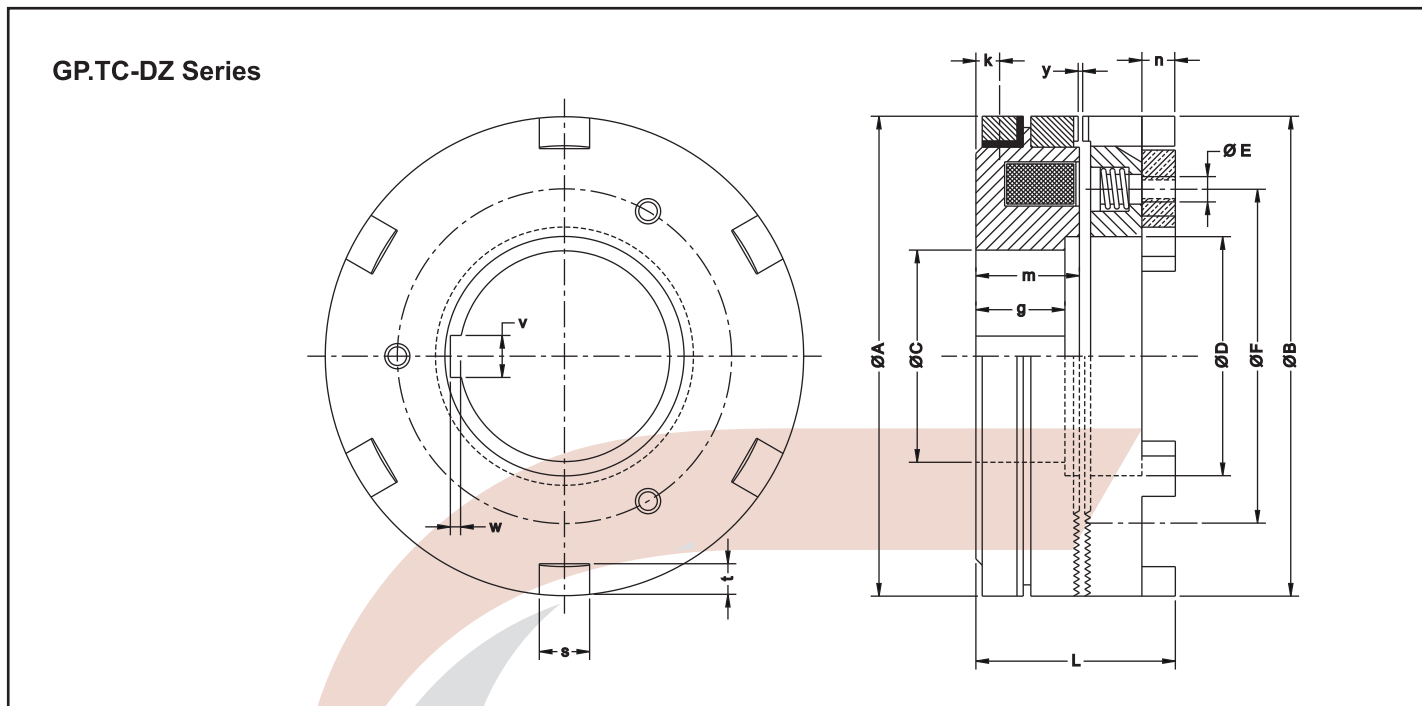


# Dimension Data

## Toothed Clutches GP.TC Series

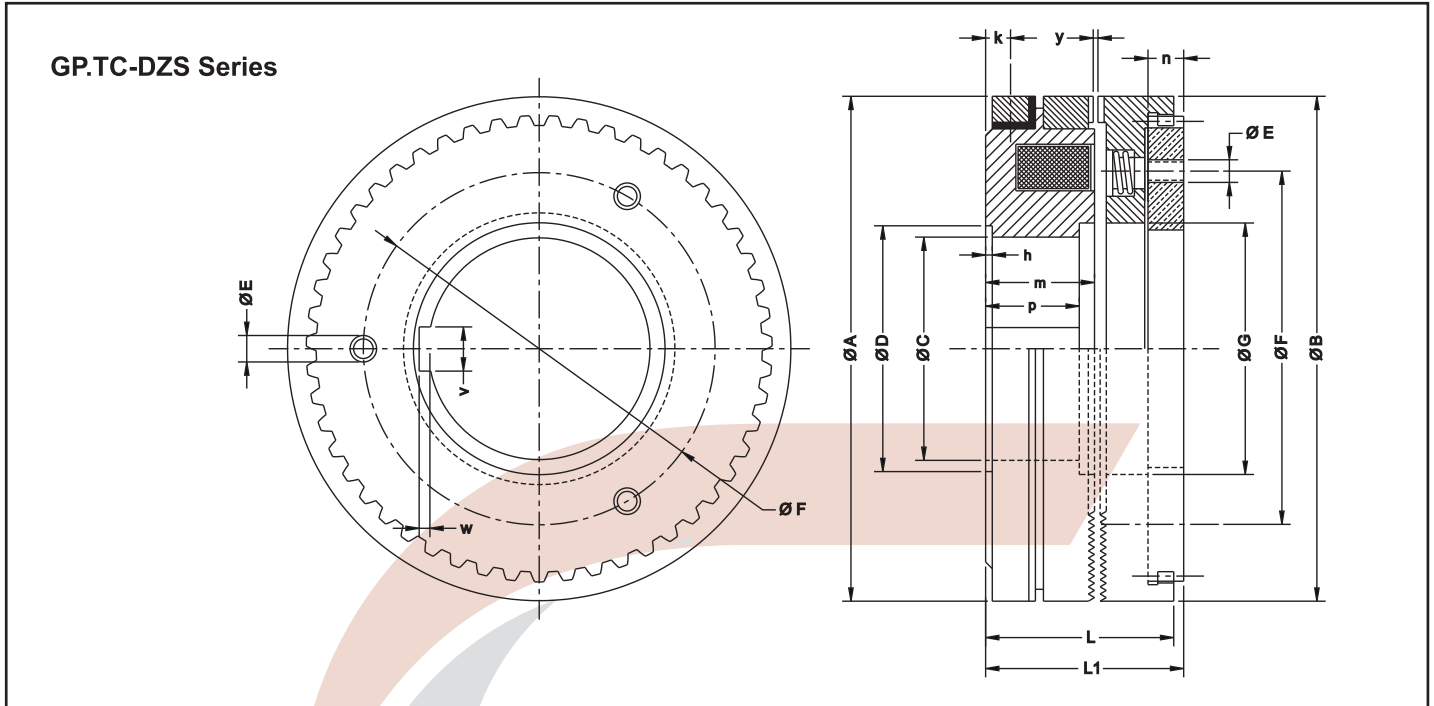


Model	Dimensional Data	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP
		.25Z	.5Z	.1Z	.2DZ	5DZ	10DZ	10EZ	20DZ	40DZ	40DZ	80Z	120EZ
Static torque	Nm	10	20	50	100	250	500	500	1000	2000	3000	4000	6000
Speed at 10 m per sec.	min <sup>-1</sup>	3150	2700	2300	2200	1650	1400	1350	1150	1150	950	750	700
Engagement time	ms	15	20	22	25	30	40	40	65	75	80	80	90
Disengagement time	ms	35	46	46	58	80	102	102	115	190	250	270	335
Coil power consumption at 20°C	W	7.5	12	24	28	48	57	58	76	83	96	100	127
Mass moment of inertia side X	10 <sup>3</sup> kgm <sup>2</sup>	0.16	0.31	0.80	1.38	3.45	6.75	8.54	19.25	41.0	55.0	98.5	154.8
Mass moment of inertia side Z	10 <sup>3</sup> kgm <sup>2</sup>	0.06	0.09	0.21	0.50	1.23	3.08	3.68	8.75	21.25	31.75	54.75	71.5
