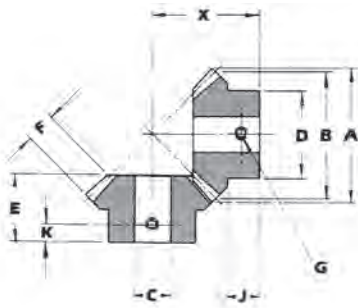


## Straight – 1:1 ratio

### Brass, 16 DP to 64 DP



Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
16	16	1.088	1.000	0.312	0.780	0.756	0.234	M4	0.455	0.187	1.064	<b>B16-16-B</b>
16	32	2.088	2.000	0.500	1.562	0.846	0.450	M4	0.351	0.156	1.500	<b>B16-32-B</b>
24	24	1.059	1.000	0.250	0.781	0.600	0.250	M4	0.307	0.156	0.906	<b>B24-24-B</b>
24	30	1.309	1.250	0.250	0.937	0.636	0.300	M4	0.307	0.156	1.031	<b>B24-30-B</b>
24	36	1.559	1.500	0.312	1.301	0.677	0.312	M4	0.338	0.156	1.187	<b>B24-36-B</b>
32	16	0.544	0.500	0.188	0.390	0.351	0.125	M3	0.195	0.094	0.500	<b>B32-16-B</b>
32	24	0.794	0.750	0.188	0.625	0.455	0.187	M3	0.250	0.125	0.687	<b>B32-24-B</b>
32	32	1.044	1.000	0.250	0.780	0.565	0.250	M3	0.265	0.156	0.875	<b>B32-32-B</b>
48	15	0.342	0.312	0.125	0.270	0.214	0.070	M3	0.135	0.070	0.312	<b>B48-15-B</b>
48	18	0.404	0.375	0.125	0.312	0.293	0.093	M3	0.188	0.094	0.406	<b>B48-18-B</b>
48	30	0.654	0.625	0.250	0.468	0.473	0.125	M3	0.295	0.156	0.687	<b>B48-30-B</b>
64	32	0.522	0.500	0.188	0.390	0.407	0.125	M3	0.256	0.125	0.562	<b>B64-32-B</b>

#### Material

Brass BS2874:1986 C2121

pitch line angle 45°

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010''$ .

Angular accuracy between shafts  $\pm 0^{\circ}.5'$ .

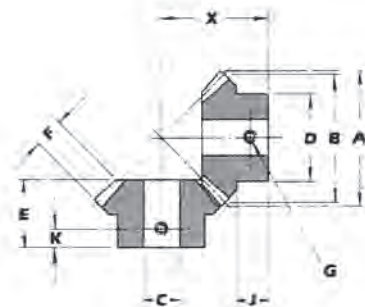
Shaft axes should intersect within  $\pm 0.001''$ .

Mounting distance tolerance (Dimn. X)  $\begin{matrix} + \text{NIL} \\ - .002 \end{matrix}$

These gears are NOT hardened. can only be run at a 90° shaft angle extra pinion or gear available

### Straight – 1:1 ratio

### Steel, 5 DP to 64 DP



GEARS

Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
5	24	5.083	4.800	1.250	3.845	2.481	1.125	—	1.123	—	4.000	<b>B 5-24-S</b>
6	24	4.236	4.000	1.000	3.125	2.025	1.000	—	0.812	—	3.250	<b>B 6-24-S</b>
8	24	3.177	3.000	0.750	2.343	1.374	0.625	—	0.577	—	2.375	<b>B 8-24-S</b>
10	20	2.141	2.000	0.625	1.562	1.145	0.500	—	0.531	—	1.750	<b>B10-20-S</b>
10	25	2.641	2.500	0.750	1.875	1.315	0.562	—	0.561	—	2.124	<b>B10-25-S</b>
12	24	2.118	2.000	0.500	1.602	1.306	0.375	M6	0.801	0.375	2.000	<b>B12-24-S</b>
16	16	1.088	1.000	0.312	0.780	0.756	0.234	M4	0.455	0.187	1.064	<b>B16-16-S</b>
16	32	2.088	2.000	0.500	1.562	0.846	0.450	M4	0.351	0.156	1.500	<b>B16-32-S</b>
24	24	1.059	1.000	0.250	0.781	0.600	0.250	M4	0.307	0.156	0.906	<b>B24-24-S</b>
24	30	1.309	1.250	0.250	0.937	0.636	0.300	M4	0.307	0.156	1.031	<b>B24-30-S</b>
24	36	1.559	1.500	0.312	1.301	0.677	0.312	M4	0.338	0.156	1.187	<b>B24-36-S</b>
32	16	0.544	0.500	0.188	0.390	0.351	0.125	M3	0.195	0.094	0.500	<b>B32-16-S</b>
32	24	0.794	0.750	0.188	0.625	0.455	0.187	M3	0.250	0.125	0.687	<b>B32-24-S</b>
32	32	1.044	1.000	0.250	0.780	0.565	0.250	M3	0.265	0.156	0.875	<b>B32-32-S</b>
48	15	0.342	0.312	0.125	0.270	0.214	0.070	M3	0.135	0.070	0.312	<b>B48-15-S</b>
48	18	0.404	0.375	0.125	0.312	0.293	0.093	M3	0.188	0.094	0.406	<b>B48-18-S</b>
48	30	0.654	0.625	0.250	0.468	0.473	0.125	M3	0.295	0.156	0.687	<b>B48-30-S</b>
64	32	0.522	0.500	0.188	0.390	0.407	0.125	M3	0.256	0.125	0.562	<b>B64-32-S</b>

