



**PRO**

**GOP18V-30**

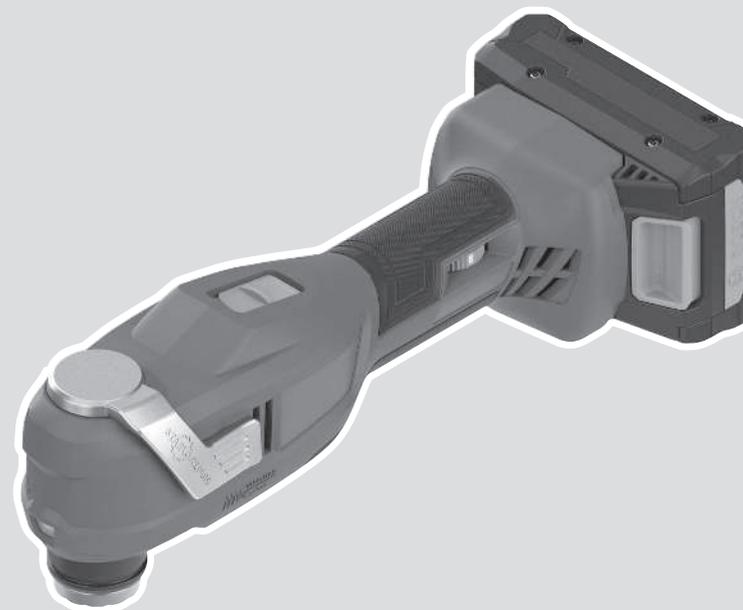
Robert Bosch Power Tools GmbH  
70538 Stuttgart  
GERMANY

[www.bosch-pt.com](http://www.bosch-pt.com)

