**Power Plant**
- No. & Model ......... (4) R-1820-97
- Mfr ..................... Wright
- Superch .................. 1 spd.
- Red. Gear .............. 0.5625
- Prop Mfr ............... Hamilton Std
- Prop Dia ............... 11'-7''
- Prop Type ............ Hydro
- Blade Design ........ 6477A-0

**Mission and Description**

The B-17G is a four engine bombardment type aircraft whose tactical mission is the destruction, by bombs, of land or naval material objectives.

Originally designed as a heavy bomber, it has now been relegated to the light bomber class.

The landing gear, tail gear, wing flaps and bomb doors are electrically operated and the brakes and cowl flaps are hydraulically operated.

The crew includes pilot, co-pilot, navigator, bombardier, upper turret gunner, lower turret gunner, radio operator, side gunner (s) and tail gunner.

The defensive armament consists of a chin turret, ball turret, top turret and tail power mount.

Automatic flight control equipment with formation stick control is provided.

**Development**

Design initiated (Model-299) ........ August 1934
First flight (Y1B-17) ............... January 1936
First service use (B-17G) ............ 1943
Production completed ............... July 1945

**Weights**

<table>
<thead>
<tr>
<th>Loading</th>
<th>Gross</th>
<th>L.F.</th>
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</thead>
<tbody>
<tr>
<td>Empty</td>
<td>35,972(A)</td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>37,672(A)</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td>48,726</td>
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<tr>
<td>Combat*</td>
<td>48,692</td>
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<tr>
<td>Max T.O.</td>
<td>67,860</td>
<td>2.0</td>
</tr>
<tr>
<td>Max Land</td>
<td>67,860</td>
<td>2.0</td>
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*For basic mission  
†Limited by structure  
(A) Actual

**Fuel**

<table>
<thead>
<tr>
<th>Location</th>
<th>Tanks</th>
<th>Gal.</th>
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</thead>
<tbody>
<tr>
<td>Wing,main*</td>
<td>6</td>
<td>1700</td>
</tr>
<tr>
<td>Wing,outer*</td>
<td>4</td>
<td>1080</td>
</tr>
<tr>
<td>Bomb bay,aux*</td>
<td>2</td>
<td>820</td>
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</table>

*Self-sealing Total 3600
Spec. ............... AN-F-48
Grade ................ 100/130

**Oil**

Cap. (gal.) ............... 148
Spec. ..................... AN-0-8
Grade .................. W-1100; S-1120

**Electronics**

- VHF Command .......... SCR-522
- Command ................ SCR-274N
- Liaison ................ AN/ARC-8
- Radio Compass .......... AN/ARN-7
- Marker Beacon ........... RC-193
- IFF ..................... SCR-505
- Approach Equip. ......... AN/ARN-5
- Navigation .............. AN/APN-9
- Interphone .............. AN/AIC-2
- RCM Equip. .............. AN/APN-1
- Altimeter ............... AN/APN-1
# Loading and Performance - Typical Mission

## Conditions

<table>
<thead>
<tr>
<th>Conditions</th>
<th>Basic</th>
<th>Max Bomb Height</th>
<th>High Speed</th>
<th>High Alt.</th>
<th>Ferry</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>II</td>
<td>III</td>
<td>IV</td>
<td>V</td>
</tr>
<tr>
<td>RADIUS</td>
<td></td>
<td>RADIUS</td>
<td>RADIUS</td>
<td>RADIUS</td>
<td>RANGE</td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>III</td>
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<td></td>
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<tr>
<td>IV</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Take-Off Weight
- **Fuel & Oil (gal)**: 2570/148
- **Military Load (lb)**: 10,000
- **Total Ammunition (rds/cal)**: 5970/.50
- **Wing Loading (lb/sq ft)**: 47.8
- **Take-off Power Loading (lb/bhp)**: 14.1
- **Stall Speed (power off)** (kn): 88.9
- **Take-off Distance SL (ft)**: 3780
- **Ground Run (no wind) (ft)**: 3780
- **To Clear 50 ft Obst (ft)**: 4925