**Material**

Steel BS970 Pt.1 1991 080M15 (EN32)  
or BS970 Pt.3 1991 230M07 (EN1A)

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010$ ".

Angular accuracy between shafts  $\pm 0^{\circ}.5'$ .

Shaft axes should intersect within  $\pm 0.001$ ".

Mounting distance tolerance (Dimn. X)  $\pm \frac{0.002}{1000}$ ".

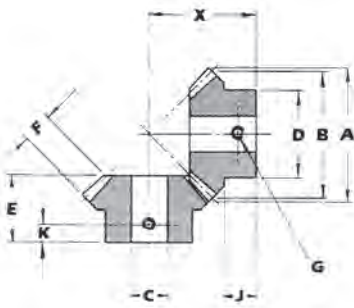
These gears are not hardened.

pitch line angle 45°

can only be run at a 90° shaft angle  
extra pinion or gear available

**Straight – 1:1 ratio**

**Polyacetal, 16 DP to 32 DP**



Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
<b>16</b>	<b>16</b>	1.088	1.000	0.312	0.780	0.756	0.234	M4	0.455	0.187	1.064	<b>B16-16-D</b>
<b>16</b>	<b>32</b>	2.088	2.000	0.500	1.562	0.846	0.450	M4	0.351	0.156	1.500	<b>B16-32-D</b>
<b>24</b>	<b>24</b>	1.059	1.000	0.250	0.781	0.600	0.250	M4	0.307	0.156	0.906	<b>B24-24-D</b>
<b>24</b>	<b>30</b>	1.309	1.250	0.250	0.937	0.636	0.300	M4	0.307	0.156	1.031	<b>B24-30-D</b>
<b>24</b>	<b>36</b>	1.559	1.500	0.312	1.301	0.677	0.312	M4	0.338	0.156	1.187	<b>B24-36-D</b>
<b>32</b>	<b>16</b>	0.544	0.500	0.188	0.390	0.351	0.125	M3	0.195	0.094	0.500	<b>B32-16-D</b>
<b>32</b>	<b>24</b>	0.794	0.750	0.188	0.625	0.455	0.187	M3	0.250	0.125	0.687	<b>B32-24-D</b>
<b>32</b>	<b>32</b>	1.044	1.000	0.250	0.780	0.565	0.250	M3	0.265	0.156	0.875	<b>B32-32-D</b>

**Material**

Polyacetal

pitch line angle 45°

All dimensions in inches.  
Pressure angle 20°.

These bevel gears are cut to the Gleason System.  
Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010''$ .

Angular accuracy between shafts  $\pm 0^{\circ}5'$ .

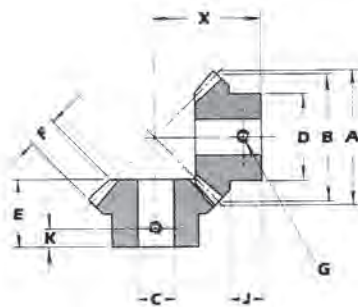
Shaft axes should intersect within  $\pm 0.001''$ .

Mounting distance tolerance  
(Dimn. X)  $\pm \frac{NL}{0.02}$

These gears are NOT hardened.  
can only be run at a 90° shaft angle  
extra pinion or gear available

Straight – 1.5 :1 ratio

Brass, 16 DP to 64 DP



Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
16	20	1.381	1.250	0.375	1.093	0.852	0.312	M5	0.510	0.250	1.500	<b>B16-1-5-B</b>
	30	1.927	1.875	0.375	1.623	0.823	0.312	M5	0.436	0.218	1.250	
20	16	0.904	0.800	0.250	0.703	0.729	0.218	M4	0.493	0.218	1.125	<b>B20-1-5-B</b>
	24	1.241	1.200	0.250	1.000	0.615	0.218	M4	0.324	0.156	0.875	
32	12	0.440	0.375	0.125	0.312	0.325	0.112	M3	0.198	0.094	0.500	<b>B32-1-5-B</b>
	18	0.588	0.562	0.156	0.437	0.386	0.112	M3	0.218	0.125	0.500	
48	18	0.419	0.375	0.125	0.312	0.321	0.112	M3	0.198	0.094	0.500	<b>B48-1-5-B</b>
	27	0.580	0.562	0.125	0.478	0.319	0.112	M3	0.187	0.094	0.437	
64	18	0.314	0.281	0.125	0.250	0.300	0.080	M3	0.216	0.094	0.437	<b>B64-1-5-B</b>
	27	0.435	0.422	0.125	0.359	0.284	0.080	M3	0.187	0.094	0.375	

### Material

Brass BS2874:1986 CZ121

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010$ ".

