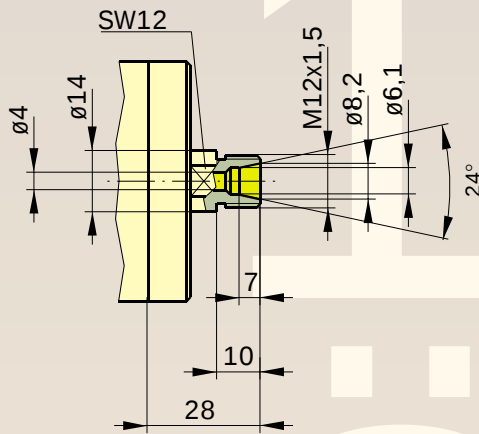


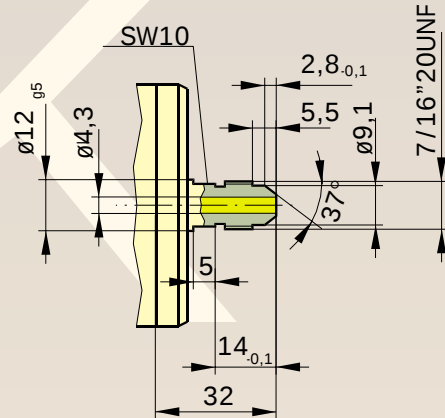
hydraulic

only at standstill - no pressure
while spindle is rotating



connection M12x1,5

code	
1	1

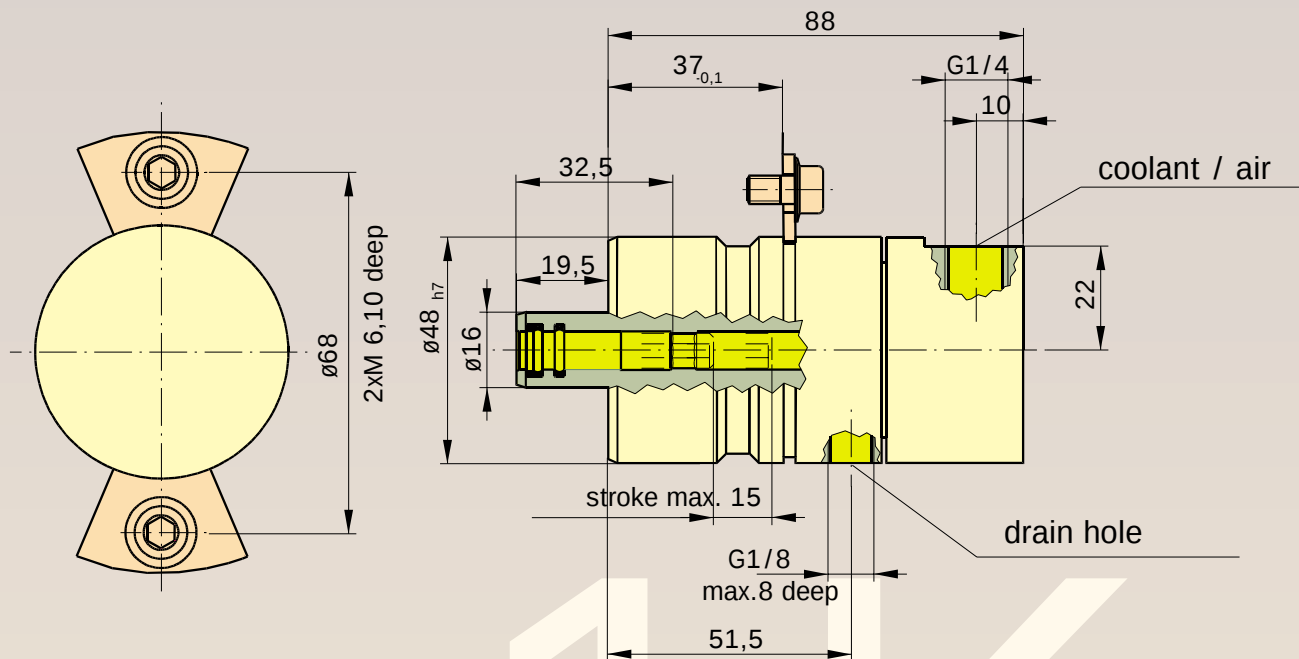


connection 7/16"

code	
1	2

technical data	
spindle speed max. (min ⁻¹)	10.000
hydr. pressure max.; n=0 min ⁻¹ [bar]	160

