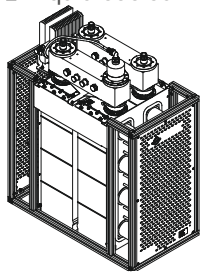
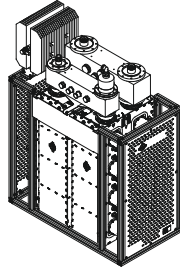


## CCS UHF CIB Combiners

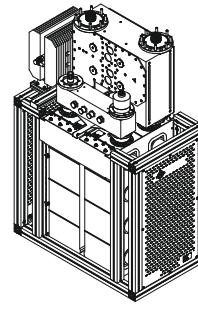
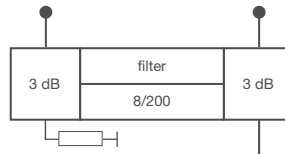
- **CCS** compact design
- Integrated mask filters for DTV
- Adjacent channel operation
- For 6, 7 and 8 MHz channel bandwidth
- Temperature compensated
- Tuneable within the whole UHF range
- Liquid cooled filter



BN 576065A2010



BN 576066A2010



BN 576067A2020

Multi Channel Combiners

Part Number Cooling	BN 576065A2010 Liquid Cooling	BN 576066A2010 Liquid Cooling	BN 576067A2020 Liquid Cooling																																																									
Frequency range	470 - 800 MHz																																																											
Channel spacing	≥ 0																																																											
<b>Narrowband input</b>	3 1/8" EIA male																																																											
Filter type integrated cavities/size	<b>8/200</b> ≡ <b>BN 616544</b>																																																											
Temperature stability	≤ 2 kHz / K																																																											
Harmonics attenuation	≥ 50 dB for f ≤ 860 MHz																																																											
DTV mask filtering	DVB-T @ 8 MHz ( $\dot{U}/U_{rms}=13$ dB)	ISDB-T @ 6 MHz ( $\dot{U}/U_{rms}=13$ dB)	ATSC 1.0 @ 6 MHz ( $\dot{U}/U_{rms}=13$ dB)																																																									
Average input power The input power of liquid cooled filters must be reduced if installed more than 500 m above sea level.	≤ <b>23 kW</b> @ 0 - 1000 m ≤ <b>20 kW</b> @ 2000 m ≤ <b>18 kW</b> @ 2600 m ≤ <b>16 kW</b> @ 3200 m ≤ <b>14 kW</b> @ 3800 m ≤ <b>12 kW</b> @ 4400 m	≤ <b>20 kW</b> @ 0 - 500 m ≤ <b>18 kW</b> @ 1200 m ≤ <b>16 kW</b> @ 2000 m ≤ <b>14 kW</b> @ 2800 m ≤ <b>12 kW</b> @ 3400 m ≤ <b>10 kW</b> @ 4200 m	≤ <b>22 kW</b> @ 0 - 600 m ≤ <b>20 kW</b> @ 1400 m ≤ <b>18 kW</b> @ 2000 m ≤ <b>16 kW</b> @ 2600 m ≤ <b>14 kW</b> @ 3300 m ≤ <b>12 kW</b> @ 4000 m																																																									
Tuning instruction	AS8067	AS8074	AS8066																																																									
Insertion loss & mask filtering (alternative tuning on request)	<table border="1"> <tr> <td></td> <td>470 MHz</td> <td>860 MHz</td> </tr> <tr> <td><math>f_0</math></td> <td>≤ 0.4 dB</td> <td>≤ 0.5 dB</td> </tr> <tr> <td><math>f_0 \pm 3.805</math></td> <td>≤ 1.0 dB</td> <td>≤ 1.4 dB</td> </tr> <tr> <td><math>f_0 \pm 3.885</math></td> <td>≤ 1.5 dB</td> <td>≤ 1.7 dB</td> </tr> <tr> <td><math>f_0 \pm 4.2</math></td> <td>≥ 15 dB</td> <td></td> </tr> <tr> <td><math>f_0 \pm 6</math></td> <td>≥ 40 dB</td> <td></td> </tr> <tr> <td><math>f_0 \pm 12</math></td> <td>≥ 55 dB</td> <td></td> </tr> </table>		470 MHz	860 MHz	$f_0$	≤ 0.4 dB	≤ 0.5 dB	$f_0 \pm 