Angular accuracy between shafts  $\pm 0^{\circ}-5'$ .

Shaft axes should intersect within  $\pm 0.001$ ".

Mounting distance tolerance (Dimn. x)  $\begin{matrix} \text{NIL} \\ -0.002 \end{matrix}$ "

These gears are NOT hardened.

can only be run at a 90° shaft angle

extra pinion or gear available

pitch line angle

Pinion

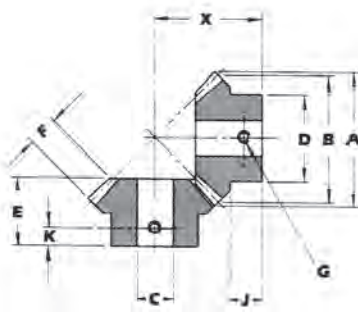
33° 41'

Gear

56° 19'

**Straight – 1:..5:1 ratio**

**Steel, 6 DP to 64 DP**



Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
<b>6</b>	<b>16</b>	3.015	2.667	0.938	2.343	1.698	0.750	—	0.892	—	3.000	<b>B6-1-5-S</b>
	<b>24</b>	4.138	4.000	1.125	3.329	2.021	0.750	—	1.038	—	2.875	
<b>8</b>	<b>16</b>	2.261	2.000	0.625	1.750	1.273	0.562	—	0.667	—	2.250	<b>B8-1-5-S</b>
	<b>24</b>	3.103	3.000	0.625	2.497	1.359	0.562	—	0.622	—	2.000	
<b>10</b>	<b>16</b>	1.809	1.600	0.500	1.405	1.209	0.437	—	0.735	—	2.000	<b>B10-1-5-S</b>
	<b>24</b>	2.483	2.400	0.500	1.997	0.981	0.437	—	0.398	—	1.500	
<b>16</b>	<b>20</b>	1.381	1.250	0.375	1.093	0.852	0.312	M5	0.510	0.250	1.500	<b>B16-1-5-S</b>
	<b>30</b>	1.927	1.875	0.375	1.623	0.823	0.312	M5	0.436	0.218	1.250	
<b>20</b>	<b>16</b>	0.904	0.800	0.250	0.703	0.729	0.218	M4	0.493	0.218	1.125	<b>B20-1-5-S</b>
	<b>24</b>	1.241	1.200	0.250	1.000	0.615	0.218	M4	0.324	0.156	0.875	
<b>32</b>	<b>12</b>	0.440	0.375	0.125	0.312	0.325	0.112	M3	0.198	0.094	0.500	<b>B32-1-5-S</b>
	<b>18</b>	0.588	0.562	0.156	0.437	0.386	0.112	M3	0.218	0.125	0.500	
<b>48</b>	<b>18</b>	0.419	0.375	0.125	0.312	0.321	0.112	M3	0.198	0.094	0.500	<b>B48-1-5-S</b>
	<b>27</b>	0.580	0.562	0.125	0.478	0.319	0.112	M3	0.187	0.094	0.437	
<b>64</b>	<b>18</b>	0.314	0.281	0.125	0.250	0.300	0.080	M3	0.216	0.094	0.437	<b>B64-1-5-S</b>
	<b>27</b>	0.435	0.422	0.125	0.359	0.284	0.080	M3	0.187	0.094	0.375	

pitch line angle      Pinion 33° 41'      Gear 56° 19'

**Material**

Steel BS970 Pt1 1991 080M15 (EN32)  
or BS970 Pt.3 1991 230M07 (EN1A)

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated ± 0.010".

Angular accuracy between shafts ± 0°-5'.

Shaft axes should intersect within ± 0.001".

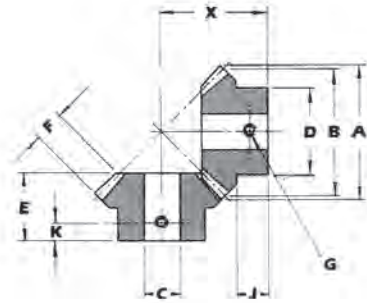
Mounting distance tolerance (Dimn, x) <sup>+ Nil</sup> - 0.02

These gears are not hardened.

can only be run at a 90° shaft angle  
extra pinion or gear available

## Straight – 1.5:1 ratio

### Polyacetal, 16 DP to 32 DP



GEARS

Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
16	20	1.381	1.250	0.375	1.092	0.852	0.312	M5	0.510	0.250	1.500	<b>B16-1-5-D</b>
	30	1.927	1.875	0.375	1.623	0.823	0.312	M5	0.436	0.218	1.250	
20	16	0.904	0.800	0.250	0.703	0.729	0.218	M4	0.493	0.218	1.125	<b>B20-1-5-D</b>
	24	1.241	1.200	0.250	1.000	0.615	0.218	M4	0.324	0.156	0.875	
32	12	0.440	0.375	0.125	0.312	0.325	0.112	M3	0.198	0.094	0.500	<b>B32-1-5-D</b>
	18	0.588	0.562	0.156	0.437	0.386	0.112	M3	0.218	0.125	0.500	

**Material**

Polyacetal

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010''$ .

