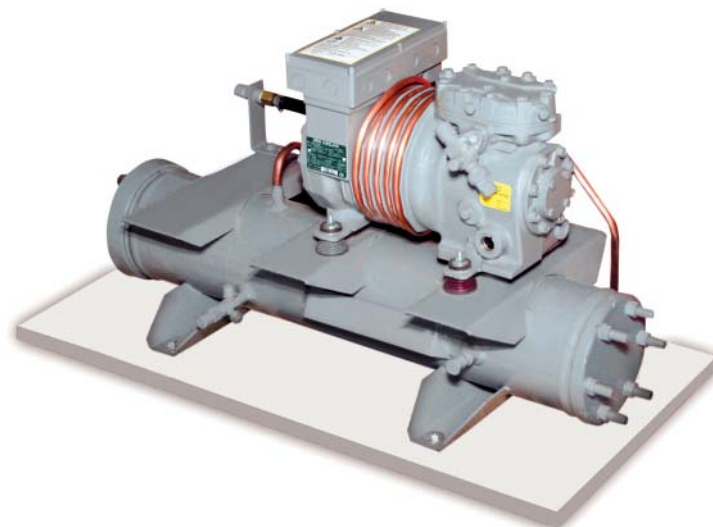


# Water-Cooled Condensing Units

Shell & Tube Condenser  
Low Operating Cost  
Durable Construction  
Built in Receiver



## Water-Cooled Condensing Units

### General Information

Units are built with semi-hermetic reciprocating compressors. Compressor motor cooling is achieved by circulating water in copper pipes wrapped on compressor body.

Compressors are mounted on springs on base frame welded to the shell and tube condenser. Compressor mounting is equipped with transport lock to prevent transit damage, which needs to be removed during installation

Standard scope of delivery: Includes compressors with factory charged POE oil, service valves and oil sight glass.

The unit includes vibration absorber on discharge line, safety valve on condenser.

Condenser shell material is of steel and tubes are cupro-nickel.

Additional accessories: Manual reset high pressure control, auto reset low pressure control and crank case heater can be provided factory installed, on request.

### وحدات التكثيف ذات التبريد بالماء

ال و وحدات مصنوعة بضواغط Semi-Hermetic حيث يتم تبريد الموتور بواسطة تمرير المياه داخل انابيب نحاسيه ملاصقة لجدار الضاغط.

يتم وضع الضاغط على يايات و قاعدة مثبتته في غلاف انبوب التكثيف ، كما يتم تجهيز الضاغط بأجزاء خاصه لتثبيتته اثناء عمليات النقل و التي يجب إزالتها فقط اثناء عملية تركيب وحدة التكثيف .

مواصفات التوريد الاساسية :-

يشمل الضاغط معبأ بزيت POE ، صمام الشحن ، و زجاج بيان مستوى الزيت كما تشمل مانع للاهتزاز مثبت في خط الضغط المرتفع

صمام أمان مثبت في المكثف

غلاف المكثف مصنوع من الحديد و الانابيب مصنعة من خليط النحاس و النيكل

مكونات أخرى يمكن إضافتها حسب طلب العميل :-

وحدة ضبط الضغط المرتفع ذات إعادة التهيئة الأوتوماتيكية و يدوية للضغط المنخفض ، سخان غلاف الضاغط