3.805$	≤ 1.0 dB	≤ 1.4 dB	$f_0 \pm 3.885$	≤ 1.5 dB	≤ 1.7 dB	$f_0 \pm 4.2$	≥ 15 dB		$f_0 \pm 6$	≥ 40 dB		$f_0 \pm 12$	≥ 55 dB		<table border="1"> <tr> <td></td> <td>470 MHz</td> <td>803 MHz</td> </tr> <tr> <td><math>f_0</math></td> <td>≤ 0.45 dB</td> <td>≤ 0.5 dB</td> </tr> <tr> <td><math>f_0 \pm 2.79</math></td> <td>≤ 1.20 dB</td> <td>≤ 1.5 dB</td> </tr> <tr> <td><math>f_0 \pm 3.15</math></td> <td>≥ 15 dB</td> <td></td> </tr> <tr> <td><math>f_0 \pm 4.5</math></td> <td>≥ 30 dB</td> <td></td> </tr> <tr> <td><math>f_0 \pm 9</math></td> <td>≥ 55 dB</td> <td></td> </tr> </table>		470 MHz	803 MHz	$f_0$	≤ 0.45 dB	≤ 0.5 dB	$f_0 \pm 2.79$	≤ 1.20 dB	≤ 1.5 dB	$f_0 \pm 3.15$	≥ 15 dB		$f_0 \pm 4.5$	≥ 30 dB		$f_0 \pm 9$	≥ 55 dB		<table border="1"> <tr> <td></td> <td>470 MHz</td> <td>820 MHz</td> </tr> <tr> <td><math>f_0</math></td> <td>≤ 0.5 dB</td> <td>≤ 0.55 dB</td> </tr> <tr> <td><math>f_0 \pm 2.69</math></td> <td>≤ 1.0 dB</td> <td>≤ 1.30 dB</td> </tr> <tr> <td><math>f_0 \pm 3.0</math></td> <td>≥ 4 dB</td> <td></td> </tr> <tr> <td><math>f_0 \pm 3.25</math></td> <td>≥ 18 dB</td> <td></td> </tr> <tr> <td><math>f_0 \pm 9</math></td> <td>≥ 64 dB</td> <td></td> </tr> </table>		470 MHz	820 MHz	$f_0$	≤ 0.5 dB	≤ 0.55 dB	$f_0 \pm 2.69$	≤ 1.0 dB	≤ 1.30 dB	$f_0 \pm 3.0$	≥ 4 dB		$f_0 \pm 3.25$	≥ 18 dB		$f_0 \pm 9$	≥ 64 dB	
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Group delay variation	$\Delta\tau \leq 700$ ns	$\Delta\tau \leq 500$ ns	$\Delta\tau \leq 400$ ns																																																									
<b>Wideband input</b>	3 1/8" EIA male	4 1/2" EIA male	52-120 BT male																																																									
Average input power	≤ <b>17.5 kW</b>	≤ <b>33 kW</b>	≤ <b>60 kW</b>																																																									
DTV mask filtering	No																																																											
Insertion loss	≤ 0.1 dB (non adjacent)																																																											
<b>Output</b>	3 1/8" EIA male	4 1/2" EIA male	52-120 BT male																																																									
Peak output voltage	≤ 12.5 kV	≤ 15.5 kV	≤ 19.5 kV																																																									
Average output power	-	-	≤ 60 kW																																																									
Isolation between inputs	≥ 35 dB																																																											
VSWR (one WB channel)	≤ 1.06																																																											
Dimensions (L x W x H) mm	900 x 480 x 1200		900 x 520 x 1400																																																									
Weight	≈ 170 kg	≈ 180 kg	≈ 235 kg																																																									
Environmental conditions	For limitations see „Environmental Conditions for Broadcast Products“.																																																											