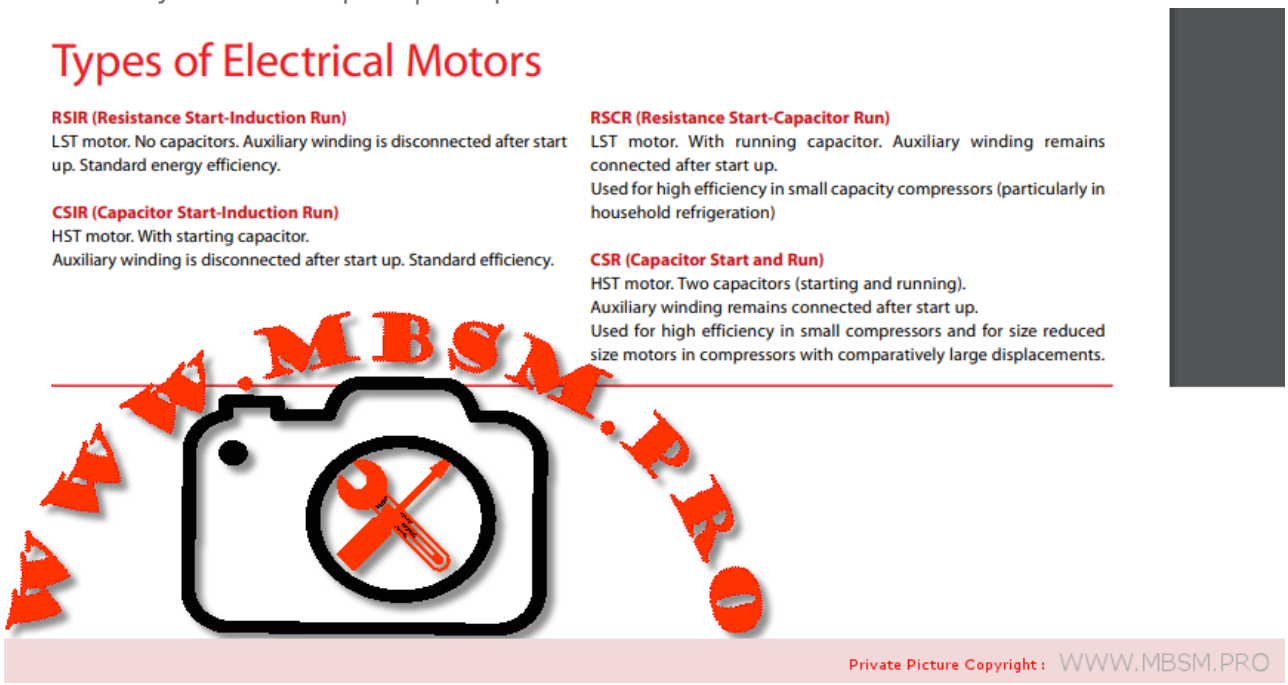
Types of Electrical Motors, RSIR, CSIR, RSCR, CSR, PTC, NTC, LST, HST, MBP, HBP, LBP

Category: compressor,Files
written by www.mbsm.pro | 8 April 2021



Types of Electrical Motors
RSIR (Resistance Start-Induction Run)
LST motor. No capacitors. Auxiliary winding is disconnected after start up. Standard energy efficiency.
CSIR (Capacitor Start-Induction Run)
HST motor. With starting capacitor.
Auxiliary winding is disconnected after start up. Standard efficiency.
RSCR (Resistance Start-Capacitor Run)
LST motor. With running capacitor. Auxiliary winding remains connected after start up.
Used for high efficiency in small capacity compressors (particularly in household refrigeration)
CSR (Capacitor Start and Run)
HST motor. Two capacitors (starting and running).
Auxiliary winding remains connected after start up.
Used for high efficiency in small compressors and for size reduced size motors in compressors with comparatively large displacements

Types of Electrical Motors

RSIR (Resistance Start-Induction Run)
LST motor. No capacitors. Auxiliary winding is disconnected after start up. Standard energy efficiency.

CSIR (Capacitor Start-Induction Run)
HST motor. With starting capacitor.
Auxiliary winding is disconnected after start up. Standard efficiency.

RSCR (Resistance Start-Capacitor Run)
LST motor. With running capacitor. Auxiliary winding remains connected after start up.
Used for high efficiency in small capacity compressors (particularly in household refrigeration)

CSR (Capacitor Start and Run)
HST motor. Two capacitors (starting and running).
Auxiliary winding remains connected after start up.
Used for high efficiency in small compressors and for size reduced size motors in compressors with comparatively large displacements.



Private Picture Copyright : WWW.MBSM.PRO

Type of starting device
Current relay – (electromechanical). RSIR/CSIR motors and CSR low/ medium-power motors with NTC (the NTC is connected in series with the starting capacitor and the main purpose is to reduce the current peaks in the relay contacts)
Potential relay – (electromechanical). CSR high-power motors.
PTC – (Positive Temperature Coefficient), the resistance increases with the temperature. Device only with RSIR or RSCR motors in the (Small L, B), L and P ranges.
NTC – (Negative Temperature Coefficient), the resistance decreases with the temperature. Used in some CSR in order to reduce dimensions and components.

Type of starting device

Current relay – (electromechanical). RSIR/CSIR motors and CSR low/medium-power motors with NTC (the NTC is connected in series with the starting capacitor and the main purpose is to reduce the current peaks in the relay contacts)

Potential relay – (electromechanical). CSR high-power motors.

