

Flamingo Chillers



AMMONIA BOOSTERS



AMMONIA CHILLERS

AMMONIA HIGH STAGE

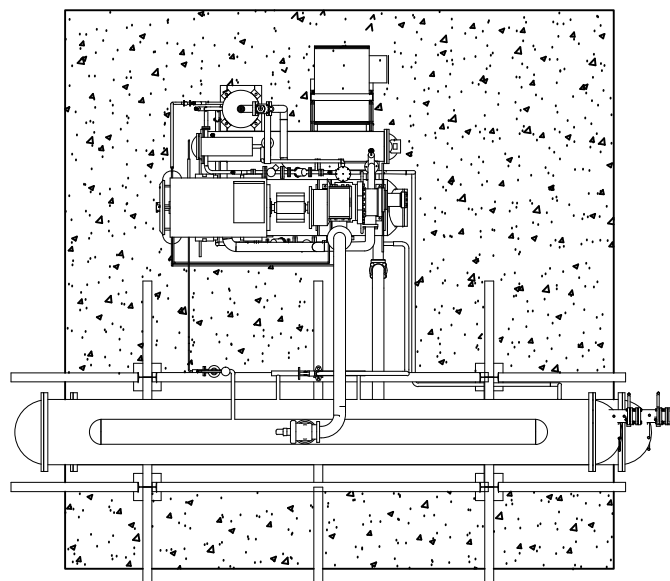
TECHNICAL SPECIFICATIONS FOR FLAMINGO BUFFALO SERIES AMMONIA SCREW CHILLER RANGE
HANBELL SCREW COMPRESSORS