1 609 92A E2C (2025.10) T / 19



1 609 92A E2C

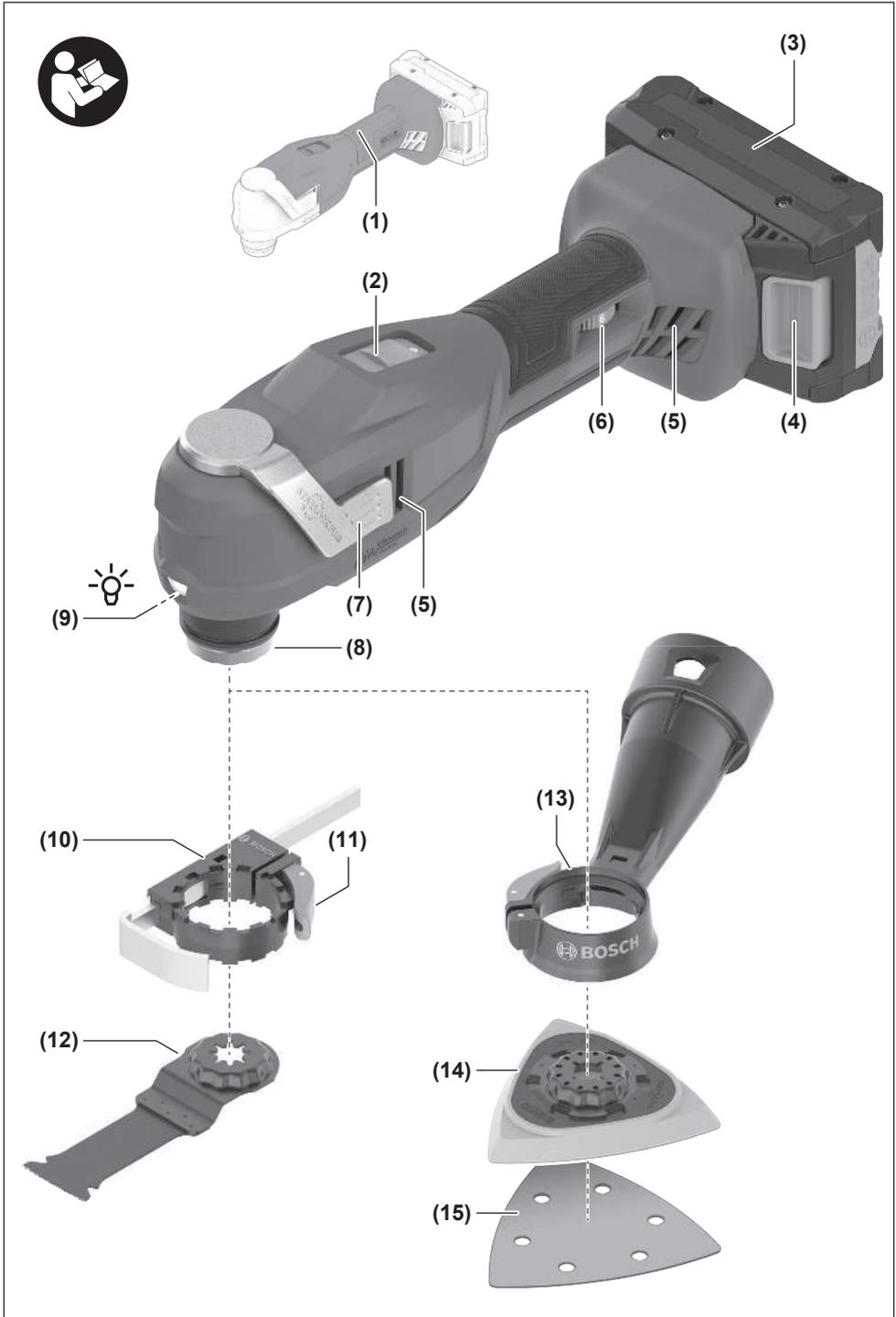


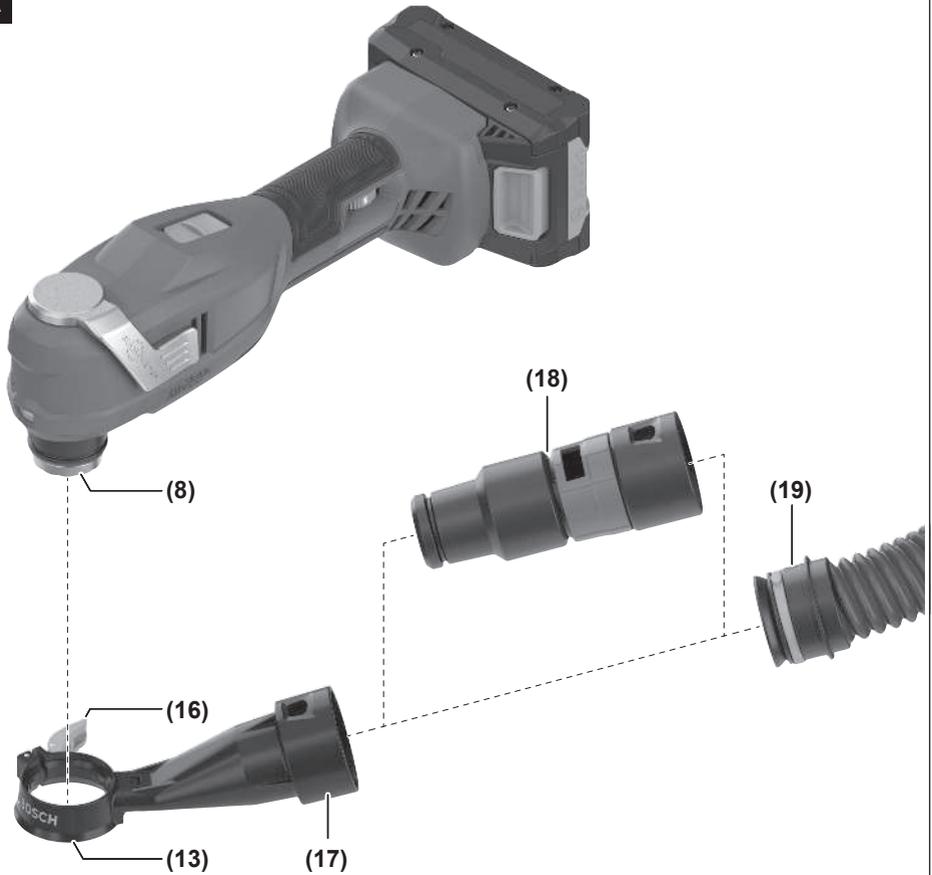
zh 原始使用說明書



繁體中文..... 頁 5





**A**

2 608 000 636



2 608 000 590

# 繁體中文

## 安全注意事項

### 電動工具一般安全注意事項

**警告** 請詳讀工作臺及電動工具的所有安全警告與使用說明。若不遵照以下列出的指示，將可能導致電擊、著火和 / 或人員重傷。

保存所有警告和說明書以備查閱。

在所有警告中，「電動工具」此一名詞泛指：以市電驅動的（有線）電動工具或是以電池驅動的（無線）電動工具。

#### 工作場地的安全

- ▶ 保持工作場地清潔和明亮。混亂和黑暗的場地會引發事故。
- ▶ 不要在易爆環境，如有易燃液體、氣體或粉塵的環境下操作電動工具。電動工具產生的火花會點燃粉塵或氣體。
- ▶ 讓兒童和旁觀者離開後操作電動工具。注意力不集中會使您失去對工具的控制。

#### 電氣安全

- ▶ 不得將電動工具暴露在雨中或潮濕環境中。水進入電動工具將增加電擊危險。

#### 人身安全

- ▶ 保持警覺，當操作電動工具時關注所從事的操作並保持清醒。當您感到疲倦，或在有藥物、酒精或治療反應時，不要操作電動工具。在操作電動工具時瞬間的疏忽會導致嚴重人身傷害。
- ▶ 使用個人防護裝置。始終佩戴護目鏡。安全裝置，諸如適當條件下使用防塵面具、防滑安全鞋、安全帽、聽力防護等裝置能減少人身傷害。
- ▶ 防止意外起動。確保開關在連接電源和 / 或電池盒、拿起或搬運工具時處於關閉位置。手指放在已接通電源的開關上或開關處於接通時插入插頭可能會導致危險。
- ▶ 在電動工具接通之前，拿掉所有調節鑰匙或扳手。遺留在電動工具旋轉零件上的扳手或鑰匙會導致人身傷害。
- ▶ 手不要伸展得太長。時刻注意立足點和身體平衡。這樣在意外情況下能很好地控制電動工具。
- ▶ 著裝適當。不要穿寬鬆衣服或佩戴飾品。讓您的衣物及頭髮遠離運動部件。寬鬆衣服、佩飾或長髮可能會捲入運動部件中。
- ▶ 如果提供了與排屑、集塵設備連接用的裝置，要確保他們連接完好且使用得當。使用這些裝置可減少塵屑引起的危險。
- ▶ 切勿因經常使用工具所累積的熟練感而過度自信，輕忽工具的安全守則。任何一個魯莽的舉動都可能瞬間造成人員重傷。

### 電動工具使用和注意事項

- ▶ 不要濫用電動工具，根據用途使用適當的電動工具。選用適當設計的電動工具會使您工作更有效、更安全。
- ▶ 如果開關不能開啟或關閉工具電源，則不能使用該電動工具。不能用開關來控制的電動工具是危險的且必須進行修理。
- ▶ 在進行任何調整、更換配件或貯存電動工具之前，必須從電源上拔掉插頭並 / 或取出電池盒。這種防護性措施將減少工具意外起動的危險。
- ▶ 將閒置不用的電動工具貯存在兒童所及範圍之外，並且不要讓不熟悉電動工具或對這些說明不瞭解的人操作電動工具。電動工具在未經培訓的用戶手中是危險的。
- ▶ 保養電動工具與配備。檢查運動件是否調整到位或卡住，檢查零件破損情況和影響電動工具運行的其他狀況。如有損壞，電動工具應在使用前修理好。許多事故由維護不良的電動工具引發。
- ▶ 保持切削刀具鋒利和清潔。保養良好的有鋒利切削刃的刀具不易卡住而且容易控制。
- ▶ 按照使用說明書，考慮作業條件和進行的作業來使用電動工具、配件和工具的刀頭等。將電動工具用於那些與其用途不符的操作可能會導致危險。
- ▶ 把手及握持區應保持乾燥、潔淨，且不得沾染任何油液或油脂。易滑脫的把手及握持區將無法讓您在發生意外狀況時安全地抓緊並控制工具。

