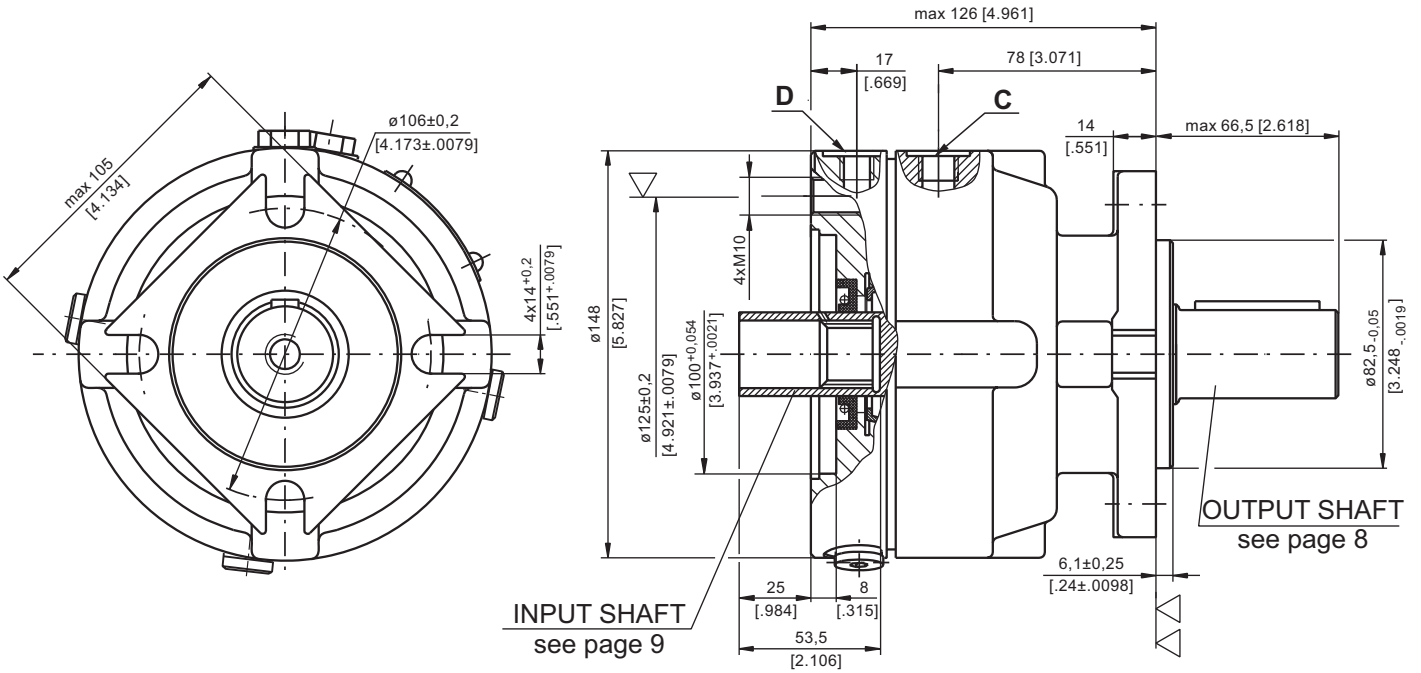


**HYDRAULIC DISC BRAKE FOR FLANGE ATTACHMENT
TO MSS AND MSV HYDRAULIC MOTORS**

TYPE LBS/289



- ▽ - Place for attachment:
LBS - tightening torque for screw M10x35 - 8.8 DIN 912 - 5 daNm [440 lb-in]
LBV - tightening torque for screw M10xL - 12.9 DIN 931 - 6⁺ daNm [530⁹⁰ lb-in]

