Cable chain services

PER END CAP

Ian Crotty 16-Mar-17

													Rect. packing	Hex Packing	Min stagg	Factor on dia =1
													Section	Section		
													[cm3]	[cm3]		
HV	Channels		Total	Umbilical	Cables	Spares	Umbilical Section			Umbilical Cable dia	38	[mm]				
1 ch per chamber				10 x 2 ch			[cm3]			10 x 2 ch						
	RE3/1	RE4/1		2						Channels/cable	20					
Main cable chains	18	18	36	40	2	4	22.7						28.88	NA		
							Cable section			Single ch HV cable dia	6	[mm]				
							[cm3]			Channels/cable	1					
Mini cable chains	18	18	36	NA	36	0	10.2						12.96	12.48	12.29	34.15
LV			Total							No control or Power (to MAO) cables required						
	RE3/1	RE4/1								Can the MAO handle the extra power ??						
Main cable chains	0	0	0													
Mini cable chains	0	0	0													
Fibre optics			Total			Spares	Section			Optical Fibres inc cond	20	[mm]				
	RE3/1	RE4/1					[cm3]			opticla fibres	1	[mm]				
Main cable chains			0				0			Quantity Conduits	2					
Mini cable chains	36	36	72			8	0.7			Conduit section	6.3	[cm3]	8	NA	NA	NA
GAS			Total			Spares	Section									
	RE3/1	RE4/1					[cm3]									
Main cable chains	0	0	0				0.0									
Mini cable chains	0	0	0				0.0			Piping already installed for old RE3/1 to be removed and modified Bulkheads present for RE3/1 to be verified for routing compability. All bulkheads missing for RE4/1						
Cooling			Total							Given the additional heat load of 840 Watts which is XX% increasce						
	RE3/1	RE4/1								over the present heat load there will be no additional piping						
Main cable chains	0	0	0							through the cable chains.						
										Extra circuits will be added to the RE4/1 Xmas trees						
Mini cable chains	0	0	0							The RE3/2 circuit will be extended to the RE3/1 chamber.						

http://project-cms-rpc-endcap.web.cern.ch/project-cms-rpc-endcap/rpc/UpscopeHighEta/RPCDevelopements/RE31and41/Services/MainAndMiniCableChains16March2017.xlsx