### 電池式工具使用和注意事項

- ▶ 只用製造商規定的充電器充電。將適用於某種電池盒的充電器用到其他電池盒時會發生著火危險。
- ▶ 只有在配有專用電池盒的情況下才使用電動工具。使用其他電池盒會發生損壞和著火危險。
- ▶ 當電池盒不用時，將它遠離其他金屬物體，例如回形針、硬幣、鑰匙、釘子、螺絲或其他小金屬物體，以防一端與另一端連接。電池端部短路會引起燃燒或火災。
- ▶ 在濫用條件下，液體會從電池中濺出；避免接觸。如果意外碰到了，用水沖洗。如果液體碰到了眼睛，還要尋求醫療幫助。從電池中濺出的液體會發生腐蝕或燃燒。
- ▶ 請勿使用已受損或經改裝的電池盒。已受損或經改裝的電池組可能出現無法預期的反應，進而導致著火、爆炸或造成人員受傷。
- ▶ 勿讓電池盒或工具靠近火源或暴露於異常溫度環境中。若是靠近火源或暴露在超過 130 °C 的環境中可能造成爆炸。
- ▶ 請完全遵照所有的充電說明，電池盒或工具的溫度若是超出指示的規定範圍，請勿進行充電。不當充電或是在未規定的溫度範圍內進行充電，皆可能造成電池損壞並面臨更高的著火風險。

### 檢修

- ▶ 將您的電動工具送交專業維修人員，必須使用同樣的備件進行更換。這樣將確保所維修的電動工具的安全性。

- ▶ 請勿自行檢修受損的電池盒。電池組應交由製造商或是獲得授權的服務供應商來進行檢修。

## 多功能切割打磨機的安全注意事項

- ▶ 進行作業時，負責進行切割的配件可能會碰觸到隱藏的配線，請從絕緣處把握處拿持電動工具。負責進行切割的配件若是觸及「導電」電線，可能導致電動工具外露的金屬部件「導電」，進而使操作人員遭受電擊。
- ▶ 請用夾具或其他可行方式將工件穩固地架在可靠平台上。用手握持工件或將它貼靠在您身上會因無法確實固定而導致失控。
- ▶ 本電動工具僅適用於乾式研磨。水進入電動工具將增加電擊危險。
- ▶ 請注意：有失火之虞！請避免砂磨材料或砂帶機過熱。暫停作業之前請務必清空集塵容器。研磨粉塵可能在不利條件下自行點燃，例如研磨金屬時所產生的火花。尤其是當研磨粉塵若混入殘留的烤漆、聚胺酯或其他化學物質，而且在經過長時間運轉後砂磨材料的溫度又極高時，這種情形特別具危險性。
- ▶ 雙手必須遠離鋸割範圍，手不可以握在工件下端。如果不小心碰觸了鋸片可能被割傷。
- ▶ 請定期清潔電動工具的通風口。電動機風扇會將灰塵吸進機殼，過多的金屬粉末沉積會導致電氣危險。
- ▶ 使用合適的偵測裝置偵察隱藏的電線，或者向當地的相關單位尋求支援。接觸電線可能引起火災並讓操作者觸電。若損壞瓦斯管會引起爆炸。如果水管被刺穿會導致財物損失。
- ▶ 作業期間請用雙手牢牢握緊電動工具並保持穩固。使用雙手才能夠更穩定地操作電動工具。
- ▶ 更換嵌件工具時請戴上防護手套。安裝在機器上的嵌件工具在長時間操作後會發燙。
- ▶ 請勿以有機溶劑處理加工表面。由於刮削時工件會變熱，可能會產生帶毒性的蒸汽。
- ▶ 請務必謹慎對待刮刀與刀具。工具極為銳利，人員可能有受傷之虞。
- ▶ 如果充電電池損壞了，或者未按照規定使用充電電池，充電電池中會散發出有毒蒸氣。充電電池可能起火或爆炸。工作場所必須保持空氣流通，如果身體有任何不適必須馬上就醫。充電電池散發的蒸氣會刺激呼吸道。
- ▶ 切勿改裝拆開充電電池。可能造成短路。
- ▶ 尖銳物品（例如釘子或螺絲起子）或是外力皆有可能造成充電電池損壞。進而導致內部短路而發生電池起火、冒煙、爆炸或過熱等事故。
- ▶ 僅可在製造商的產品中使用充電電池。如此才可提供過載保護。



保護充電電池免受高溫（例如長期日照）、火焰、污垢、水液和濕氣的侵害。有爆炸及短路之虞。



## 產品和功率描述



請詳讀所有安全注意事項和指示。如未遵守安全注意事項與指示，可能導致火災、人員遭受電擊及 / 或重傷。請留意操作說明書中最前面的圖示。

## 依規定使用機器

本電動工具適合在木質複合板、塑膠、石膏、非鐵金屬和固定元件（例如未經硬化處理鐵釘、夾子）上進行鋸切和切割。它也可以加工偏軟壁磚、去除接縫、進行乾磨以及在小面積上刮削。本工具特別適合在工件的邊緣操作，以及進行切平的工作。本電動工具上只能安裝博世原廠配件。

## 插圖上的機件

機件的編號和電動工具詳解圖上的編號一致。

- (1) 把手（絕緣握柄）
- (2) 起停開關
- (3) 充電電池<sup>a)</sup>
- (4) 充電電池解鎖按鈕<sup>a)</sup>
- (5) 通風口
- (6) 振盪次數設定轉鈕
- (7) 可將工具解鎖的 Starlock 扳片
- (8) 工具夾座
- (9) 工作燈
- (10) 限深擋塊<sup>a)</sup>
- (11) 限深擋塊的緊固扳桿<sup>a)</sup>
- (12) 穿孔切割鋸片<sup>a)</sup>
- (13) 配有 Click & Clean 連接的吸塵裝備<sup>a)</sup>
- (14) 磨板<sup>a)</sup>
- (15) 研磨片<sup>a)</sup>
- (16) 吸塵裝置的緊固扳桿<sup>a)</sup>
- (17) 吸塵接管<sup>a)</sup>
- (18) 吸塵轉接頭<sup>a)</sup>
- (19) 吸塵管<sup>a)</sup>

a) 所述之配件並不包含在基本的供貨範圍中。

## 技術性數據

充電式多功能切割打磨機		GOP18V-30
產品機號		3 601 HG3 0..
額定電壓	V=	18
無負載轉速 n <sub>0</sub> <sup>A)</sup>	次 / 分	10000-18000
左側 / 右側振盪角度	°	1.5
重量 <sup>B)</sup>	kg	1.0
充電狀態下的建議環境溫度	°C	0 ... +35
操作狀態下的容許環境溫度 <sup>C)</sup> 以及存放狀態下	°C	-20 ... +50

## 充電式多功能切割打磨機

GOP18V-30

## 相容的充電電池

GBA18V...  
GBA 18V...  
ProCORE18V...  
EXPERT18V...  
EXBA18V...  
CORE18V...