PTC – (Positive Temperature Coefficient), the resistance increases with the temperature. Device only with RSIR or RSCR motors in the (Small L, B), L and P ranges.

NTC – (Negative Temperature Coefficient), the resistance decreases with the temperature. Used in some CSR in order to reduce dimensions and components.



Private Picture Copyright : WWW.MBSM.PRO

Type of torque
LST – Low Starting Torque – Systems with capillary tube or balanced pressures at start up.
HST – High Starting Torque – Systems with expansion valve or capillary tube, with unbalanced pressures at start up.

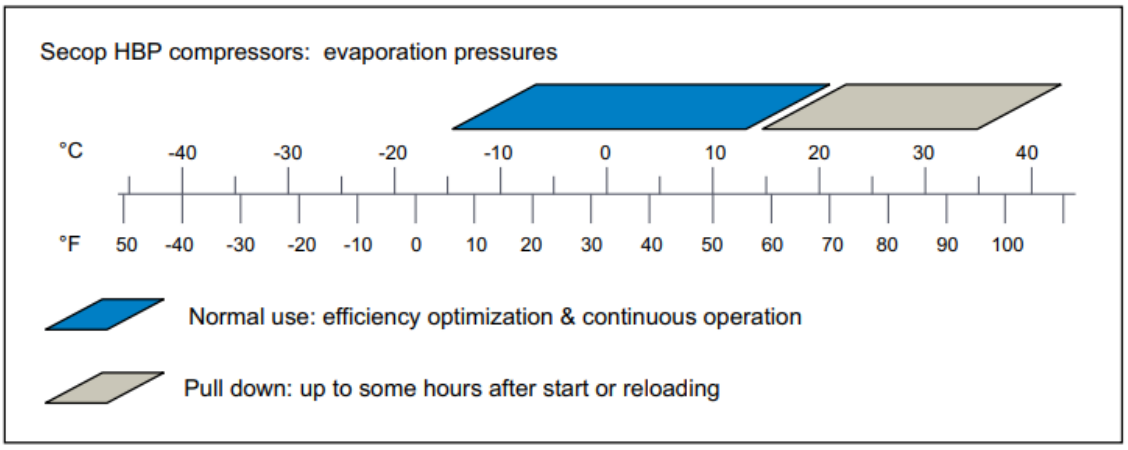
Type of torque

LST – Low Starting Torque – Systems with capillary tube or balanced pressures at start up.

HST – High Starting Torque – Systems with expansion valve or capillary tube, with unbalanced pressures at start up.

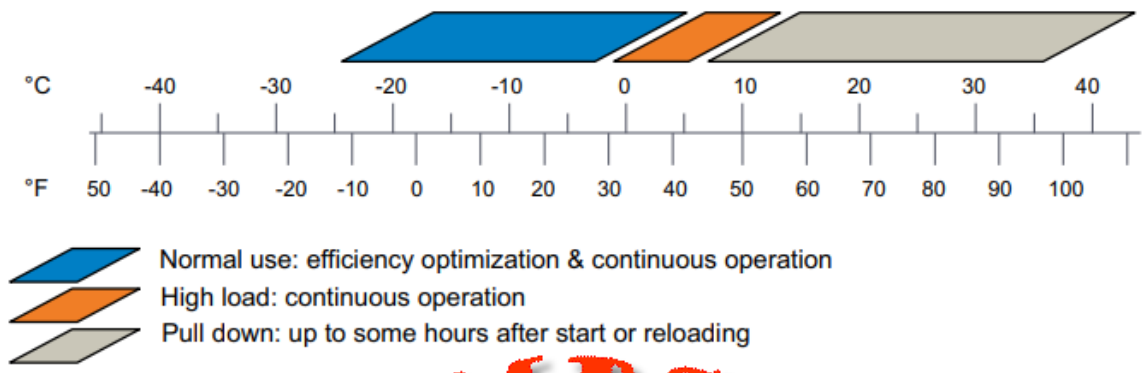


Private Picture Copyright : WWW.MBSM.PRO



Private Picture Copyright : WWW.MBSM.PRO

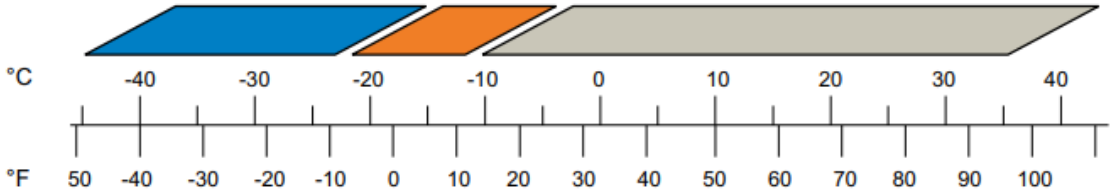
Secop MBP compressors: evaporation pressures



Normal use: efficiency optimization & continuous operation
High load: continuous operation
Pull down: up to some hours after start or reloading

WWW.MBSM.PRO
Private Picture Copyright : WWW.MBSM.PRO

Secop LBP compressors: evaporation pressures



Normal use: efficiency optimization & continuous operation
High load: continuous operation
Pull down: short time operation (<60min.) after start or defrost

WWW.MBSM.PRO
Private Picture Copyright : WWW.MBSM.PRO