## Dual Application

R134a Medium Temperature  
R404A Low Temperature

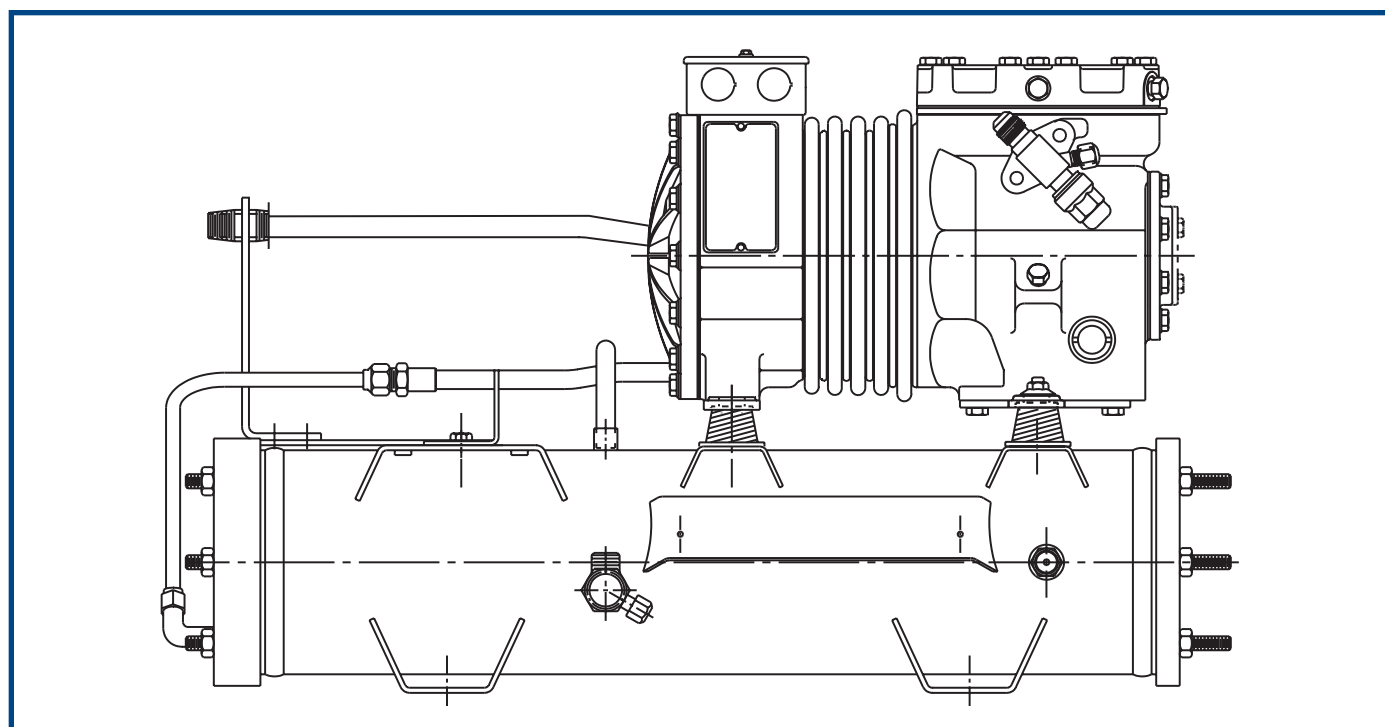
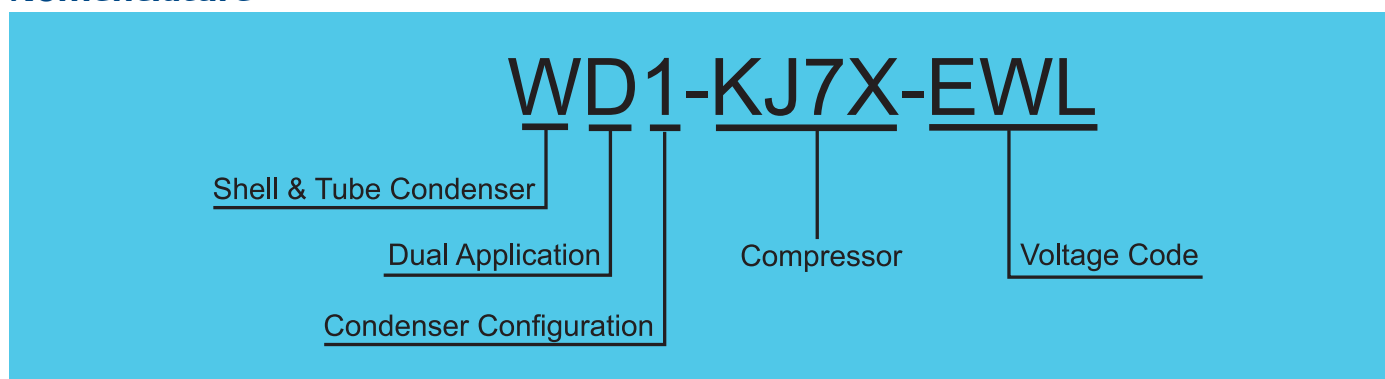
## Shell & Tube Condenser