## 建議使用的充電器

GAL18...  
GAL 18...  
GAL 36...  
GAL12V/18...  
GAL 12V/18...  
GAX 18...  
EXAL18...

A) 於 20–25 °C 配備充電電池 **ProCORE18V 4.0Ah** 時測得。

B) 不含充電電池（您可在 [www.bosch-professional.com](http://www.bosch-professional.com) 找到充電電池重量）

C) 溫度 <0 °C 時，性能受限  
數值可能因產品而異，並受使用條件以及環境條件影響。進一步資訊請見 [www.bosch-professional.com/wac](http://www.bosch-professional.com/wac)。

## 充電電池

**Bosch** 亦販售不含充電電池的充電式電動工具。可以從外包裝看出電動工具的供貨範圍是否包括電池。

### 為充電電池進行充電

► **只能選用技術性數據裡所列出的充電器。** 僅有這些充電器適用於電動工具所使用的鋰離子充電電池。

**提示：**由於國際運輸規定，出貨時鋰離子充電電池已部分充電。初次使用電動工具之前，請先將充電電池充飽電以確保充電電池蓄滿電力。

### 安裝充電電池

將已充飽電的充電電池推至充電電池固定座內，直到卡緊。

### 取出充電電池

若要取出充電電池，請按解鎖鈕，然後將充電電池抽出。**不可以強行拉出充電電池。**

本充電電池具備了雙重鎖定功能，即使不小心按壓了充電電池解鎖按鈕，充電電池也不會從機器中掉落出來。固定彈簧會把充電電池夾緊在機器中。

### 充電電池的電量指示器

**提示：**並非所有的充電電池類型都有電量指示器。充電電池的電量指示器透過綠色 LED 燈告知充電電池的目前電量。基於安全顧慮，務必在電動工具完全靜止時才能檢查充電電池的電量。

按一下電量指示器按鈕  或 , 即可顯示目前的電量。即使已取出充電電池，此項功能仍可正常運作。

按壓電量顯示按鈕後，LED 燈若未亮起，即表示充電電池故障，必須予以更換。

### 充電電池型號 GBA 18V... | GBA18V...



LED	容量
3 顆綠燈持續亮起	60–100 %
2 顆綠燈持續亮起	30–60 %
1 顆綠燈持續亮起	5–30 %
1 顆綠燈呈閃爍狀態	0–5 %

### 充電電池型號 ProCORE18V... | EXPERT18V... | EXBA18V... | CORE18V...



LED	容量
5 顆綠燈持續亮起	80–100 %
4 顆綠燈持續亮起	60–80 %
3 顆綠燈持續亮起	40–60 %
2 顆綠燈持續亮起	20–40 %
1 顆綠燈持續亮起	5–20 %
1 顆綠燈呈閃爍狀態	0–5 %

### 電池缺陷風險檢測

#### EXPERT18V... | EXBA18V...

電池電量指示器的 LED 燈除了顯示電池的充電狀態外，還可顯示電池缺陷的風險。

要啟用此功能，請按住電量指示器按鈕  3 秒鐘。電池電量指示器上的跑動燈號會顯示電池的分析結果。結果會顯示在電池電量指示器上。

 **1 個 LED 燈：**電池有很高的缺陷風險。效能和運作時間可能已經降低。建議更換電池。

 **5 個 LED 燈：**充電電池狀況良好，故障風險低。

**請注意：**電池缺陷風險評估分為兩個階段，並提供簡化的狀況評估。電池會被評估為狀況良好或缺陷風險增加。不會顯示電池狀況的百分比。

### 如何正確地使用充電電池

妥善保護充電電池，避免濕氣和水分滲入。

充電電池必須儲存在 -20 °C 至 50 °C 的環境中。夏天不可以把充電電池擱置在汽車中。

偶爾用柔軟、乾淨且乾燥的毛刷清潔充電電池的通氣孔。

充電後如果充電電池的使用時間明顯縮短，代表充電電池已經損壞，必須更換新的充電電池。

請您遵照廢棄物處理相關指示。

## 安裝

- ▶ 在電動工具上進行任何作業之前（例如維修，更換工具等等），請將機器中的電池取出。若是不小心觸動起停開關，可能造成人員受傷。

## 更換工具

- ▶ 更換工具時請戴上防護手套。碰觸到嵌件工具可能被割傷。

## 選擇嵌件工具

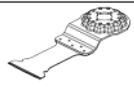
請注意是否為電動工具指定使用的嵌件工具。

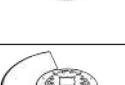
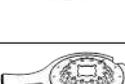
## 嵌件工具

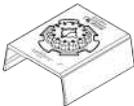
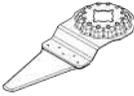
## GOP18V-30

