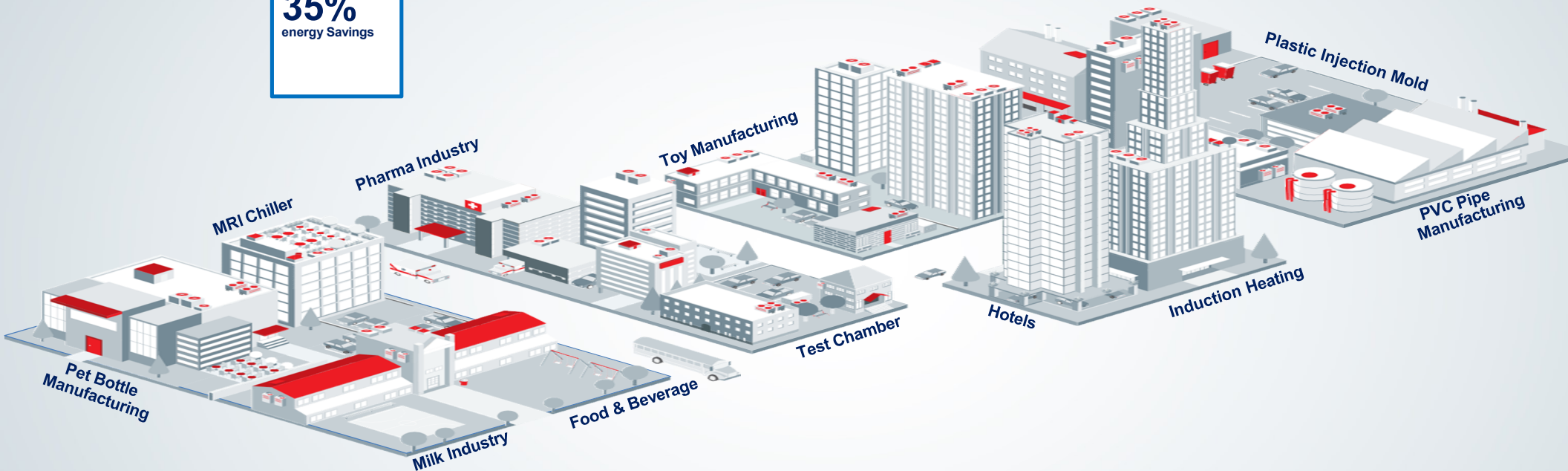


Next-generation Process Cooling solutions

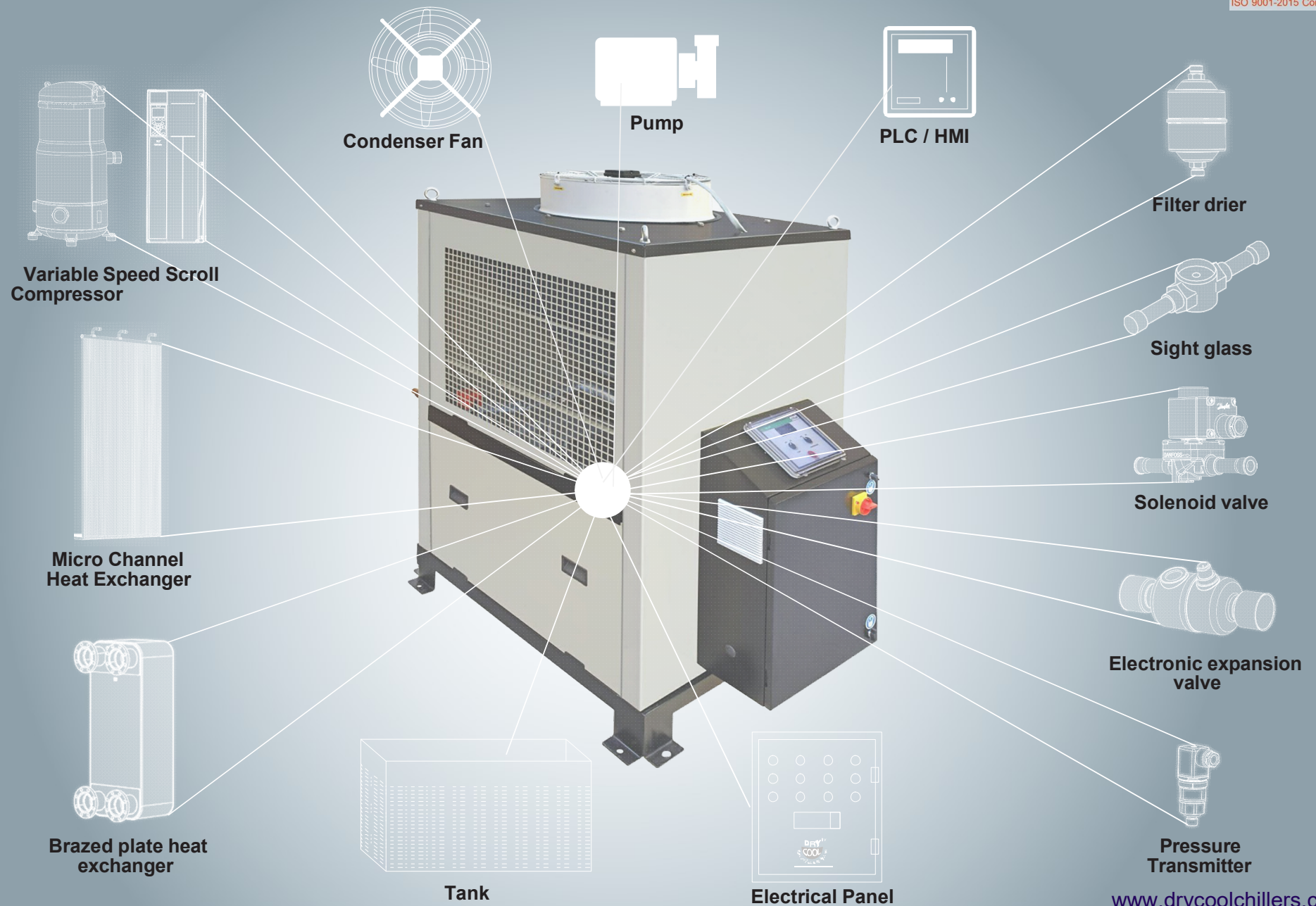
Reliable. Efficient. High Performance

Variable Speed Scroll Chillers (5 TR – 60 TR)

Achieve
35%
energy Savings



DRYCOOL Energy Efficient Technologies for Process Chillers

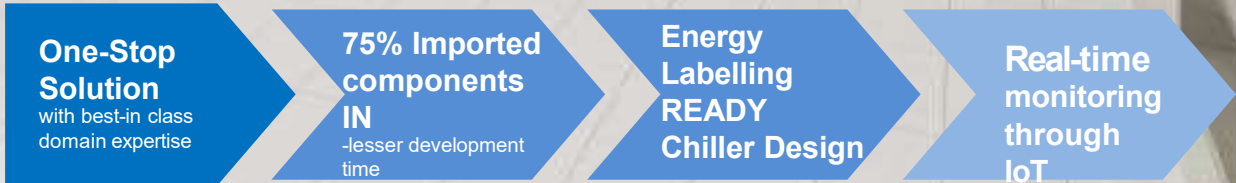


What we offer

- Wide Capacity range - 15 to 100%**
- MPHE- Compact, Energy Efficient, less refrigerant Charge compared to BPHE**
- Pre-Qualified drive package- compressor safety functions embedded**
- Compressor Intermediate Discharge Valve- higher part load efficiency**
- Faster response to varying loads- Precise Temperature Control**