Angular accuracy between shafts  $\pm 0^{\circ}-5'$ .

Shaft axes should intersect within  $\pm 0.001''$ .

Mounting distance tolerance (Dimn. X)  $\begin{matrix} + \text{NIL} \\ - .002'' \end{matrix}$

These gears are NOT hardened.

can only be run at a 90° shaft angle

extra pinion or gear available

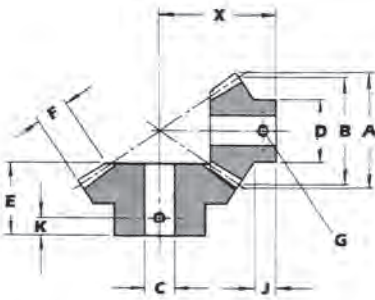
pitch line angle

Pinion 33° 41'

Gear 56° 19'

Straight – 2:1 ratio

Brass, 20 DP to 64 DP



Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
20	15	0.870	0.750	0.250	0.625	0.743	0.250	M3	0.469	0.218	1.250	<b>B20-2-B</b>
	30	1.529	1.500	0.500	1.000	0.755	0.250	M4	0.459	0.218	1.000	
20	20	1.120	1.000	0.312	0.915	0.755	0.260	M5	0.479	0.187	1.500	<b>B20-2x-B</b>
	40	2.029	2.000	0.625	1.250	0.637	0.260	M5	0.334	0.156	1.000	
32	12	0.450	0.375	0.188	0.312	0.374	0.125	M3	0.235	0.125	0.625	<b>B32-2x-B</b>
	24	0.768	0.750	0.250	0.563	0.380	0.125	M3	0.209	0.125	0.500	
32	16	0.575	0.500	0.188	0.445	0.429	0.187	M3	0.207	0.125	0.750	<b>B32-2-B</b>
	32	1.018	1.000	0.188	0.625	0.441	0.187	M3	0.243	0.125	0.597	
32	18	0.638	0.562	0.188	0.468	0.315	0.125	M3	0.164	0.075	0.751	<b>B32-2y-B</b>
	36	1.143	1.125	0.188	0.625	0.322	0.125	M3	0.149	0.075	0.534	
48	18	0.425	0.375	0.125	0.312	0.370	0.125	M3	0.235	0.125	0.625	<b>B48-2-B</b>
	36	0.762	0.750	0.125	0.390	0.313	0.125	M3	0.180	0.094	0.437	
64	18	0.319	0.281	0.125	0.250	0.294	0.104	M3	0.187	0.094	0.476	<b>B64-2-B</b>
	36	0.572	0.562	0.188	0.511	0.348	0.104	M3	0.244	0.125	0.437	

**Material**

Brass BS2874:1986 CZ121

pitch line angle  
Pinion 26° 34'  
Gear 63° 26'

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010$ ".

Angular accuracy between shafts  $\pm 0^{\circ}5'$ .

Shaft axes should intersect within  $\pm 0.001$ ".

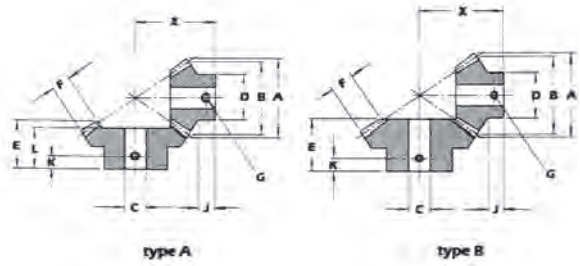
Mounting distance tolerance (Dimn. X)  $\begin{matrix} +NIL \\ -0.002 \end{matrix}$ .

