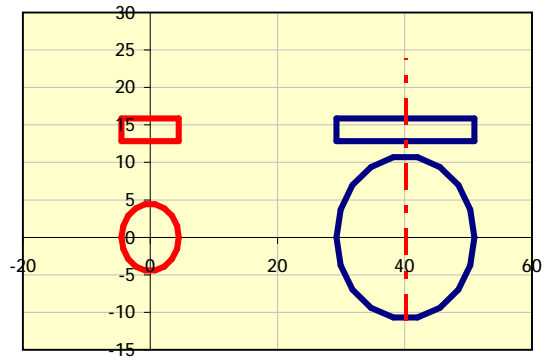
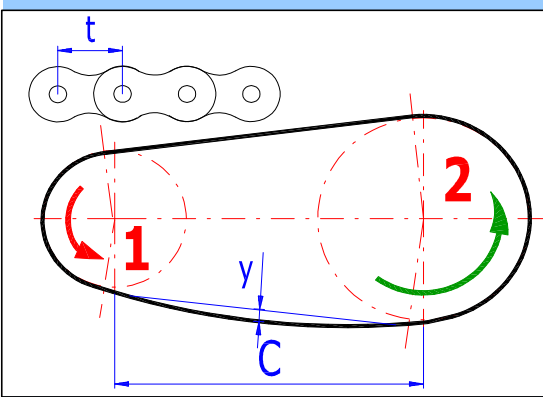


? Roller chain transmission													
? Calculation without errors.		Sprocket1	Sprocket2										
ii Project information													
? Input section													
1.0 The manner of loading, working parameters													
1.1 Calculation units		Imperial (lbf, in, HP...)											
1.2 Transferred power	P	40,00	39,20 [HP]										
1.3 Speed of the sprocket wheel (desired)	n	970	390 [/min]										
1.4 Speed of the sprocket wheel (actual)	n	970	384,34 [/min]										
1.5 The desired / actual transmission ratio	i	2,487	2,524										
1.6 Torque	Mk	2597,94	6425,57 [lb.in]										
1.7 The type of driving machine (loading)		B...Moderate shocks											
1.8 The type of driven machine (loading)		B...Light duty											
1.9 Type of lubrication		A...Requested failure free											
1.10 Number of links of the chain		Even only											
1.11 Number of teeth of the sprocket wheel		Odd only											
2.0 Automatic design													
2.1 Chain type													
2.2		D...Standard roller chains (EU) / DIN 8187, ISO R-606, BS 228											
2.3 Axis distance for Automatic design		27,56	Optimal [in]										
2.4 Range of smaller sprocket teeth		17	21										
2.5 Automatic design - press the button													
2.6 Sort results according to parameter		Transmission weight											
2.7 Table of solutions													
2.8	Type	z1	z2	n2	i	A	Pp	v	SD	p	SP	Pp%	m
2.9	16B - 2	21	53	384.3	2.52	40.18	62.75	1704	22.06	1321	1.23	83	120.6
3.0 Design and calculation													
3.1 Chain selection - Standard chain No. (Pitch)		20B - 2 (1,25)											
3.2 Chain pitch / chains strands number	t	1,250	2										
3.3 Sprocket - number of teeth / recommended	z	21	53 23 (min=15)										
3.4 Pitch diameter	Dp	8,387	21,100 [in]										
3.5 Desired axis distance / recommended	C	40,18	50 [in]										
3.6 Actual axis distance / min.-max.	C	40,12	20,6 - 200 [in]										
3.7 Number of chain links	X	102	102										
3.8 Length of the chain	L	127,5 [in]											
3.9 Speed of the chain / max	v	2129,65	< 2236 [ft/min]										
3.10 Design power / table power	Pp	58,78	< 68,3 [HP]										
3.11 Tensile force / Centrifugal force	Fu/Fc	619,8	197,3 [lbf]										
3.12 Breaking force (table) / Force on the chain	FB/Fr	38218	817,1 [lbf]										
3.13 Static coefficient of safety against breakage	SB	46,77	> 20,41										
3.14 Dynamic coefficient of safety against breakage	SD	35,98	> 15,95										
3.15 The calculated / permitted pressure in the chain joint	p	892	< 1383,4 [psi]										
3.16 Level of safety of the chain joint	SP	1,55	> 1.00										
3.17 Total weight of the transmission / chain	m	197,57	53,55 [lb]										



?