7 Months payback Period	35% Energy savings
30% Smaller Footprint	50% less refrigerants charge



Model Option

Base



Example case of 5TR

5 TR Chiller Reference Conditions:

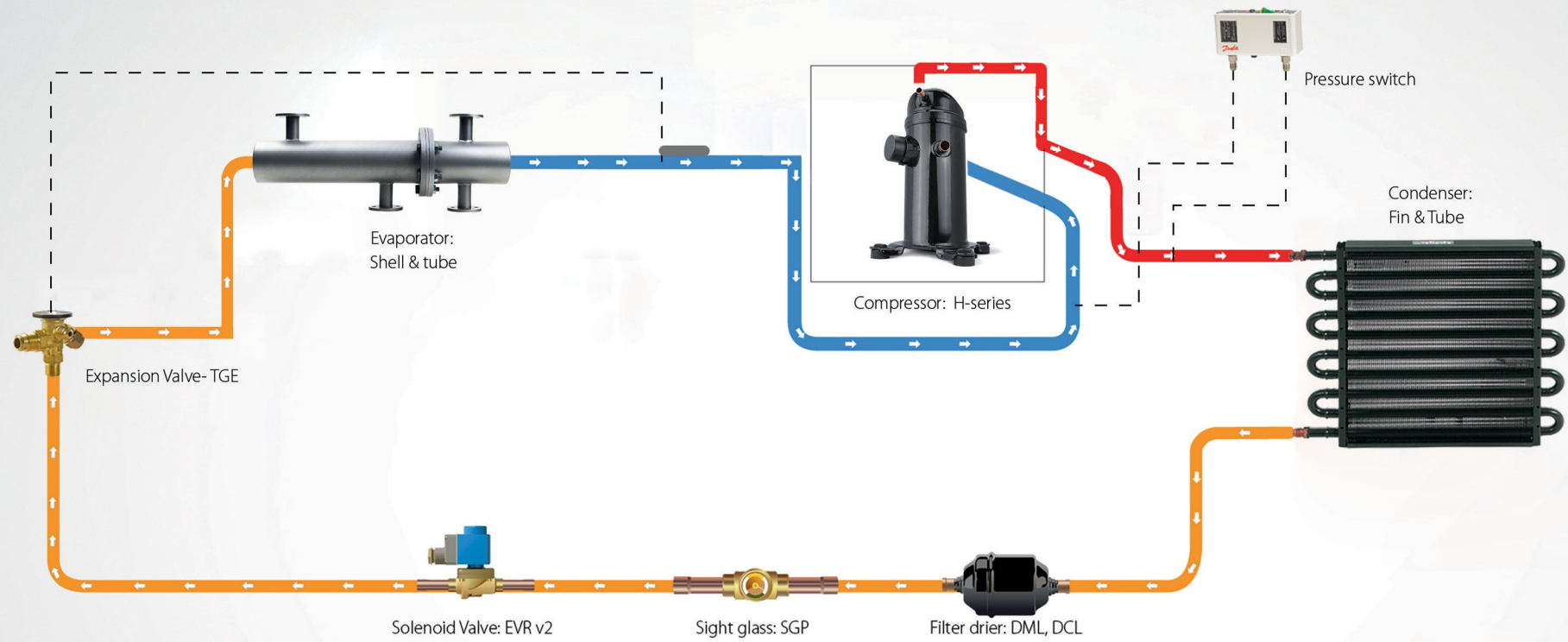
Evaporator loads: 5 TR Ambient air temperatures

- 39°C (6% of time)
- 32°C (48% of time)
- 26°C (36% of time)
- 20°C (10% of time)