These gears are NOT hardened.

can only be run at a 90° shaft angle  
extra pinion or gear available

### Straight – 2:1 ratio

### Steel, 6 DP to 64 DP



GEARS

D.P.	No. Teeth	type	Outside Dia A	Pitch Dia B	Bore Dia C	Boss Dia D	Overall Length E	Face Width F	Set-screw G	Boss Project'n J	Setscrew pos'n K	Length through L	Mounting Distance X	Catalogue STEEL	Reference parts
6	15	A	2.901	2.500	0.750	2.240	1.774	1.082		0.685			3.25	B 6 - 2	- S -PIN
	30	A	5.098	5.000	1.000	3.125	2.533	1.082		1.445		2.344	3.250		-GEAR
	36	A	6.123	6.000	1.125	3.250		1.060		1.590		2.766	4.750	B 6 - 2X	- S -PIN
8	16	A	2.301	2.000	0.750	1.812	1.360	0.625		0.700			2.750	B 8 - 2	- S -PIN
	32	A	4.073	4.000	0.750	2.500	1.326	0.625		0.584		1.156	2.000		-GEAR
	40	A	5.120	5.000	1.000	3.000		0.820		1.410		2.281	4.000	B 8 - 2X	- S -PIN
10	16	A	1.841	1.600	0.500	1.440	1.191	0.562		0.609		1.844	2.250	B10 - 2	- S -PIN
	32	A	3.259	3.200	0.500	1.875	1.111	0.562		0.492		0.982	1.625		-GEAR
	40	A	4.078	4.000	0.875	3.000		0.710		1.060		1.797	3.125	B10 - 2X	- S -PIN
12	18	A	1.701	1.500	0.4375	1.365	1.168	0.500	M6	0.653	0.312		2.187	B12 - 2	- S -PIN
	36	A	3.049	3.000	0.750	1.875	1.290	0.500	M6	0.598	0.312	1.018	1.625		-GEAR
	40	A	1.400	1.250	0.375	1.150	1.051	0.450	M6	0.600	0.250		1.875	B16 - 2	- S -PIN
16	40	A	2.537	2.500	0.625	1.625	0.973	0.450	M6	0.542	0.250	0.893	1.375		-GEAR
	16	A	1.019	1.000	0.375	0.810		0.350		0.440			1.500	B16 - 2X	- S -PIN
	32	A	2.037	2.000	0.500	1.130		0.350		0.500			1.188		-GEAR
20	15	B	0.870	0.750	0.250	0.625	0.743	0.250	M3	0.690	0.218		1.250	B20 - 2	- S -PIN
	30	B	1.529	1.500	0.500	1.000	0.755	0.250	M4	0.459	0.218		1.000		-GEAR
	40	B	1.12	1.000	0.312	0.915	0.755	0.260	M5	0.479	0.187		1.500	B20 - 2X	- S -PIN
32	12	B	0.450	0.375	0.1875	0.312	0.374	0.125	M3	0.235	0.125		0.625	B32 - 2X	- S -PIN
	24	B	0.768	0.750	0.250	0.563	0.380	0.125	M3	0.209	0.125		0.500		-GEAR
	16	B	0.575	0.500	0.1875	0.445	0.429	0.187	M3	0.207	0.125		0.750	B32 - 2	- S -PIN
32	32	B	1.018	1.000	0.1875	0.625	0.441	0.187	M3	0.243	0.125		0.597		-GEAR
	18	B	0.638	0.562	0.188	0.468	0.315	0.125	M3	0.164	0.075		0.751	B32 - 2Y	- S -PIN
	36	B	1.143	1.125	0.188	0.625	0.322	0.125	M3	0.149	0.075		0.534		-GEAR
48	18	B	0.425	0.375	0.125	0.312	0.37	0.125	M3	0.235	0.125		0.625	B48 - 2	- S -PIN
	36	B	0.762	0.750	0.125	0.390	0.313	0.125	M3	0.180	0.094		0.437		-GEAR
64	18	B	0.319	0.281	0.125	0.25	0.294	0.104	M3	0.187	0.094		0.476	B64 - 2	- S -PIN
	36	B	0.572	0.562	0.188	0.511	0.348	0.104	M3	0.244	0.125		0.437		-GEAR

**Material**

Steel BS970 Pt1 1991 080M15 (EN32)  
or BS970 Pt.3 1991 230M07 (EN1A)

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

Pinion pitch line angle 26° 34'

Gear pitch line angle 63° 26'

General tolerance unless otherwise stated ± 0.010".

Angular accuracy between shafts ± 0°-5'.

Shaft axes should intersect within ± 0.001".

Mounting distance tolerance

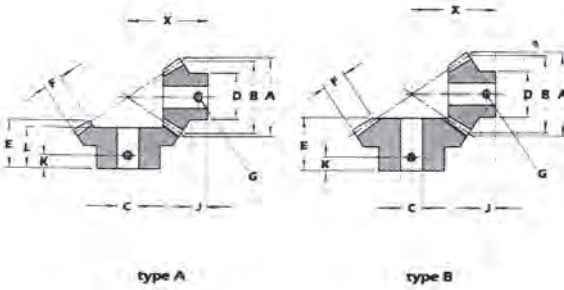
(Dimn. X) =  $\frac{MIL}{1000}$

These gears are not hardened.  
can only be run at a 90° shaft angle  
extra pinion or gear available



