Capillaires

Sélection en fonction du fluide et de l'application

TECUMSEH
EUROPE

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10/06/2003

CAPILLARY RECOMMENDATIONS FOR LOW BACK PRESSURE R404A

	0,028"/0,712mm	0,8mm	0,036"/0,914mm	1mm	0,042"/1,067mm	1.2 mm	0.049"	0.050"
AEZ2411Z		2x2m	2x3.2m	1.3m	2.3m			
AEZ2411Z	2x2.8m	1.5m	2.5m	3.5m				
AEZ2415Z		2x1.6m	2x2.7m	2x3.8m	1.8m			
AEZ2415Z	2x2.3m	2x3.8m	2.1m	3m	4m			
AE1417Z			2x1.6m	2x2.5m	2x3.7m	2.9m	3.5m	
AE1417Z	2x1.6m	2x2.7m	2x4.5m	1.9m	3m			
AE1420Z				2x2.2m	2x3m	2.3m	2.7m	3.5m
AE1420Z			2x3m	2x4.5m	2m	3.3m		
CAE2424Z					2x2.1m	1.7m	2m	2.8m
CAE2424Z			2x2.3m	2x3.2m	2x4m	3.8m		

Pour armoire de conservation des produits à -20°c inside temperature
Pour armoire de conservation des produits à -30°c inside temperature

2x would mean two capillaries in parallel
Exchangor capillaries/suction tube mandatory

$$L1 = L2\ (D1/D2)^{4,5}$$

L1	4.9029193
L2	3.4
d1	0.064
d2	0.059

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	1mm	0,042"	1.2 mm	0.049"	0.052"	0.054"	0.059"/1.5mm	0.064"	0.069"	0.075"	2mm	2.2mm
CAJ2428Z		2x2m	2x3.3m	2m	2.3m	3.3m						
CAJ2428Z	2x3.5m	1.8m	3m									
CAJ2432Z			2x3.7m	1.5m	2m	2.4m	3m					
CAJ2432Z	2x2m	2x3.7m	2.8m	3.3m								
CAJ2446Z				2x2.5m	2x3.5m	2x4.1m	1.7m	2.5m	3.7m			
CAJ2446Z		2x2.1m	1.45m	1.9m	2.5m	3m						
CAJ2464Z					2x2m	2x2.3m	2x3.4		2m	3m	3.8m	
CAJ2464Z			2x3m	2x3.6m		1.8m	2.5m	3.5m				
FH2480Z								2x2.6m	2x3.5m		2m	3.5m
FH2480Z			2x1.7m	2x1.9m	2x2.7m	2x3.4m		2m	3m			
FH2511Z									2x2m	2x3.2m	2x3.8m	2m
FH2511Z							2x2.4m	2x3.5m			3m	

Pour armoire de conservation des produits à -20°c **inside temperature**
Pour armoire de conservation des produits à -30°c **inside temperature**

2x would mean two capillaries in parallel
Exchangor capillaries/suction tube mandatory

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CAPILLARY RECOMMENDATIONS FOR HIGH BACK PRESSURE R134a

INTERNAL DIAMETER	0,028"/ 0,712mm	0,8mm	0,036"/ 0,914mm	1mm	0,042"/ 1,067mm	1.2 mm	0.049"	0.052"	0.055"	0.059"/ 1.5mm	0.064 "	0.069"	0.075"	2mm
AZ4410Y	1.4	2.3	3.3											
AZ4412Y / THB 4413Y		1.6	2.4	3.0										
AZ4414Y/ THB4415Y		1.3	2.0	2.4										
AZ4419Y/ THB4419Y			1.0	1.2	2.2									
AEZ4425Y / THB 4422Y					1.3	3.1								
AEZ4430Y					1.0	2.2	2.8							
CAE4440Y						1.4	1.8	2.4	3.0					
CAE4448Y							1.0	1.7	2.2	2.8				
CAE4456Y								1.4	1.8	2.2	3.4			
CAJ4452Y								1.5	1.8	1.5				
CAJ4461Y								1.1	1.4	1.8	2.9			
CAJ4476Y									1.0	1.3	2.1	3.0		
CAJ4492Y										1.0	1.5	2.0	3.4	
CAJ4511Y												1.2	2.0	2.8