Coolant Supply Target Temperature: 10°C

$$ISEER = A.COP_{100\%} + B.COP_{75\%} + C.COP_{50\%} + D.COP_{25\%}$$

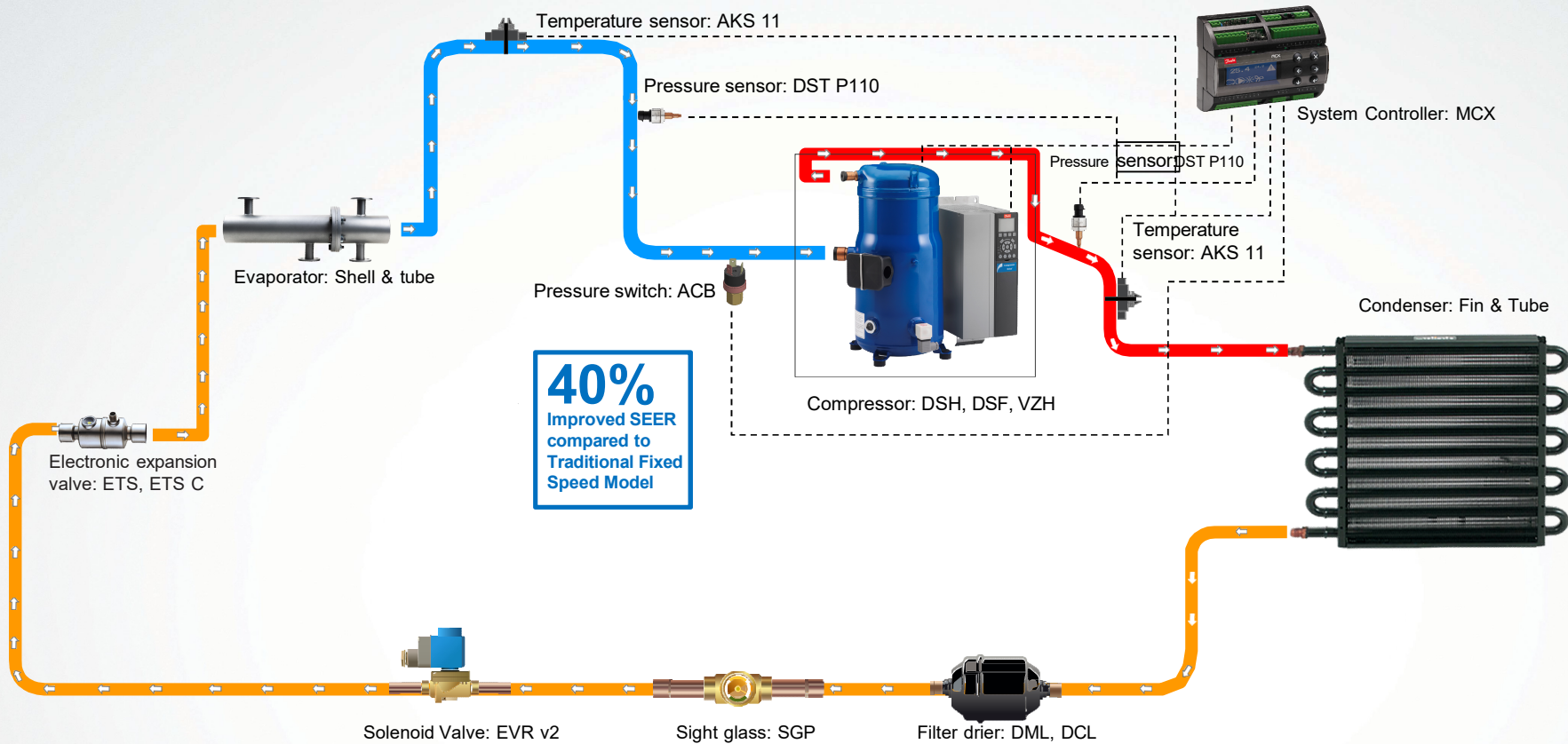
Load Rate (%)	100	75	50	25
Weighting Co-efficient	A = 6	B = 48	C = 36	D = 10