### Straight – 2:1 ratio

### Polyacetal, 16 DP to 32 DP



Pitch DP	No. Teeth	Type	Outside dia.	Pitch dia.	Bore dia.	Boss dia.	Overall length	Face width						Catalogue No.
			A	B	C	D	E	F	G	J	K	L	X	
16	20	A	1.400	1.250	0.375	1.150	1.051	0.450	M6	0.600	0.250	—	1.875	<b>B16-2-D</b>
	40		2.537	2.500	0.625	1.625	0.973	0.450	M6	0.542	0.250	0.893	1.375	
20	15	B	0.870	0.750	0.250	0.625	0.743	0.250	M3	0.469	0.218	—	1.250	<b>B20-2-D</b>
	30		1.529	1.500	0.500	1.000	0.755	0.250	M4	0.459	0.218	—	1.000	
20	20	B	1.120	1.000	0.312	0.915	0.755	0.260	M5	0.479	0.187	—	1.500	<b>B20-2x-D</b>
	40		2.029	2.000	0.625	1.250	0.637	0.260	M5	0.334	0.156	—	1.000	
32	12	B	0.450	0.375	0.188	0.312	0.374	0.125	M3	0.235	0.125	—	0.625	<b>B32-2x-D</b>
	24		0.768	0.750	0.250	0.563	0.380	0.125	M3	0.209	0.125	—	0.500	
32	16	B	0.575	0.500	0.188	0.445	0.429	0.187	M3	0.207	0.125	—	0.750	<b>B32-2-D</b>
	32		1.018	1.000	0.188	0.625	0.441	0.187	M3	0.243	0.125	—	0.597	
32	18	B	0.638	0.562	0.188	0.468	0.315	0.125	M3	0.164	0.075	—	0.751	<b>B32-2y-D</b>
	36		1.143	1.125	0.188	0.625	0.322	0.125	M3	0.149	0.075	—	0.534	

pitch line angle      Pinion 26° 34'      Gear 63° 26'

#### Material

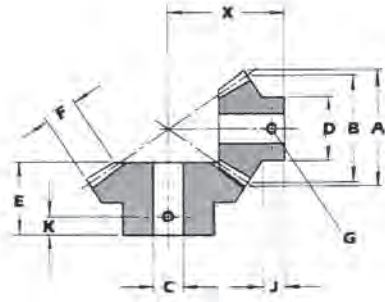
Polyacetal

All dimensions in inches.  
 Pressure angle 20°.  
 These bevel gears are cut to the Gleason System.  
 Bore tolerances to BS. 1916: 1953, Pt. 1, H8.  
 General tolerance unless otherwise stated  $\pm 0.010''$ .  
 Angular accuracy between shafts  $\pm 0^{\circ} 5'$ .  
 Shaft axes should intersect within  $\pm 0.001''$ .  
 Mounting distance tolerance (Dimn. x)  $\begin{matrix} +NLL \\ -007 \end{matrix}$   
 These gears are NOT hardened.  
 can only be run at a 90° shaft angle  
 extra pinion or gear available

**Straight – 3:1 ratio**

**Brass, 32 DP to 64 DP**

GEARS



Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
32	12	0.459	0.375	0.125	0.312	0.436	0.187	M3	0.239	0.125	0.812	<b>B32-3-B</b>
	36	1.137	1.125	0.250	0.545	0.382	0.187	M3	0.200	0.094	0.500	
48	18	0.431	0.375	0.125	0.340	0.417	0.170	M3	0.244	0.125	0.812	<b>B48-3-B</b>
	54	1.133	1.125	0.188	0.545	0.311	0.170	M3	0.175	0.094	0.437	
64	18	0.323	0.281	0.125	0.250	0.340	0.140	M3	0.198	0.094	0.625	<b>B64-3-B</b>
	54	0.850	0.844	0.188	0.390	0.346	0.140	M3	0.240	0.125	0.437	

**Material**

Brass BS2874:1986 CZ121

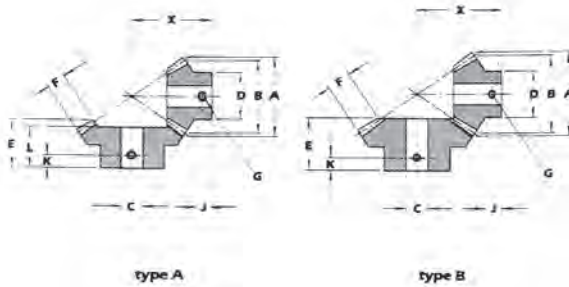
All dimensions in inches.  
Pressure angle 20°.  
These bevel gears are cut to the Gleason System.  
Bore tolerances to BS. 1916: 1953, Pt. 1, H8.  
General tolerance unless otherwise stated  $\pm 0.010''$ .  
Angular accuracy between shafts  $\pm 0'-5'$ .  
Shaft axes should intersect within  $\pm 0.001''$ .  
Mounting distance tolerance (Dimn. X)  $\begin{matrix} +NIL \\ -0.002'' \end{matrix}$

pitch line angle      Pinion      Gear  
18° 26'      18° 26'      71° 34'