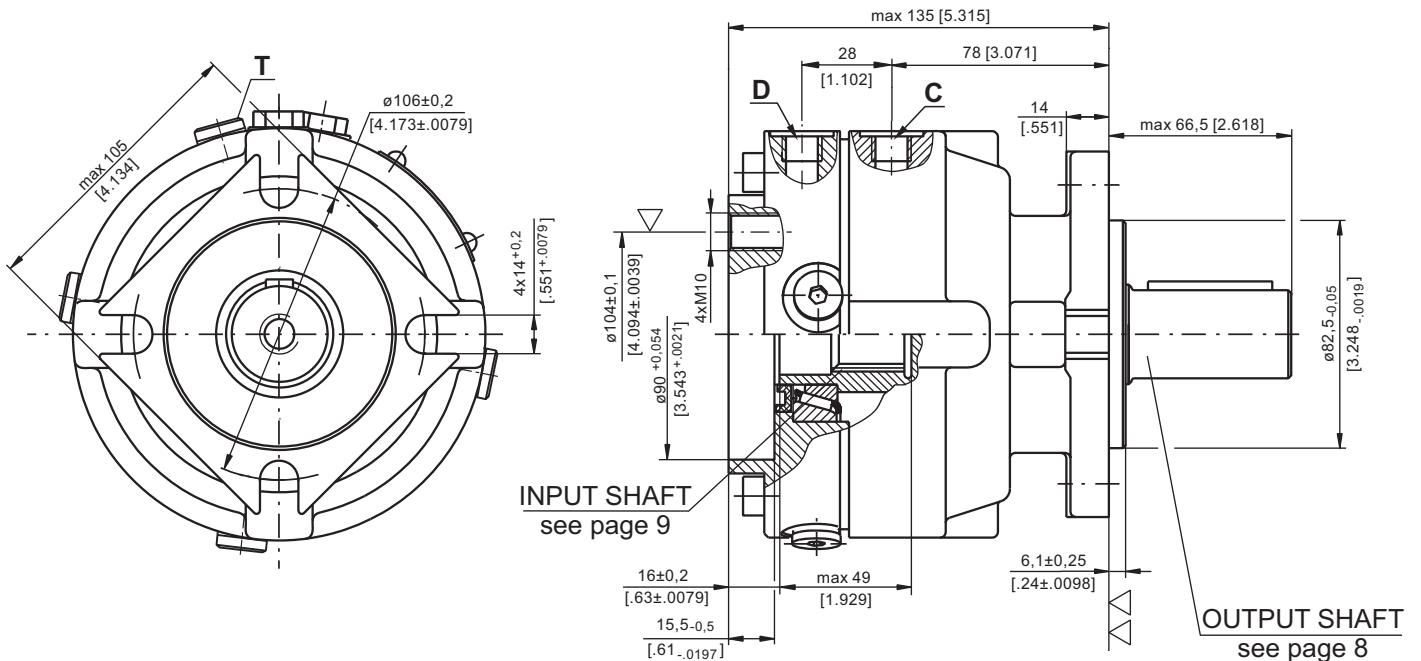
▽▽ - Place for attachment



mm [in]