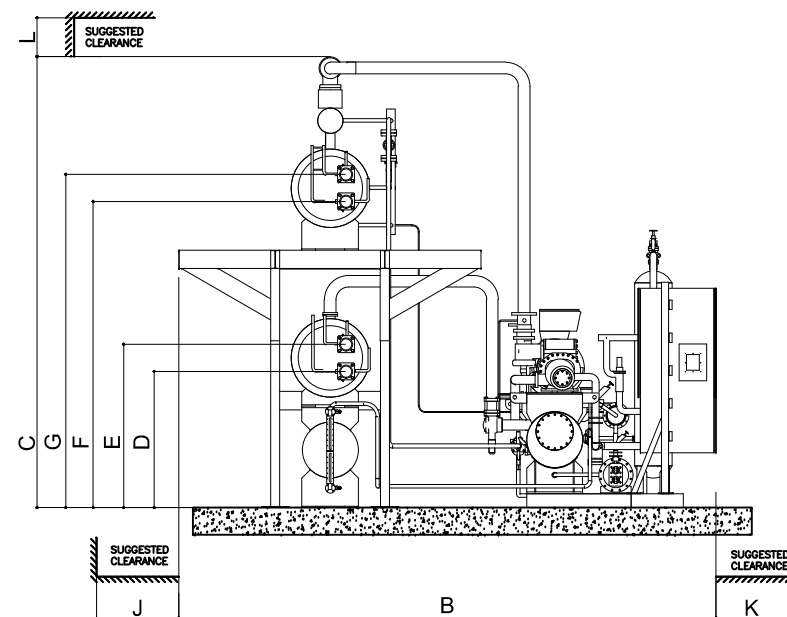
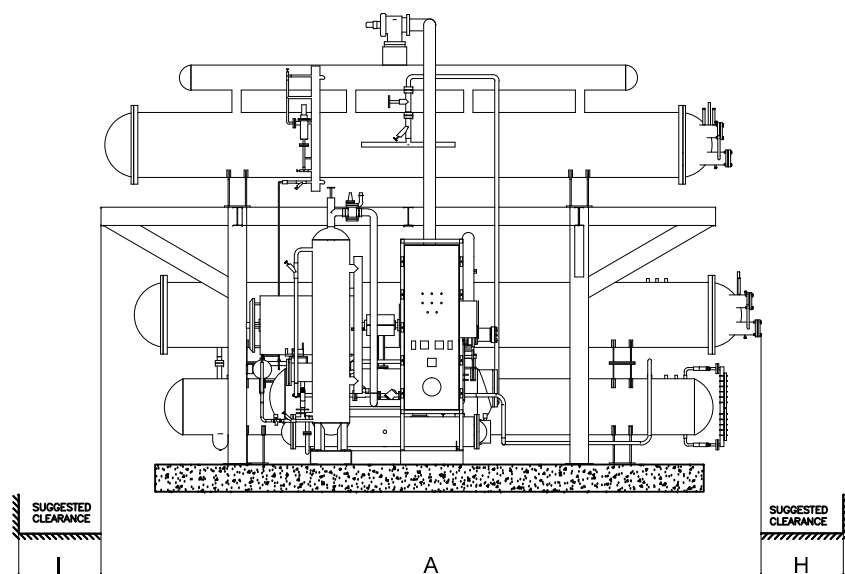
Technical Data Sheet (R-717)					
FLAMINGO BUFFALO SERIES WATER COOLED SCREW CHILLERS WITH HANBELL SEMI HERMETIC OPEN SCREW COMPRESSOR					
Description	Units	BUFFALO		BUFFALO	
		DWCOR-01-HB		DWCOR-02-HB	
Unit Model		Cooling capacity / Power Input	External Motor (KW) HP	Cooling capacity / Power Input	External Motor (KW) HP
At Evap / Cond temp: -50/ 40 deg. C & Power Input (KW)	TR / (KW)	4.49TR / 23.3KW	(30 KW) 40 HP	9.55TR / 48.9KW	(55 KW) 75 HP
At Evap / Cond temp: -45/ 40 deg. C & Power Input (KW)	TR / (KW)	6.42TR / 25.9KW	(30 KW) 40 HP	13.74TR / 54.4KW	(55 KW) 75 HP
At Evap / Cond temp: -40 / 40 deg. C & Power Input (KW)	TR / (KW)	8.79TR / 28.8KW	(30 KW) 40 HP	18.74TR / 60.5KW	(75 KW)100HP
At Evap / Cond temp: -35 / 40 deg. C & Power Input (KW)	TR / (KW)	11.66TR/ 32.3KW	(37 KW) 50 HP	24.86TR/ 67.4KW	(75 KW)100HP
At Evap / Cond temp: -30 / 40 deg. C & Power Input (KW)	TR / (KW)	15.13TR/ 34.7KW	(37 KW) 50 HP	32.26TR/ 72.4KW	(75 KW)100HP
At Evap / Cond temp: -25 / 40 deg. C & Power Input (KW)	TR / (KW)	19.28TR/ 36.3KW	(37 KW) 50 HP	41.10TR/ 75.7KW	(90 KW)120HP
At Evap / Cond temp: -20 / 40 deg. C & Power Input (KW)	TR / (KW)	24.23TR/ 38.9KW	(37 KW) 50 HP	51.66TR/ 81.3KW	(90 KW)120HP
At Evap / Cond temp: -15/ 40 deg. C & Power Input (KW)	TR / (KW)	29.98TR/ 40.8KW	(45 KW) 60 HP	63.86TR/ 85.1KW	(90 KW)120HP
At Evap / Cond temp: -10/ 40 deg. C & Power Input (KW)	TR / (KW)	36.78TR/ 42.6KW	(45 KW) 60 HP	78.40TR / 88.8KW	(90 KW)120HP
At Evap / Cond temp: -05 / 40 deg. C & Power Input (KW)	TR / (KW)	44.49TR/ 44.3KW	(45 KW) 60 HP	94.82TR/ 92.5KW	(110KW)150HP
At Evap / Cond temp: 0 / 40 deg. C & Power Input (KW)	TR / (KW)	53.20TR/ 45.3KW	(55 KW) 75 HP	113.39TR/ 94.6KW	(110KW)150HP
At Evap / Cond temp: 05 / 40 deg. C & Power Input (KW)	TR / (KW)	60.42TR/ 45.1KW	(55 KW) 75 HP	128.76TR/ 94.1KW	(110KW)150HP
At Evap / Cond temp: 10 / 40 deg. C & Power Input (KW)	TR / (KW)	72.11TR/ 46.1KW	(55 KW) 75 HP	153.66TR/ 96.2KW	(110KW)150HP
COMPRESSOR					
Compressor Type		Semi-Hermatic Open Screw Compressor			
Compressor Model		RG-200		RG-410	
Compressor Qty	Nos.	1		1	
Compressor Make		Hanbell Precise Machinery (Made in Taiwan)			
Unit capacity reduction steps in %		25, 50, 75 & 100%		25, 50, 75 & 100%	
OIL SEPRATION SYSTEM					
Type		External horizontal oil sepration system			
Number of filtration stages	Nos.	3		3	
MOC of seprator element		SS-304		SS-304	
Oil Type		Shell Clavus G		Shell Clavus G	
Oil Charge / Compr (Ltr.)	Ltr	75		110	
FLOODED EVAPORATOR					
Evaporator Type		Shell & Tube Flooded Evaporator with tubes of SA-179 material and electronic liquid level controller			
Evaporator Model		FMT-75TR-FI-Evap-NH3		FMT-160TR-FI-Evap-NH3	
Evaporator Qty	Nos.	1		1	
No. Of Pass (Water/Brine Side)	Nos.	4		4	
Tube Diameter	mm	19.05		19.05	
Water Connection Size In/Out	Inch	3" NB		4" NB	
Water/Brine Flow Rate (Minimum)	LPM	350		750	
Water/Brine Flow Rate (Maximum)	LPM	750		1600	
Liquid Level Controller		Electronic		Electronic	
Expansion valve type		Hand expansion valve		Hand expansion valve	
CONDENSER					
Condenser Type		Shell & Tube Type Condenser With Outer Finned SA-179 Tubes Having 26 Fins Per Inch			
Condenser Model		FMT-90TR-WC-Cond-NH3		FMT-175TR-WC-Cond-NH3	
Condenser Qty	Nos.	1		1	
No. Of Pass (Water Side)	Nos.	4		4	
Tube Diameter	mm	19.05		19.05	
Water Connection Size In/Out	Inch	3" NB		5" NB	
Water Flow Rate (Minimum)	LPM	500		1100	
Water Flow Rate (Maximum)	LPM	1100		2300	
Cooling Tower Water In Temp (Maximum)	Deg. C	32		32	
Cooling Tower Water Out Temp (Maximum)	Deg. C	35.5		35.5	
EXTERNAL OIL COOLER					
Type		Water Cooled Shell & Tube Type			
Capacity	kW	17.85		37.12	
Water Flow Rate	LPM	73.03		151.87	
LIQUID RECIEVER					
Arrangement		Horizontal		Horizontal	
Shell Diameter	Inch	16"		24"	
ECONOMISER					
Type		Vertical Flash type		Vertical Flash type	
Liquid Level Controller		Electronic		Electronic	
Expansion valve type		Hand expansion valve		Hand expansion valve	
CONTROL PANEL					
Starter Type		Star-Delta starter panel with optional choice of soft starter			
Microprocessor		PLC with optional choice of MCS Controls(USA) make microprocessor based control panel with step-less capacity control OR SIMATIC S7-300 Siemens PLC			
Starter Make		Schneider			
UNIT DIMENSION & WEIGHTS					
Length	mm	2500		5853	
Width	mm	2800		2944	
Height	mm	2400		3598	
Detailed Dimensions & GA Drawing		3		3	
Rating Conditions:- 1).Condenser tube side fouling Factor= 0.000043 m2K/W 2).Evaporator shell side fouling factor= 0.000043 m2.K/W 3).Specifications are subject to change due to continuos product development. 4).Economiser applied to all models below 5.0 deg. C Evap. Temp. 5).Condenser Tonnage calculated at Evap. Temp. 2.0 deg. C and Cond. Temp. 40.0 deg. C and may vary for low temperature applications					
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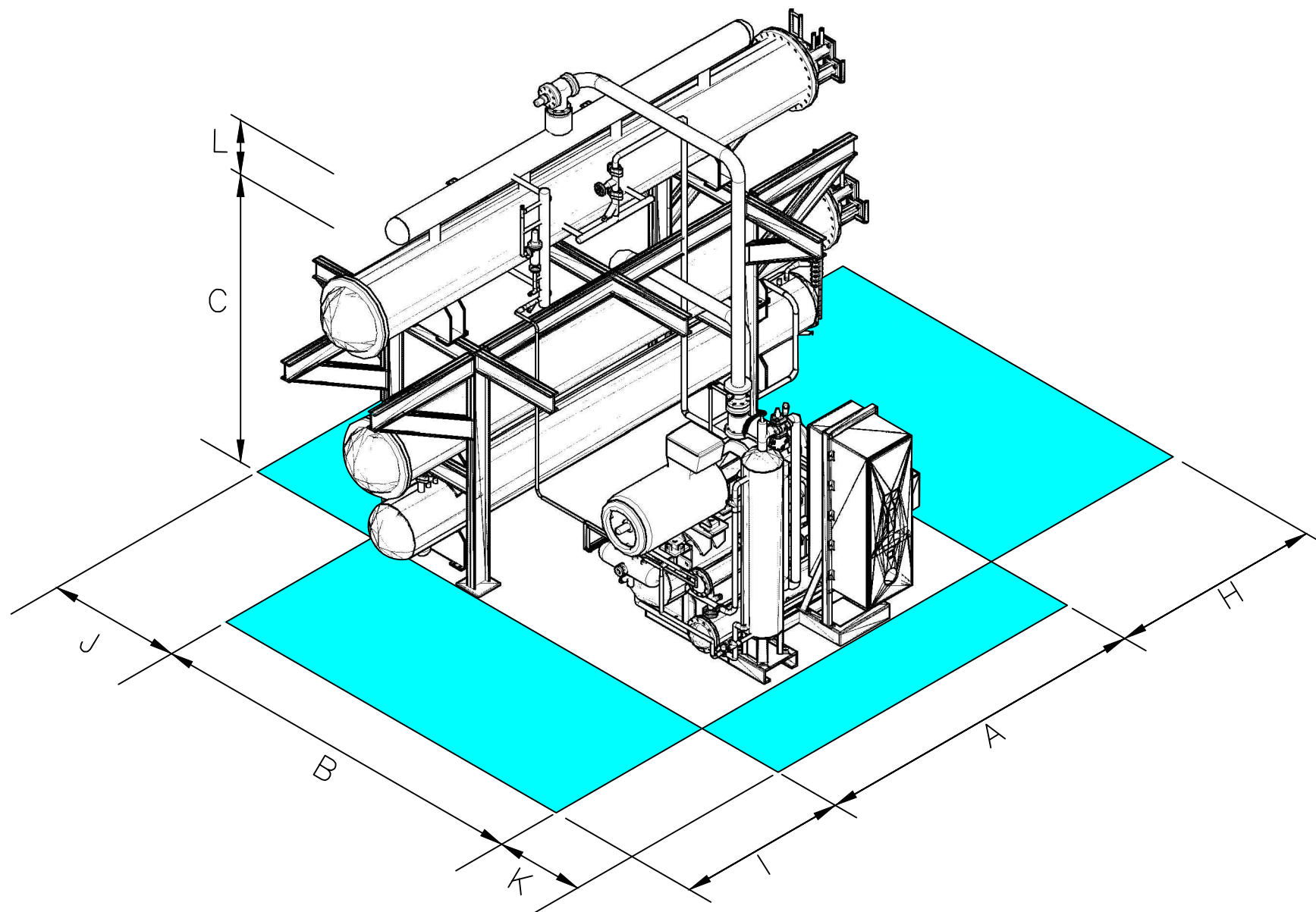
Technical Data Sheet (R-717)							
FLAMINGO BUFFALO SERIES WATER COOLED SCREW CHILLERS WITH HANBELL SEMI HERMETIC OPEN SCREW COMPRESSOR							
Description	Units	BUFFALO		BUFFALO		BUFFALO	
		DWCOR-03-HB		DWCOR-04-HB		DWCOR-05-HB	
Unit Model		Cooling capacity / Power Input	External Motor (KW) HP	Cooling capacity / Power Input	External Motor (KW) HP	Cooling capacity / Power Input	External Motor (KW) HP
At Evap / Cond temp: -50/ 40 deg. C & Power Input (KW)	TR / (KW)	14.7TR / 73.7KW	(75KW) 100HP	20.00TR/ 97.80KW	(110KW) 150HP	32.88TR/ 153.7KW	(160KW) 215HP
At Evap / Cond temp: -45/ 40 deg. C & Power Input (KW)	TR / (KW)	21.13TR / 82.1KW	(90KW) 120HP	28.73TR/ 109.1KW	(110KW) 150HP	47.19TR/ 171.7KW	(200KW) 270HP
At Evap / Cond temp: -40 / 40 deg. C & Power Input (KW)	TR / (KW)	28.87TR / 91.3KW	(110KW) 150HP	39.23TR/121.4KW	(132KW) 180HP	64.49TR/ 191.1KW	(200KW) 270HP
At Evap / Cond temp: -35 / 40 deg. C & Power Input (KW)	TR / (KW)	38.26TR / 100.5KW	(110KW) 150HP	52.03TR/ 131.5KW	(132KW) 180HP	85.51TR/ 201.7KW	(250KW) 335HP
At Evap / Cond temp: -30 / 40 deg. C & Power Input (KW)	TR / (KW)	49.61TR/ 107.9KW	(110KW) 150HP	67.48TR/ 141.3KW	(160KW) 215HP	110.89TR/ 216.6KW	(250KW) 335HP
At Evap / Cond temp: -25 / 40 deg. C & Power Input (KW)	TR / (KW)	63.27TR / 112.8KW	(132KW) 180HP	86.00TR/ 147.7KW	(160KW) 215HP	141.36TR/ 226.4KW	(250KW) 335HP
At Evap / Cond temp -20 / 40 deg. C & Power Input (KW)	TR / (KW)	79.51TR/ 121.1KW	(132KW) 180HP	108.10TR/ 158.5KW	(160KW) 215HP	177.66TR/ 243.1KW	(250KW) 335HP
At Evap / Cond temp: -15/ 40 deg. C & Power Input (KW)	TR / (KW)	98.29TR/ 126.8KW	(132KW) 180HP	133.65TR/ 166.0KW	(200KW) 270HP	219.63TR/ 254.0KW	(315KW) 425HP
At Evap / Cond temp: -10/ 40 deg. C & Power Input (KW)	TR / (KW)	120.65TR/ 132.4KW	(160KW) 215HP	164.03TR/ 173.3KW	(200KW) 270HP	269.58TR/ 265.7KW	(315KW) 425HP
At Evap / Cond temp: -05 / 40 deg. C & Power Input (KW)	TR / (KW)	145.91TR/ 137.8KW	(160KW) 215HP	198.34TR/ 180.4KW	(200KW) 270HP	317.06TR/ 276.6KW	(315KW) 425HP
At Evap / Cond temp: 0 / 40 deg. C & Power Input (KW)	TR / (KW)	174.50TR/ 140.9KW	(160KW) 215HP	237.24TR/ 184.5KW	(200KW) 270HP	389.90TR/ 282.9KW	(315KW) 425HP
At Evap / Cond temp: 05 / 40 deg. C & Power Input (KW)	TR / (KW)	198.26TR/ 140.2KW	(160KW) 215HP	269.4TR/ 183.5KW	(200KW) 270HP	442.78TR/ 281.4KW	(315KW) 425HP
At Evap / Cond temp: 10 / 40 deg. C & Power Input (KW)	TR / (KW)	236.47TR/ 143.4KW	(160KW) 215HP	321.50TR/ 187.8KW	(200KW) 270HP	533.51TR/ 287.7KW	(315KW) 425HP
COMPRESSOR							
Compressor Type		Semi-Hermatic Open Screw Compressor					
Compressor Model		RG-620		RG-830		RG-1270	
Compressor Qty	Nos.	1		1		1	
Compressor Make		Hanbell Precise Machinery (Made in Taiwan)					
Unit capacity reduction steps in %		25, 50, 75 & 100%		25, 50, 75 & 100%		25, 50, 75 & 100%	
OIL SEPRATION SYSTEM							
Type		External horizontal oil separation system					
Number of filtration stages	Nos.	3		3		3	
MOC of seprator element		SS-304		SS-304		SS-304	
Oil Type		Shell Clavus G		Shell Clavus G		Shell Clavus G	
Oil Charge / Compr (Ltr.)	Ltr	150		210		300	
FLOODED EVAPORATOR							
Evaporator Type		Shell & Tube Flooded Evaporator with tubes of SA-179 material and electronic liquid level controller					
Evaporator Model		FMT-250TR-FI-Evap-NH3		FMT-350TR-FI-Evap-NH3		FMT-550TR-FI-Evap-NH3	
Evaporator Qty	Nos.	1		1		1	
No. Of Pass (Water/Brine Side)	Nos.	4		4		4	
Tube Diameter	mm	19.05		25		25	
Water Connection Size In/Out	Inch	5" NB		6" NB		6" NB	
Water/Brine Flow Rate (Minimum)	LPM	1000		1100		2150	
Water/Brine Flow Rate (Maximum)	LPM	2400		3000		5400	
Liquid Level Controller		Electronic		Electronic		Electronic	
Expansion valve type		Hand expansion valve		Hand expansion valve		Hand expansion valve	
CONDENSER							
Condenser Type		Shell & Tube Type Condenser With Outer Finned SA-179 Tubes Having 26 Fins Per Inch					
Condenser Model		FMT-275TR-WC-Cond-NH3		FMT-375 TR-WC-Cond		FMT-600 TR-WC-Cond-NH3	
Condenser Qty	Nos.	1		1		1	
No. Of Pass (Water Side)	Nos.	4		4		4	
Tube Diameter	mm	19.05		25		25	
Water Connection Size In/Out	Inch	5" NB		6" NB		6" NB	
Water Flow Rate (Minimum)	LPM	1450		1581		3100	
Water Flow Rate (Maximum)	LPM	3450		4300		7750	
Cooling Tower Water In Temp (Maximum)	Deg .C	32		32		32	
Cooling Tower Water Out Temp (Maximum)	Deg .C	35.5		35.5		35.5	
EXTERNAL OIL COOLER							
Type		Water Cooled Shell & Tube Type					
Capacity	kW	54.88		71.27		107.43	
Water Flow Rate	LPM	224.53		291.59		439.53	
LIQUID RECIEVER							
Arrangement		Horizontal		Horizontal		Horizontal	
Shell Diameter	Inch	24"		24"		28"	
ECONOMISER							
Type		Vertical Flash type		Vertical Flash type		Vertical Flash type	
Liquid Level Controller		Electronic		Electronic		Electronic	
Expansion valve type		Hand expansion valve		Hand expansion valve		Hand expansion valve	
CONTROL PANEL							
Starter Type		Star-Delta starter panel with optional choice of soft starter					
Microprocessor		PLC with optional choice of MCS Controls(USA) make microprocessor based control panel with step-less capacity control OR SIMATIC S7-300 Siemens PLC					
Starter Make		Schneider					
UNIT DIMENSION & WEIGHTS							
Length	mm	6200		7208		8200	
Width	mm	4050		5867		6000	
Height	mm	3800		4926		5200	
Detailed Dimensions & GA Drawing		3		3		3	
Rating Conditions:-							
1).Condenser tube side fouling Factor= 0.000043 m2K/W							
2).Evaporator shell side fouling factor= 0.000043 m2.K/W							
3).Specifications are subject to change due to continous product development.							
4).Economiser applied to all models below 5.0 deg. C Evap. Temp.							
5). Condenser Tonnage calculated at Evap. Temp. 2.0 deg. C and Cond. Temp. 40.0 deg. C and may vary for low temperature applications							