Results section

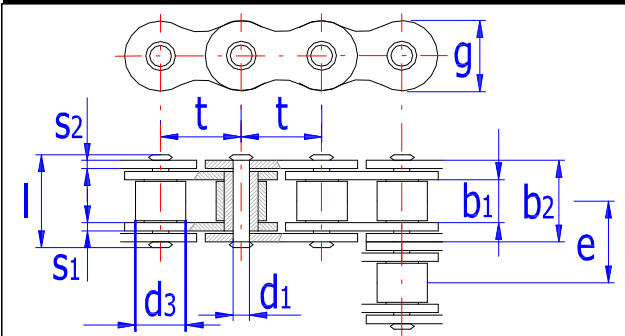
4.0 Results, coefficients

4.1 Coefficients for power corrections

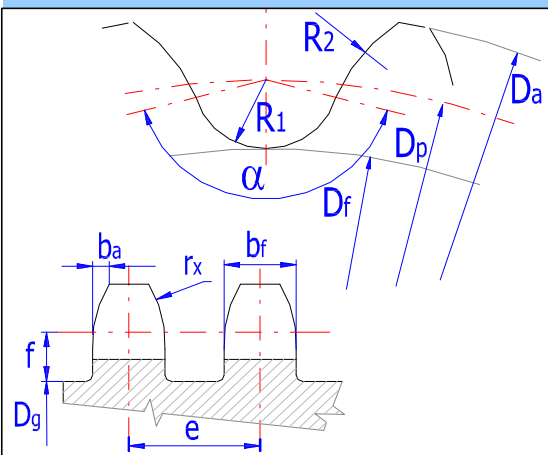
- 4.2 Coefficient of the number of teeth
- 4.3 Coefficient of the transmission ratio
- 4.4 Coefficient of shock (Service factor)
- 4.5 Coefficient of distances of axes
- 4.6 Coefficient of lubrication
- 4.7 Coefficient of temperature
- 4.8 Coefficient of service life
- 4.9 Calculation and setting of coefficients according to
- 4.10 Recommended type of lubrication
- 4.11 Type of lubrication (permissible)
- 4.12 Maximum slackness of the chain
- 4.13 Minimum / Maximum speed of sprocket 2
- 4.14 Coefficient of speed variation

K1	1,00	0,90
K2	1,05	1,05
K3	1,30	1,30
K4	1,08	1,08
K5	1,00	1,00
K6	1,00	1,00
K7	1,00	1,00
ISO 10823		
Oil mist lubrication		
Oil pressure circulation lubrication		
y	0,80	[in]
	2105,87	2133,40
		[ft/min]
ξ	1,30	[%]

5.0 Dimensions



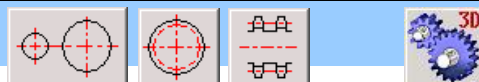
d1	0,401	[in]
d3	0,750	[in]
b1	0,770	[in]
b2	1,142	[in]
t	1,250	[in]
g	1,024	[in]
l	3,059	[in]
e	1,435	[in]
s1	0,177	[in]
s2	0,138	[in]



Da	8,981	21,694	[in]
Dp	8,387	21,100	[in]
Df	7,622	20,336	[in]
R1	0,382		[in]
R2	2,898	11,442	[in]
α	125,714	128,302	[°]
bf	0,716		[in]
ba	0,094		[in]
rx	0,602		[in]
f	0,875		[in]
Dg	6,637	19,350	[in]

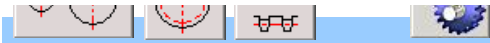
6.0 Graphical output, CAD systems

- 6.1 2D drawing output to: AutoCAD LT xx
- 6.2 2D drawing scale: Automatic



6.3 Detail:

Sprocket1



6.4 Text description (Information for BOM)

Row 1 (BOM attribute 1)
Row 2 (BOM attribute 2)
Row 3 (BOM attribute 3)

Sprocket1

Sprocket1 20B - 2
z1=21, n1=970, P=40 [HP]
DIN 8187, ISO R-606, BS 228

Row 1 (BOM attribute 1)
Row 2 (BOM attribute 2)
Row 3 (BOM attribute 3)

Sprocket2

Sprocket2 20B - 2
z2=53, n2=384,3, P=40 [HP]
DIN 8187, ISO R-606, BS 228

Row 1 (BOM attribute 1)
Row 2 (BOM attribute 2)
Row 3 (BOM attribute 3)

Chain

Chain 20B - 2
X =102, L=127,5 [in]
DIN 8187, ISO R-606, BS 228