

Air Cooled Scroll Chiller



I-CH Series
High Performance & Reliable



SHOPPING
CENTERS



OFFICES



HOTELS



INDUSTRIES



HOSPITALS



BROADCASTINGS



AIRPORT
TERMINALS



TRANSPORTATIONS



This is new variant of ITU product, Air Cooled Scroll Chiller with 3 type refrigerant R-407c, R-410A, and R-32.

The Scroll Chillers are available to handle varying cooling requirement. Multiple compressors are used in this models, with independent refrigerant circuits. In 'part load' conditions, the controller ensures that only the required number of compressors operate to handle the load, thus saving the power and very easy to install and commissioning. Making them ideal for air conditioning office spaces, hotels, hospitals, shopping malls, etc.

General Features

- ⑩ The compressors are reliable, quiet and low vibration and high efficiency
- ⑩ High heat rejection condenser with optimization of fan blade (Axial Fan) and fan shroud design, bigger the air flow, lower the noise.
- ⑩ The chillers are pre-wired, fully charged and run- tested at the factory thereby making it easy and less time-consuming for installation and start up.
- ⑩ Auto distribution of load, when the air conditioning load less than full capacity of the chiller, the controller automatically keeps only the required of compressors on and switched off the rest.

Basic Models

Chiller I-CH 20, I-CH 25, I-CH 30

Refrigerant R-407C, 2 Scroll Compressors.



Chiller I-CH 35

Refrigerant R-407C, 3 Scroll Compressors.



Chiller I-CH 40, I-CH 45, I-CH 50

Refrigerant R-407C, 4 Scroll Compressors.



Main Control





- Phase failure and phase sequence protection
- Digital thermostat and room thermostat
- Controller (Built-in time delay for compressors, auto distribution load and Auto restart)
- Overload Relay
- Compressor current protector

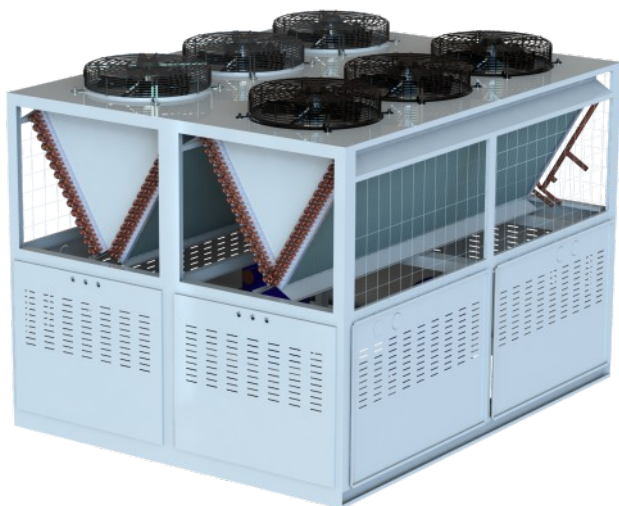
Accessories

- High and low pressure control
- Refrigerant sight glass and filter dryer in liquid line
- Water flow switch protection