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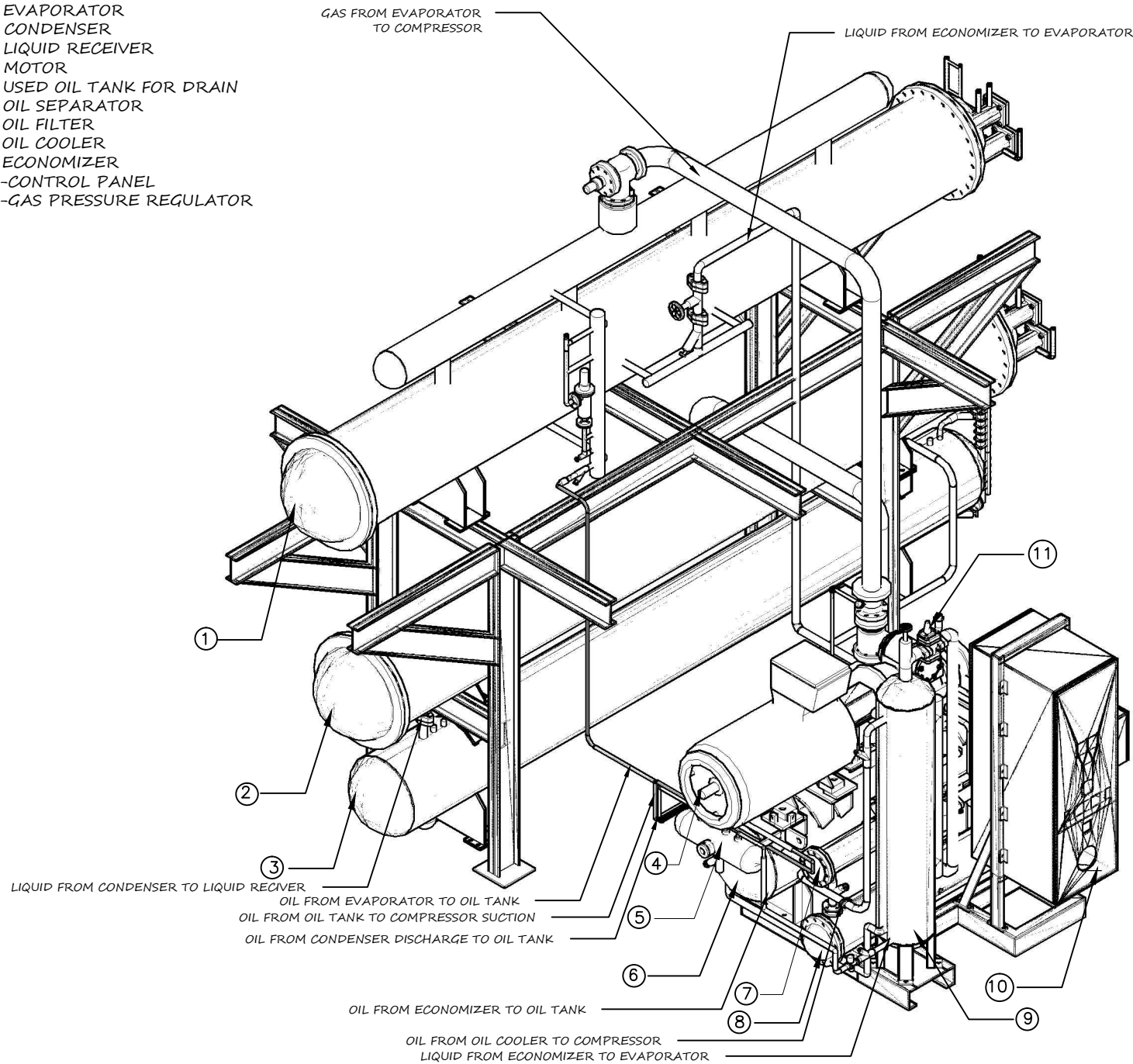
dimensions and clearances												
MODEL	A	B	C	D	E	F	G	H	I	J	K	L
DWC0R-01-HB	2500	2800	2400	950	1150	1850	2050	1000	1500	1000	1000	300
DWC0R-02-HB	5853	2944	3598	1358	1654	3097	3394	1000	4000	1000	1000	300
DWC0R-03-HB	6200	4050	3800	1400	1616	3400	3600	1000	4400	1000	1000	300
DWC0R-04-HB	7208	5867	4926	1487	1783	3343	3640	1000	6000	1000	1000	300
DWC0R-05-HB	8200	6000	5200	1655	1850	3520	3891	1000	7000	1000	1000	300
Nomenclature												
A	End to End Length						G	Evaporator Chilled Water Outlet Center Distance From Base				
B	End to End Width						H	Suggested Clearance				
C	End to End Height						I	Suggested Clearance				
D	Condenser CT Water Inlet Center Distance From Base						J	Suggested Clearance				
E	Condenser CT Water Outlet Center Distance From Base						K	Suggested Clearance				
F	Evaporator Chilled Water Outlet Center Distance From Base						L	Suggested Clearance				