Design Working Pressure - 355 Psig  
In Built Receiver  
Water Connections - 1/2 inch  
UL Approved

## Compressors

Terminal Box - IP 54  
Motor Protection - INT 69 Electronic Protection Module  
Factory Oil Charge - POE Oil  
Voltage Code -  
EWL: 220-240/380-420V / 3Ph / 50Hz Operation  
EWK: 220-240/380-420V / 3Ph / 60Hz Operation  
Optionals - Hp/LP, Crank Case Heater Installed

## Nomenclature



Typical W-Line Unit

# Water-Cooled Condensing Units

R404A								
kW, 50Hz								
Unit Model	Cond. Temp. °C	Evaporating Temperature °C						
		-50	-45	-40	-35	-30	-25	-20
WD1-KJ-7X-EWL	30	0.33	0.52	0.76	1.05	1.39	1.79	2.25
	40		0.37	0.58	0.83	1.12	1.47	1.87
	50			0.41	0.61	0.86	1.15	1.50
WD1-KSJ-10X-EWL	30	0.49	0.73	1.02	1.37	1.78	2.27	2.84
	40	0.32	0.53	0.79	1.10	1.47	1.90	2.41
	50		0.33	0.55	0.82	1.14	1.51	
WD2-KL-15X-EWL	30	0.58	0.86	1.19	1.59	2.07	2.63	3.30
	40	0.41	0.65	0.95	1.30	1.72	2.21	2.79
	50		0.45	0.70	1.00	1.36	1.79	2.28
WD2-KSL-20X-EWL	30		1.04	1.47	1.97	2.58	3.30	4.15
	40		0.79	1.17	1.61	2.15	2.78	3.50
	50		0.55	0.88	1.27	1.72	2.26	2.89
WD3-LF-20X-EWL	30		0.95	1.56	2.28	3.15	4.15	5.35
	40			1.04	1.67	2.40	3.25	4.30
	50				1.11	1.72	2.45	3.30
WD3-LJ-20X-EWL	30		1.11	1.85	2.74	3.80	5.00	6.45
	40			1.22	2.01	2.95	4.05	5.30
	50				1.31	2.11	3.05	
WD4-LL-30X-EWL	30	0.87	1.64	2.56	3.70	5.00	6.55	8.35
	40		0.98	1.80	2.79	3.95	5.35	6.95
	50			1.07	1.91	2.90	4.10	5.50

Capacities are at 20°C return gas temperature and 5K liquid subcooling

Electrical Data											
Nominal Voltage : 380 - 420 V / 3 Ph / 50 Hz											
Unit Model	Compressor		R134A				R404A			Max. Amps. A	LRA A
			7 °C	0 °C	-10 °C	-20 °C	-20 °C	-30 °C	-40 °C		
WD1-KJ-7X-EWL	DKJ-7X-EWL	kW	0.85	0.80	0.69	0.57	0.99	0.80	0.59	2.3	12.2
		A	1.6	1.5	1.4	1.2	1.8	1.6	1.3		
WD1-KSJ-10X-EWL	DKSJ-10X-EWL	kW	1.01	0.96	0.84	0.69	1.32	1.06	0.81	2.7	15.5
		A	2.1	2.1	1.9	1.8	2.6	2.2	1.9		
WD2-KL-15X-EWL	DKL-15X-EWL	kW	1.28	1.20	1.04	0.84	1.46	1.18	0.90	3.4	20.4
		A	2.7	2.6	2.4	2.2	2.9	2.6	2.3		
WD2-KSL-20X-EWL	DKSL-20X-EWL	kW	1.59	1.47	1.24	1.00	1.86	1.44	1.03	4.7	20.4
		A	3.0	2.9	2.6	2.3	3.4	2.9	2.4		
WD3-LF-20X-EWL	DLF-20X-EWL	kW	1.94	1.82	1.56	1.23	2.22	1.66	1.11	4.5	37.6
		A	3.6	3.4	3.1	2.8	4.2	3.4	2.7		
WD3-LJ-20X-EWL	DLJ-20X-EWL	kW	2.40	2.23	1.92	1.58	2.62	1.91	1.20	5.6	37.6
		A	5.0	4.8	4.3	3.9	5.0	4.0	3.2		
WD4-LL-30X-EWL	DLL-30X-EWL	kW	3.05	2.79	2.35	1.85	3.29	2.42	1.56	7.3	53.0
		A	5.8	5.4	4.8	4.3	6.2	4.9	3.8		

