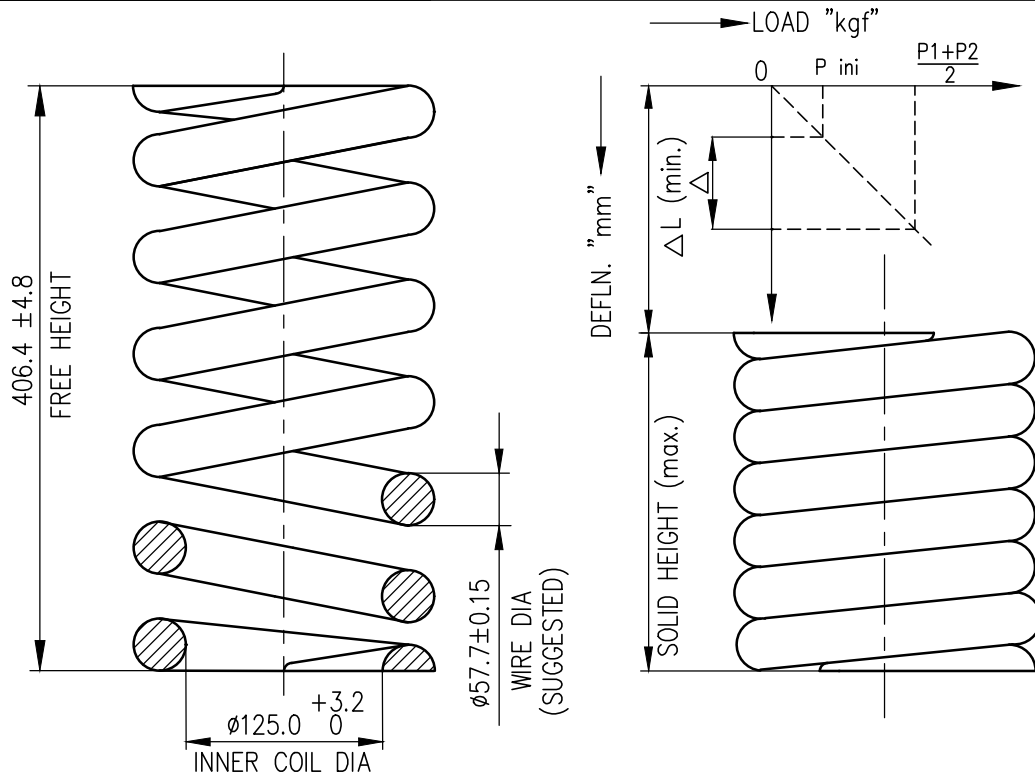


CAUTION : The information of this document is the property of BHARAT HEAVY ELECTRICALS LIMITED
It must not be used directly or indirectly in any way detrimental to the interest of the company.



| ROW | DESCRIPTION | UNITS | VALUE |
|-----|----------------------------------|----------|---------------|
| 01 | SPRING NUMBER | 5107480E | |
| 02 | OUTSIDE DIA. MAX. LIMIT | (mm) | 254.0 |
| 03 | SPRING RATE ($\pm 4\%$) | (Kg/mm) | 394.66 |
| 04 | SOLID DEFLECTION ΔL min. | (mm) | 63.5 |
| 05 | INITIAL LOADING P ini | (Kgs) | 3759.1 |
| 06 | TEST DEFLECTION Δ | (mm) | 44.5 |
| 07 | LOAD AT TEST DEFLECTION | P1 MIN. | (Kgs) 20428.4 |
| | | P2 MAX. | (Kgs) 22175.1 |

| ROW | DESCRIPTION | UNITS | VALUE |
|-----|---------------------------|-------------|-----------------------|
| 08 | TILT DEFLECTION | (mm) | 54.0 |
| 09 | EFFECTIVE NO.OF COILS | NOS | 4.7 ± 0.5 |
| 10 | SPRING WEIGHT | (Kgs) | 70.3 |
| 11 | PITCH | (mm) | 71.8 ± 2.2 |
| 12 | DEVELOPED LENGTH OF ROD | (mm) | 3443 |
| 13 | RAW MATERIAL DIA x LENGTH | (mm) | $\phi 60 \times 4837$ |
| 14 | RAW MATERIAL WEIGHT | (Kgs) | - |
| 15 | PROCESS OF MANUFACTURE | HOT COILING | |

NOTES:

1. MANUFACTURE & WORKMANSHIP SHALL BE IN ACCORDANCE WITH APPLICABLE PROCEDURE FOR IBR SPRINGS AND DESIGNED FOR SAFETY VALVE APPLICATIONS ONLY.
2. FREE HEIGHT, SPRING RATE & SOLID DEFLECTION SHOULD BE MAINTAINED AND OTHER PARAMETERS TO BE DECIDED BY SPRING VENDOR, ACCORDING TO THE MATERIAL MENTIONED IN THIS DRAWING.
3. ACCEPTABLE SPRING MATERIALS TO ATTEST:
ASTM A681-H12/H21 OR BS 4659-BH12/BH21
4. SPRING VENDOR IS RESPONSIBLE FOR STRESS RELIEVING, TEMPERING AND OTHER HEAT TREATMENTS AND CONTROLS TO INSURE MINIMUM STRESSED SPRINGS.
5. TEST CERTIFICATE TO BE OBTAINED WITH THE INSPECTING AUTHORITY APPROVED UNDER IBR 1950.
6. SPRINGS SHALL BE ALUMINIZED, USING EITHER BAKED-ON PAINT OR MOLTEN ALUMINIUM.

| REV. | ALTD: | REV. | ALTD: | NAME | SIGN | DATE |
|------|-------|------|-------|----------------|------|------------|
| 02 | CHKD: | 01 | CHKD: | DRAWN | S.S | 24.07.2018 |
| | APPD: | | APPD: | CHECKED | R.R | 24.07.2018 |
| | | | | APPROVED | S.M | 24.07.2018 |
| | | | | TITLE | | |
| | | | | SPRING | | |
| | | | | DRG No. | | REV. |
| | | | | 4-V-J748-23864 | | 00 |