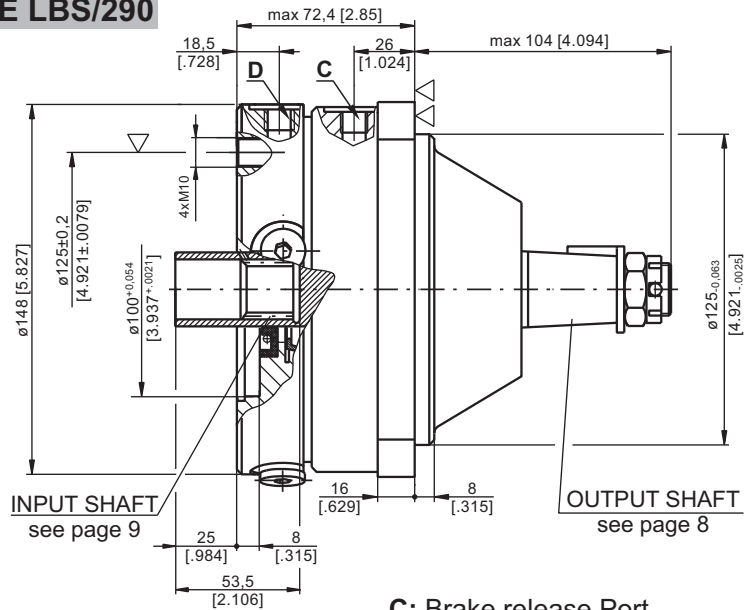
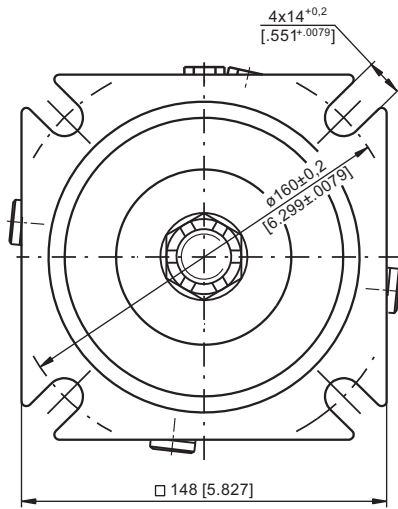
- C:** Brake release Port - G $\frac{1}{4}$, 9 mm [.35 in] depth
- D:** Drain plug for the Brake - G $\frac{1}{4}$, 9 mm [.35 in] depth
- T:** Drain plug for the Motor - G $\frac{1}{4}$, 9 mm [.35 in] depth

TYPE LBV/289



HYDRAULIC DISC BRAKE FOR FLANGE ATTACHMENT TO MSS AND MSV HYDRAULIC MOTORS

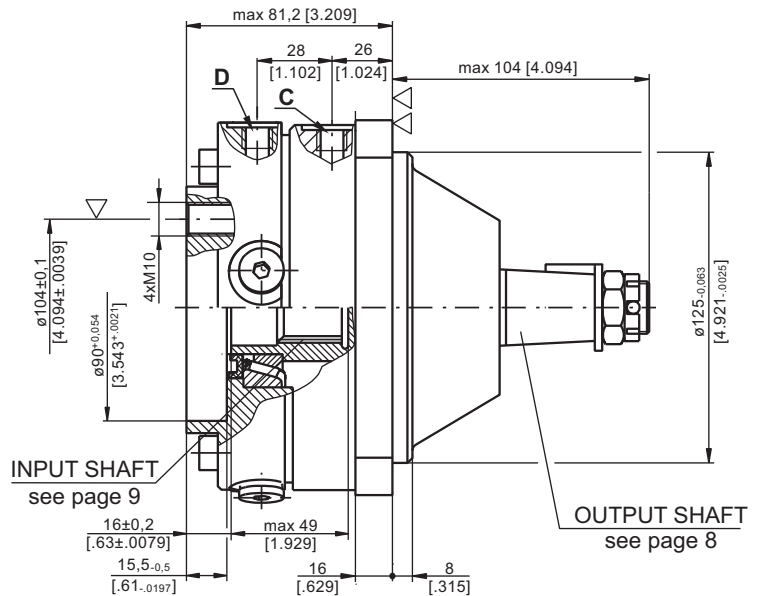
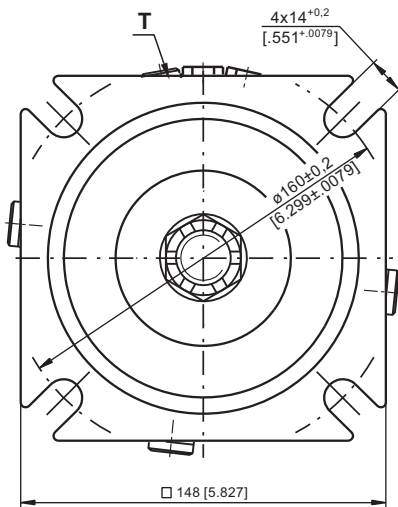
TYPE LBS/290