AMMONIA SCREW CHILLER PARTS:-

- 1- EVAPORATOR
- 2- CONDENSER
- 3- LIQUID RECEIVER
- 4- MOTOR
- 5- USED OIL TANK FOR DRAIN
- 6- OIL SEPARATOR
- 7- OIL FILTER
- 8- OIL COOLER
- 9- ECONOMIZER
- 10-CONTROL PANEL
- 11-GAS PRESSURE REGULATOR



AMMONIA SCREW CHILLER PARTS :-

- 12- SCREW COMPRESSOR
- 13- COMPRESSOR SUCTION VALVE
- 14- DISCHARGE VALVE- (OIL SEPARATOR)
- 15- OIL LEVEL SWITCH
- 16- WATER OUTLET- (OIL COOLER)
- 17- WATER INLET- (OIL COOLER)
- 18- LIQUID LEVEL GLASS- (LIQUID RECEIVER)
- 19- CT WATER INLET- (CONDENSER)
- 20- CT WATER OUTLET- (CONDENSER)
- 21- CHILLED WATER OUTLET- (EVAPORATOR)
- 22- CHILLED WATER INLET- (EVAPORATOR)
- 23- HAND EXPANSION VALVE
- 24- SECOND SUCTION VALVE- (EVAPORATOR)
- 25- LIQUID LEVEL SWITCH- (EVAPORATOR)
- 26- LIQUID LEVEL SWITCH- (ECONOMIZER)
- 27- DISCHARGE NRV
- 28- EVAPORATOR BASE FRAME- (OPTIONAL)



GAS + OIL FROM COMPRESSOR
TO OIL SEPARATOR

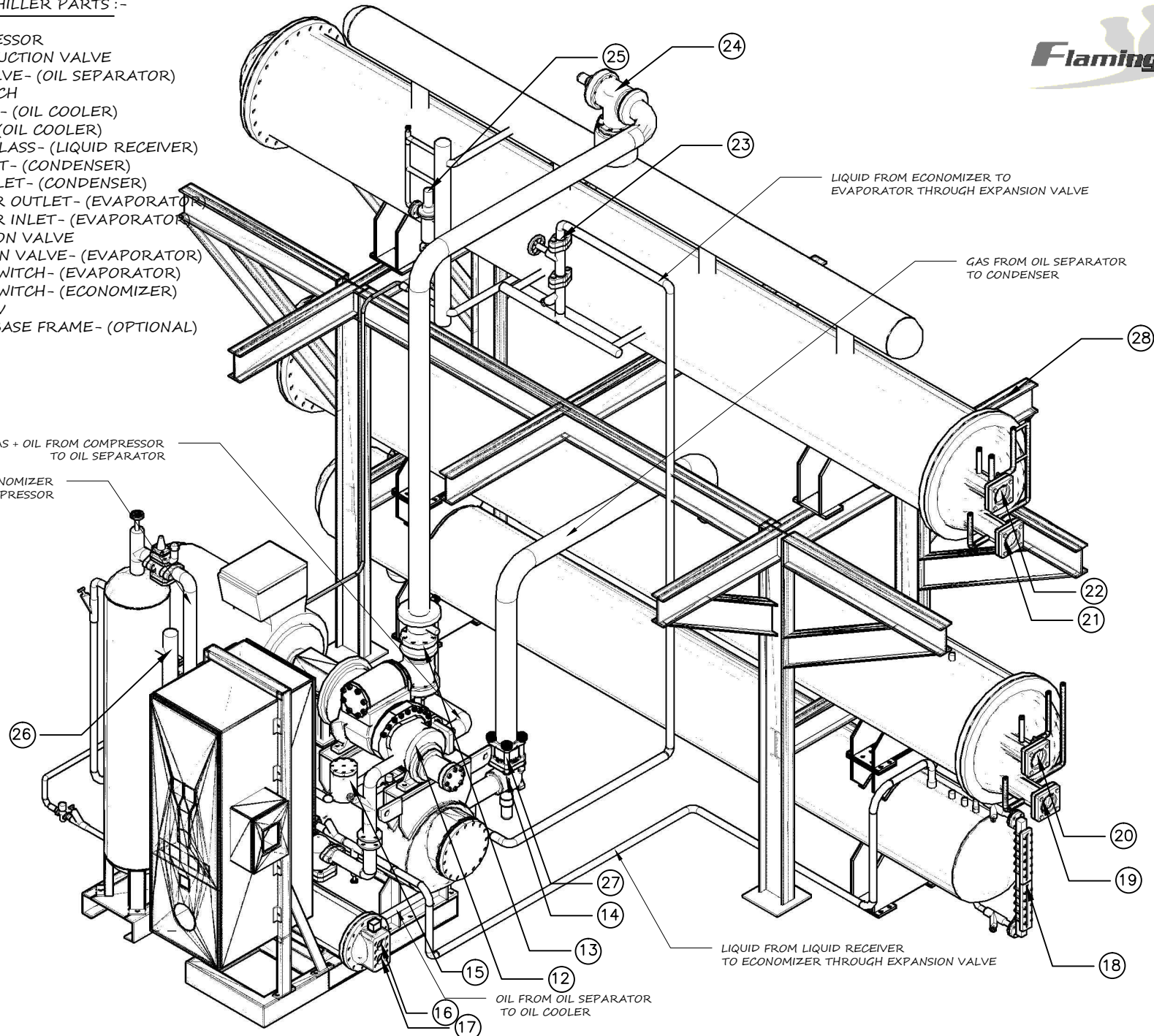
GAS FROM ECONOMIZER
TO COMPRESSOR

LIQUID FROM ECONOMIZER TO
EVAPORATOR THROUGH EXPANSION VALVE

GAS FROM OIL SEPARATOR
TO CONDENSER

LIQUID FROM LIQUID RECEIVER
TO ECONOMIZER THROUGH EXPANSION VALVE

OIL FROM OIL SEPARATOR
TO OIL COOLER



Technical Data Sheet (R-717)

FLAMINGO BUFFALO SERIES WATER COOLED SCREW CHILLERS WITH HANBELL SEMI HERMETIC OPEN SCREW COMPRESSOR FOR HIGH STAGE APPLICATION

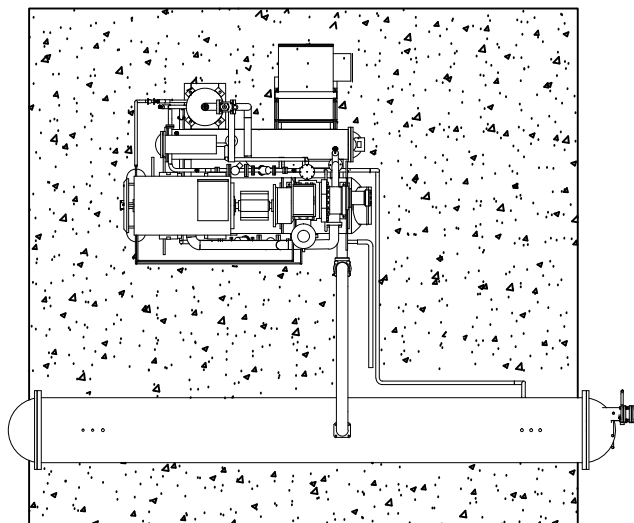
Description	Units	BUFFALO	BUFFALO
Unit Model		DWCOR-01-HB-HIGH STAGE	DWCOR-02-HB-HIGH STAGE
Nominal Cooling Capacity			
At Evap / Cond temp: -15/ 40 deg. C & Power Input (KW)	KW	105.4	224.5
	TR	29.99	63.87
Power Input	KW	40.8	85.1
COP		2.58	2.64
IKW		1.36	1.33
COMPRESSOR			
Compressor Type		Semi-Hermatic Open Screw Compressor	
Compressor Model		RG-200	RG-410
Compressor Qty	Nos.	1	1
Compressor Make		Hanbell Precise Machinery (Made in Taiwan)	
Unit capacity reduction steps in %		25, 50, 75 & 100%	25, 50, 75 & 100%
EXTERNAL 2 POLE MOTOR			
Power Supply		380-420 V/3 Ph, 50Hz, AC	
External Motor rating for 2 Pole 3000 rpm	HP/KW	60 HP / 45 KW	120 HP / 90 KW
OIL SEPRATION SYSTEM			
Type		External horizontal oil sepration system	
Number of filtration stages	Nos.	3	3
MOC of seprator element		SS-304	SS-304
Oil Type		Shell Clavus G	Shell Clavus G
Oil Charge / Compr (Ltr.)	Ltr	75	110
CONDENSER			
Condenser Type		Shell & Tube Type Condenser With Outer Finned SA-179 Tubes Having 26 Fins Per Inch	
Condenser Model		FMT-70TR-WC-Cond-NH3	FMT-150TR-WC-Cond-NH3
Condenser capacity		66	141
Condenser Qty	Nos.	1	1
No. Of Pass (Water Side)	Nos.	4	4
Tube Diameter	mm	19.05	19.05
Water Connection Size In/Out	Inch	3" NB	5" NB
Water Flow Rate	LPM	953	2025
Cooling Tower Water In Temp (Maximum)	Deg .C	32	32
Cooling Tower Water Out Temp (Maximum)	Deg. C	35.5	35.5
EXTERNAL OIL COOLER			
Type		Water Cooled Shell & Tube Type	
Capacity	kW	25	45
Water Flow Rate	LPM	102.28	184.11
LIQUID RECIEVER			
Arrangement		Horizontal	Horizontal
Shell Diameter	Inch	16"	24"
ECONOMISER			
Type		Vertical Flash type	Vertical Flash type
Liquid Level Controller		Electronic	Electronic
Expansion valve type		Hand expansion valve	Hand expansion valve
CONTROL PANEL			
Starter Type		Star-Delta starter panel with optional choice of soft starter	
Microprocessor		PLC with optional choice of MCS Controls(USA) make microprocessor based control panel with step-less capacity control OR SIMATIC S7-300 Siemens PLC	
Starter Make		Schneider	
UNIT DIMENSION & WEIGHTS			
Length	mm	2142	5495
Width	mm	1579	1723
Height	mm	772	1970
Detailed Dimensions & GA Drawing		9	9

