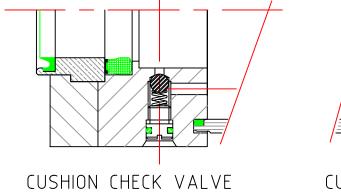
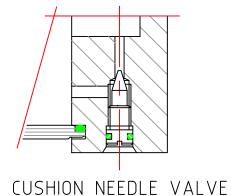


CUSHION ASSEMBLY (IF APPLICABLE)





NOMINAL WORKING PRESSURE 3000 P.S.I. (207 Bar.)

- 1 PISTON ROD WIPER
  PROLONGS CYLINDER & PISTON ROD LIFE
  BY PREVENTING DIRT ENTERING GLAND
- (2) GLAND BEARING PHOSP. BRONZE FOR ADEQUATE LIFE
- 3 GLAND PACKING SYNTHETIC SINGLE ACTING SEAL
- 4 CYLINDER END CAPS
  ACCURATELY MACHINED FROM SOLID STEEL
  PROVIDES PRECISE LOCATION FOR BARREL
- (5) BARREL / END CAP SEAL
  AN O-RING PROVIDES SEALING AT BOTH
  ENDS OF BARREL. ANTI EXTRUSION RINGS
  FITTED ON SIZES SIZES HB60 AND ABOVE
- 6 PISTON ROD

  MANUFACTURED FROM ALLOY STEEL

  HARD CHROME PLATED & POLISHED
- 7 BARREL
  CYLINDER BARREL MANUFACTURE FROM
  SEAMLESS TUBE, HONED & POLISHED
  TO GIVE A LONG SEAL LIFE
- (8) PISTON
  2 PIECE PISTON WITH COMPOSITE SEAL
- 9 PISTON PACKING STANDARD COMPOSITE SEAL WITH SEAR RINGS
- 10) PISTON
  ALTERNATIVE PISTON, 1 PIECE CAST IRON
  WITH SINGLE ACTING "LIP" TYPE SEALS.
- 11) TIE RODS

  MANUFACTURED FROM HIGH TENSILE ALLOY

  STEEL. ON CYLINDERS HB80 & ABOVE, MULTIPLE

  TIE RODS ARE USED
- (12) CYLINDER PORTS

  B.S.P.P. THREADS ARE STANDARD. SPECIAL

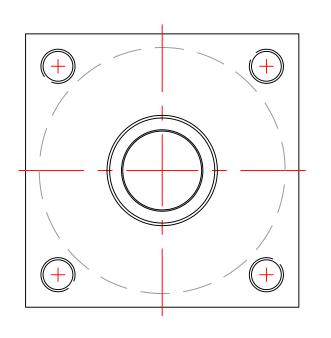
  PORTS MAY BE SPECIFIED BY CUTOMER

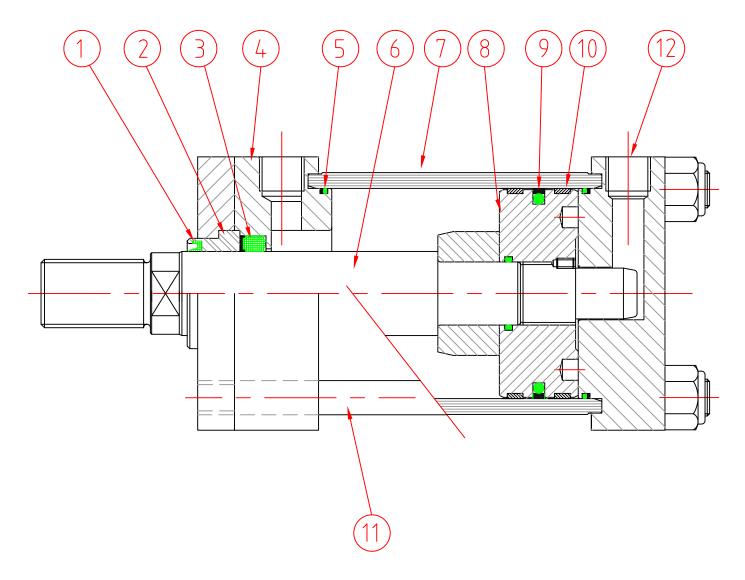
GENERAL ARRANGEMENT HB15 TO HB40 CYLINDERS