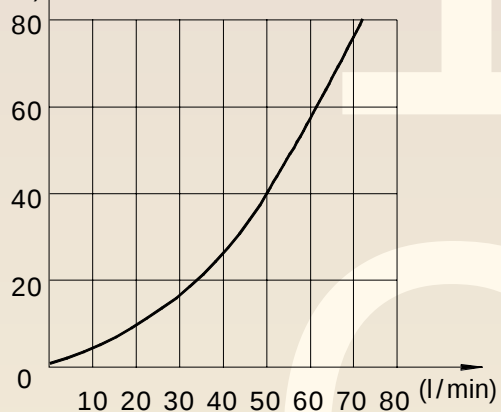
features	
• rotary union for hydraulic unclamping of power drawbar	



flow volume
at orifice $\varnothing 5$

pressure

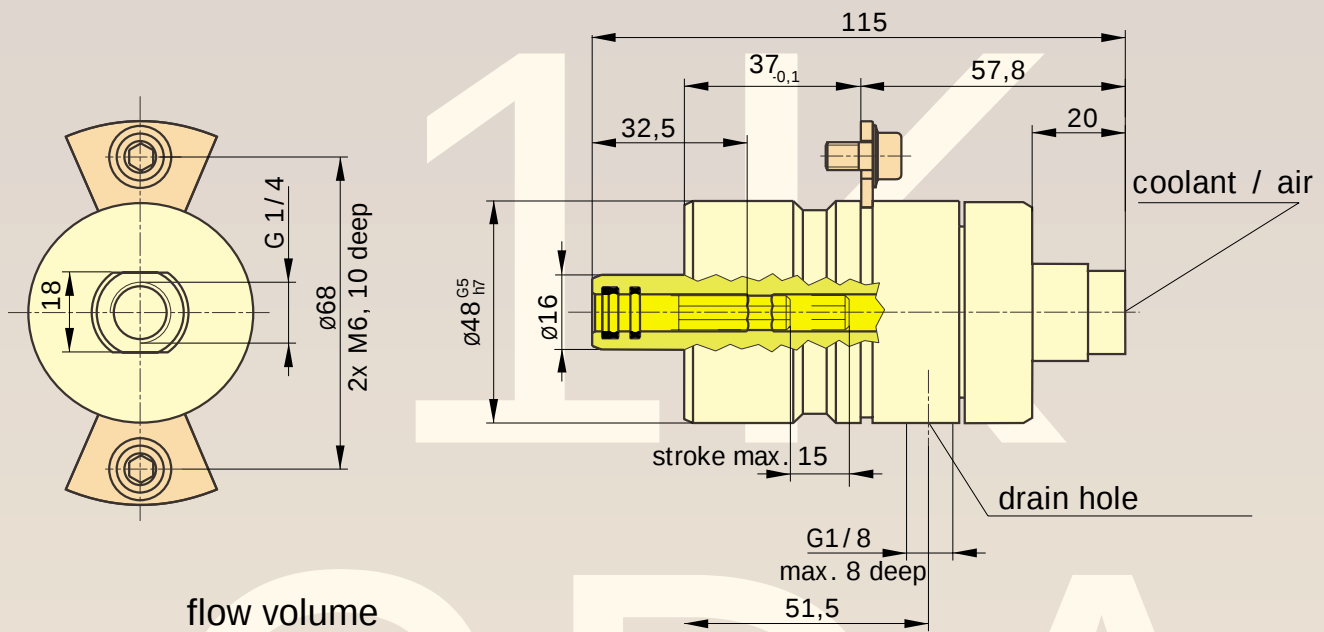
(bar) ↑



code	
2	1

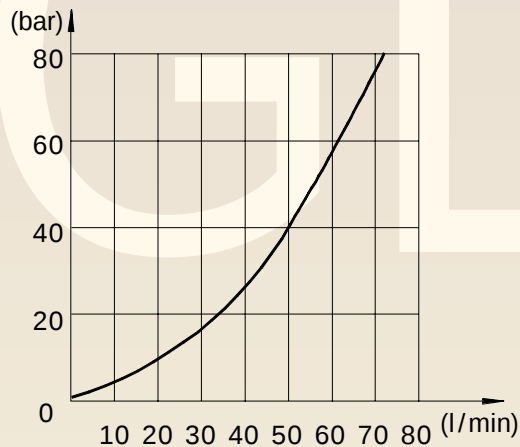
technical data	
spindle speed max. (min ⁻¹)	36.000
coolant pressure max. [bar]	80
cleaning air max.; n=0 min ⁻¹ [bar]	10
pressure air max.; n<10000 min ⁻¹ [bar]	5
required media purity according to ISO 4406 filter grade [µm]	-/16/13 <50