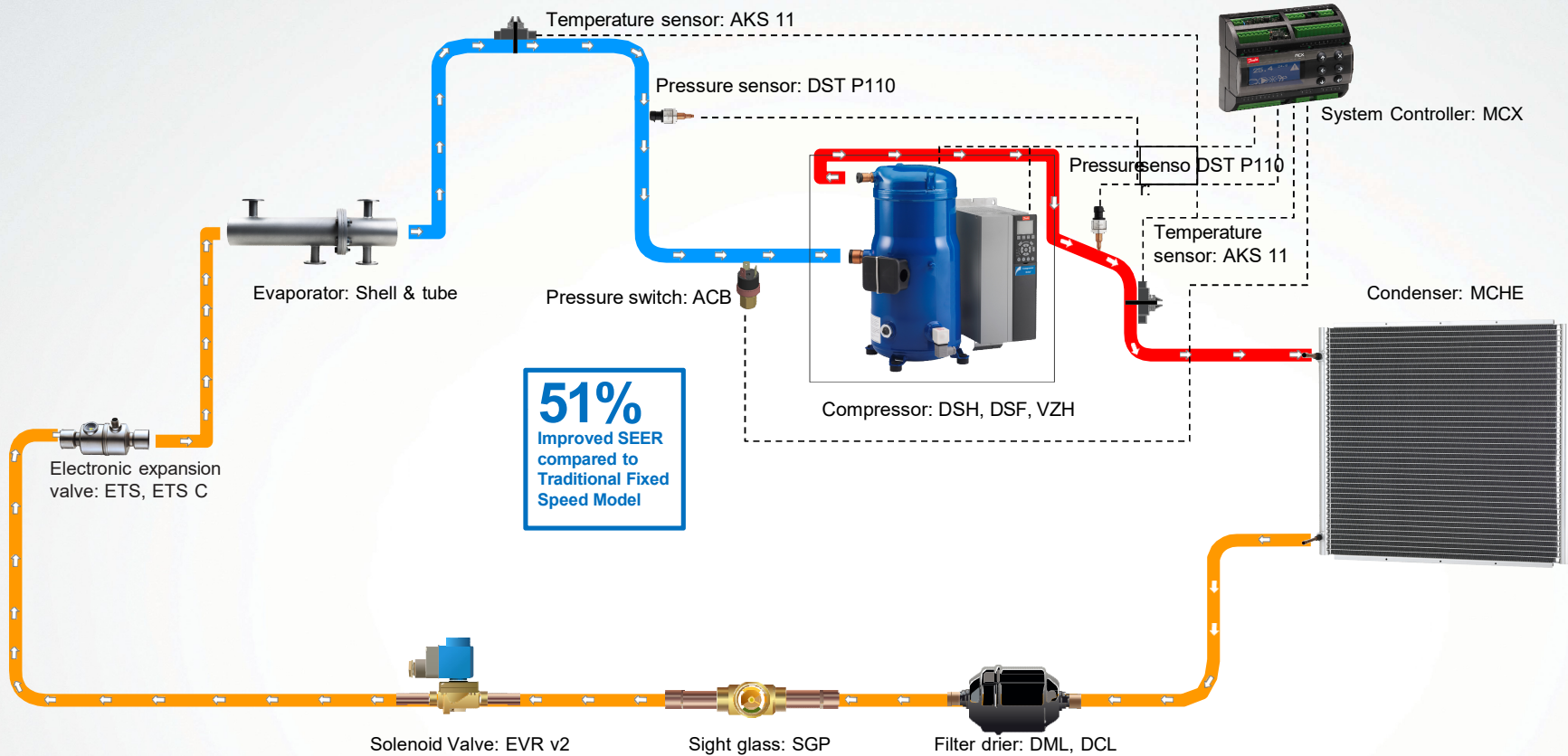
Traditional Fixed Speed Chiller with R407C