		✓
		✓
		✗

下表中列舉了部份嵌件工具。如需其餘嵌件工具的相關資訊，請查閱內容最完備的博世配件目錄。

嵌件工具	材料	用途
 <b>AIZ 10 AB</b> Starlock 10×20 mm 木材金屬兩用的雙金屬穿刺切割鋸片	軟木、軟質塑膠、石膏板、薄壁鋁質異型材與非鐵金屬異型材、金屬薄板、未經硬化處理的釘子和螺絲	切口較小的截斷式切割及穿刺式切割；對木材進行細微調整； 例如：挖出線槽、在石膏板上進行穿刺式切割、為安裝鎖頭而開挖的鑿孔以及按照樣式鋸切五金配件
 <b>AIZ 32 EPC</b> Starlock 32×50 mm 用於木材的 HCS 高碳鋼穿刺切割鋸片	軟木	由於刀刃採弧形設計（Curved-Tec），不但可進行截斷式鋸切與穿刺式鋸切，而且切口乾淨俐落；亦可在接近邊緣處、角落處以及難以觸及的位置上進行鋸切； 例如：為製作通風網柵或插座凹槽所進行的穿刺式切割
 <b>AIZ 32 APiB</b> Starlock 32×50 mm 木材金屬兩用的雙金屬穿刺切割鋸片	木質複合材料以及不含鐵的軟金屬、未經硬化處理的釘子和螺絲、非鐵金屬材質的管件，以及小尺寸異型材	由於刀刃採弧形設計（Curved-Tec）因此可在木材上進行鋸切及穿刺式切割，切口平整且乾淨俐落，亦可處理不含鐵的軟金屬以及塑膠； 例如：插座和管件的安裝挖槽，將未經硬化處理的釘子和螺絲截短至與平面齊平
 <b>PAIZ 32 APB</b> StarlockPlus 32×60 mm 木材金屬兩用的雙金屬穿刺切割鋸片	木質複合材料以及不含鐵的軟金屬、未經硬化處理的釘子和螺絲、非鐵金屬材質的管件，以及小尺寸異型材	在木材、具磨蝕特性的木質複合板及塑膠上進行快速又深入的穿刺式切割，由於刀刃採弧形設計（Curved-Tec），因此加工出來的切口乾淨俐落； 例如：快速切斷非鐵管材以及小尺寸異型材，單向割斷未經硬化處理的釘子、螺絲以及小尺寸異型鋼材
 <b>AIZ 32 BSPIB</b> Starlock 32×50 mm 硬木專用的雙金屬穿刺切割鋸片	硬質木材、美耐板	由於刀刃採弧形設計（Curved-Tec）因此可在美耐板或硬木上進行截斷式切割及穿刺式切割，切口乾淨俐落，日式鋸齒設計特別適合用來處理硬木； 例如：安裝屋頂天窗、插座凹槽
 <b>AIZ 32 AIT</b> Starlock 32×40 mm 金屬專用 Carbide 穿刺切割鋸片	含鐵硬金屬、高磨蝕特性材料、纖維玻璃、石膏板、水泥纖維板、經硬化處理的釘子和螺絲	用於鋸切高磨蝕性材料或堅硬的含鐵金屬；在 BOSCH Carbide Technology 的加持之下，使用壽命大大提升； 例如：切割廚具面板、單向鋸切經硬化處理的螺絲和不鏽鋼
 <b>AIZ 32 APiLT</b> Starlock 32×45 mm 多重材質專用 Carbide 穿刺切割鋸片	含釘子木材、環氧樹脂、石膏板、玻璃纖維強化塑膠、碳纖維強化塑膠、水泥纖維板、金屬板	在因此適合在含釘子木材、磚塊及其他複合材料和具磨蝕特性材質上進行截斷式切割及穿刺式切割，切口乾淨俐落；在 BOSCH Carbide Technology 的加持之下，使用壽命大大提升； 例如：割斷窗框裡的螺絲

嵌件工具	材料	用途	
	<b>AIZ 45 AIT</b> Starlock 45×50 mm 金屬專用 Carbide 穿孔切割鋸片	含鐵硬金屬、高磨蝕特性材料、纖維玻璃、石膏板、水泥纖維板、經硬化處理的釘子和螺栓	寬型鋸片，用於鋸切高磨蝕性材料或堅硬的含鐵金屬；在 BOSCH Carbide Technology 的加持之下，使用壽命大大提升； 例如：切割廚具面板、單向鋸切經硬化處理的螺栓和不鏽鋼
	<b>PAII 52 APIT</b> StarlockPlus 52×50 mm 多重材質專用 Carbide 穿孔切割鋸片	含鐵硬質金屬板、環氧樹脂、石膏板、玻璃纖維強化塑膠、碳纖維強化塑膠、水泥纖維板	長型鋸片，由於刀刃採弧形設計 (Curved-Tec) 因此適合在金屬板上進行截斷式切割及穿孔式切割，切口乾淨俐落；在 BOSCH Carbide Technology 的加持之下，使用壽命大大提升； 例如：切割金屬板、割斷窗框裡的螺栓
	<b>AYZ 53 BPB</b> Starlock 53×40 mm 多重材質專用穿孔切割鋸片	石膏板、塑合板、夾層材料、木材	穿孔式鋸切之後若還要繼續長段切割，最適合使用此款產品；雙重科技的形狀設計，可確保您不論是在角落進行切割，亦或是在進行長段切割時都能得到乾淨俐落的完整切口； 例如：在石膏板或木牆上開挖插座凹槽
	<b>AII 65 APIB</b> Starlock 65×40 mm 木材金屬兩用的雙金屬穿孔切割鋸片	軟質木材、硬質木材、膠合鑲板、膠皮板材，未經硬化處理的釘子和螺栓	由於刀刃採弧形設計 (Curved-Tec) 因此可在美耐板或硬木上進行截斷式切割及穿孔式切割，切口乾淨俐落； 例如：裁短門框、用於架設層板的挖槽或在已安裝好的家具上開槽，將未經硬化處理的釘子和螺栓截短至與平面齊平
	<b>ACZ 85 EIB</b> Starlock 直徑 85 mm 木材金屬兩用的雙金屬扇形鋸片	木質複合板、塑膠、不含鐵的軟金屬	截斷式鋸切與穿孔式鋸切；亦可在難以觸及的接近邊緣處進行鋸切； 例如：截短已安裝在牆邊上的踢腳板或門框、為修改地板拼塊尺寸而進行的穿孔式鋸切
	<b>ACZ 100 SWB</b> Starlock 直徑 100 mm 多重材質專用的雙金屬半圓刀片	絕緣材料、隔音板、樓板、樓板隔音墊、厚紙板、地毯、橡膠、皮革	精準切割軟質材料； 例如：按尺寸裁切隔音板、將凸出的絕緣材料截短至與平面齊平
	<b>ACZ 105 ET</b> Starlock 直徑 105 mm 多重材質專用的扇形碳化鋸片	纖維水泥板、瓷磚填縫劑、磚塊、玻璃纖維強化塑膠、超耐磨地板	截斷式鋸切與穿孔式鋸切；亦可在難以觸及的接近邊緣處進行鋸切；在 BOSCH Carbide Technology 的加持之下，使用壽命大大提升； 例如：截短已安裝在牆邊上的踢腳板或門框、在磚塊上銑切配線槽、快速切下瓷磚填縫劑且僅產生少量粉塵、在玻璃纖維板上進行裁切以便裝設水龍頭配件、調整超耐磨地板尺寸
	<b>ACZ 85 RD4</b> Starlock 直徑 85 mm、帶有鋸齒緣、水泥墘料和具磨蝕特性材質專用的扇形鑽石鋸片	水泥縫、偏軟的壁磚、玻璃纖維強化塑膠、環氧樹脂、防火石膏板	能夠在接近邊緣處或難以觸及的位置上以及角落處進行切割，鋸齒緣採用鑽石材質，可大大拉長使用壽命； 例如：進行整修時去除壁磚間的填縫劑、在瓷磚上挖槽； 亦有碳化鋸齒緣版本供售：ACZ 85 RT3
	<b>AVZ 70 RT4</b> Starlock 70 mm 寬、Carbide 鋸齒緣的水泥墘料清除器	水泥墘料、填縫劑、環氧樹脂、玻璃纖維強化塑膠、具磨蝕特性的材質	開鑿切挖 / 切斷填縫材料與陶瓷瓦材料，以及在硬質基材上銼磨及研磨；在 BOSCH Carbide Technology 的加持之下，使用壽命大大提升； 例如：去除陶瓷瓦黏接劑及填縫用水泥墘料