Mass (weight)	kg	0.32	0.48	0.87	1.16	1.98	3.15	3.45	6.20	9.61	11.72	17.56	19.90
L	mm	25	27.5	37	38	43	50	51	60	68	73	81	84
ØA / ØB	mm	60	70	82	95	114	134	140	166	195	210	240	258
ØC (H7)	mm	12	15	20	28	35	40	50	45	65	70	75	85
ØD +0.2	mm	23	26	35	45	53	63	70	80	89	100	112	134
ØE	mm	M3	M3	M4	M4	M4	M5	M5	M6	M6	M6	M6	M6
ØF +0.1	mm	40	45	55	65	80	100	100	120	150	150	150	170
m	mm	15.5	17	23	23	26	29	30	35	38.5	38	42	46
g	mm	12	14	23	20	23	26	26	30	33.5	35	37	42
k	mm	3.5	3.5	5.5	5.5	6	7	7	7	7	8.5	8.5	8.5
n	mm	3.5	4	6	6	7	8	8	9.5	12	14	14.5	16.5
s +05.0->0.1	mm	6	7	8	8	10	10	10	12	15	18	20	20
t	mm	4	5	7.5	7.5	8	9	9	11	12	12	13	15
v	mm	4	5	6	8	10	12	14	14	18	20	20	22
w	mm	1.1	1.3	1.7	1.7	2.1	2.1	2.6	2.6	3.1	4.1	4.1	4.1
Keyways : number	-	1	1	1	1	1	2	2	2	2	4	4	4
position	-	-	-	-	-	-	180°	180°	180°	180°	90°	90°	90°
y	mm	0.3 <sup>+0.2</sup>	0.3 <sup>+0.2</sup>	0.3 <sup>+0.2</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>