These gears are NOT hardened.  
can only be run at a 90° shaft angle  
extra pinion or gear available

## Straight – 3:1 ratio

### Steel, 6 DP to 64 DP



type A

type B

Pitch DP	No. Teeth	Type	Outside dia.		Pitch dia.		Bore dia.		Boss dia.		Overall length		Face width		G	J	K	L	X	Catalogue No.
			A	B	C	D	E	F												
6	12	A	2.446	2.000	0.750	1.750	2.053	1.062	—	0.959	—	—	4.000	B6-3-S						
	36	A	6.062	6.000	1.000	3.125	1.888	1.062	—	0.902	—	1.668	2.500							
8	12	A	1.834	1.500	0.500	1.250	1.776	0.781	—	0.959	—	—	3.250	B8-3-S						
	36	A	4.547	4.500	1.000	3.125	2.037	0.781	—	1.301	—	1.870	2.500							
10	12	A	1.467	1.200	0.375	1.015	1.258	0.625	—	0.606	—	—	2.437	B10-3-S						
	36	A	3.637	3.600	0.625	2.375	1.630	0.625	—	1.041	—	1.496	2.000							
12	12	A	1.223	1.000	0.375	0.875	1.027	0.531	M5	0.485	0.250	—	2.000	B12-3-S						
	36	A	3.031	3.000	0.625	2.000	1.319	0.531	M6	0.826	0.375	1.209	1.625							
16	12	A	0.917	0.750	0.250	0.625	1.089	0.406	M3	0.666	0.312	—	1.812	B16-3-S						
	36	A	2.273	2.250	0.500	1.687	1.148	0.406	M6	0.776	0.375	1.066	1.375							
32	12	B	0.459	0.375	0.125	0.312	0.436	0.187	M3	0.239	0.125	—	0.812	B32-3-S						
	36	B	1.137	1.125	0.250	0.545	0.382	0.187	M3	0.200	0.094	—	0.500							
48	18	B	0.431	0.375	0.125	0.340	0.417	0.170	M3	0.244	0.125	—	0.812	B48-3-S						
	54	B	1.133	1.125	0.188	0.545	0.311	0.170	M3	0.175	0.094	—	0.437							
64	18	B	0.323	0.281	0.125	0.250	0.340	0.140	M3	0.198	0.094	—	0.625	B64-3-S						
	54	B	0.850	0.844	0.188	0.390	0.346	0.140	M3	0.240	0.125	—	0.437							

#### Material

Steel BS970 Pt1 1991 080M15 (EN32)  
or BS970 Pt.3 1991 230M07 (EN1A)

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010$ .

Angular accuracy between shafts  $\pm 0^{\circ}5'$ .

Shaft axes should intersect within  $\pm 0.001$ ".

Mounting distance tolerance

(Dimn. X)  $\begin{matrix} + \text{Nil} \\ - 0.02 \end{matrix}$

These gears are not hardened.

can only be run at a 90° shaft angle  
extra pinion or gear available

pitch line angle

Pinion

18° 26'

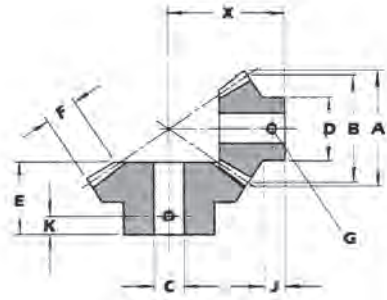
Gear

71° 34'

# DAVALL GEARS Bevel Gears

Straight – 3:1 ratio

Polyacetal, 32 DP



Pitch	No. Teeth	Outside dia.	Pitch dia.	Bore dia.	Boss dia.	Overall length	Face width					Catalogue No.
DP		A	B	C	D	E	F	G	J	K	X	
<b>32</b>	<b>12</b>	0.459	0.375	0.125	0.312	0.436	0.187	M3	0.239	0.125	0.812	<b>B32-3-D</b>
	<b>36</b>	1.137	1.125	0.250	0.545	0.382	0.187	M3	0.200	0.094	0.500	

## Material

Polyacetal

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010$ .

Angular accuracy between shafts  $\pm 0^{\circ} 5'$ .

Shaft axes should intersect within  $\pm 0.001$ .

Mounting distance tolerance (Dimn. X)  $\pm \frac{NI}{100}$ .

These gears are NOT hardened.