嵌件工具	材料	用途
	<b>AVZ 90 RT2</b> Starlock 90 mm 寬、水泥壘料和具磨蝕特性的材質、油漆	在硬質基材上銼磨及研磨； 例如：去除水泥壘料或陶瓷瓦黏接劑（像是更換受損瓷磚時）、清除殘留的地毯膠和油漆； 研磨顆粒規格分為 20 (RT2)、40 (RT4)、60 (RT6) 或 100 (RT10)
	<b>AVZ 93 G</b> Starlock 93 mm 的三角形系列研磨片專用磨板（寬度亦為 93 mm）	視研磨片種類而定  在邊緣處、角落處或難以觸及的位置上進行研磨； 根據研磨片種類可在木材、油漆、表面烤漆、石材等質地上進行研磨； 羊毛氈可用於清潔、在木材上刻花、為金屬去除鏽斑、打磨表面烤漆；拋光氈布則是用於預拋光  研磨的最大振動次數等級為「4」。如果振蕩次數過多，嵌件工具的磨損會顯著增加，或會導致嵌件工具過早失效。
	<b>AUZ 70 G</b> Starlock 70x125 mm 研磨片專用的剖面打磨器（寬度為 70 mm）	木材、管件 / 異型材料、油漆，表面烤漆、補土、金屬  方便又快速地磨削剖面以及已修成弧形但仍不平整的材料表面，直徑可達 55 mm； 研磨片用於磨削木材，管材 / 剖面、表面烤漆、補填材料和金屬
	<b>AVZ 32 RT4</b> Starlock 32x50 mm 木材和油漆專用、Carbide 鋸齒緣的深入式三角頭磨具	木材、油漆  不需使用研磨片即可直接研磨難以觸及的木材或油漆；在 BOSCH Carbide Technology 的加持之下，使用壽命大大提升； 例如：磨除百葉窗片間的油漆、研磨角落處的木質地板； 研磨顆粒規格分為 40 (RT4) 及 100 (RT10)
	<b>AIZ 28 SC</b> Starlock 28x40 mm HCS 高碳鋼萬用細縫刀頭	伸縮縫、窗框補土、隔音材料（礦棉）  切割軟質材料； 例如：切割矽利康伸縮縫或窗框補土
	<b>ASZ 32 SC</b> Starlock 24 mm 寬 HCS 高碳鋼拉式切刀、 11 mm 寬 HCS 高碳鋼推式切刀	屋頂油氈、地毯、人工草皮、厚紙板、PVC 地板  快速又精準地切割軟質材料及具磨蝕特性的彈性材料； 例如：切割地毯、厚紙板、PVC 地板、在屋頂油氈上挖槽
	<b>ATZ 52 SC</b> Starlock 52 mm 硬性刮刀	地毯、水泥壘料、混凝土、陶瓷瓦黏接劑  在硬質基材上刮削； 例如：去除水泥壘料、陶瓷瓦黏接劑、殘留的混凝土及地毯膠； 另有彈性刮刀 ATZ 52 SFC（用於地毯軟膠 / 殘留的油漆）

### 安裝 / 更換機器的嵌件工具

必要時得拆除已裝在機器上的嵌件工具。

其做法是：請將 Starlock 扳片 (7) 打開至最底位置。嵌件工具隨之彈出。Starlock 扳片 (7) 會再次自動關閉。

將您想要使用的嵌件工具（例如穿刺切割鋸片 (12)）裝到工具夾頭 (8) 上，讓水平錯位的部份位於下方（請參考詳解圖中的圖示，從上方要能看到嵌件工具上的印刷字）。

將嵌件工具的位置調成對於當前加工作業最有利的角度。可設成十二種不同位置，各相差 30°。

嵌件工具調成所需角度後，請將它牢牢推至工具夾頭的夾爪上，直到其自動上鎖。

► **檢查嵌件工具是否已固定牢靠。** 安裝方式錯誤或者未牢牢地固定好嵌件工具，它可能會在操作中途鬆開並傷害您。

## 安裝及調整限深擋塊

以扇形鋸片和穿刺切割鋸片進行加工時，可使用限深擋塊 (10)。

必要時得拆除已裝在機器上的嵌件工具。

將限深擋塊 (10) 以所需的擺放角度推入到底，讓它跨越工具夾頭 (8) 後套在電動工具的軸頭上。請將限深擋塊卡上。可設成十二種不同位置，各相差 30°。

請視需要調整加工深度。將限深擋塊的緊固扳桿 (11) 壓緊，如此即可固定住限深擋塊。

## 選擇研磨片

本公司特別針對欲進行加工之各種材質以及所需之表面材料去除比例，推出各式研磨片供您選購：

研磨片	材料	用途	粒度	振動次數等級
PRO F460	- 所有種類的木質材料 (例如硬木、軟木、塑合板、建築板材)	粗加工研磨，例如未刨平的粗糙木樑及木板	粗	40 1-4 60
		平面磨整以及整平凹凸不平處	中	80 1-4 100 120
	- 金屬	粗磨和細磨木材	細	180 1-4 240
PRO F460	- 顏色 - 烤漆 - 補土 - 填縫泥	磨除顏料層	粗	40 1-4 60
		研磨先前塗上的顏料 (例如磨除某一條筆刷痕跡、滴落的色點和蜿蜒垂流的顏料)	中	80 1-4 100 120
		磨平底料以方便上漆	細	180 1-4 240