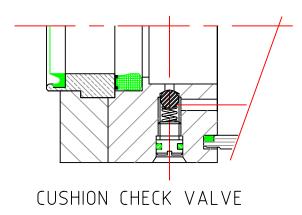
HB SERIES HYDRAULIC CYLINDERS N.F.P.A. STYLE

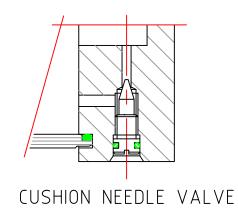
PAGE NO.	1
ISSUE	1
DATE	1.9.97





CUSHION ASSEMBLY (IF APPLICABLE)





NOMINAL WORKING PRESSURE 3000 P.S.I. (207 Bar.)

- 1 PISTON ROD WIPER
  PROLONGS CYLINDER & PISTON ROD LIFE
  BY PREVENTING DIRT ENTERING GLAND
- (2) GLAND BEARING PHOSP. BRONZE FOR ADEQUATE LIFE
- 3 GLAND PACKING
  SYNTHETIC SINGLE ACTING SEAL
- 4 CYLINDER END CAPS
  ACCURATELY MACHINED FROM SOLID STEEL
  PROVIDES PRECISE LOCATION FOR BARREL
- (5) BARREL / END CAP SEAL
  AN O-RING PROVIDES SEALING AT BOTH
  ENDS OF BARREL. ANTI EXTRUSION RINGS
  FITTED ON SIZES SIZES HB50 AND ABOVE
- 6 PISTON ROD

  MANUFACTURED FROM ALLOY STEEL

  HARD CHROME PLATED & POLISHED
- 7 BARREL
  CYLINDER BARREL MANUFACTURE FROM
  SEAMLESS TUBE, HONED & POLISHED
  TO GIVE A LONG SEAL LIFE
- (8) PISTON
  1 PIECE PISTON WITH COMPOSITE SEAL
- (9) PISTON PACKING
  STANDARD DOUBLE ACTING SEAL
- (10) PISTON WEAR RINGS
  ALTERNATIVE PISTON, 1 PIECE CAST IRON
  WITH SINGLE ACTING "LIP" TYPE SEALS.
- 11) TIE RODS