Rating Conditions:-

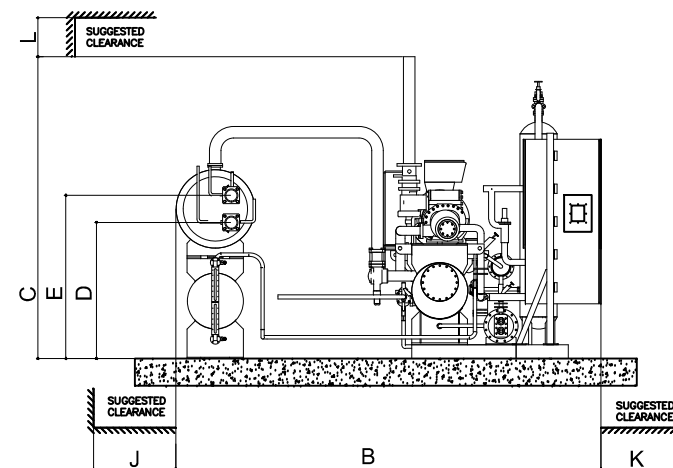
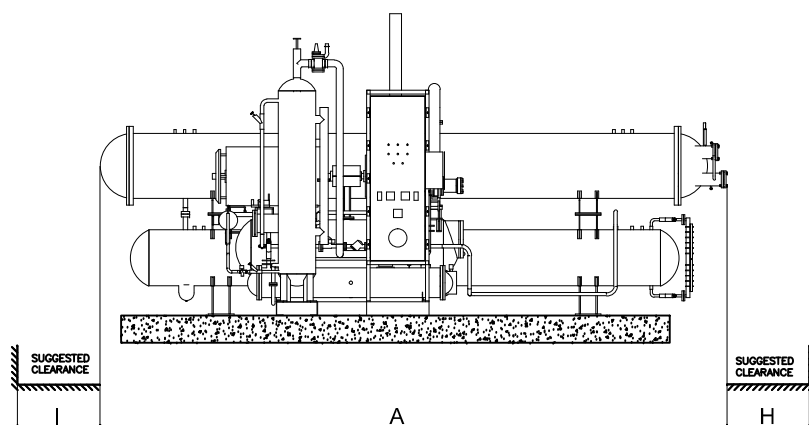
- 1). Condenser tube side fouling Factor= 0.000043 m2K/W
- 2). Specifications are subject to change due to continuos product development.
- 3). Economiser applied to all high stage models for better efficiency
- 4). Condenser Tonnage calculated at Evap. Temp. 2.0 deg. C and Cond. Temp. 40.0 deg. C considering pulldown efficiency

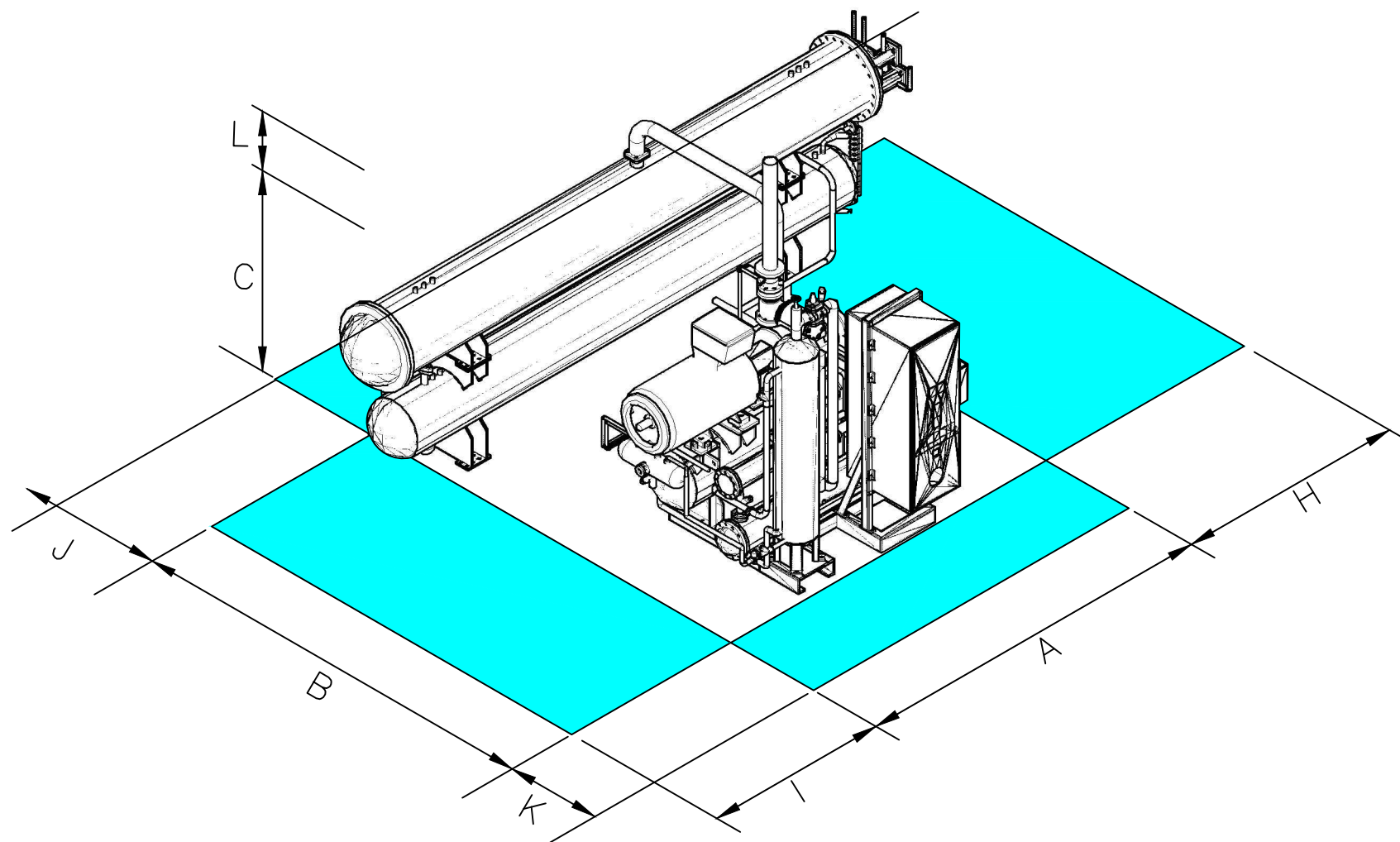
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Description	Units	BUFFALO	BUFFALO	BUFFALO
Unit Model		DWCOR-03-HB-HIGH STAGE	DWCOR-04-HB-HIGH STAGE	DWCOR-05-HB-HIGH STAGE
Nominal Cooling Capacity				
At Evap / Cond temp: -15/ 40 deg. C & Power Input (KW)	KW	345.5	469.8	772
	TR	98.29	133.66	219.63
Power Input	KW	126.8	166	254.5
COP		2.72	2.83	3.03
IKW		1.29	1.24	1.16
COMPRESSOR				
Compressor Type		Semi-Hermatic Open Screw Compressor		
Compressor Model		RG-620	RG-830	RG-1270
Compressor Qty	Nos.	1	1	1
Compressor Make		Hanbell Precise Machinery (Made in Taiwan)		
Unit capacity reduction steps in %		25, 50, 75 & 100%	25, 50, 75 & 100%	25, 50, 75 & 100%
EXTERNAL 2 POLE MOTOR				
Power Supply				
External Motor rating for 2 Pole 3000 rpm	HP/KW	180 HP / 132 KW	270 HP / 200 KW	425 HP / 315 KW
OIL SEPRATION SYSTEM				
Type		External horizontal oil separation system		
Number of filtration stages	Nos.	3	3	3
MOC of seprator element		SS-304	SS-304	SS-304
Oil Type		Shell Clavus G	Shell Clavus G	Shell Clavus G
Oil Charge / Compr (Ltr.)	Ltr	150	210	300
CONDENSER				
Condenser Type		Shell & Tube Type Condenser With Outer Finned SA-179 Tubes Having 26 Fins Per Inch		
Condenser Model		FMT-220TR-WC-Cond-NH3	FMT-300 TR-WC-Cond	FMT-500 TR-WC-Cond-NH3
Condenser capacity		216	293	478
Condenser Qty	Nos.	1	1	1
No. Of Pass (Water Side)	Nos.	4	4	4
Tube Diameter	mm	19.05	25	25
Water Connection Size In/Out	Inch	5" NB	6" NB	6" NB
Water Flow Rate	LPM	3109	4211	6881
Cooling Tower Water In Temp (Maximum)	Deg .C	32	32	32
Cooling Tower Water Out Temp (Maximum)	Deg .C	35.5	35.5	35.5
EXTERNAL OIL COOLER				
Type		Water Cooled Shell & Tube Type		
Capacity	kW	65	85	130
Water Flow Rate	LPM	265.94	347.76	531.87
LIQUID RECIEVER				
Arrangement		Horizontal	Horizontal	Horizontal
Shell Diameter	Inch	24"	24"	28"
ECONOMISER				
Type		Vertical Flash type	Vertical Flash type	Vertical Flash type
Liquid Level Controller		Electronic	Electronic	Electronic
Expansion valve type		Hand expansion valve	Hand expansion valve	Hand expansion valve
CONTROL PANEL				
Starter Type		Star-Delta starter panel with optional choice of soft starter		
Microprocessor		MCS Controls(USA) make microprocessor based control panel with step-less capacity control OR 5		
Starter Make		Schneider		
UNIT DIMENSION & WEIGHTS				
Length	mm	5842	6850	7842
Width	mm	2829	4646	4779
Height	mm	2172	3298	3572
Detailed Dimensions & GA Drawing		9	9	9
Rating Conditions:- 1).Condenser tube side fouling Factor= 0.000043 m2K/W 2).Specifications are subject to change due to continuos product development. 3).Economiser applied to all high stage models for better efficiency 4). Condenser Tonnage calculated at Evap. Temp. 2.0 deg. C and Cond. Temp. 40.0 deg. C considering pulldown efficiency				