Lenght should be reduce by -30% for R12 applications

This standard recommendations are determined for bottle coolers, starting with +5°c evaporator temperature and going down up to -8°c.
On some application we don't need a such powerful pull down, as you can apply differently our recommendations. L1= L2 (D1/D2)4,5
At least our main advice will remain to keep the internal diameter displayed hereunder and depending on your application,
ajust the lenght of the capillary: Example: THB 4415Y 1.3m / 0.8mm ==> 2m / 0.8mm
2.4m / 1mm ==> 3.2m / 1mm

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CAPILLARY RECOMMENDATIONS FOR HIGH BACK PRESSURE R12

INTERNAL DIAMETER	0,028"/ 0,712mm	0,8mm	0,036"/ 0,914mm	1mm	0,042"/ 1,067mm	1.2 mm	0.049"	0.052"	0.055"	0.059"/ 1.5mm	0.064 "	0.069"	0.075"	2mm	2.2m m	.090"	.098"	2.7m m
AZ0360A	1.0	1.6	2.3															
AZ0374A		1.1	1.7	2.1														
AZ0387A		0.9	1.4	1.7														
AZ0411A / AE5ZA9			0.7	0.8	1.5													
AE/CAE59ZF9					0.9	2.2												
AE/CAE41ZF11					0.7	1.5	2.0											
AE3440A / CAE4440A						1.0	1.3	1.7	2.1									
CAE4448A							0.7	1.2	1.5	2.0								
CAE4456A								1.0	1.3	1.5	2.4							
CAJ4452A								1.1	1.3	1.1								
CAJ4461A								0.8	1.0	1.3	2.0							
CAJ4492A										0.7	1.1	1.4	2.4					
CAJ4511A												0.8	1.4	2.0				
CAH4518A															0.8	1.1	1.3	2.4

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At least our main advice will remain to keep the internal diameter displayed hereunder and depending on your application,
ajust the lenght of the capillary: **Example: AZ 0387A** **0.9m / 0.8mm ==> 1.4m / 0.8mm**
1.7m / 1mm ==> 2.4m / 1mm

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CAPILLARY RECOMMENDATIONS FOR LOW BACK PRESSURE R134a

INTERNAL DIAMETER	0,6mm	0,024"/ 0,61mm	0,026"/ 0,66mm	0,028" / 0,712mm	0,8mm	0,036"/ 0,914mm	1mm	0,042"/ 1,067mm
AZ 1320 Y	3.60	3.80						
THB1324Y	3.40	3.50						
AZ 1330 Y		2.50	3.60	4.80				
AZ1335Y			3.30	4.60				
AZ 1339 Y			2.60	3.60				
THB 1340 Y			2.40	3.40				
AZ 1348 Y				2.60	4.40			
THB 1350 Y				2.60	4.50			
AZ 1355 Y				2.10	3.60			
THB 1360 Y				2.10	3.50			
AEZ1370Y					2.50	4.60		
AEZ 1365 Y					2.50	4.50		
AEZ 1380 Y						3.30	5.00	
AE1410 Y							3.60	4.80
AE 1412Y							2.70	3.60
CAE 2414Y								2.70

$$L1 = L2\ (D1/D2)^{4,5}$$

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CAPILLARY RECOMMENDATIONS FOR LOW BACK PRESSURE R12

INTERNAL DIAMETER	0,6mm	0,024"/ 0,61mm	0,026"/ 0,66mm	0,028" / 0,712mm	0,8mm	0,036"/ 0,914mm	1mm	0,042"/ 1,067mm
AZ 1320 A/D	2.88	3.04						
AZ 1328 A/D		2.00	2.88	3.84				
AZ1335 A/D			2.64	3.68				
AZ 1340 A/D			2.08	2.88				
AZ 1355 D				1.68	2.88			
AEZ 1360 A/B				1.68	2.80			
AEZ 1380 A/B						2.64	4.00	
AEZ 1410 D / AE 1410 A/B							2.88	3.84
AE 1412A							2.16	2.88

