTHER HEAT TREATMENTS AND CONTROLS TO INSURE MINIMUM STRESSED SPRINGS.

| | | | |
|--------|-------|--------|-------|
| REV.02 | ALTD: | REV.01 | ALTD: |
| | CHKD: | | CHKD: |
| | APPD: | | APPD: |

| | | | | |
|-------------|----------|---------------|------|---------|
| 365-081 | DRAWN | J.Dhanabal | SIGN | DATE |
| | CHECKED | R.Rabin | | 20.09.2 |
| | APPROVED | S.Madhulingam | | 20.09.2 |

| | | | |
|---------|----------------|--|---------|
| TITLE | SPRING | | |
| DRG No. | 4-V-J120-21876 | | REV. 00 |

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| ROW | DESCRIPTION | UNITS | VALUE |
|-----|---------------------------------------|------------------|----------|
| 01 | SPRING NUMBER | 0102580CR | |
| 02 | MAX. OUTSIDE DIA | mm | 85.7 |
| 03 | SPRING RATE | Kg/mm | 10.945 |
| 04 | AVERAGE DEFLECTION ΔL min. | mm | 48.3 |
| 05 | INITIAL LOADING P_{ini} | Kg | 79.2 |
| 06 | TEST DEFLECTION Δ | mm | 33.8 |
| 07 | LOAD AT TEST DEFLECTION | P_1 MIN. | Kg 430.5 |
| | | P_2 MAX. | Kg 467.5 |
| 08 | TILT DEFLECTION | mm | 41.0 |

| ROW | DESCRIPTION | UNITS | VALUE |
|-----|---------------------------|---|---|
| 09 | EFFECTIVE NO. OF COILS | NOS | 6.2 $\begin{matrix} 0 \\ -0.5 \end{matrix}$ |
| 10 | SPRING WEIGHT | Kg | 1.2 |
| 11 | PITCH | mm | 20.5 ± 0.7 |
| 12 | DEVELOPED LENGTH OF ROD | mm | 1403 |
| 13 | RAW MATERIAL DIA x LENGTH | mm | $\phi 18 \times 1857$ |
| 14 | RAW MATERIAL WEIGHT | Kg | 3.8 |
| 15 | RAW MATERIAL CODE | 153274050100 | |
| 16 | SPRING CODE | 931721660000/ 964156830000/ 974198900000 | |
| 17 | PROCESS OF MANUFACTURE | HOT/COLD COILING (NOTE-4) | |

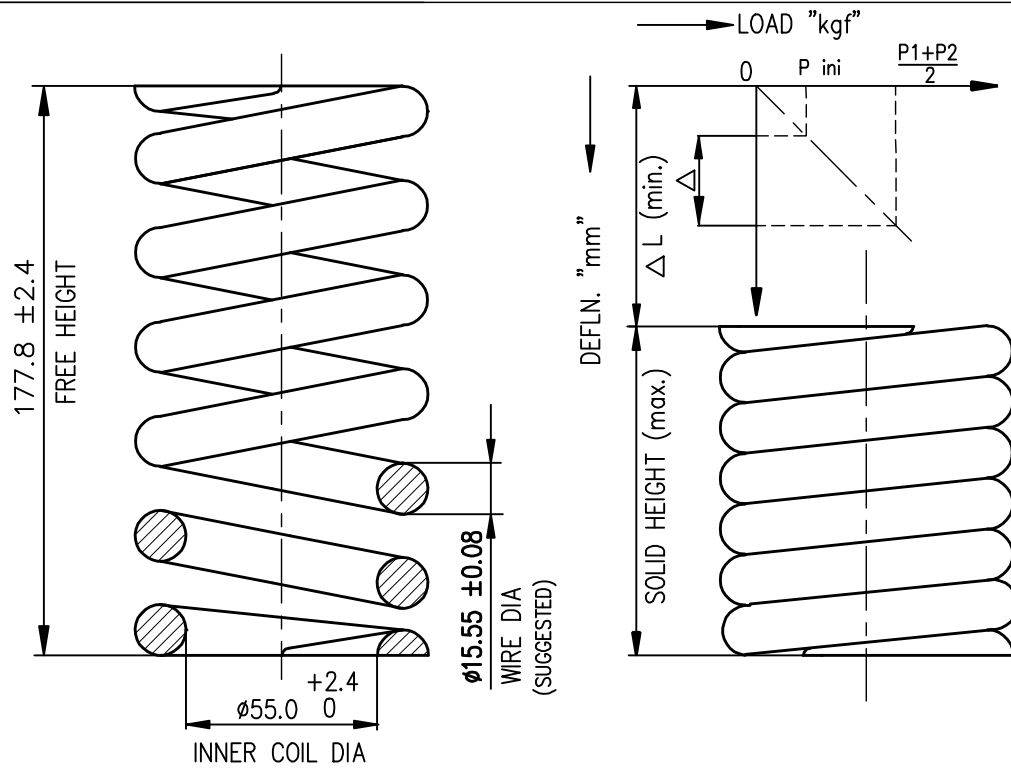
NOTES:

1. MANUFACTURE & WORKMANSHIP SHALL BE IN ACCORDANCE WITH APPLICABLE PROCEDURE FOR **NON IBR** SPRINGS.
2. DATA GIVEN IN ROWS 11 TO 14 ARE FOR REFERANCE ONLY. SPRING VENDOR TO DECIDE SUITABILITY.
3. ACCEPTABLE SPRING MATERIALS TO **PRODUCT ATTEST**:
ASTM A304-6150H,ASTM A322-6150,BS970/2-735A51, BS970/2-735H51,BS2803-735A50,BS2803-685A55.
4. SPRING VENDOR IS RESPONSIBLE FOR STRESS RELIEVING, TEMPERING AND OTHER HEAT TREATMENTS AND CONTROLS TO INSURE MINIMUM STRESSED SPRINGS.

| | | | | | | | |
|------------|-------|------------|--|---|--------------|--------------------|------------|
| REV. 05 | ALTD: | REV. 04 | ALTD: G.V <i>[Signature]</i> 29.03.08 | DRAWN G.VENKATESWARALU <i>[Signature]</i> 29.03.08 CHECKED E.ATHIANNAVI <i>[Signature]</i> 29.03.08 APPROVED E.ATHIANNAVI <i>[Signature]</i> 29.03.08 | NAME | SIGN | DATE |
| | CHKD: | | CHKD: E.A <i>[Signature]</i> 29.03.08 | | E.ATHIANNAVI | <i>[Signature]</i> | 29.03.08 |
| | APPD: | | APPD: E.A <i>[Signature]</i> 29.03.08 | | E.ATHIANNAVI | <i>[Signature]</i> | 29.03.08 |
| | | | (REF: 4VJ25823166/01) DRG. UPDATED & REDRAWN IN CAD. DCP.NO.800783 DT.07.01.08 | TITLE SPRING | | | |
| | | | DRG No. | 4-V-J258-21166 | | | REV. 04 |



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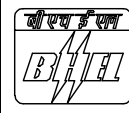


| ROW | DESCRIPTION | UNITS | VALUE |
|-----|-----------------------------|------------------|--------|
| 01 | SPRING NUMBER | 0303130CR | |
| 02 | MAX. OUTSIDE DIA | (mm) | 98.4 |
| 03 | SPRING RATE | (Kg/mm) | 24.39 |
| 04 | AVERAGE DEFLECTION Δ L min. | (mm) | 56.6 |
| 05 | INITIAL LOADING P ini | (Kgs) | 207.2 |
| 06 | TEST DEFLECTION Δ | (mm) | 39.6 |
| 07 | LOAD AT TEST | P1 MIN. (Kgs) | 1125.9 |
| | DEFLECTION | P2 MAX. (Kgs) | 1222.6 |
| 08 | TILT DEFLECTION | (mm) | 48.2 |

| ROW | DESCRIPTION | UNITS | VALUE |
|-----|---------------------------|------------------------------|------------------------------------|
| 09 | EFFECTIVE NO. OF COILS | NOS | 6.9 ⁰ / _{-0.5} |
| 10 | SPRING WEIGHT | (Kgs) | 2.427 |
| 11 | PITCH | (mm) | 24.5 ± 1.0 |
| 12 | DEVELOPED LENGTH OF ROD | (mm) | 1628 |
| 13 | RAW MATERIAL DIA x LENGTH | (mm) | ø18x2140 |
| 14 | RAW MATERIAL WEIGHT | (Kgs) | 4.275 |
| 15 | RAW MATERIAL CODE | 153274050100 | |
| 16 | SPRING CODE | 931723750000 | |
| 17 | PROCESS OF MANUFACTURE | HOT/ COLD COILING | |

NOTES:

1. MANUFACTURE & WORKMANSHIP SHALL BE IN ACCORDANCE WITH APPLICABLE PROCEDURE FOR **NON IBR** SPRINGS.
2. DATA GIVEN IN ROWS 11 TO 14 ARE FOR REFERENCE ONLY. SPRING VENDOR TO DECIDE SUITABILITY.
3. ACCEPTABLE SPRING MATERIALS TO **PRODUCT ATTEST**: ASTM A322 GR.6150.
4. SPRING VENDOR IS RESPONSIBLE FOR STRESS RELIEVING, TEMPERING AND OTHER HEAT TREATMENTS AND CONTROLS TO INSURE MINIMUM STRESSED SPRINGS.

| | | | | | | | | | |
|---|-------|---------|--|--|----------|-------------------|-------------------------|-------------------------------|----------------|
| REV. 02 | ALTD: | REV. 01 | ALTD: G.V. <i>[Signature]</i> 16.06.09 |  | DRAWN | G.Venkateshwaralu | SIGN <i>[Signature]</i> | DATE 16.06.09 | |
| | CHKD: | | CHKD: S.M. <i>[Signature]</i> 16.06.09 | | CHECKED | S.Madhulingam | S.M. <i>[Signature]</i> | 16.06.09 | |
| | APPD: | | APPD: E.A. <i>[Signature]</i> 16.06.09 | | APPROVED | E.Athiannavi | E.A. <i>[Signature]</i> | 16.06.0 | |
| DRG. UPDATED REDRAWN IN CAD. DCP.NO.800903 DT.21.01.09 | | | TITLE SPRING | | | | | DRG No. 4-V-J313-21375 | REV. 01 |