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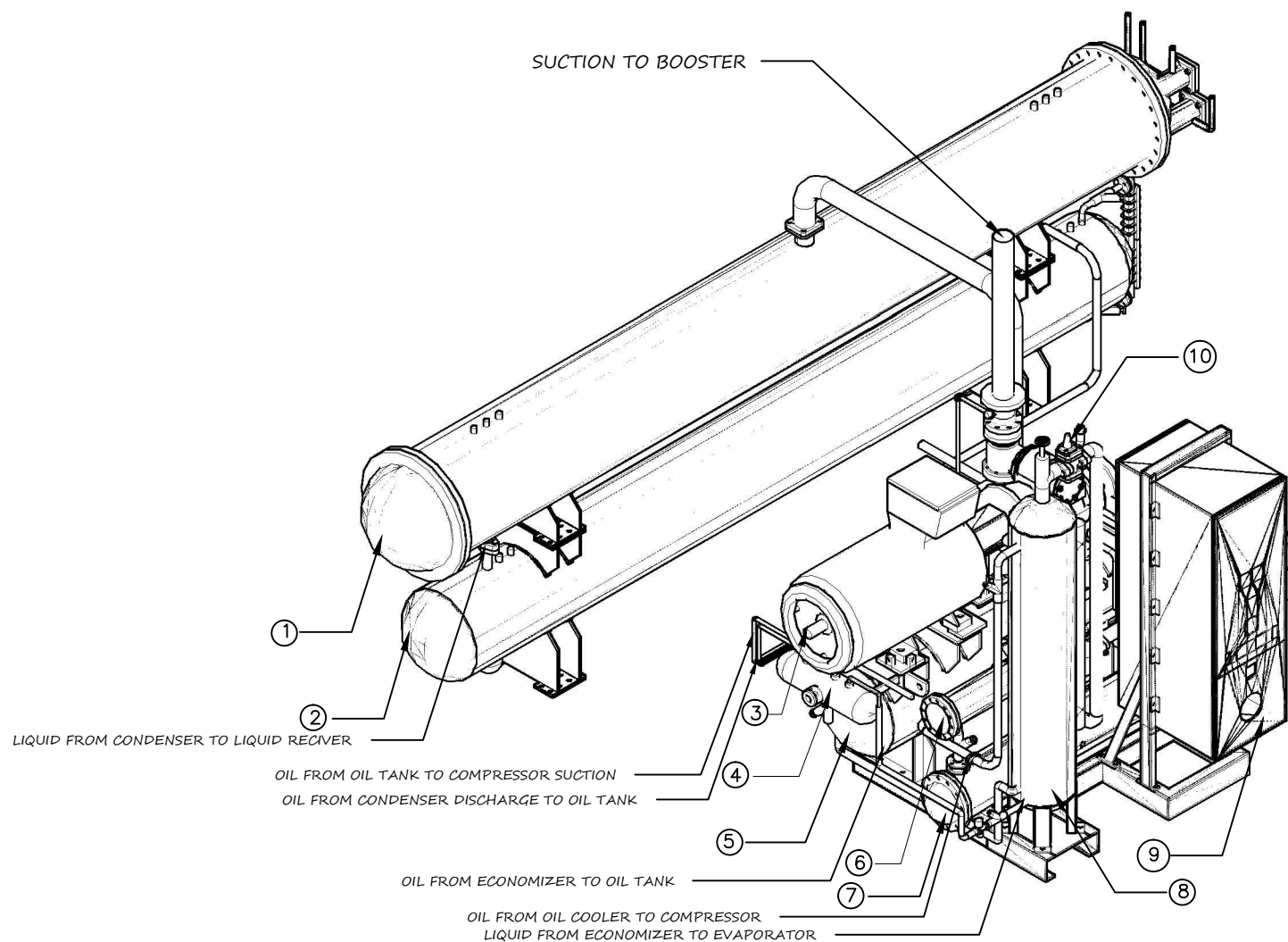
dimensions and clearances										
MODEL	A	B	C	D	E	H	I	J	K	L
DWCOR-01-HB	2142	1579	772	950	1150	1000	1500	1000	1000	300
DWCOR-02-HB	5495	1723	1970	1358	1654	1000	4000	1000	1000	300
DWCOR-03-HB	5842	2829	2172	1400	1616	1000	4400	1000	1000	300
DWCOR-04-HB	6850	4646	3298	1487	1783	1000	6000	1000	1000	300
DWCOR-05-HB	7842	4779	3572	1655	1850	1000	7000	1000	1000	300
Nomenclature										
A	End to End Length						I	Suggested Clearance		
B	End to End Width						J	Suggested Clearance		
C	End to End Height						K	Suggested Clearance		
D	Condenser CT Water Inlet Center Distance From Base						L	Suggested Clearance		
E	Condenser CT Water Outlet Center Distance From Base									
H	Suggested Clearance									





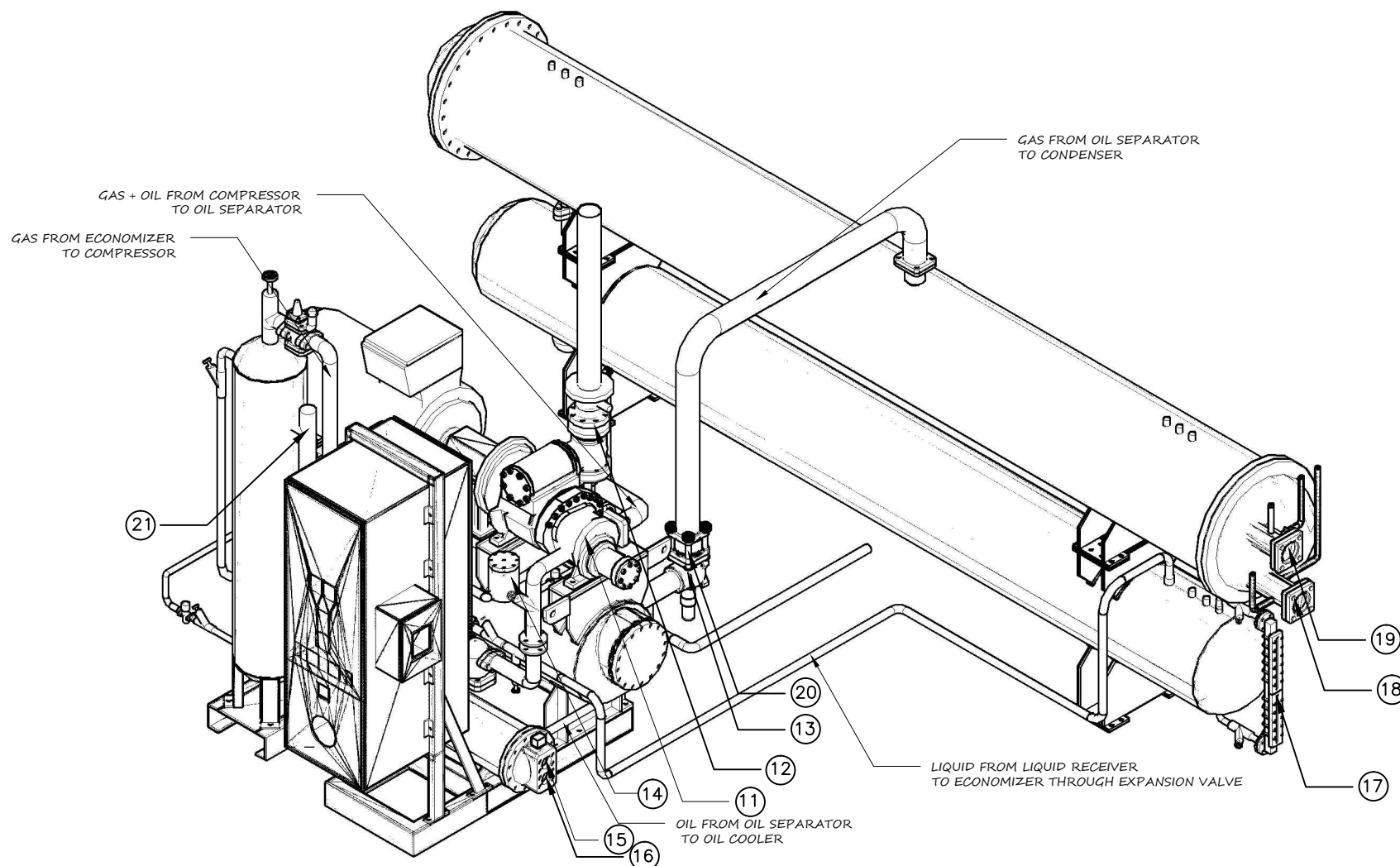
WATER COOLED AMMONIA FOR HIGH STAGE PARTS:-