features
• hybrid bearing • closed sealing surface • balanced design • coolant • minimum volume lubrication (mixed externally) $p_{\max} = 5 \text{ bar}$ • dry operation



flow volume
at orifice $\varnothing 5$

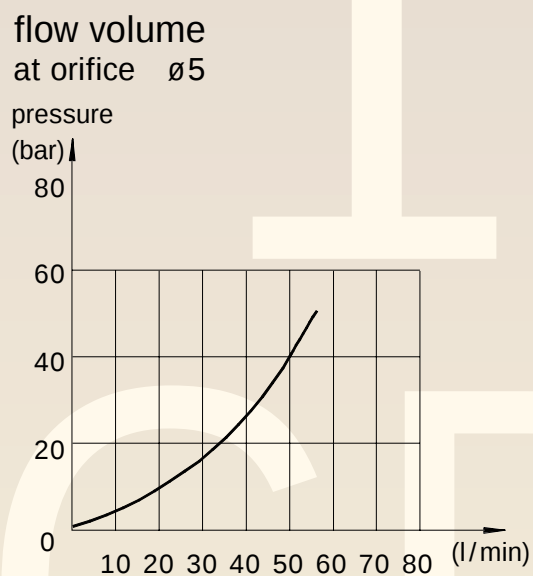
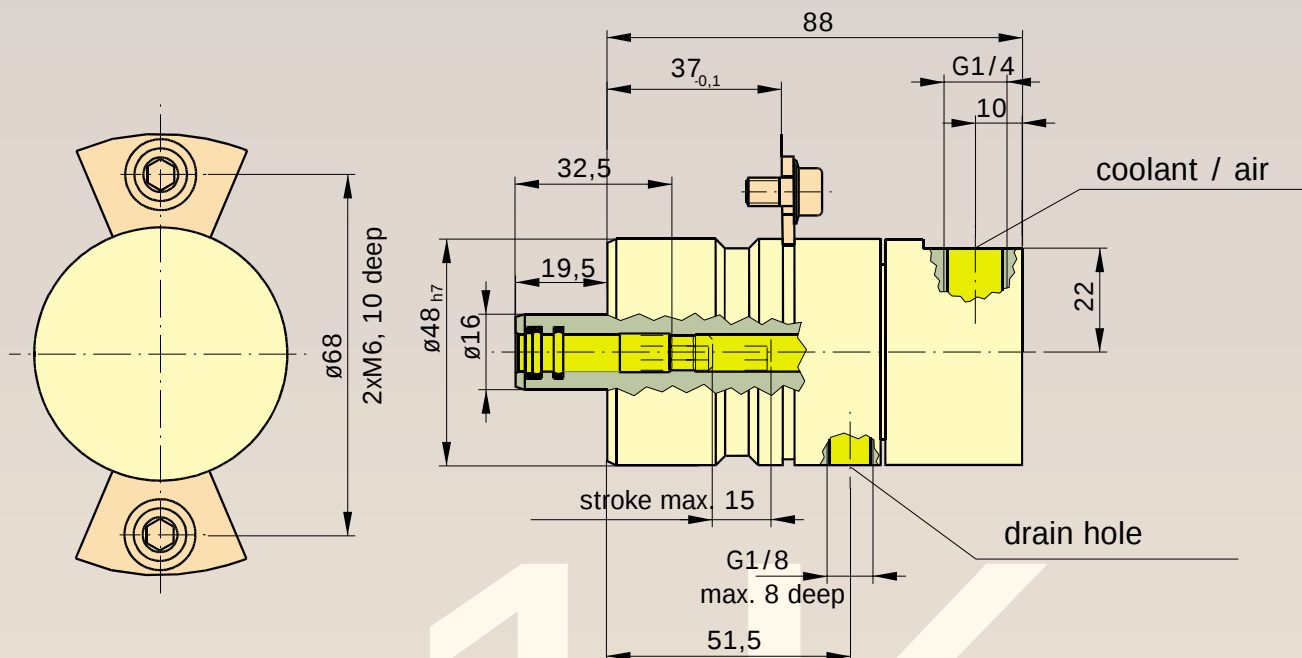
pressure



code	
2	2

technical data	
spindle speed max. (min ⁻¹)	36.000
coolant pressure max. [bar]	80
cleaning air max.; n=0 min ⁻¹ [bar]	10
pressure air max.; n<10000 min ⁻¹ [bar]	5
required media purity according to ISO 4406 filter grade [μm]	-/16/13 <50