Optional Accessories

- Chilled water pump and controls
- Custom specification by request

Compressor	Axial Fan	Shell & Tube	Controller & Protector
			



Technical Specifications Chiller R-407C

PERFORMANCE UNIT		CHILLER I-CH 20	CHILLER I-CH 25	CHILLER I-CH 30	CHILLER I-CH 35	CHILLER I-CH 40	CHILLER I-CH 45	CHILLER I-CH 50
COOLING CAPACITY	Btu/hr	200000	250000	300000	375000	400000	450000	500000
	kW	58.6	73.3	87.9	109.9	117.2	131.9	146.5
	TR	16.7	20.8	25.0	31.3	33.3	37.5	41.7
TOTAL POWER	kW	21.12	24.82	30.40	38.83	42.24	45.94	49.64
REFRIGERANT	R-407 C							
COMPRESSOR	Scroll Compressor							
Motor Size	Hp	10 Hp	12,5 Hp	15 Hp	12,5 Hp	10 Hp	10 Hp	12,5 Hp
Quantity	Pcs	2	2	2	3	4	2	2
Power Input	kW	8.96	10.8	13.6	10.8	8.96	8.96	10.8
Current	A	16.4	21.6	24.0	21.6	16.4	16.4	21.6
Power Supply	V/ph/Hz	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50
Total Power Input	kW	17.9	21.6	27.2	32.4	35.8	39.5	43.24
CONDENSER COIL	Air Cooled Condenser							
Tube Diameter	Inch	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Coil Row	Row	2	2	2	2	2	2	2
Fin Spacing	FPI	14	14	14	14	14	14	14
Face Area	Ft ²	33.8	41.6	48.0	52.8	67.6	75.4	83.2
CONDENSER FANS	Axial Fans							
Fan Speed	RPM	1,320	1,320	1,320	1,320	1,320	1,320	1,320
Blade Diameter	m	0.65	0.65	0.65	0.65	0.65	0.65	0.65
No. of Fans	Pcs	2	2	2	4	4	4	4
Total Power	kW	3.2	3.2	3.2	6.4	6.4	6.4	6.4
Current	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Total Airflow	m ³ /h	24,840	24,840	24,840	49,680	49,680	49,680	49,680
EXPANSION VALVE	Manual Type							
COOLER UNIT	Shell and Tube Heat Exchanger							
Chilled Water Flow	L/s	2.7	3.4	4.1	5.1	5.5	6.1	6.8
	GPM	43.3	54.2	65.0	81.3	86.7	97.5	108.3
	m ³ /h	9.5	11.9	14.3	17.9	19.1	21.5	23.8
Inlet / Outlet Temp	°C	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7
DIMENSION								
Length	mm	2,300	2,300	2,500	2,500	3,000	3,000	3,000
Width	mm	1,400	1,400	1,700	1,700	1,700	1,700	1,700
Height	mm	1,700	1,700	1,700	1,700	1,700	1,700	1,700