$$L1 = L2\ (D1/D2)^{4,5}$$

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CAPILLARY RECOMMENDATIONS FOR HIGH BACK PRESSURE R404A

	0,036''/0,914mm	1mm	0,042''/1,067mm	1.2 mm	0.049"	0.050"	0.052"	0.054"
AEZ4425Z	2x1.7m	2x2.8m	1.3m	2.7m	3.2m	3.5m		
AEZ4430Z	2x1.2m	2x1.8m	2x2.7m	1.8m	2.2m	2.3m	2.7m	3m
AEZ9440Z		2x1.2m	2x1.7m	2x3.8m	1.3m		1.6m	1.7m
CAE9450Z				2x2.6m	2x3m	2x3.2m	2x3.6m	2x4m
CAE9460Z				2x1.8m	2x2.2m	2x2.3m	2x2.6m	2x2.8m
CAE9470Z					2x1.3m	2x1.6m	2x1.7m	2x1.9m
CAJ9480Z							2x1.4m	2x1.7m
	0.054"	0.059"/1.5mm	0.064"	0.069"	0.075"	2mm	.080''	2.2mm
AEZ4430Z	3m	4m						
AEZ9440Z	1.7m	2.4m	3.2m					
CAE9450Z	2x4m	1.4m	2.1m	3.2m				
CAE9460Z	2x2.8m	2x3.5m		2.1m	3.2m	3.7m		
CAE9470Z	2x1.9m	2x2.5m	2x3.5m		2.2m	2.7m		
CAJ9480Z	2x1.7m	2x1.9m	2x2.7m	1.4m	2m	2.2m	2.4m	3.4m
CAJ9510Z		2x1.4m	2x2m	2x2.7m	1.4m	1.8m	1.9m	2.7m
CAJ9513Z			2x1.3m	2x1.8m	2x2.6m	2x3.2m	2x3.6m	2m
CAJ4517Z				2x1.5m	2x2.1m	2x2.7m	2x2.7m	1.6m
CAJ4519Z					2x1.7m	2x1.7m	2x1.8m	2x2.8m

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CAPILLARY RECOMMENDATIONS FOR HIGH BACK PRESSURE R22

Internal diameter	0,8mm	1mm	0,036"	0,038"	0,042"	1,2mm	0,052"	0,057"	0,062"	1,8mm	2mm
Cp model	lenght										
AEZ4425E	2x2.8m	2.7m	3.2m	3.5m							
AEZ4430E	2x1.8m	1.8m	2.2m	2.3m	3m	4m					
AEZ9440T	2x1.2m	2x3.8m	1.3m		1.7m	2.4m	3.2m				
CAE9450T		2x2.6m	2x3m	2x3.2m	2x4m	1.4m	2.1m	3.2m			
CAE9460T		2x1.8m	2x2.2m	2x2.3m	2x2.8m	2x3.5m		2.1m	3.2m	3.7m	
CAE9470T			2x1.3m	2x1.6m	2x1.9m	2x2.5m	2x3.5m		2.2m	2.7m	
CAJ9480T					2x1.7m	2x1.9m	2x2.7m	1.4m	2m	2.2m	3.4m
CAJ9510T						2x1.4m	2x2m	2x2.7m	1.4m	1.8m	2.7m
CAJ9513T							2x1.3m	2x1.8m	2x2.6m	2x3.2m	2m
CAJ4517E								2x1.5m	2x2.1m	2x2.7m	1.6m
CAJ4519E									2x1.7m	2x1.7m	2x2.8m