\* Optional : Bore available with splines to DIN 5642

# Dimension Data

## Toothed Clutches GP.TC Series

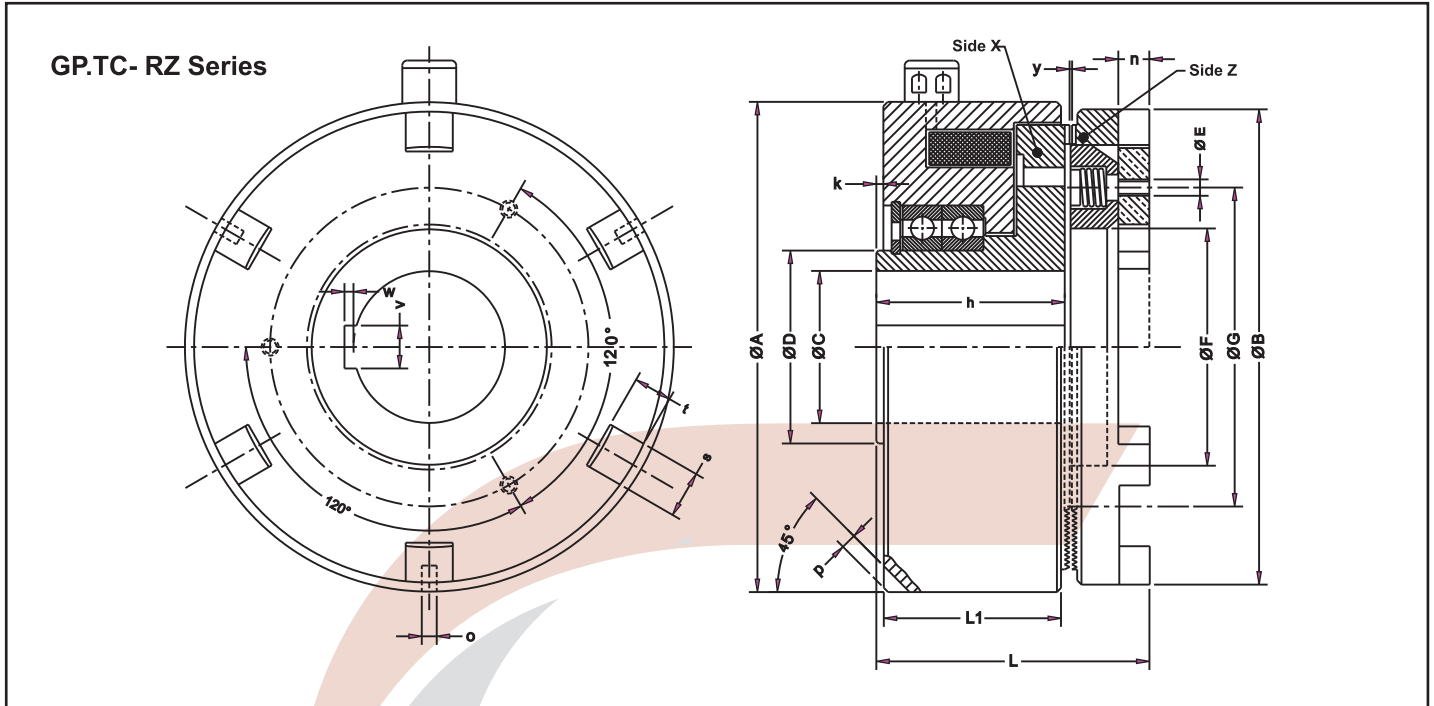


Model	Dimensional Data	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP	GP		
		.25ZS	.5ZS	1ZS	2DZS	5DZS	10DZS	10EZS	20EZS	20DZS	40DZS	60DZS	80ZS	120EZS	
Static torque	Nm	20	40	100	200	350	600	600	1200	1200	2200	3000	4000	6000	
Speed at 10 m per sec.	min <sup>-1</sup>	3150	2700	2300	2200	1650	1400	1350	1150	1150	950	900	750	700	
Engagement time	ms	15	20	22	25	30	40	40	65	65	75	80	80	90	
Disengagement time	ms	55	80	80	90	110	165	165	275	275	440	550	770	1100	
Coil power consumption at 20°C	W	10	12	20	25	45	55	55	70	65	75	90	100	140	
Mass moment of inertia side X	10 <sup>3</sup> kgm <sup>2</sup>	0.16	0.31	0.80	1.38	3.45	6.75	8.54	19.25	16.75	41.0	55.0	98.5	154.8	
Mass moment of inertia side Z	10 <sup>3</sup> kgm <sup>2</sup>	0.06	0.10	0.23	0.55	1.35	3.38	4.08	9.50	9.05	23.5	35.2	60.5	78.5	
Mass (weight)	kg	0.32	0.48	0.86	1.18	1.93	3.1	3.3	9.95	5.2	9.45	11.5	17.3	20	
L	mm	25	27.5	37	38	43	50	51	60	57	68	73	81	84	