  MANUFACTURED FROM HIGH TENSILE ALLOY

  STEEL. ON CYLINDERS HB80 & ABOVE, MULTIPLE

  TIE RODS ARE USED
- (12) CYLINDER PORTS

  B.S.P.P. THREADS ARE STANDARD. SPECIAL

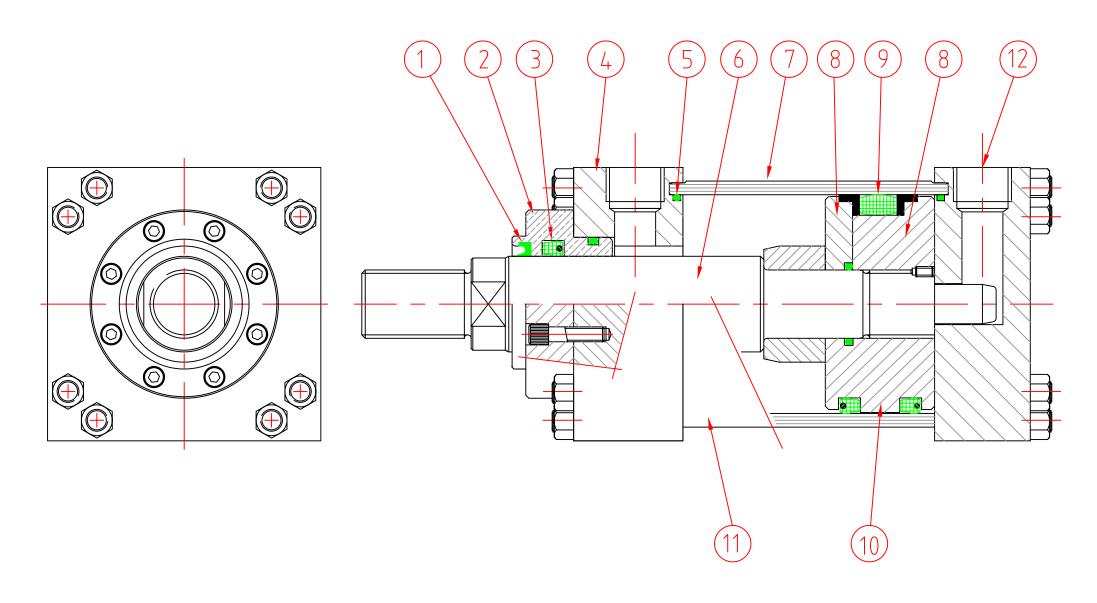
  PORTS MAY BE SPECIFIED BY CUTOMER

GENERAL ARRANGEMENT HB50 TO HB80 CYLINDERS

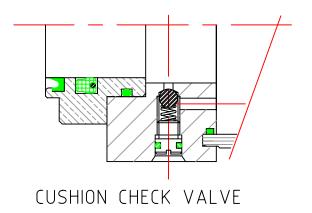


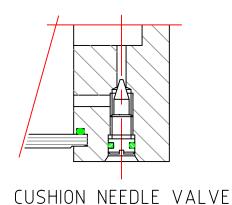
HB SERIES HYDRAULIC CYLINDERS N.F.P.A. STYLE

PAGE NO.	1A
ISSUE	1
DATE	1.9.97



CUSHION ASSEMBLY (IF APPLICABLE)





NOMINAL WORKING PRESSURE 3000 P.S.I. (207 Bar.)

- 1 PISTON ROD WIPER
  PROLONGS CYLINDER & PISTON ROD LIFE
  BY PREVENTING DIRT ENTERING GLAND
- 2 GLAND BEARING
  PHOSP. BRONZE FOR ADEQUATE LIFE
- (3) GLAND PACKING SYNTHETIC SINGLE ACTING SEAL
- 4 CYLINDER END CAPS
  ACCURATELY MACHINED FROM SOLID STEEL
  PROVIDES PRECISE LOCATION FOR BARREL
- 5) BARREL / END CAP SEAL
  AN O-RING WITH ANTI EXTRUSION RING
  PROVIDES SEALING AT BOTH ENDS OF BARREL
- (6) PISTON ROD

  MANUFACTURED FROM ALLOY STEEL

  HARD CHROME PLATED & POLISHED
- 7 BARREL
  CYLINDER BARREL MANUFACTURE FROM
  SEAMLESS TUBE, HONED & POLISHED
  TO GIVE A LONG SEAL LIFE
- 8 PISTON
  2 PIECE PISTON WITH COMPOSITE SEAL
- 9 PISTON PACKING STANDARD COMPOSITE SEAL WITH SEAR RINGS
- (10) PISTON

  ALTERNATIVE PISTON, 1 PIECE CAST IRON

  WITH SINGLE ACTING "LIP" TYPE SEALS.
- (11) TIE RODS

  MANUFACTURED FROM HIGH TENSILE ALLOY

  STEEL
- (12) CYLINDER PORTS

  B.S.P.P. THREADS ARE STANDARD. SPECIAL

  PORTS MAY BE SPECIFIED BY CUTOMER

GENERAL ARRANGEMENT HB100 TO HB120 CYLINDERS



HB SERIES HYDRAULIC CYLINDERS N.F.P.A. STYLE

PAGE NO.	1B
ISSUE	1
DATE	1.9.97