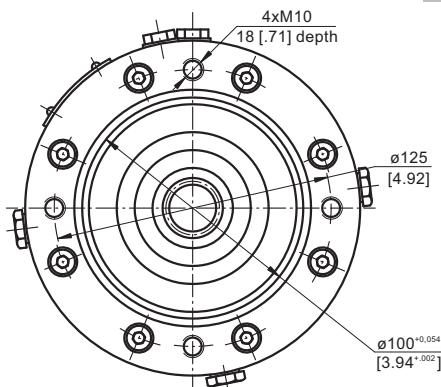
- ▽ - Place for attachment:
 LBS - tightening torque for screw M10x35 - 8.8 DIN 912 - 5 daNm [440 lb-in]
 LBV - tightening torque for screw M10xL - 12.9 DIN 931 - 6⁺ daNm [530⁹⁰ lb-in]
- ▽▽ - Place for attachment

- C:** Brake release Port
 - G¹/₄, 9 mm [.35 in] depth
- D:** Drain plug for the Brake
 - G¹/₄, 9 mm [.35 in] depth
- T:** Drain plug for the Motor
 - G¹/₄, 9 mm [.35 in] depth

TYPE LBV/290

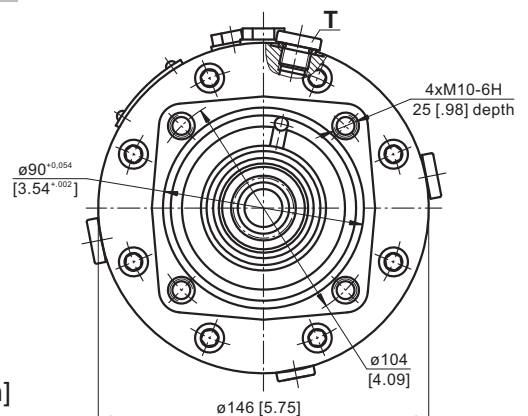


TYPE LBS/289(290)



INPUT FACE For Versions 289 and 290

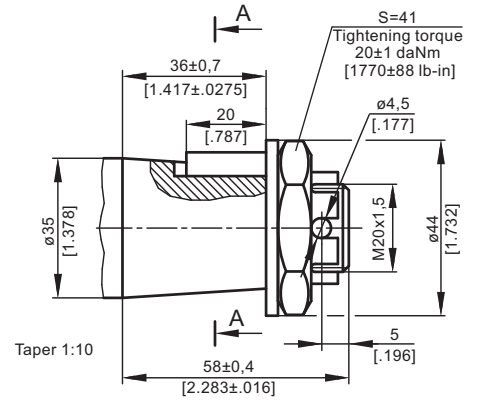
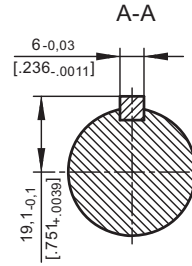
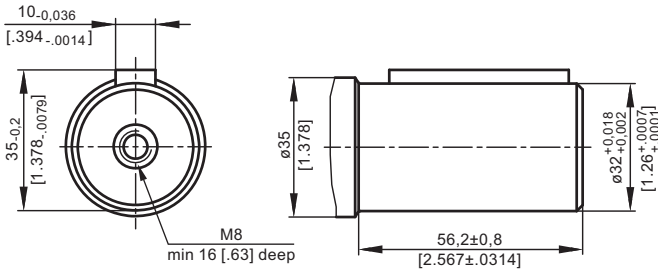
TYPE LBV/289(290)



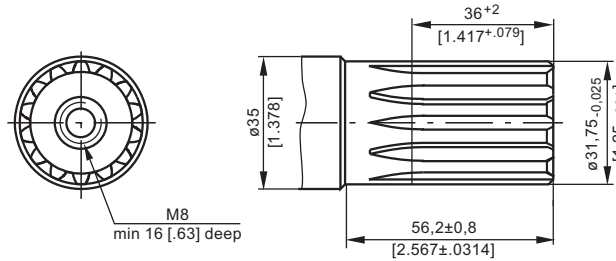
OUTPUT SHAFT EXTENSIONS

CB - $\varnothing 32$ straight, Parallel key A10x8x45 DIN 6885
Max. Torque 77 daNm [6815 lb-in]