L1	mm	30.5	32.5	40	41	46	53	54	63.5	60.5	71	75	83.5	86.5	
$\varnothing A / \varnothing B$	mm	60	70	82	95	114	134	140	166	166	195	210	240	258	
$\varnothing C$ (H7)	mm	12	15	20	28	35	40	50	45	50	65	70	75	85	
$\varnothing D$ (H8)	mm	24	27	36	42	52	60	70	80	90	90	100	110.5	123	
E	mm	M3	M3	M4	M4	M4	M5	M5	M6	M6	M6	M6	M6	M6	
$\varnothing F + 0.1$	mm	40	45	55	65	80	100	100	120	120	150	150	150	170	
$\varnothing G + 0.2$	mm	23	26	35	45	53	63	70	80	89	89	100	112	133	
m	mm	15.5	17	23	23	23	26	26	30	27	33.5	35	37	42	
p	mm	15.5	17	23	23	26	29	30	35	32	38.5	38	42	46	
$h+0.05$	mm	1.5	1.5	1.5	1.5	2	2	2	2.5	2.5	3	3	3	3	
k	mm	3.5	3.5	5.5	5.5	6	7	7	7	7	7	8.5	8.5	8.5	
n	mm	3.5	4	6	6	7	8	8	9.5	9.5	12	14	14.5	16.5	
v	mm	4	5	6	8	10	12	14	14	14	18	20	20	22	
w	mm	1.1	1.3	1.7	1.7	2.1	2.1	2.6	2.6	2.6	3.1	4.1	4.1	4.1	
y	mm	0.3 <sup>+0.2</sup>	0.3 <sup>+0.2</sup>	0.3 <sup>+0.2</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	
Gear DIN5480 Pressure Angle30*	Number of Teeth	-	26	31	36	42	51	38	38	48	48	34	36	42	46
	Module	mm	2	2	2	2	2	3	3	3	3	5	5	5	5