- 1- CONDENSER
- 2- LIQUID RECEIVER
- 3- MOTOR
- 4- USED OIL TANK FOR DRAIN
- 5- OIL SEPARATOR
- 6- OIL FILTER
- 7- OIL COOLER
- 8- ECONOMIZER
- 9- CONTROL PANEL
- 10-GAS PRESSURE REGULATOR



WATER COOLED AMMONIA FOR HIGH STAGE PARTS :-

- 11- SCREW COMPRESSOR
- 12- COMPRESSOR SUCTION VALVE
- 13- DISCHARGE VALVE- (OIL SEPARATOR)
- 14- OIL LEVEL SWITCH
- 15- WATER OUTLET- (OIL COOLER)
- 16- WATER INLET- (OIL COOLER)
- 17- LIQUID LEVEL GLASS- (LIQUID RECEIVER)
- 18- CT WATER INLET- (CONDENSER)
- 19- CT WATER OUTLET- (CONDENSER)
- 20- DISCHARGE NRV
- 21- LIQUID LEVEL SWITCH-(ECONOMISER)



Technical Data Sheet (R-717)

FLAMINGO BUFFALO SERIES WATER COOLED SCREW CHILLERS WITH HANBELL SEMI HERMETIC OPEN SCREW COMPRESSOR FOR BOOSTER APPLICATION

Description	Units	BUFFALO	BUFFALO
Unit Model		DWCOR-01-HB-BOOSTER	DWCOR-02-HB-BOOSTER
Nominal Cooling Capacity			
At Evap / Cond temp: -40/-10 deg. C	KW	35.55	75.47
	TR	10.11	21.47
Power Input	KW	10.15	21.41
COP		3.50	3.52
IKW		1.00	1.00
COMPRESSOR			
Compressor Type		Semi-Hermatic Open Screw Compressor	
Compressor Model		RG-200	RG-410
Compressor Qty	Nos.	1	1
Compressor Make		Hanbell Precise Machinery (Made in Taiwan)	
Unit capacity reduction steps in %		25, 50, 75 & 100%	25, 50, 75 & 100%
EXTERNAL 2 POLE MOTOR			
Power Supply		380-420 V/3 Ph, 50Hz, AC	
External Motor rating for 2 Pole 3000 rpm	HP/KW	15 HP / 11 KW	30 HP / 22 KW
OIL SEPRATION SYSTEM			
Type		External horizontal oil sepration system	
Number of filtration stages	Nos.	3	3
MOC of seprator element		SS-304	SS-304
Oil Type		Shell Clavus G	Shell Clavus G
Oil Charge / Compr (Ltr.)	Ltr	75	110
EXTERNAL OIL COOLER			
Type		Water Cooled Shell & Tube Type	
Capacity	kW	6	12
Water/Brine Flow Rate	LPM	24.55	49.10
EXTERNAL OIL PUMP			
Type		Rotary gear pump of suitable pumping capacity in SS 304 construction along with meachanical seal	
CONTROL PANEL			
Starter Type		Star-Delta starter panel with optional choice of soft starter	
Microprocessor		PLC with optional choice of MCS Controls(USA) make microprocessor based control panel with step-less capacity control OR SIMATIC S7-300 Siemens PLC	
Starter Make		Schneider	
UNIT DIMENSION & WEIGHTS			
Length	mm	1916	2275
Width	mm	955	1295
Height	mm	2413	3121
Detailed Dimensions & GA Drawing		15	15

Rating Conditions:-

- 1). Specifications are subject to change due to continuos product development.
- 2). Booster data for lower suction/evaporating temperatures available on request

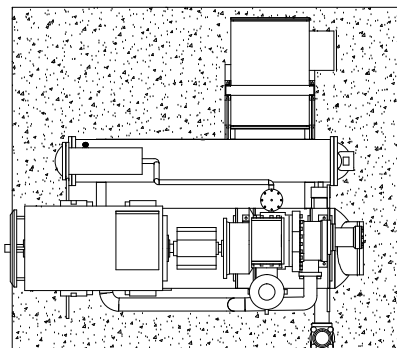
Technical Data Sheet (R-717)

FLAMINGO BUFFALO SERIES WATER COOLED SCREW CHILLERS WITH HANBELL SEMI HERMETIC OPEN SCREW COMPRESSOR FOR BOOSTER APPLICATION

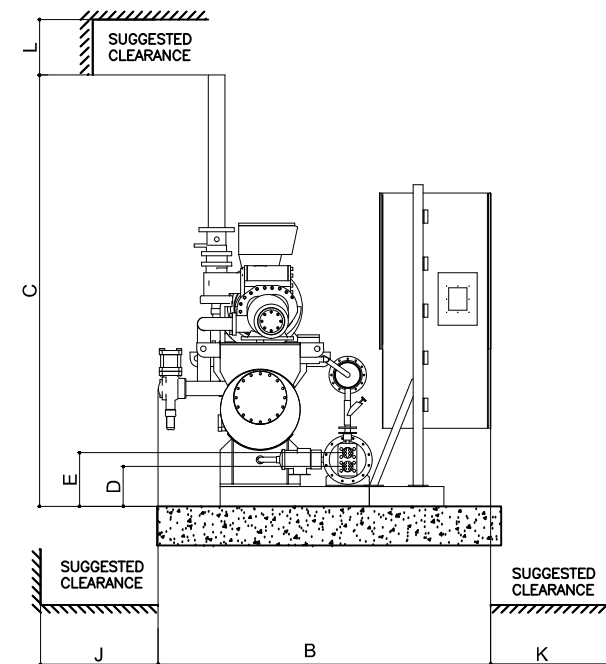
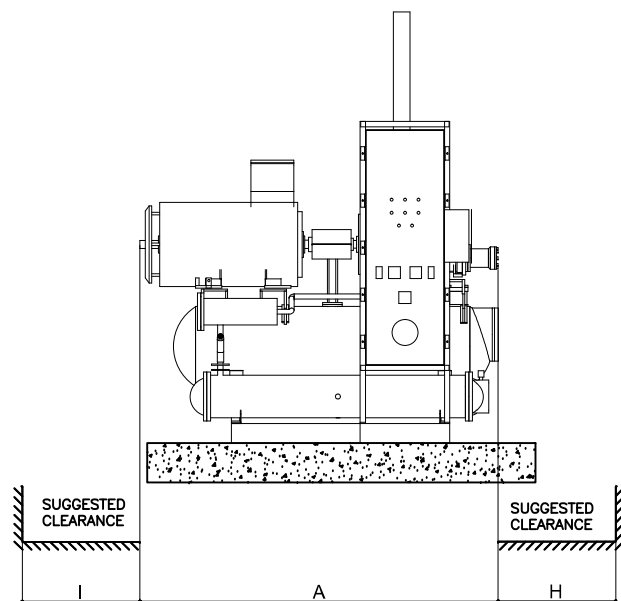
Description	Units	BUFFALO	BUFFALO	BUFFALO
Unit Model		DWCOR-03-HB-BOOSTER	DWCOR-04-HB-BOOSTER	DWCOR-05-HB-BOOSTER
Nominal Cooling Capacity				
At Evap / Cond temp: -40/-10 deg. C	KW	117.7	159.87	256.33
	TR	33.49	45.48	72.92
Power Input	KW	29.25	39.2	61.2
COP		4.02	4.08	4.19
IKW		0.87	0.86	0.84
COMPRESSOR				
Compressor Type		Semi-Hermatic Open Screw Compressor		
Compressor Model		RG-620	RG-830	RG-1270
Compressor Qty	Nos.	1	1	1
Compressor Make		Hanbell Precise Machinery (Made in Taiwan)		
Unit capacity reduction steps in %		25, 50, 75 & 100%	25, 50, 75 & 100%	25, 50, 75 & 100%
EXTERNAL 2 POLE MOTOR				
Power Supply		380-420 V/3 Ph, 50Hz, AC		
External Motor rating for 2 Pole 3000 rpm	HP/KW	40 HP / 30 KW	60 HP/ 45 KW	100 HP / 75 KW
OIL SEPRATION SYSTEM				
Type		External horizontal oil sepration system		
Number of filtration stages	Nos.	3	3	3
MOC of seprator element		SS-304	SS-304	SS-304
Oil Type		Shell Clavus G	Shell Clavus G	Shell Clavus G
Oil Charge / Compr (Ltr.)	Ltr	150	210	300
EXTERNAL OIL COOLER				
Type		Water Cooled Shell & Tube Type		
Capacity	kW	15	20	25
Water/Brine Flow Rate	LPM	61.37	81.83	102.28
EXTERNAL OIL PUMP				
Type		Rotary gear pump of suitable pumping capacity in SS 304 construction along with meachanical seal		
CONTROL PANEL				
Starter Type		Star-Delta starter panel with optional choice of soft starter		
Microprocessor		PLC with optional choice of MCS Controls(USA) make microprocessor based control panel with step-less capacity control OR SIMATIC S7-300 Siemens PLC		
Starter Make		Schneider		
UNIT DIMENSION & WEIGHTS				
Length	mm	2507	2739	2900
Width	mm	1919	2543	3167
Height	mm	3198	3298	3400
Detailed Dimensions & GA Drawing		15	15	15