KB - tapered 1:10, Parallel key B6x6x20 DIN 6885
Max. Torque 95 daNm [8400 lb-in]



SH - $\varnothing 1\frac{1}{4}$ " splined 14T, DP12/24 ANS B92.1-1970
Max. Torque 95 daNm [8400 lb-in]



SPECIFICATION DATA

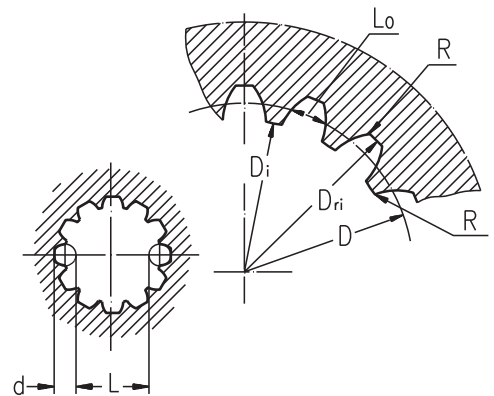
Description LBS/289(290) LBV/289(290)	21	32	43	63	L43	L63	
*Min. Static Torque, daNm [lb-in]	20-22 [1770-1947]	31-34 [2743-3009]	41-45 [3628-3982]	61-64 [5399-5665]	41-45 [3628-3982]	61-64 [5399-5665]	
Opening Pressure, bar [PSI]	min	12-13 [174-188]	18-20 [260-290]	24-26 [348-377]	37-39 [540-565]	20-22 [290-320]	21-23 [305-333]
	max	300 [4350]					
Min. oil quantity for brake releasing cm ³ [in ³]	7 - 8 [4,27 - .488]						
Oil volume cm ³ [in ³]	50 - 120 [3,05 - 7,35]						
Max. Pressure in drain space bar [PSI]	5 [72]						
Weight kg [lb]	9 [19,8]						

* Static torque is obtained at working pressure - 0 bar [0 PSI].

INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

Fillet Root Side Fit	LBS(V)/289 LBS(V)/290		LBS(V)/314 LBS(V)/315	
	mm	inch	mm	inch
Number of Teeth z	12	12	16	16
Diametral Pitch DP	12/24	12/24	12/24	12/24
Pressure Angle	30°	30°	30°	30°
Pitch Dia. D	25,4	1	33,8656	1.3333
Major Dia. D _{ri}	28,0-0,1	1.1 ± 1.098	38,4 ^{+0,4}	1.5118±1.5275
Minor Dia. D _i	23,0 ^{+0,033}	.907 ± .905	32,15 ^{+0,06}	1.2657±1.2673
Space Width [Circular]Lo	4,308±0,020	.1704 ± .1688	4,516±0,037	.1763±.1791
Fillet Radius R	0,2	.008	0,5	.02
Max. Measurement between Pins L	17,62 ^{+0,15}	.699 ± .694	26,9 ^{+0,10}	1.063±1.059
Pin Dia. d	4,835±0,001	.19039±.19031	4,835±0,001	.19026±.19034
Corrected x.m	+0,8	+0,031	+1,0	+0,039

Standard ANS B92.1-1970, class 5
[m=2.1166]