\* Optional : Bore available with splines to DIN 5642

# Dimension Data

## Toothed Clutches GP.TC Series

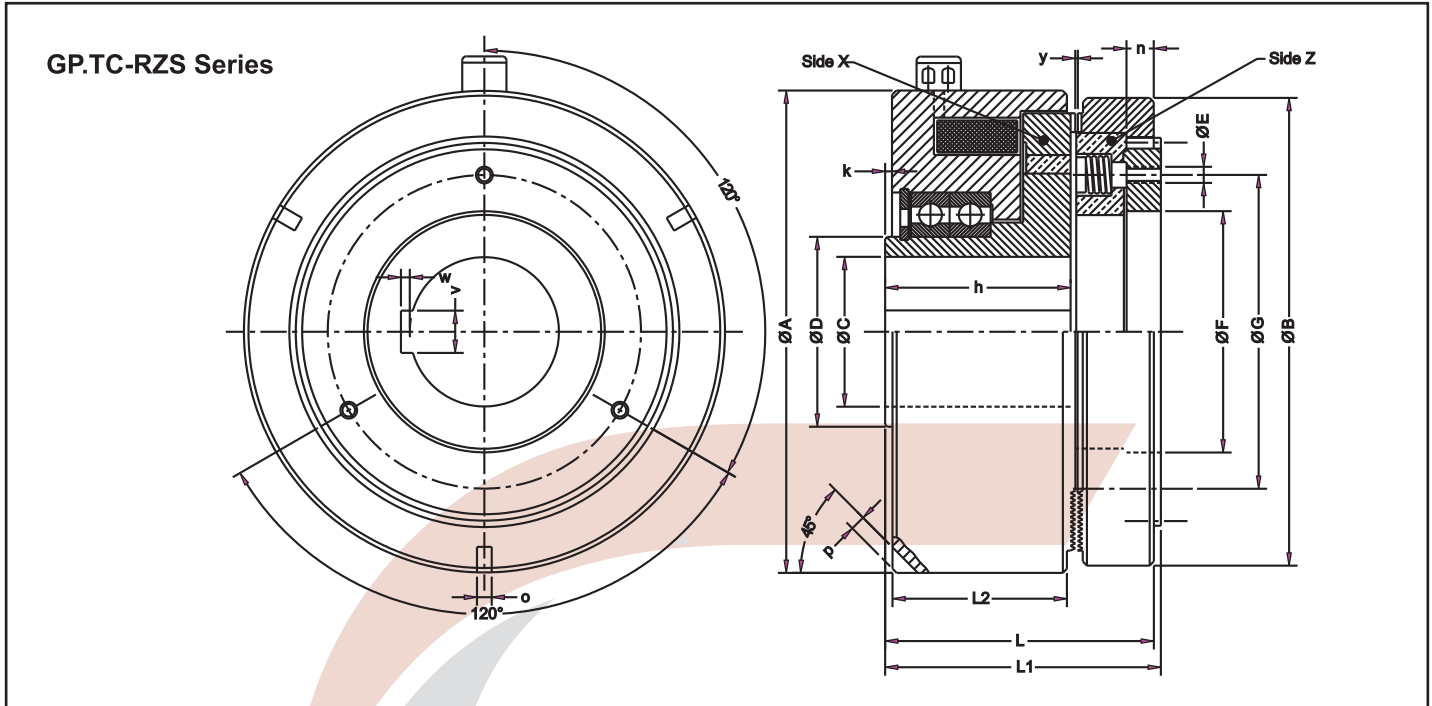


Model Dimensional Data		GP	GP	GP	GP	GP	GP	GP	GP	GP
		1RZ	2RZ	5RZ	10RZ	20RZ	40RZ	60RZ	80RZ	120RZ
Static torque	Nm	50	100	250	500	1000	2000	3000	4000	6000
Speed at oil operation	min <sup>-1</sup>	4500	4000	3800	3800	3500	3500	3000	3000	2500
Speed at dry operation	min <sup>-1</sup>	2200	2000	2000	2000	1800	1800	1500	--	--
Engagement time	ms	20	30	40	60	70	90	100	120	130
Disengagement time	ms	46	58	110	172	265	380	480	630	735
Coil power consumption at 20°C	W	42	52	64	85	115	140	170	210	240
Mass moment of inertia side X	10 <sup>3</sup> kgm <sup>2</sup>	0.20	0.46	1.15	2.50	6.30	18.70	27.00	51.00	76.00
Mass moment of inertia side Z	10 <sup>3</sup> kgm <sup>2</sup>	0.28	0.58	1.30	2.90	8.00	18.70	30.00	60.00	72.50
Mass (weight)	kg	1.3	1.9	3.1	5.4	9.5	15.5	19.7	29.0	36.5
L	mm	54	59	66	80	90	96	111	119	126
L1	mm	36.5	40	43	53	60	51	59	61	68
ØA	mm	82	95	114	134	166	195	210	240	258
B	mm	80	95	109	127	162	195	210	240	258
ØC (H7)	mm	25	35	38	46	60	65	68	78	85
ØD (H8)	mm	35	45	50	60	75	80	85	95	105
E	mm	M4	M4	M4	M5	M6	M6	M6	M6	M6
ØF ± 0.1	mm	38	46	56	62	79	100	105	115	130
ØG ± 0.2	mm	52	62	70	85	108	150	150	150	170
k	mm	1	1	1	1	1	2	2	2	2
h-0.2	mm	37	41	44	54	61	65	74	77	85
n	mm	6	6	7	8	9.5	12	14	14.5	16.5
o+0.2	mm	6	6	8	8	8	12	12	12	12
p	mm	3	4	4	5	6	8	8	10	10
s+0.05->+0.1	mm	8	8	10	10	12	15	18	20	20
t	mm	7.5	8.5	9	10	13.5	12	12	13	15
v	mm	8	10	10	14	18	18	20	22	22
w	mm	1.7	2.1	2.1	2.6	3.1	3.1	4.1	4.1	4.1
y	mm	0.3 <sup>+0.2</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>

\* Optional : Bore available with splines to DIN 5642