Model Option

1



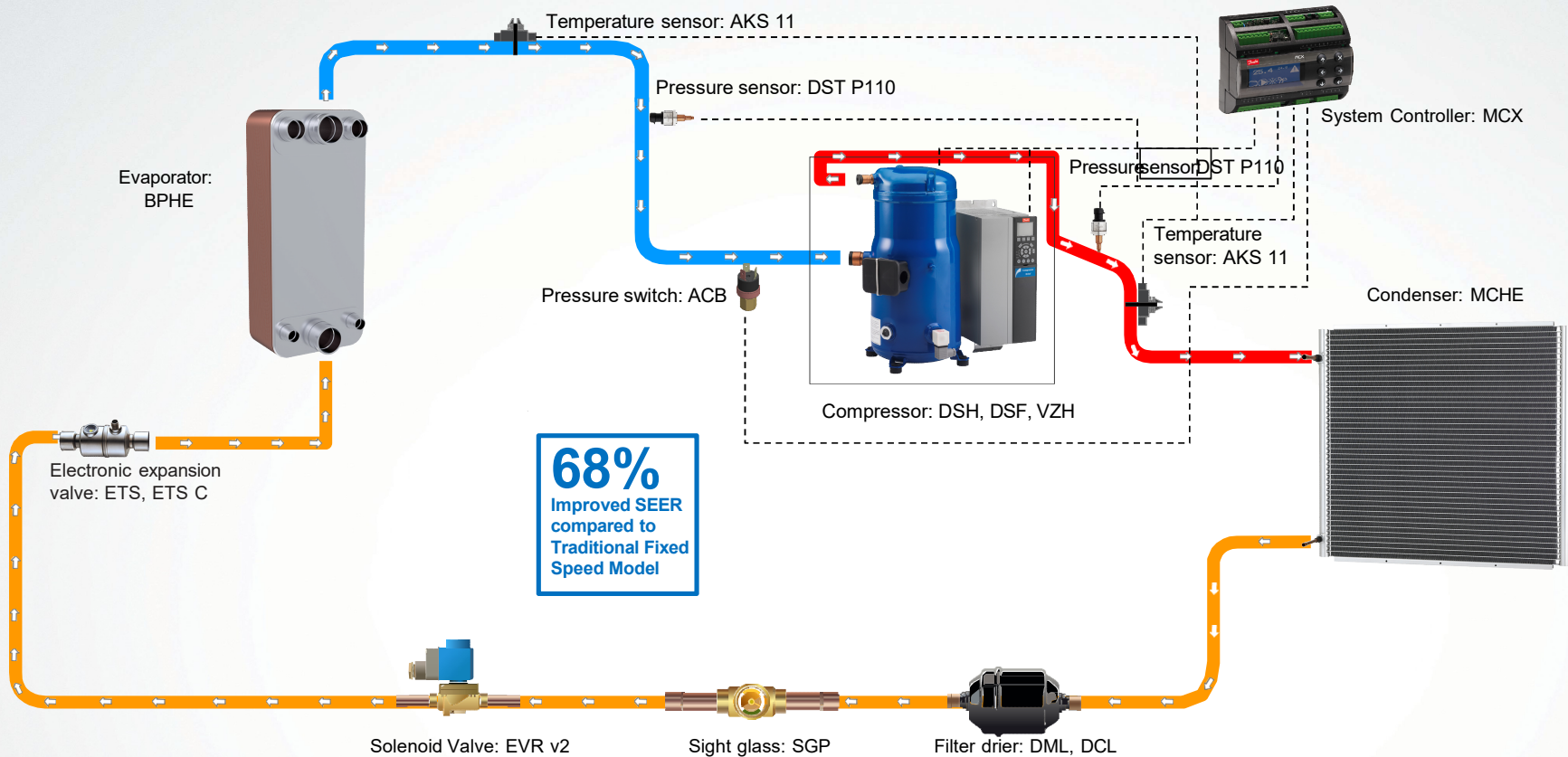
Chiller with Variable speed with R410A Compressor



Chiller with Variable speed Compressor + MCHE with R410A

Model Option

3



Chiller with Variable speed Compressor + MCHE + BPHE with R410A

Comparison of Various Model's ROI

		Model 1	Model 2	Model 3
ROI (5TR Process Chiller)	Fixed Speed	Chiller with Variable Speed Compressor	Chiller with Variable Speed Compressor + Micro Channel Heat Exchanger	Chiller with Variable Speed Compressor + Micro Channel Heat Exchanger + Brazed Plate HEX
Additional Investment %age	Base	40% additional cost to Base	36% additional cost to Base	33% additional cost to Base
SEER (Seasonal Energy Efficiency Ratio)	Base	40% improvement to the base model	51% improvement to the base model	68% improvement to the base model
Energy Consumption per year, INR	Base	18% less than Base	27% less than Base	35% less than Base
ROI, in months		15	9	7