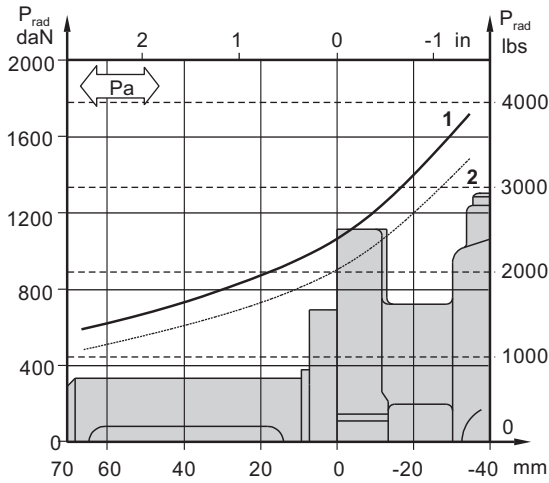


LOAD CURVE

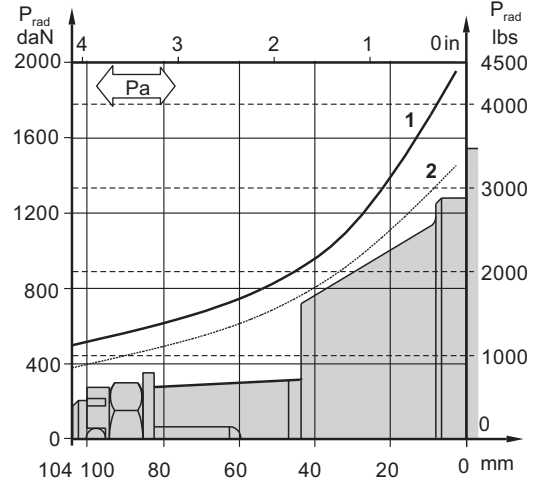
The curve applies to a B10 bearing life of 3000 hours at 200 RPM

- 1: Pa<350 daN [787 lbs]
- 2: Pa=500 daN [1125 lbs]

LBS(V)/289



LBS(V)/290



ORDER CODE - LB/288

1	2	3	4	5
LB/288	-			

Pos.1 - Input Shaft Hole

C, CO, SH, CB, SB

Pos.2 - Static Torque code (See Specification data)

7, 14, 21, 32, 43, 63

Pos.3 - Output Shaft Extensions**

- C** - ø25 straight, Parallel key A8x7x32 DIN 6885
- CO** - ø1" straight, Parallel key ¼"x¼"x¼" BS46
- SH** - ø25,32 splined BS 2059 (SAE 6B)
- SA** - ø24,5 splined B25x22 DIN 5482

CB - ø32 straight, Parallel key A10x8x45 DIN 6885

KB - ø35 tapered 1:10, Parallel key B6x6x20 DIN6885

Pos.4 - Option (Paint)***

omit - no Paint

P - Painted

PC - Corrosion Protected Paint

Pos.5 - Design Series

omit - Factory specified

ORDER CODE - LBS, LBV

1	2	3	4	5	6
LB	/	-			

Pos.1 - Type

- S** - Disc Brake for short motor S- MSS
- V** - Disc Brake for very short motor V- MSV

Pos.2 - Design code

- 289** - for MSS and MSV Motors
- 290** - for MSS and MSV Motors (Wheel Mount)

Pos.3 - Static Torque code (See Specification data)

21, 32, 43, 63, L43, L63

Pos.4 - Output Shaft Extensions*

- CB** - ø32 straight, Parallel key A10x8x45 DIN 6885
- KB** - ø35 tapered 1:10, Parallel key B6x6x20 DIN6885
- SH** - ø1¼" splined 14T ANS B92.1-1970

Pos.5 - Option (Paint)**

omit - no Paint

P - Painted

PC - Corrosion Protected Paint

Pos.6 - Design Series

omit - Factory specified

NOTES:

- * The permissible output torque for shafts must not be exceeded! For Max. Torque values see data on pages 5 and 8.
- ** The color is by customer's request.

The Disc Brakes are mangano-phosphatized as standard.

ATTENTION:

1. Hydraulic brake is delivered without oil (it is lubricated only).
2. Hydraulic brake is filled through the drain port **D**. Space is filled with 50 ÷ 120 cm³ [3.05÷7.32 in³] mineral oil HLP (DIN 51524) or HM (ISO 6743/4). For LB/288 fill oil after hydraulic motor assembly.
3. In all brakes, friction discs and separators should be lubricated.