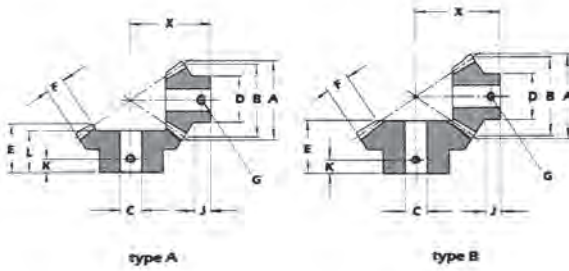
can only be run at a 90° shaft angle

extra pinion or gear available

	Pinion	Gear
pitch line angle	18° 26'	71° 34'

Straight – 4:1 ratio

Steel, 6 DP to 64 DP



Pitch DP	No. Teeth	Type	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	L	X	Catalogue No.
6	12	A	2.463	2.000	0.750	1.750	1.821	1.062	—	0.719	—	—	4.750	<b>B6-4-S</b>
	48		8.046	8.000	1.562	3.905	2.318	1.062	—	1.384	—	2.063	3.000	
10	12	A	1.478	1.200	0.438	1.050	0.981	0.625	—	0.332	—	—	2.750	<b>B10-4-S</b>
	48		4.828	4.800	0.938	2.343	1.463	0.625	—	0.906	—	1.309	1.875	
16	12	A	0.924	0.750	0.250	0.656	0.659	0.406	M3	0.238	0.125	—	1.750	<b>B16-4-S</b>
	48		3.017	3.000	0.562	1.405	0.871	0.406	M6	0.519	0.250	0.776	1.125	
32	12	B	0.462	0.375	0.156	0.320	0.500	0.250	M3	0.243	0.125	—	1.000	<b>B32-4-S</b>
	48		1.508	1.500	0.250	0.702	0.445	0.250	M3	0.259	0.125	—	0.562	
48	18	B	0.433	0.375	0.125	0.341	0.466	0.218	M3	0.245	0.125	—	1.000	<b>B48-4-S</b>
	72		1.505	1.500	0.188	0.702	0.310	0.218	M3	0.173	0.094	—	0.437	
64	18	B	0.325	0.281	0.125	0.250	0.343	0.156	M3	0.183	0.094	—	0.750	<b>B64-4-S</b>
	72		1.129	1.125	0.188	0.545	0.403	0.156	M3	0.302	0.125	—	0.500	

#### Material

Steel BS970 Pt.1 1991 080M15 (EN32)  
or BS970 Pt.3 1991 230M07 (EN1A)

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010''$ .

Angular accuracy between shafts  $\pm 0'-5'$ .

Shaft axes should intersect within  $\pm 0.001''$ .

Mounting distance tolerance

(Dimn.  $\times$ )  $\begin{matrix} +NIL \\ -0.02'' \end{matrix}$

These gears are not hardened.

can only be run at a 90° shaft angle  
extra pinion or gear available

pitch line angle

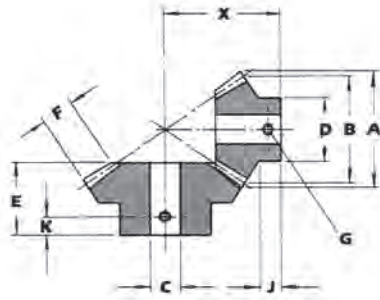
Pinion  
14° 02'

Gear  
75° 58'

# DAVALL GEARS Bevel Gears

Straight – 4:1 ratio

Brass, 32 DP to 64 DP



Pitch DP	No. Teeth	Outside dia. A	Pitch dia. B	Bore dia. C	Boss dia. D	Overall length E	Face width F	G	J	K	X	Catalogue No.
<b>32</b>	<b>12</b>	0.462	0.375	0.156	0.320	0.500	0.250	M3	0.243	0.125	1.000	<b>B32-4-B</b>
	<b>48</b>	1.508	1.500	0.250	0.702	0.445	0.250	M3	0.259	0.125	0.562	
<b>48</b>	<b>18</b>	0.433	0.375	0.125	0.341	0.466	0.218	M3	0.245	0.125	1.000	<b>B48-4-B</b>
	<b>72</b>	1.505	1.500	0.188	0.702	0.310	0.218	M3	0.173	0.094	0.437	
<b>64</b>	<b>18</b>	0.325	0.281	0.125	0.250	0.343	0.156	M3	0.183	0.094	0.750	<b>B64-4-B</b>
	<b>72</b>	1.129	1.125	0.188	0.545	0.403	0.156	M3	0.302	0.125	0.500	

## Material

Brass BS2874:1986 CZ121

pitch line angle

Pinion

14° 02'

Gear

75° 58'

All dimensions in inches.

Pressure angle 20°.

These bevel gears are cut to the Gleason System.

Bore tolerances to BS. 1916: 1953, Pt. 1, H8.

General tolerance unless otherwise stated  $\pm 0.010''$ .

Angular accuracy between shafts  $\pm 0^{\circ}5'$ .

Shaft axes should intersect within  $\pm 0.001''$ .

Mounting distance tolerance

(Dimn. X)  $\begin{matrix} + \text{NIL} \\ - 0.002 \end{matrix}$

These gears are NOT hardened.

can only be run at a 90° shaft angle

extra pinion or gear available