Variable Speed + Micro Channel Heat Exchanger + Brazed Plate HEX

Variable Speed + Micro Channel Heat Exchanger

Variable Speed Compressor

The Micro Channel HEX used instead of Fin-tube HEX in Condenser offers higher heat transfer efficiency, compactness of the system, and weight reduction in the overall system

Significantly less usage of refrigerant in Condenser

The Brazed plate HEX used instead of Shell-tube HEX in evaporator offers higher heat transfer efficiency, this leads to the compactness of the system, and weight reduction in the overall system

Significantly less usage of refrigerant in evaporator

Adaptable compressor speed leads to High part load efficiency of the system

Optimized superheat conditions regardless of load and/or evaporating temperature using EEV

Downsizing potential possibilities for Coolant storage tank

Drycool Solution BOM list

		5 TR		15 TR	
S.No.	Description	Product	Part Code	Product	Part Code
1	Compressor	VZH035CG	120G0258	VZH088CG	120G0189
	Minimum Capacity	2.714 Kw		12.22 Kw	
	Maximum Capacity	20.23 Kw		51.61 Kw	
2	Compressor Drive	CDS803, 8 kW	134N4263	CDS803P18KT4E20H2	136U4910
3	Drive Contol Panel	LCP	132B0200	LCP	130B1107
4	Solenoid coil for Compressor				120Z0521
5	Crankcase heater	65W 240V	120Z0540	75W, 230V	7773108
6	LP	KP1	060-110166	KP1	060-110166
7	HP Switch	KP6W	060-519066	KP6W	060-519066
8	Discharge Check Valve	NRV12	020B1012	NRV16	020B1018
9	Shut off Ball Valve	GBC12	009L7052	GBC22	009L7055
10	Filter Drier	DML054S	023Z5101	DML084	023Z5061
12	Sight Glass	SGP12s	014L0183	SGP22s	014L1207
13	Solenoid Valve	EVR10	032L1217	EVR20	032L1240
14	Expansion Valve	ETS6-25	034G5035	ETS 8M 40 L-16	034G8806
15	Expansion Valve Coil	ETS6 COIL	034G5115	ETS 8M Coil	034G8300
16	MCHE Condenser	MCHE Condenser 25.4X1.3X26 OM0032 I/27	021U0984	MCHE Cond 25.4X1.3X26 DF0101 PEDI I/12	021U0093
17	Evaporator BPHE	B3-030-50-3.0-HQ(5TR,H5/8xH1-1/8xL3/4)	021B2063	B3-052-88-3.0-HQ(15TR,H5/8xH1-1/8xL 1-1/4A)	021B3708
18	Fan Speed Regulator	RGE-Z1P6-7 (0.2 to 6A) Single		RGE-X3R6-7 (0.2 to 5A) 3 Phase	
S.No. Hardware					
1	MCX061V Elect.Control 24V LCD RS485 S			080G0251	
2	Water Temp Sensor			080G0205	
3	Suction Temp Sensor			080G0209	
4	Discharge Temp Sensor			080G0212	
5	Suction Pressure DST P110 (-1 to 34 bar)			075G1018	
6	Discharge Pressure DST P110 (0 to 50 bar)			075G1020	
7	Connectors. round Packard cable 2.5 mtr			060G8196	

The BOM is provided for two preferred capacities 5TR and 13TR. But various chiller capacities up to 30TR can be built with single VS compressor



Drycool Energy Efficient Technologies

- For your Process Chillers

Global Expertise with Local Support



Ask the experts

Our dedicated team of experts are standing by to provide design support, technical expertise and customer service. Whatever you need to know about our solutions, we have the answers.

For more information, please visit www.drycoolchillers.com