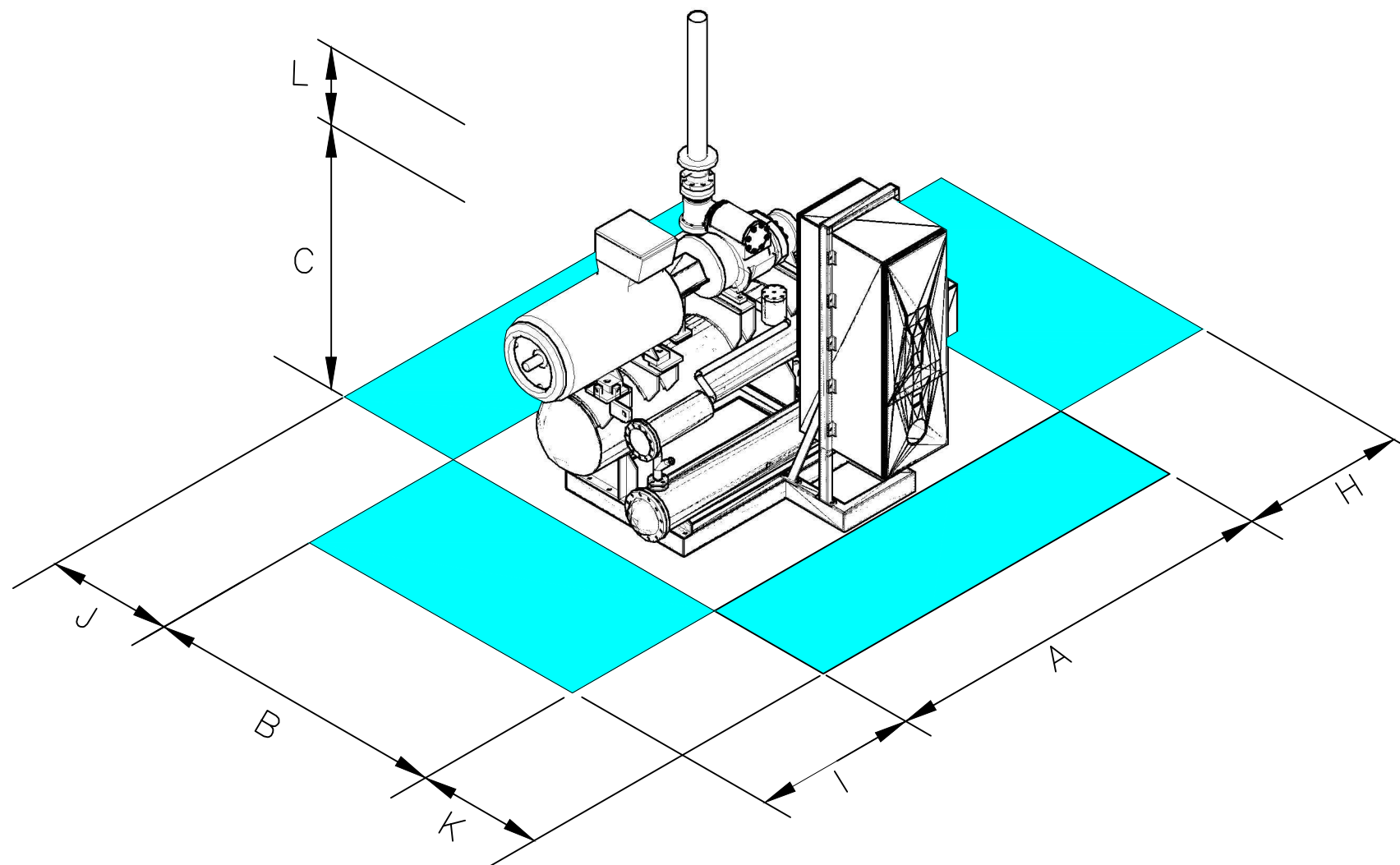
Rating Conditions:-

- 1).Specifications are subject to change due to continuos product development.
- 2).Booster data for lower suction/evaporating temperatures available on request



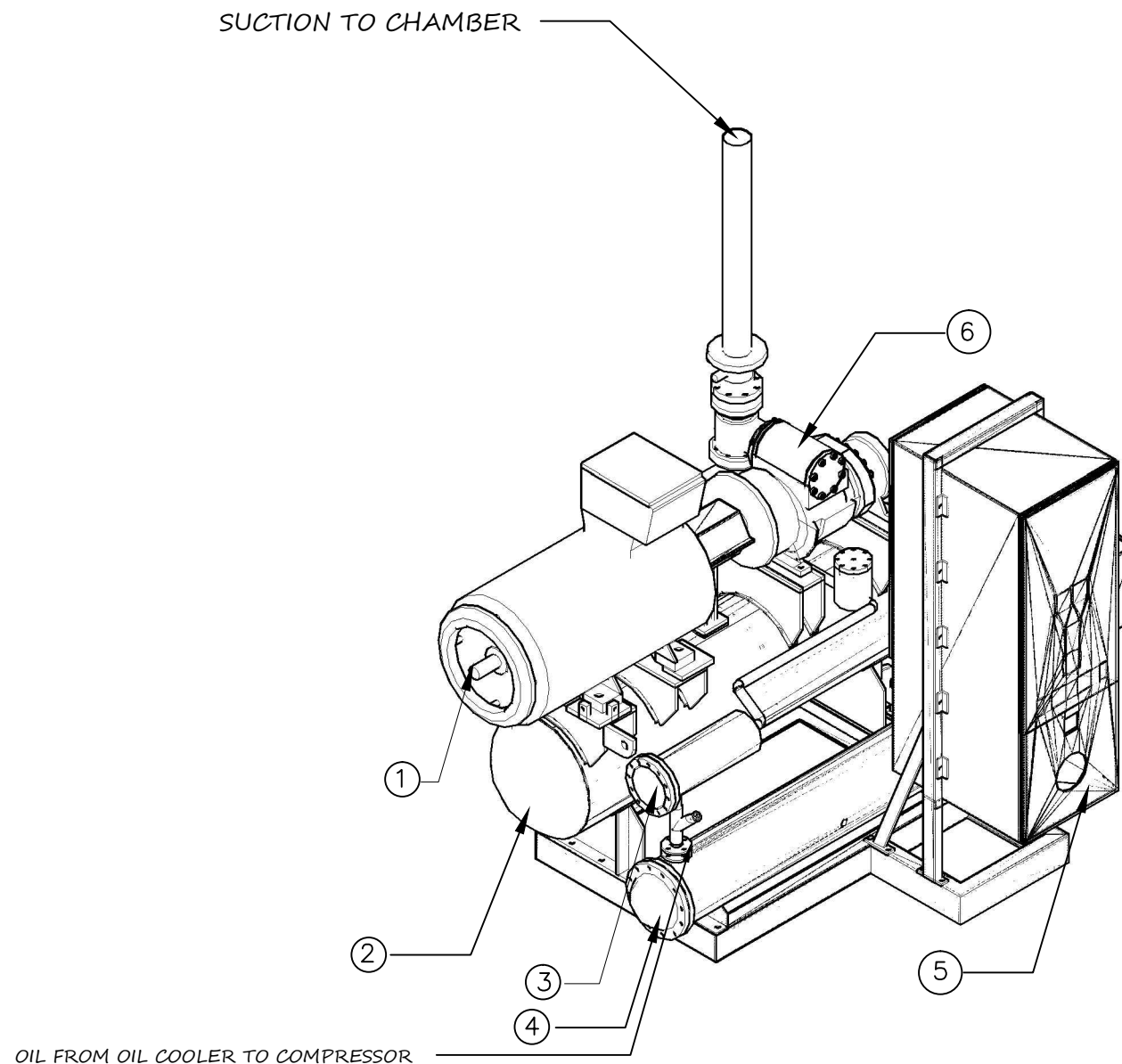
dimensions and clearances										
MODEL	A	B	C	D	E	H	I	J	K	L
DWC0R-01-HB	1916	955	2413	240	370	1500	1000	1000	1000	300
DWC0R-02-HB	2275	1295	3121	288	380	4000	1000	1000	1000	300
DWC0R-03-HB	2507	1919	3198	296	400	4400	1000	1000	1000	300
DWC0R-04-HB	2739	2543	3298	304	410	6000	1000	1000	1000	300
DWC0R-05-HB	2900	3167	3400	340	500	7000	1000	1000	1000	300
Nomenclature										
A	End to End Length						I	Suggested Clearance		
B	End to End Width						J	Suggested Clearance		
C	End to End Height						K	Suggested Clearance		
D	Water Inlet Center Distance From Base						L	Suggested Clearance		
E	Water Outlet Center Distance From Base									
H	Suggested Clearance									





WATER COOLED AMMONIA FOR BOOSTER PARTS:-

- 1- MOTOR
- 2- OIL SEPARATOR
- 3- OIL FILTER
- 4- OIL COOLER
- 5- CONTROL PANEL
- 6- SCREW COMPRESSOR



WATER COOLED AMMONIA FOR BOOSTER PARTS:-



- 7- WATER INLET- (OIL COOLER)
- 8 - WATER OUTLET- (OIL COOLER)
- 9 - OIL LEVEL SWITCH
- 10- COMPRESSOR SUCTION VALVE
- 11- DISCHARGE VALVE- (OIL SEPARATOR)
- 12- DISCHARGE NRV
- 13- EXTERNAL OIL PUMP