Data at 40°C condensing temperature, 400 V / 3 Ph / 50 Hz

R134a										
kW, 50Hz										
Unit Model	Cond. Temp. °C	Evaporating Temperature °C								
		-20	-15	-10	-5	0	5	7	10	12.5
WD1-KJ-7X-EWL	30	1.17	1.52	1.93	2.42	3.00	3.65	3.95	4.45	4.85
	40	0.96	1.27	1.64	2.07	2.58	3.15	3.45	3.85	4.25
	50	0.76	1.03	1.35	1.73	2.16	2.68	2.90	3.25	3.60
WD1-KSJ-10X-EWL	30	1.43	1.85	2.35	2.95	3.60	4.40	4.75	5.35	5.85
	40	1.22	1.60	2.06	2.60	3.25	3.95	4.30	4.80	5.30
	50	0.99	1.35	1.76	2.25	2.82	3.50	3.80	4.25	4.70
WD2-KL-15X-EWL	30	1.67	2.15	2.72	3.40	4.20	5.10	5.50	6.20	6.75
	40	1.43	1.86	2.36	2.95	3.70	4.50	4.85	5.45	6.00
	50	1.19	1.57	2.02	2.55	3.15	3.90	4.20	4.75	5.20
WD2-KSL-20X-EWL	30	2.12	2.73	3.45	4.35	5.35	6.55	7.05	7.90	8.65
	40	1.82	2.38	3.05	3.85	4.75	5.80	6.30	7.05	7.75
	50	1.51	2.01	2.60	3.30	4.10	5.05	5.50	6.20	6.80
WD3-LF-20X-EWL	30	2.77	3.65	4.70	5.90	7.35	9.00	9.75	10.95	12.00
	40	2.27	3.05	4.00	5.05	6.35	7.85	8.50	9.60	10.55
	50	1.79	2.49	3.30	4.25	5.40	6.70	7.30	8.20	9.05
WD3-LJ-20X-EWL	30	3.20	4.15	5.30	6.60	8.20	10.00	10.80	12.10	13.25
	40	2.67	3.50	4.50	5.70	7.05	8.70	9.40	10.55	11.60
	50	2.13	2.88	3.75	4.75	5.95	7.35	8.00	9.00	9.90
WD4-LL-30X-EWL	30	4.00	5.25	6.75	8.50	10.55	12.95	14.05	15.70	17.30
	40	3.30	4.40	5.75	7.35	9.20	11.35	12.30	13.85	15.20
	50	2.61	3.65	4.80	6.20	7.85	9.75	10.60	11.95	13.20

Capacities are at 20°C return gas temperature and 5K liquid subcooling

Mechanical Data										
Unit Model	Compressor	Receiver Tank @ 90% (lbs)		Length (mm)	Depth (mm)	Height (mm)	Gross Weight (kg)	POE oil charge (l)	Suction (in)	Discharge (in)
		R134a	R404A							
WD1-KJ-7X-EWL	DKJ-7X-EWL	14	12	620	370	475	62	0.65	5 / 8	1 / 2
WD1-KSJ-10X-EWL	DKSJ-10X-EWL	14	12	620	370	475	63	0.65	5 / 8	1 / 2
WD2-KL-15X-EWL	DKL-15X-EWL	33	28	865	370	475	65	0.65	5 / 8	1 / 2
WD2-KSL-20X-EWL	DKSL-20X-EWL	33	28	865	370	475	65	0.65	5 / 8	1 / 2
WD3-LF-20X-EWL	DLF-20X-EWL	36	31	865	370	600	105	2	7 / 8	5 / 8
WD3-LJ-20X-EWL	DLJ-20X-EWL	36	31	865	370	600	105	2	7 / 8	5 / 8
WD4-LL-30X-EWL	DLL-30X-EWL	54	46	765	430	660	141	2	7 / 8	5 / 8