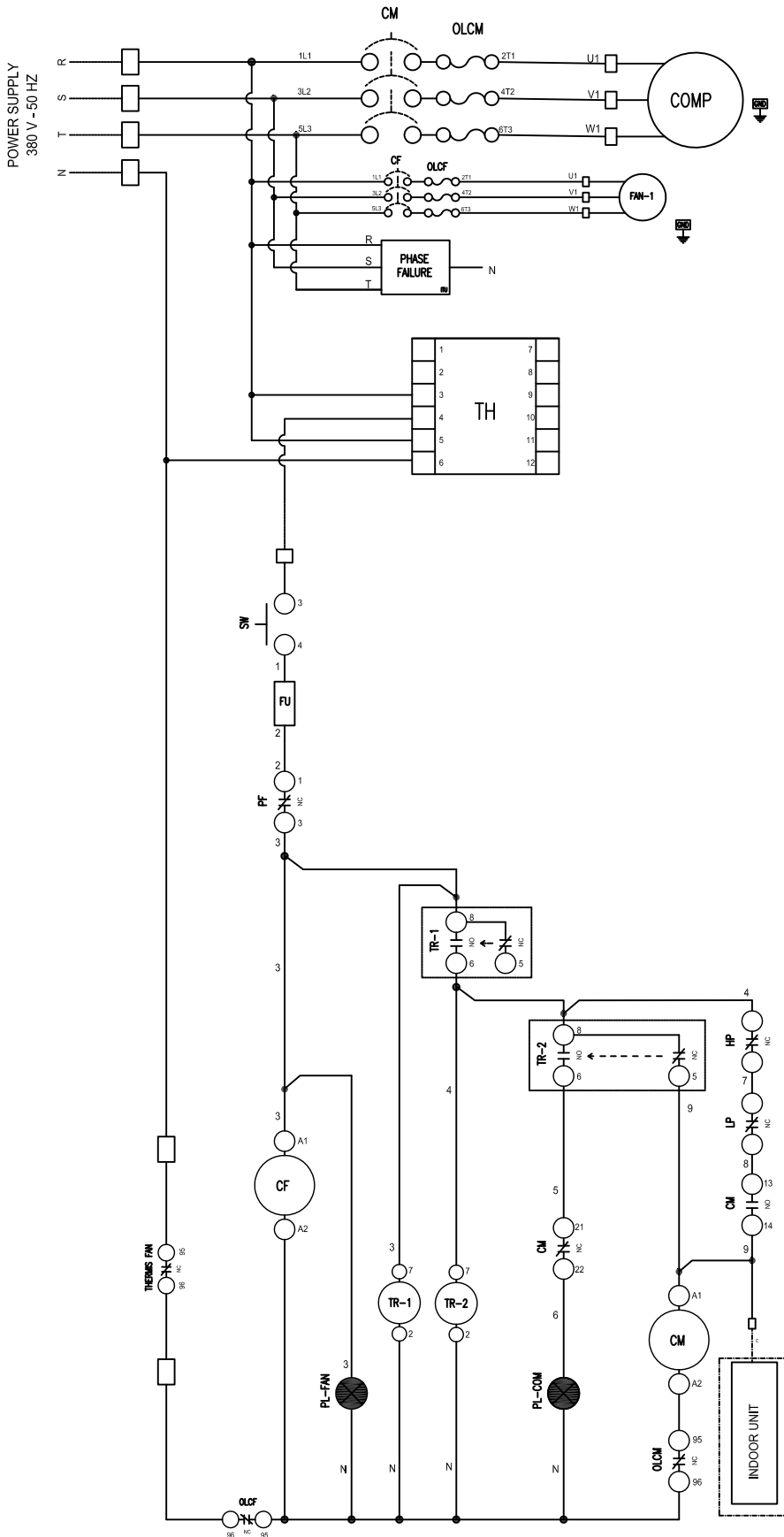
Technical Specifications Chiller R-410A

PERFORMANCE UNIT		CHILLER I-CH 20	CHILLER I-CH 25	CHILLER I-CH 30	CHILLER I-CH 35	CHILLER I-CH 40	CHILLER I-CH 45	CHILLER I-CH 50
COOLING CAPACITY	Btu/hr	200000	250000	300000	375000	400000	450000	500000
	kW	58.6	73.3	87.9	109.9	117.2	131.9	146.5
	TR	16.7	20.8	25.0	31.3	33.3	37.5	41.7
TOTAL POWER	kW	21.4	26.4	30.2	33.7	42.8	47.80	52.80
REFRIGERANT	R-410 A							
COMPRESSOR	Scroll Compressor							
Motor Size	Hp	10 Hp	12,5 Hp	15 Hp	12,5 Hp	10 Hp	10 Hp	12,5 Hp
Quantity	Pcs	2	2	2	3	4	2	2
Power Input	kW	9.10	11.6	13.5	9.1	9.10	9.10	11.6
Current	A	16.6	20.8	26.3	16.6	16.6	16.6	20.8
Power Supply	V/ph/Hz	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50	380 / 3 / 50
Total Power Input	kW	18.2	23.2	27.0	27.3	36.4	41.4	46.40
CONDENSER COIL	Air Cooled Condenser							
Tube Diameter	Inch	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Coil Row	Row	2	2	2	2	2	2	2
Fin Spacing	FPI	14	14	14	14	14	14	14
Face Area	Ft ²	33.8	41.6	48.0	52.8	67.6	75.4	83.2
CONDENSER FANS	Axial Fans							
Fan Speed	RPM	1,320	1,320	1,320	1,320	1,320	1,320	1,320
Blade Diameter	m	0.65	0.65	0.65	0.65	0.65	0.65	0.65
No. of Fans	Pcs	2	2	2	4	4	4	4
Total Power	kW	3.2	3.2	3.2	6.4	6.4	6.4	6.4
Current	A	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Total Airflow	m ³ /h	24,840	24,840	24,840	49,680	49,680	49,680	49,680
EXPANSION VALVE	Manual Type							
COOLER UNIT	Shell and Tube Heat Exchanger							
Chilled Water Flow	L/s	2.7	3.4	4.1	5.1	5.5	6.1	6.8
	GPM	43.3	54.2	65.0	81.3	86.7	97.5	108.3
	m ³ /h	9.5	11.9	14.3	17.9	19.1	21.5	23.8
Inlet / Outlet Temp	°C	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7	12 / 7
DIMENSION								
Length	mm	2,300	2,300	2,500	2,500	3,000	3,000	3,000
Width	mm	1,400	1,400	1,700	1,700	1,700	1,700	1,700
Height	mm	1,700	1,700	1,700	1,700	1,700	1,700	1,700

