



Field Service Note

Electronic Expansion Valves Type TQ/PHTQ Clarification of Spare Parts Availability

The PHTQ/TQ range of Electronic Expansion Valves has now been superseded by the new Stepper Motor Electronic Expansion Valve Type ETS.

The Q actuators , orifices etc will still be available as spare parts for the next 5 years starting from March 2006.

Obviously this means in theory that we can still sell new PHTQ/TQ valves which we should try to avoid as their lifetime is getting shorter and shorter by the day.

Therefore it is advised that the new ETS range of valves be selected for new plants.



We have ETS valves operating on water chillers and on CO2 systems at minus 60 Deg C. There are already many ETS valves working on systems some with Danfoss controllers and some with the CAREL controllers. We have worked on a couple of chillers in London where ETS and Carel controllers are working. We have been advised by customers that the CAREL controller is very difficult to get hold of for some reason, and We have supplied the DANFOSS EKC 316A controller in its place.

So to clarify the situation the following "Q" parts are available as spare parts for the next 5 Years as of March 2006.

PHTQ/TQ ACTUATORS

TQ 5 Solder	Equaliser connector	068F3211
TQ 5 FLare	Equaliser connector	068F3209
TQ 20 Flare	Equaliser connector	068F3207
TQ 55 Flare	Equaliser connector	068F3208
PHTQ Flare	Equaliser connector	068F3205
PHTQ Solde	Equaliser connector	368F3212

} Solder Adaptor Code No. 068B0170
} for both TQ 20 and TQ 55

PHTQ/TQ ORIFICES

TQ 5-1	Orifice No 1	068F2041
TQ 5-2	Orifice No 2	068F2042
TQ 5-3	Orifice No 3	068F2043
TQ 20-1	Orifice No 1	068F2033
TQ 20-2	Orifice No 2	068F2034
TQ 20-3	Orifice No 3	068F2035
TQ 20-4	Orifice No 4	068F2036
TQ 20-5	Orifice No 5	068F2037
TQ 55-0.3	Orifice No 0.3	068F2045
TQ 55-0.5	Orifice No 0.5	068F2046
TQ 55-0.7	Orifice No 0.7	068F2047
TQ 55-1	Orifice No 1	068F2048
TQ 55-2	Orifice No 2	068F2049
PHTQ Pilot Orifice	This fits all sizes of PHTQ from the 85 up to the 300	068F2041

All TQ and PHTQ valve bodies are standard products which are used for all the range of TE valves and PHT valves and can be selected accordingly.

Customers who use these valves should be advised to carry spares.

The New Electronic Expansion Valve type ETS

The ETS range of valves covers most of the capacities of the old TQ valves, but in addition the smaller ETS valves can also be used on R410A.

The ETS comes in versions with or without a built on liquid line sight glass, and can be used with either an EKC 316A or an EKC 312 controller. The EKC 312 is similar to the 316A but has less parameter functions and is slightly cheaper.

The pressure transmitter and sensors used are the same as the TQ controller the EKC 315A, so retro-fitting costs will be lower.

One important thing to know with the ETS valve is when long cables above 5 metres are used between the EKC controller and the ETS valve an in line cable filter must be installed to prevent motor current waveform distortion which could cause the ETS valve to lose steps in the stepper motor count with obvious problems.

The filter is made of 4 x 10mH choke coils.

CABLE FILTER Code No 084X6121



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