## Water-Cooled Condensing Units

R404A								
kW, 60Hz								
Unit Model	Cond. Temp. °C	Evaporating Temperature °C						
		-50	-45	-40	-35	-30	-25	-20
WD1-KJ-7X-EWK	30	0.39	.062	0.90	1.24	1.64	2.11	2.66
	40		0.44	0.68	0.98	1.32	1.73	2.21
	50			0.48	0.72	1.02	1.36	1.77
WD1-KSJ-10X-EWK	30	0.58	0.86	1.21	1.62	2.11	2.68	3.35
	40	0.38	0.63	0.94	1.30	1.73	2.24	2.84
	50		0.39	0.65	0.97	1.34	1.78	
WD2-KL-15X-EWK	30	0.69	1.01	1.40	1.88	2.44	3.10	3.90
	40	0.48	0.77	1.12	1.53	2.03	2.61	3.30
	50		0.53	0.83	1.18	1.61	2.11	2.70
WD2-KSL-20X-EWK	30		1.23	1.73	2.33	3.05	3.90	4.90
	40		0.93	1.38	1.91	2.53	3.30	4.15
	50		0.64	1.04	1.49	2.03	2.67	3.40
WD3-LF-20X-EWK	30		1.12	1.84	2.69	3.70	4.90	6.30
	40			1.23	1.97	2.84	3.85	5.05
	50				1.31	2.03	2.89	3.90
WD3-LJ-20X-EWK	30		1.31	2.19	3.25	4.45	5.95	7.65
	40			1.44	2.37	3.45	4.75	6.30
	50				1.54	2.49	3.60	
WD4-LL-30X-EWK	30	1.03	1.93	3.05	4.35	5.90	7.75	9.90
	40		1.16	2.13	3.30	4.65	6.30	8.20
	50			1.26	2.25	3.45	4.85	6.50

Capacities are at 20°C return gas temperature and 5K liquid subcooling

Electrical Data											
Nominal Voltage : 380 - 420 V / 3 Ph / 60 Hz											
Unit Model	Compressor		R134A				R404A			Max. Amps. A	LRA A
			7 °C	0 °C	-10 °C	-20 °C	-20 °C	-30 °C	-40 °C		
WD1-KJ-7X-EWK	DKJ-7X-EWK	kW	1.02	0.96	0.83	0.69	1.18	0.95	0.71	2.76	16.7
		A	1.9	1.8	1.7	1.5	2.2	1.9	1.5		
WD1-KSJ-10X-EWK	DKSJ-10X-EWK	kW	1.22	1.15	1.01	0.83	1.58	1.27	0.98	3.24	23.3
		A	2.5	2.4	2.3	2.1	3.1	2.7	2.3		
WD2-KL-15X-EWK	DKL-15X-EWK	kW	1.53	1.44	1.25	1.01	1.75	1.41	1.08	4.08	25.6
		A	3.2	3.1	2.9	2.6	3.5	3.1	2.7		
WD2-KSL-20X-EWK	DKSL-20X-EWK	kW	1.90	1.76	1.49	1.19	2.23	1.72	1.23	5.3	25.6
		A	3.6	3.4	3.2	2.8	4.1	3.4	2.8		
WD3-LF-20X-EWK	DLF-20X-EWK	kW	2.33	2.19	1.88	1.48	2.67	1.99	1.33	5.4	48.5
		A	4.3	4.1	3.8	3.4	5.0	4.0	3.3		
WD3-LJ-20X-EWK	DLJ-20X-EWK	kW	2.88	2.67	2.32	1.89	3.14	2.30	1.44	6.72	48.5
		A	5.8	5.5	5.1	4.6	6.0	4.8	3.9		
WD4-LL-30X-EWK	DLL-30X-EWK	kW	3.66	3.35	2.82	2.22	3.95	2.90	1.87	8.76	69.5
		A	6.6	6.3	5.7	5.1	7.4	5.9	4.6		