Technical Specifications Chiller R-32

PERFORMANCE UNIT		CHILLER I-CH 25
COOLING CAPACITY	Btu/hr	240000
	kW	70.3
	TR	20.0
TOTAL POWER	kW	25.4
REFRIGERANT		R - 32
COMPRESSOR		Scroll Compressor
Motor Size	Hp	12 Hp
Quantity	Pcs	2
Power Input	kW	11.10
Current	A	20.8
Power Supply	V/ph/Hz	380 / 3 / 50
Total Power Input	kW	22.2
CONDENSER COIL		Air Cooled Condenser
Tube Diameter	Inch	3/8
Coil Row	Row	2
Fin Spacing	FPI	14
Face Area	Ft ²	33.8
CONDENSER FANS		Axial Fans
Fan Speed	RPM	1,320
Blade Diameter	m	0.65
No. of Fans	Pcs	2
Total Power	kW	3.2
Current	A	1.6
Total Airflow	m ³ /h	24,840
EXPANSION VALVE		Manual Type
COOLER UNIT		Shell and Tube Heat Exchanger
Chilled Water Flow	L/s	3.3
	GPM	52.0
	m ³ /h	11.4
Inlet / Outlet Temp	°C	12 / 7
DIMENSION		
Length	mm	2,300
Width	mm	1,400
Height	mm	1,700

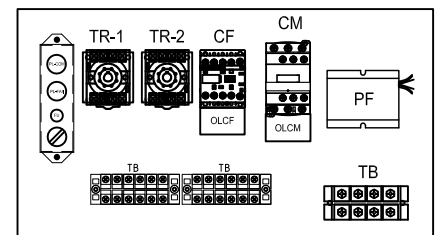
Wiring Diagrams



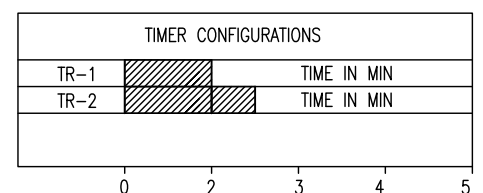
LEGEND :

- FAN : FAN CONDENSER
- COMP : COMPRESSOR
- TH : THERMOSTAT
- SW : SWITCH
- FU : FUSE
- PF : PHASE FAILURE RELAY
- CF : CONTACTOR FAN
- OLCF : OVERLOAD FAN
- TR - 1 : TIMER DELAY 1
- TR - 2 : TIMER DELAY 2
- CM : CONTACTOR COMPRESSOR
- OLCM : OVERLOAD COMPRESSOR
- HP : HIGH PRESSURE SWITCH
- LP : LOW PRESSURE SWITCH
- PL - FAN : INDICATOR FAN
- PL - COMP : INDICATOR COMPRESSOR
- TB : TERMINAL BLOCK
- GND : GROUND
- L : POWER INPUT 220 V / 50 HZ
- N : NETRAL
- : FACTORY WIRING
- - - : FIELD WIRING
- : TERMINAL BLOCK

LAYOUT COMPONENT :



TIMER SETTING :





OFFICES

Balai kota Gedung G
 Bank Of Indonesia
 Bank CIMB Niaga
 Cyber Kuningan
 GMF Cengkareng
 Indah Kiat
 Indonesia Power
 Indosat
 Kantor Walikota: Pusat, Timur, Barat
 Lion Air
 Menara BATAVIA
 Menara Global
 Menara Karya
 Menara Mandiri Surabaya
 Menara Multi
 Ministry Of Health
 Ministry Of Home Affairs
 Ministry Of Industry
 Ministry Of Justice & Human Rights
 Ministry Of Maritime & Fisheries Affairs
 Ministry Of Trade
 Parliament
 Pertamina
 Puspitek
 Sampurna Strategic Square
 Selatan & Utara
 Senayan Office Tower
 Thamrin Tower
 Trust Radiator Specialist
 Wisma Indocement
 Wisma Pondok Indah
 Wisma Slipi