2x1,6m means two capillaries in parallel mounting

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CAPILLARY RECOMMENDATIONS FOR AIR CONDITIONING R22

Internal diameter	0,042"	1,2mm	.049"	0,052"	0.055"	1.5mm	0,064"	1,8mm	.075"	2mm	2.2mm
AJ5512E	2x1.2 m	2x1.7 m	2x1.9 m	2x2.6 m	2x3.2 m	1.2 m	1.7 m	2.5 m	3.6 m		
AJ5513E		2x1.3 m	2x1.7 m	2x2 m	2x2.7 m	1.0 ou 2x3.6 m	1.4 m	2.1 m	3.0 m	3.4 m	
AJ5515E		2x1.2 m	2x1.3 m	2x1.6 m	2x2.2 m	2x2.8 m	1.2 ou 2x3.9 m	1.8 m	2.2 m	2.8 m	
AJ5518E				2x1.1 m	2x1.3 m	2x2 m	2x2.7 m	1.23 ou 2x3.8 m	1.5 m	1.7 m	2.8 m
AJ5519E					2x1.2 m	2x1.8 m	2x2.4 m	1.07 ou 2x3.6 m	1.6 m	1.8 m	2.6 m
AH5524E						2x1.3 m	2x1.8 m	2x2.7 m	1.01 ou 2x3.5 m	1.3 m	2.1 m
AH5531H							2x1 m	2x1.5 m	2x2.2 m	2x2.5 m	1.27 ou 2x3.9 m

2x1,7m means two capillaries in parallel mounting

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CAPILLARY RECOMMENDATIONS FOR ROTARY LOW BACK PRESSURE R404A

	0,8 mm	0,036"	1mm	0,042"	1.2 mm	0.049"	0.052"	0.054"	0.059"/1.5mm
HG/RG2426Z			2 x 3m	1,5m	4m				
HG/RG2426Z	2 x 3m		2m	3,5m					
HG/RG2432Z		2x1,5m	2x2,5m		3m	3,5m			
HG/RG2432Z	2x2,5m	2x3,5m	1,5m	2,5m					
HG/RG2436Z			2x2m	2x3m	2,5m	3m			
HG/RG2436Z	2x2m	2x3m		2,2m					
HG/RG2446Z				2x2m	1,5m	1,8m	2,5m	3m	
HG/RG2446Z		2x2m	2x3m	1,5m	3,5m				

Pour armoire de conservation des produits à -20°c	inside temperature	2x would mean two capillaries in parallel
Pour armoire de conservation des produits à -30°c	inside temperature	Exchangor capillaries/suction tube mandatory

On some application we don't need a such powerful pull down, as you can apply differently our recommendations.
At least our main advice will remain to keep the internal diameter displayed hereunder and depending on your application, ajust the lenght of the capillary:

$$L1 = L2\ (D1/D2)^{4,5}$$

Attention, this formula is only applicable in close range of diameter (.004" difference maximum)

Lenghts are given for indication, they must be validated by test.
Use only specific Capillary Tube calibrated for refrigeration, and not usual capillary tube.

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CAPILLARY RECOMMENDATIONS FOR ROTARY HIGH BACK PRESSURE R404A

	0,042"	1.2 mm	0.049"	0.050"	0.052"	0.054"	059"/1.5m	0.064"	0.069"	0.075"	2mm	.080"	2.2mm
HG/RG4467Z			2x2m		2x2,5m	2x3m	2x3,5	1,4m	2m	3m	3,8m		
	2x2m	1,4m	1,7m	1.80	2m	2,5m	3,5m						
HG/RG4480Z			2x1,4m		2x1,8m	2x2,m	2x2,5m	2x3,5m	1,5m	2,4m	2,8m		
		2x2m	2x3,5m	2x3,9m		1,5m	1,9m	2,6m	3,5m				
HG/RG4492Z					2x1,5m	2x1,6m	2x2,2m	2x2,9m		2m	2,3m	2,6m	3,5m
		2x 2,3m	2x2,9m		2x 3,6m		1,5m	2m	3,2m				
HG/RG4512Z								2x2m	2x2,9m		1,7m	1,9m	2,6m
		2x 1,7m	2x 2,1m	2x2,2m	2x2,5m	2x2,7m	2x3,3m	1,5m	2,1m	3,2m	3,8m		

operating range from **+5 /50°C** **(Bottle Cooler)** **to** **-10 /45°C** **(Ice Maker Machine)**

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$$L1 = L2\,(D1/D2)^{4,5}$$

Attention, this formula is only applicable in close range of diameter (.004" difference maximum)