## 將研磨片安裝在磨板上 / 更換研磨片

磨板 (14) 上有魔鬼氈設計，可以很便利地快速固定研磨片。

裝上研磨片 (15) 之前，請拍掉磨板 (14) 魔鬼氈上的粉塵，以確保最佳附著力。

放上研磨片 (15) 時，請將它與磨板 (14) 的其中一邊對齊，接著將它研磨片整片鋪到磨板上，並確實壓緊。

請注意：為確保最佳吸塵效果，研磨片上的孔請對準磨板開孔位置。

若要取下研磨片 (15)，請從尖端處將它從磨板 (14) 上拆下。

您可使用 **Bosch** 配件目錄中 93 mm 三角形系列的所有研磨片、拋光氈布和清潔氈布。

您可以採取相同方式把研磨配件，例如氈布 / 拋光毛氈等，固定在磨板上。

使用研磨配件操作時，如研磨片或研磨板，最大振動次數等級為「4」。如果振蕩次數過多，嵌件工具的磨損會顯著增加，或會導致嵌件工具過早失效。請注意嵌件工具上或嵌件工具包裝上的資訊。

## 吸鋸塵 / 吸鋸屑

避免在未採取減塵措施的情況下進行工作。適合的吸塵裝置可減少危害健康的粉塵污染。工作場所要保持空氣流通。原則上，請使用適合的呼吸防護裝置。儘可能使用適合物料的吸塵裝置。請留意並遵守貴國與加工物料有關的法規。

► 避免讓工作場所堆積過多的塵垢。塵埃容易被點燃。

## 對吸塵器之要求

建議軟管額定直徑	mm	<b>35</b>
所需負壓 <sup>A)</sup>	mbar	≥ <b>230</b>
	hPa	≥ <b>230</b>
所需流量 <sup>A)</sup>	l/s	≥ <b>36</b>
	m <sup>3</sup> /h	≥ <b>129.6</b>
建議過濾效率		粉塵等級 M <sup>B)</sup>