SHOPPING CENTERS

Atrium Mulia
 Bintaro Life Style
 Boarding Lounge Soetta
 Carrefour
 Carrefour Cawang
 Carrefour Cempaka Putih
 Carrefour Imam Bonjol
 Carrefour Maguwo
 Carrefour Pabelan
 Ciputra Mall Citra Raya
 Ciputra World Jakarta
 Ciputra World Surabaya
 Eco Plaza
 Futami Food
 Giant Hypermarket
 Grage Mall Cirebon
 Grand City Mall
 Grand Metropolitan Mall
 ITC Surabaya
 Kalibata Mall
 King Shopping Center
 Kirana
 KKCC Krampung
 Malang Town Square
 Mall Bogor
 Mall Emporium
 Mall Kalibata
 Mall Karawaci
 Mall Mangga Dua
 Mall Margo City
 Mall Pondok Gede
 Pusat Grosir Cililitan

Mall Puri Indah
 Mall Taman Anggrek
 Mall Tasik
 Matahari Department Store
 Mega Mas
 Metropolitan Mall
 Mitra 10
 Plaza Senayan
 Pondok Indah Mall
 Senen Blok 3
 Ubertos Bandung

HOTELS

Borobudur
 Four Season
 Grand Hyatt
 Grand Kuningan
 Green Tebet
 Horison
 Ibis
 Jayakarta
 Maharaja
 Maharani
 Majapahit
 Mandarin
 Mercure
 Mirah Bogor
 Mulia
 Mustika
 Nelayan
 Nikko Bali
 Novotel
 PHI Heritage
 Pondok Indah
 Quest Surabaya
 Sahid
 Sari Pan Pasific
 Sentral
 Sintesa Peninsula
 Sultan
 Western

HOSPITALS

RSUD Ambon
 RS Anak Bunda
 RS Awal Bross
 RS Budi Asih
 RS Cipto Mangunkusumo
 RS Fatmawati
 RS Islam Surabaya
 RS Jantung Harapan Kita
 RS Kanker Dharmais
 RS Mayapada
 RS Pasar Rebo
 RS PELNI
 RS Persada Malang
 RS Pertamina Pusat
 RS Pondok Indah
 RS Premier
 RS Sari Asih
 RS Siloam Gleaneagle
 RS Siloam Kb Jeruk
 RS Sulianti Saroso
 RSUD Kebumen
 RSUD Purwokerto

INDUSTRIES

ABC
 Aqua
 Bekaert Indonesia
 Bintang Toedjoe
 Calbee Wings Food
 Capsugel
 Charoen Phokpan
 Denso
 Djarum
 Enseval
 Essai
 Fanbo
 Holcim Cement
 Nine Cocoa
 Orang Tua Group
 Pabrik Kara Batam
 Prestine
 Pupuk Kaltim
 Sanbe Farma
 Semen Gresik
 Sinde Budi Sentosa
 STTC
 Tirtamas Perkasa
 Unilever
 Indorama
 Mercy Farma

OTHERS

AIRPORT TERMINAL
 Soekarno-Hatta Terminal I, II, III
 Juanda Surabaya
 Ngurah Rai Denpasar
 Iskandar Muda Aceh

MOBILE AIR CONDITIONING
 Kereta Api Indonesia
 Pelangi Bravo - CONOCO OIL

OFFSHORE
 RIG Platform (Pertamina)

POWER PLANT
 PLTU Paiton
 PLTU Hyundai

RESTAURANTS
 McDonald
 Pizza Hut Indonesia
 Sand Executive Rest
 Starbuck

TV BROADCAST
 TVRI
 RCTI
 SCTV
 TV NET
 TV ONE
 METRO TV
 INDO SIAR
 TRANS TV



PT ITU AIRCONCO
 Air Conditioner Manufacturer
 Quality-Reliability-Speed

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