### Climb From SL
- **Rate of Climb at SL (fpm)**: 630
- **Time To 10,000 Feet (min)**: 17.0
- **Time To 25,000 Feet (min)**: 61.0
- **Service Ceiling (100 f.p.m.) (ft)**: 28,250
- **Combat Range or Radius (n.mi)**: 303
- **Avg. Cruising Speed (kn)**: 171
- **Total Mission Time (hr)**: 10.45
- **Cruising Altitude (ft)**: 10,000

### Combat Weight
- **Combat Altitude (ft)**: 25,000

### Speed
- **Max Speed (combat alt) (kn)**: 278
- **Max Speed At 26,700 Ft (kn)**: 282

### Climb
- **Rate of Climb (combat alt) (fpm)**: 1250
- **Rate of Climb at SL (fpm)**: 1870

### Ceiling
- **Combat Ceiling (ft)**: 33,500
- **Service Ceiling (ft)**: 36,950
- **Service Ceiling (ft)**: 36,450

### Lading Weight SL
- **Ground Roll (ft)**: 1265
- **From 50' Obst. (ft)**: 2710

## Notes
- ① Take-off power
- ② Max power
- ③ Normal power
- ④ Take-off and landing distances are obtainable at sea level using normal technique. For airport planning add 25% to distances shown.
- ⑤ Detailed descriptions of the RADIUS & RANGE missions are given on page 6.

## Conditions:
- (a) Performance basis: NACA standard conditions, no wind, single airplane
- (b) Fuel consumption used in computing RADIUS & RANGE is based on flight test data increased 5%.
- (c) Performance based on powers listed on page 6.
RADIUS FORMULA: BASIC & MAX. BOMBS I & III

(a) Allowance for 10 minutes normal rated power, warm up and take off.
(b) Climb to 10,000 ft. normal rated power.
(c) Cruise at long range speeds to point where climb is made to point where climb is made to 25,000 feet.
(d) Climb to 25,000 ft., arriving 30 minutes prior to bomb-drop. (normal rated power).
(e) Cruise long range speeds for 15 minutes and conduct a 15 minute normal power bomb-run.
(f) Drop bombs.
(g) Conduct 5 minute normal power evasive action (no distance gained).
(h) Plus, 10 minute normal rated power run-out from target area.
(i) Cruise back to base at long range speeds at 25,000 feet.
(j) Land with 5% initial fuel load as reserve.

RANGE FORMULA: BASIC II

(a) Allowance for 10 minute normal rated power, warm up and take off.
(b) Climb to 10,000 ft. normal rated power.
(c) Cruise at long range speeds to point where climb is made to 25,000 feet.
(d) Climb to 25,000 feet at normal rated power, arriving 30 minutes prior to bomb-drop.
(e) Cruise long range speeds for 15 minutes and conduct a 15 minute normal power bomb run.
(f) Drop bombs.
(g) Land with 10% initial fuel load as reserve.

RADIUS FORMULA: HIGH SPEED IV

(a) Same as basic except all cruising is at normal rated power.

RADIUS FORMULA: HIGH ALTITUDE V

(a) Same as basic except all cruising is at 25,000 ft.

RANGE FORMULA: FERRY VI

(a) Allowance for 10 minutes normal rated power, warm up and take-off.
(b) Climb to 10,000 ft., normal rated power.
(c) Cruise at long range speeds to target.
(d) Land with 10% initial fuel load as reserve.

GENERAL DATA:

(a) Power ratings used for performance calculation. Includes RAM

<table>
<thead>
<tr>
<th>R - 1820 - 97</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHP</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>T.O: 1200</td>
</tr>
<tr>
<td>Max: 1380</td>
</tr>
<tr>
<td>Nor: 1000</td>
</tr>
</tbody>
</table>