Data at 40°C condensing temperature, 380 V / 3 Ph / 60 Hz  
For Amps at 220V multiply 380V Amps by 1.73

R134a										
kW, 60Hz										
Unit Model	Cond. Temp. °C	Evaporating Temperature °C								
		-20	-15	-10	-5	0	5	7	10	12.5
WD1-KJ-7X-EWK	30	1.38	1.79	2.28	2.86	3.55	4.35	4.65	5.25	5.75
	40	1.14	1.50	1.93	2.44	3.05	3.75	4.05	4.55	5.00
	50	0.90	1.22	1.60	2.04	2.55	3.15	3.45	3.85	4.25
WD1-KSJ-10X-EWK	30	1.69	2.18	2.77	3.45	4.25	5.20	5.65	6.30	6.90
	40	1.44	1.89	2.43	3.05	3.80	4.70	5.05	5.70	6.25
	50	1.17	1.59	2.08	2.65	3.35	4.10	4.45	5.05	5.55
WD2-KL-15X-EWK	30	1.97	2.54	3.20	4.00	4.95	6.05	6.50	7.30	8.00
	40	1.68	2.19	2.79	3.50	4.35	5.30	5.75	6.45	7.05
	50	1.40	1.85	2.38	3.00	3.75	4.60	4.95	5.60	6.15
WD2-KSL-20X-EWK	30	2.50	3.20	4.10	5.10	6.30	7.70	8.35	9.30	10.20
	40	2.15	2.80	3.60	4.50	5.60	6.85	7.45	8.35	9.15
	50	1.78	2.37	3.05	3.90	4.85	6.00	6.50	7.30	8.00
WD3-LF-20X-EWK	30	3.25	4.30	5.55	6.95	8.65	10.65	11.50	12.90	14.15
	40	2.68	3.60	4.70	6.00	7.50	9.25	10.05	11.30	12.45
	50	2.12	2.95	3.90	5.05	6.35	7.90	8.60	9.70	10.70
WD3-LJ-20X-EWK	30	3.80	4.90	6.25	7.80	9.65	11.80	12.75	14.25	15.60
	40	3.15	4.15	5.30	6.70	8.35	10.25	11.10	12.45	13.65
	50	2.52	3.40	4.40	5.65	7.05	8.70	9.45	10.60	11.70
WD4-LL-30X-EWK	30	4.70	6.20	7.95	10.05	12.45	15.30	16.60	18.60	20.40
	40	3.90	5.20	6.80	8.65	10.85	13.40	14.50	16.30	18.00
	50	3.10	4.30	5.70	7.30	9.25	11.50	12.50	14.10	15.60

Capacities are at 20°C return gas temperature and 5K liquid subcooling

Mechanical Data										
Unit Model	Compressor	Receiver Tank @ 90% (lbs)		Length (mm)	Depth (mm)	Height (mm)	Gross Weight (kg)	POE oil charge (l)	Suction (in)	Discharge (in)
		R134a	R404A							
WD1-KJ-7X-EWK	DKJ-7X-EWK	14	12	620	370	475	62	0.65	5 / 8	1 / 2
WD1-KSJ-10X-EWK	DKSJ-10X-EWK	14	12	620	370	475	63	0.65	5 / 8	1 / 2
WD2-KL-15X-EWK	DKL-15X-EWK	33	28	865	370	475	65	0.65	5 / 8	1 / 2
WD2-KSL-20X-EWK	DKSL-20X-EWK	33	28	865	370	475	65	0.65	5 / 8	1 / 2
WD3-LF-20X-EWK	DLF-20X-EWK	36	31	865	370	600	105	2	7 / 8	5 / 8
WD3-LJ-20X-EWK	DLJ-20X-EWK	36	31	865	370	600	105	2	7 / 8	5 / 8
WD4-LL-30X-EWK	DLL-30X-EWK	54	46	765	430	660	141	2	7 / 8	5 / 8

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