# Dimension Data

## Toothed Clutches GP.TC Series



1ZS	2ZS	Model Dimensions Data	GP	GP	GP	GP	GP	GP	GP	GP	GP
			10RZS	20RZS	40RZS	60RZS	80RZS	120RZS			
Static torque	Nm		100	200	300	600	1400	2000	3000	4000	6000
Speed at oil operation	min <sup>-1</sup>		4500	4000	3800	3800	3500	3500	3000	3000	2500
Speed at dry operation	min <sup>-1</sup>		2200	2000	2000	2000	1800	1800	1500	1500	1500
Engagement time	ms		20	30	40	60	70	90	100	120	130
Disengagement time	ms		80	90	110	165	275	440	550	800	1100
Coil power consumption at 20°C	W		36	48	58	87	110	140	180	190	230
Mass moment of inertia side X	10 <sup>3</sup> kgm <sup>2</sup>		0.20	0.46	1.15	2.6	6.3	18.7	27.0	51.0	76.0
Mass moment of inertia side Z	10 <sup>3</sup> kgm <sup>2</sup>		0.35	0.72	1.6	3.5	9.5	21.0	33.4	65.7	79.5
Mass (weight)	kg		1.4	2.0	3.3	5.7	10.0	16.0	20.5	30.0	38.0
L	mm		54	59	66	80	90	96	111	119	126
L1	mm		57	62	69	83	93.5	99	113	121.5	128.5
L2	mm		36.5	40	43	53	60	51	59	61	68
ØA	mm		82	95	114	134	166	195	210	240	258
ØB	mm		80	93	109	127	162	195	210	240	258
ØC (H7)	mm		25	35	38	46	60	65	68	78	85
ØD	mm		35	45	50	60	75	80	85	95	105
E	mm		M4	M4	M4	M5	M6	M6	M6	M6	M6
Ø F +0.1	mm		38	46	56	62	79	100	105	115	130
Ø G +0.2	mm		52	62	70	85	108	150	150	150	170
k	mm		1	1	1	1	1	2	2	2	2
h-0.2	mm		37	41	44	54	61	65	74	77	85
n	mm		6	6	7	8	9.5	12	14	14.5	16.5
o+0.2	mm		6	6	8	8	8	12	12	12	12
p	mm		3	4	4	5	6	8	8	10	10
v	mm		8	10	10	14	18	18	20	22	22
w	mm		1.7	2.1	2.1	2.6	3.1	3.1	4.1	4.1	4.1
y	mm		0.3 <sup>+0.2</sup>	0.4 <sup>-0.20</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>	0.4 <sup>+0.3</sup>
Gear DIN5480	Number of Teeth	--	31	36	42	51	42	32	36	42	46
Pressure Angle 30*	Module	--	2	2	2	2	3	5	5	5	5

\* Optional : Bore available with splines to DIN 5642