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CAPILLARY RECOMMENDATIONS FOR ROTARY HIGH BACK PRESSURE R134a

	0,042"/ 1,067mm	1.2 mm	0.049"	0.052"	0.055"	0.059"/ 1.5mm	0.064"	0.069"
HG/RG4445Y	2x1,5m		1.5m	2.1m	2.6m	3.5m		
HG/RG4450Y		2x3m	2x3,5m	1.5m	1.8m	2.5m		
HG/RG4460Y		2x2,5m	2x3,5m		1.5m	2.m	3.m	
HG/RG4476Y		2x1,7m	2x2m	2x2,5m	2x3m	1.4m	2.m	3.m

On some application we don't need a such powerful pull down, as you can apply differently our recommendations.
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ajust the lenght of the capillary:

$$L1 = L2\ (D1/D2)^{4,5}$$

Attention, this formula is only applicable in close range of diameter (.004" difference maximum)

Lenghts are given for indication, they must be validated by test.
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CAPILLARY RECOMMENDATIONS FOR ROTARY AIR CONDITIONING R22

	1.0 mm	0.042"	1.2 mm	0.049"	0.052"	0.055"	0.059"/ 1.5mm	0.064"	0.069"	0.075"	2mm	2.2mm
HG/RG5480E		2x1.8m	2x2.7m	2x3.2m		1.5m	2.m	2.8m				
HG/RG5492E			2x2.3m	2x2.7m			1.7m	2.3m	3.3m			
HG/RG5510E				2x2.3m	2x2.7m			2m	2.7m			
HG/RG5512E					2x2.3m	2x2.8m			2.m	3.m		
RK5480E		2x1.9m	2x2.9m	2x3.4m		1.7m	2.2m	3.m				
RK5490E			2x2.3m	2x2.7m			1.7m	2.3m	3.3m			
RK5510E				2x2.2m	2x2.6m			1.9m	2.6m			
RK5512E					2x2.3m	2x2.8m			2.m	3.m		
RK5513E					2x1.9m	2x2.3m				2.5m	3.m	
RK5515E						2x1.7m	2x2.4m	2x3.2m			2.4m	3.5m
RK5518E							2x1.9m	2x2.6m			1.7m	2.8m

At least our main advice will remain to keep the internal diameter displayed hereunder and depending on your application, ajust the lenght of the capillary:

$$L1 = L2\ (D1/D2)^{4,5}$$

Caution, this formula is only applicable in close range of diameter (.004" difference maximum)

Lenghts are given for indication, they must be validated by test.
Use only specific Capillary Tube calibrated for refrigeration, and not usual capillary tube.

determined @ +5/50°C, 0K Subcooling, 20°C return gas

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CAPILLARY RECOMMENDATIONS FOR ROTARY AIR CONDITIONING R407C

	1.0 mm	0.042"	1.2 mm	0.049"	0.052"	0.055"	0.059"/ 1.5mm	0.064"	0.069"	0.075"	2mm	2.2mm
HG/RG5480E		2x1.4m	2x2.2m	2x2.6m		1.2m	1.6m	2.2m				
HG/RG5492E			2x1.8m	2x2.2m			1.4m	1.8m	2.6m			
HG/RG5510E				2x1.8m	2x2.2m			1.6m	2.2m			
HG/RG5512E					2x1.8m	2x2.2m			1.6m	2.4m		
RK5480E		2x1.5m	2x2.3m	2x2.7m		1.4m	1.8m	2.4m				
RK5490E			2x1.8m	2x2.2m			1.4m	1.8m	2.6m			
RK5510E				2x1.8m	2x2.0m			1.5m	2.m			
RK5512E					2x1.8m	2x2.2m			1.6m	2.4m		
RK5513E					2x1.5m	2x1.8m				2.m	2.4m	
RK5515E						2x1.4m	2x1.9m	2x2.6m			1.9m	2.8m
RK5518E							2x1.5m	2x2.0m			1.4m	2.2m

At least our main advice will remain to keep the internal diameter displayed hereunder and depending on your application, ajust the lenght of the capillary:

$$L1 = L2\ (D1/D2)^{4,5}$$

Caution, this formula is only applicable in close range of diameter (.004" difference maximum)

Lenghts are given for indication, they must be validated by test.
Use only specific Capillary Tube calibrated for refrigeration, and not usual capillary tube.

determined @ +5/50°C, 0K Subcooling, 20°C return gas, (Mid/Mid)
This conduct to -20% compared to R22