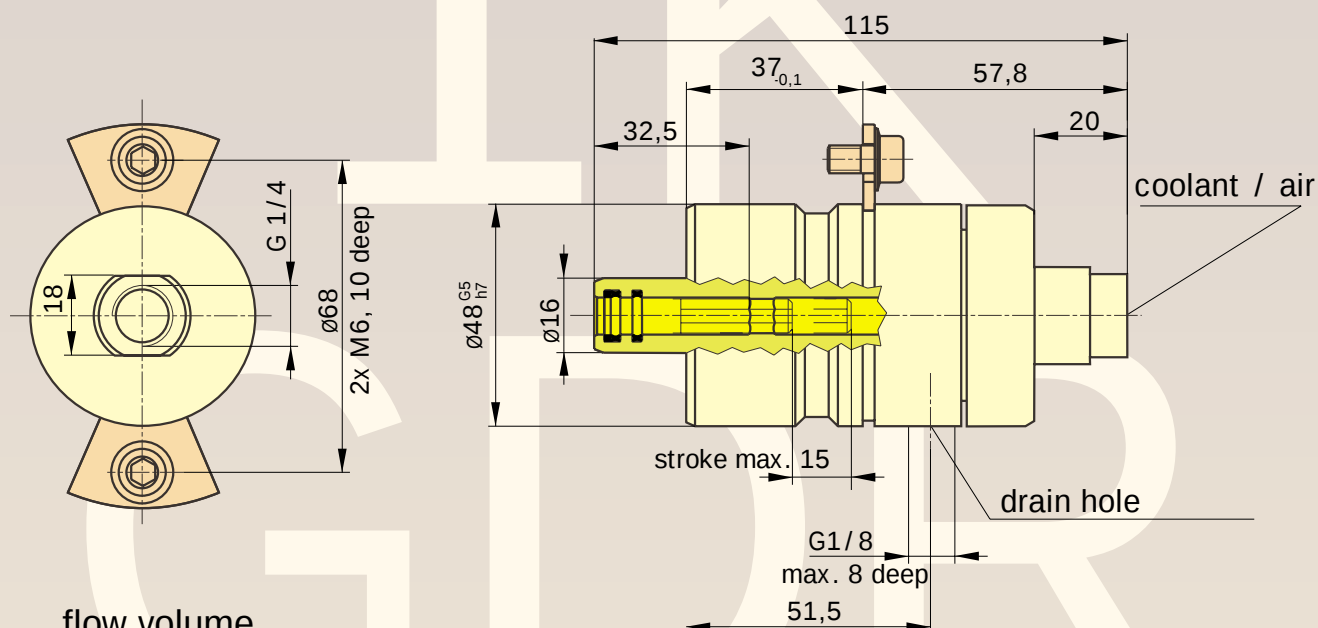
features
• hybrid bearing • closed sealing surface • balanced design • coolant • minimum volume lubrication (mixed externally) p_{max} = 5 bar • dry operation



code	
2	3

technical data	
spindle speed max. (min ⁻¹)	16.000
coolant pressure max. [bar]	50
cleaning air max.; n=0 min ⁻¹ [bar]	10
pressure air max.; n<10000 min ⁻¹ [bar]	5
required media purity according to ISO 4406 filter grade [μm]	-/16/13 <50

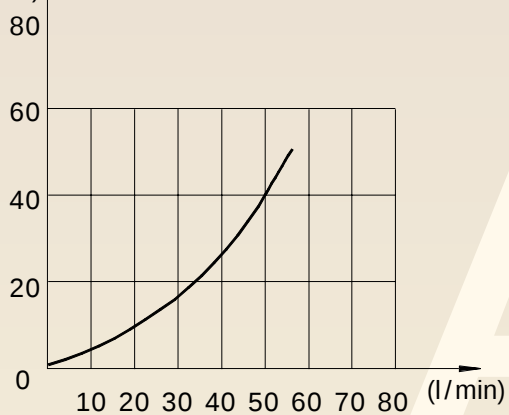
features	
• closed sealing surface • coolant • minimum volume lubrication (mixed externally) $p_{\max} = 5 \text{ bar}$ • dry operation	



flow volume
at orifice $\varnothing 5$

pressure

(bar) ↑



code	
2	4

technical data	
spindle speed max. (min ⁻¹)	16.000
coolant pressure max. [bar]	50
cleaning air max.; n=0 min ⁻¹ [bar]	10
pressure air max.; n<10000 min ⁻¹ [bar]	5
required media purity according to ISO 4406 filter grade [μm]	-/16/13 <50

features	
• closed sealing surface • coolant • minimum volume lubrication (mixed externally) p_{max} = 5 bar • dry operation	