A) 電動工具的吸塵器連接頭功率值

B) 符合 IEC/EN 60335-2-69

請遵循吸塵器說明書。如果吸塵力下降，請停止工作並排除原因。

## 連接吸塵裝置 (請參考圖 A)

吸塵裝置 僅設計用來與磨板 (14) 一起使用，搭配其他嵌件工具時無法發揮作用。

進行打磨時，一律要連接吸塵裝置。

安裝吸塵裝置之前，請先取下嵌件工具和限深擋塊 (10)。

請將吸塵裝置 (13) 推入到底，讓它跨越工具夾頭 (8) 後接在電動工具的軸頭上。壓緊緊固扳桿 (16)，以便將吸塵裝置鎖定。

將吸塵器的吸塵管 (19) 插到吸塵裝置 (13) 的吸塵接管 (17) 上並使其卡入。

或是您可將吸塵轉接頭 (18) 插入吸塵裝置的吸塵接管 (17) 和將吸塵管 (19) 插入吸塵轉接頭 (18)。

將吸塵管 (19) 與吸塵器連接起來 (配件)。

本手冊於結尾處另外刊錄了連接不同類型吸塵器的操作概要。

根據工件材質選擇合適的吸塵裝置。

吸集可能危害健康、可能致癌或乾燥的廢塵時，務必使用特殊吸塵裝置。

## 操作

### 操作機器

#### 啟動 / 關閉

▶ 請確定您不用放開把手，就能操作起停開關。

若要**啟動**電動工具，請將起停開關 **(2)** 往前推，此時開關上出現的符號是「**I**」。

若要**關閉**電動工具，請將起停開關 **(2)** 往後推，此時開關上會出現「**O**」符號。

工作燈可改善緊鄰之工作範圍的照明。此燈會與電動工具一同啟動和關閉。

▶ 勿直視工作燈，強光會刺眼。

**提示：**當充電電池已無電力或過熱時，本電動工具會自動關機，這時請您將電動工具的起停開關 **(2)** 關閉。

請為充電電池進行充電，或是先讓它冷卻，然後才重新啟動電動工具。否則充電電池可能會損壞。

#### 設定振蕩次數

利用振蕩次數設定轉鈕 **(6)**，即使是在工具運作期間，亦可按照需求設定振蕩次數。

正確的振蕩次數是由加工材質和工作條件決定，唯有實際操作才能夠找出最合適的振蕩次數。

– 鋸切木材的建議最大振動次數等級為「**6**」。

– 適用於研磨的最大振動次數等級為「**4**」。

– 適用於鋸切塑膠的最大振動次數等級為「**4**」。

**注意：**請遵循嵌件工具上或嵌件工具包裝上的最大振動次數資訊。操作如研磨及鋸齒緣嵌件工具等嵌件工具時的最大振動次數等級為「**4**」。

**提示：**如果振動次數過高，嵌件工具的磨損會顯著增加，或會導致嵌件工具提早故障。

### 作業注意事項

▶ 在電動工具上進行任何作業之前（例如維修、更換工具等等），請將機器中的電池取出。若是不小心觸動起停開關，可能造成人員受傷。

▶ 等待電動工具完全靜止後才能夠放下機器。

**提示：**作業期間請勿用手捂住電動工具的通氣孔 **(5)**，否則將導致電動工具的使用壽命縮短。

#### 機器的工作原理

由於採用振蕩式驅動方式，嵌件工具以 **3°** 每分鐘來回擺動的次數高達 **18000** 次。這樣的性能讓您能夠在狹窄空間內精準地進行加工。



使用輕微且均勻的下壓力操作機器，否則不僅會降低操作功率，也會讓安裝在機器上的工具卡住。



操作時要左右移動電動工具，這樣可以避免安裝在機器上的工具太熱並且可以避免工具被卡住。

### 鋸切

▶ 只能使用未受損、功能正常的鋸片。彎曲或變鈍的鋸片可能斷裂，對鋸痕造成負面影響或導致反彈。

▶ 鋸切輕建材時，必須注意有關的法令規定以及材料供應商提供的建議事宜。

▶ 僅加工木材、石膏板等這類的軟性材料時可進行穿刺切割！

▶ 請確保在欲剪切的工件之後沒有電力線路。

在高碳鋼鋸片（HCS）鋸進木材、塑合板、建材等物的內部前，請先確認有無異物（例如鐵釘、螺絲等）。必要時得清除這些異物或者改用雙金屬鋸片。

### 切割

**提示：**切割壁磚時請注意，嵌件工具在長時間使用下很快就會耗損。

### 研磨

磨除功率和研磨的效果原則上是由所選擇的研磨片、設定的振蕩等級和操作機器時施壓的大小來決定的。

只有完好的研磨片才能夠提高研磨效率，並且保護電動工具。

操作機器時要均力施壓，如此才能夠提高研磨片的使用壽命。

在機器上施力過度不僅無法提高研磨效率，反而會加劇電動工具的磨損，使研磨片過早失效。

為了在角落、邊緣和不易進入的區域精確地研磨，您可以使用磨板的尖端或側緣進行研磨。

持續在單點位置上打磨，可能會使研磨片的溫度快速拉高。請調降振蕩次數並放輕下壓力道，並且定時讓研磨片冷卻。

不可以使用研磨過金屬的研磨片來研磨其它材質。

僅可使用 **Bosch** 原廠研磨配件。

進行打磨時，一律要連接吸塵裝置。

### 刮削

刮削時必須選擇高振蕩等級。

加工軟質基材（例如木材）時，請採用貼面的方式並放輕下壓力道。否則刮鏟可能切入底墊中。

### 減震裝置

 內建減震裝置，可減緩震動。

### 溫控的過載保護裝置

只要按照規定使用，電動工具就不可能過載。萬一負載過重或充電電池的溫度已超出允許範圍，電動工具的轉速會變慢或是直接停機。電動工具將持續以低轉速運作，直到充電電池的溫度降至允許範圍或負載減輕，它才會恢復全速運轉。發生自動停機的情況時，請將電動工具關機，待充電電池降溫後再重新開機。

## 維修和服務

### 維修和清潔

- ▶ 在電動工具上進行任何作業之前（例如維修，更換工具等等），請將機器中的電池取出。若是不小心觸動起停開關，可能造成人員受傷。
- ▶ 電動工具和通風口都必須保持清潔，這樣才能夠提高工作品質和安全性。

定期使用鋼絲刷清潔有鋸齒緣的嵌件工具。

### 顧客服務處和顧客諮詢中心

台灣進口商

電話: (02) 7734 2588

製造商地址:

Robert Bosch Power Tools GmbH

羅伯特·博世電動工具有限公司

70538 Stuttgart / GERMANY

70538 斯圖加特/ 德國

當您需要諮詢或訂購備用零件時，請務必提供本產品型號銘牌上 10 位數的產品機號。

### 廢棄物處理

必須以符合環保的方式，將損壞的電動工具、充電電池、配件和包裝材料進行回收再利用。



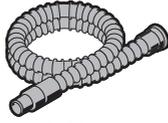
不可以把電動工具和充電電池 / 拋棄式電池丟入一般家庭垃圾中!

## 依據 (EU) 2023/2854 法規的產品數據資訊

### 產品數據的種類

### 產品數據記錄

### 數據存取與數據格式



Ø 28 mm:  
2 608 000 772 (3.2 m)



GAS 18V-12 MC



Ø 28 mm:  
2 608 000 885 (4 m)



GAS 12-40 MA



Ø 22 mm:  
2 608 000 567 (5 m)  
Ø 35 mm:  
2 608 000 565 (5 m)



GAS 35 M AFC



GAS 55 M AFC



Ø 22 mm:  
2 608 000 568 (5 m)  
Ø 35 mm:  
2 608 000 566 (5 m)

# Legal Information and Licenses

## 1 – Open Source Components

### 1.1 GCE-Math-Apache-2.0

Copyright 2016–2023 Keith O'Hara

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the Software), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED AS IS, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### 1.2 CMSIS\_5 v5.9.0 – Apache-2.0

Copyright 2009–2020 Arm Limited. All rights reserved.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.

You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

### 1.3 Infineon TLE987x DFP, v1.4.6 – BSD-3-Clause

Copyright © 2015–2017, Infineon Technologies AG.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the copyright holders nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### 1.4 Libfixmath – MIT

Copyright © 2011–2021 Flatmush <Flatmush@gmail.com>, Petteri Aimonen <Petteri.Aimonen@gmail.com>, & libfixmath AUTHORS libfixmath is Copyright © 2011–2021 Flatmush

<Flatmush@gmail.com>, Petteri Aimonen <Petteri.Aimonen@gmail.com>, & libfixmath AUTHORS

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the Software), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED AS IS, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### 1.5 - MFixedPoint, v8.0.2 – MIT

Copyright 2018 Geoffrey Hunter

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

### 1.6 picolibc, v1.8.8

(1) Copyright © 2001 Mike Barcroft <mike@FreeBSD.org>

All rights reserved.

(2) Copyright 2002 Jeff Johnston <jjohnstn@redhat.com>

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,

EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### (3) Copyright 2019, 2020, 2021, 2024

**Keith Packard Stephen Street**

#### (4) Copyright 1997 Nick Clifton, Cygnus Solutions

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### (5) Copyright 2024, Synopsys, Inc.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the Synopsys, Inc., nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### (6) Copyright © 1983, 1993 The Regents of the University of California. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### (7) Copyright 2009–2015 ARM Ltd

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The name of the company may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY ARM LTD "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL ARM LTD BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

#### (8) Copyright 2009–2015 Linaro Limited

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of Linaro Limited nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS AS IS AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF

MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT INCLUDING NEGLIGENCE OR OTHERWISE ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

### (9) Copyright 1994 Cygnus Support

Redistribution and use in source and binary forms are permitted provided that the above copyright notice and this paragraph are duplicated in all such forms and that any documentation, and/or other materials related to such distribution and use acknowledge that the software was developed at Cygnus Support, Inc. Cygnus Support, Inc. may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## 2 – Common Licenses

### 2.1 Apache License 2.0 (Apache-2.0)

#### Apache-2.0

#### Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

#### 1. Definitions.

**"License"** shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

**"Licensor"** shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

**"Legal Entity"** shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, **"control"** means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

**"You"** (or **"Your"**) shall mean an individual or Legal Entity exercising permissions granted by this License.

**"Source"** form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

**"Object"** form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

**"Work"** shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

**"Derivative Works"** shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

**"Contribution"** shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, **"submitted"** means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as **"Not a Contribution."**

**"Contributor"** shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

**2. Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

**3. Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

**4. Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a **"NOTICE"** text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

**5. Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

**6. Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

**7. Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

**8. Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

**9. Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

### 3 – WARRANTY DISCLAIMER

This product contains Open Source Software components which underlie Open Source Software Licenses. Please note that Open Source Licenses contain disclaimer clauses. The text of the Open Source Licenses that apply are included in this manual under "Legal Information and Licenses".

Servicekontakte  
Service Contacts  
Contacts de Service  
Contactos de Servicio



<https://www.bosch-pt.com/serviceaddresses>

Garantiebedingungen  
Guarantee Conditions  
Conditions de Garantie  
Condiciones de Garantía



<https://www.bosch-pt.com/guarantee/202507>