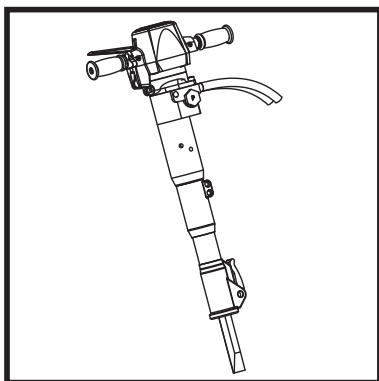




BELLE BHB BREAKERS

870/40001/2
01/18



- Spare Parts Book
- Pièces Détachées
- Libro Despiece
- Lista de Peças
- Ersatzteilhandbuch
- Lista Części Zamiennych
- Запасные Части Книга
- Част Списък
- Část Barevný Pruh
- Lista Pieśelor De Schimb
- Részek Oldalra Dől
- Rezervní Díjlovi Knjiga
- Zoznam Náhradných Díelov

202

(GB) Operators Manual	6
(US) Operators Manual	20
(F) Manuel De L'Opérateur	34
(E) Manual del Operador	48
(P) Manual de Operação	62
(NL) Bedieningshandbuch	76
(DK) Instrukcja Obsługi	90
(D) Руководство для оператора	104
(I) Operatore Ръчен	118
(S) Na'vod K Obzluze	132
(NO) Manual de Utilizare	146
(SF) Kezelők Kézi	160
(PL) Uputstvo za rukovatelja	174
(RUS) Průručka pre obsluhu	188

EC DECLARATION OF CONFORMITY / DECLARATION CE DE CONFORMITE / DECLARACIÓN DE CONFORMIDAD CE / DECLARAÇÃO CE DE CONFORMIDADE / EG-VERKLARING VAN OVEREENSTEMMING / EF OVERENSSTEMMELSESERKLÆRING



We, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, hereby certify that if the product described within this certificate is bought from an authorised Belle Group dealer within the EEC, it conforms to the following EEC directives: 2006/42/CE (This directive replaces directive 98/37/EC), Electromagnetic Compatibility Directive 2004/108/CE (as amended by 89/336/EEC, 92/31/EEC & 93/68 EEC), The Waste Electrical and Electronic Equipment (WEEE) 2002/96/CE, the low voltage directive 2006/95/CE, BS EN ISO 12100-1:2003 Safety of machinery and associated harmonised standards, where applicable. Noise emissions conform to directives 2000/14/EC Annex VI & 2005/88/EC, for machines under article 12 the notified body is **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**

Noise Technical Files are held at the Belle Group Head Office address which is stated above.



Nous soussignés, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, certifions que si le produit décrit dans ce certificat est acheté chez un distributeur autorisé Belle Group au sein de la CEE, il est conforme aux normes CEE ci-après: 2006/42/CE (Cette norme remplace la norme 98/37/CE), Norme compatible pour l'électromagnétisme 2004/108/CE (modifié par 89/336/EEC, 92/31/EEC & 93/68 EEC), Les déchets électriques, et d'équipement électronique 2002/96/CE, caractéristiques basse tension 2006/95/CE, BS EN ISO 12100-1:2003 Norme de sécurité des machines et des critères associés et configurés, si applicable. Les émissions de bruit sont conformes à la directive 2000/14/CE Annexe VI et 2005/88/EC pour machines, article 12, l'objet mentionné est **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**

Les dossiers techniques sur les émissions sonores des machines sont détenus au siège social de BELLE GROUP à l'adresse ci-dessus.



La Sociedad, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, por el presente documento certifica que si el producto descrito en este certificado es comprado a un distribuidor autorizado de Belle Group en la CEE, este es conforme a las siguientes directivas: 2006/42/CE de la CEE (Esta directiva sustituye a la Directiva 98/37/CE), Directiva 2004/108/CE sobre Compatibilidad Electromagnética (según enmiendas 89/336/EEC, 92/31/EEC & 93/68 EEC), Los residuos eléctricos y electrónicos (RAEE) 2002/96/CE, Directiva sobre Bajo Voltaje 2006/95/CE, BS EN ISO 12100-1:2003 de Seguridad de Maquinaria y Niveles armonizados estándares asociados donde sean aplicables. Emisión de Ruidos conforme a la Directiva 2000/14/CE Anexo VI y 2005/88/EC para máquinas bajo artículo 12 la mencionada unidad está **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**

En La Sede Central de Belle Group existen Archivos Técnicos con contenido referente a Niveles de Ruido.



O signatário, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK 0EU, GB**, pelo presente, declara que se o produto descrito neste certificado foi adquirido a um distribuidor autorizado do Belle Group em qualquer país da UE, está em conformidade com o estabelecido nas seguintes directivas comunitárias: 2006/42/CE (Esta directiva substitui a Directiva 98/37/EC), Directiva de Compatibilidade Electromagnética 2004/108/CE (conforme corrigido pelas 89/336/EEC, 92/31/EEC & 93/68 EEC). O Eléctrico de Perda e Equipamento Electrónico (DEEE) 2002/96/CE, a directiva de baixa voltagem 2006/95/CE, BS EN ISO 12100-1:2003 Segurança da maquinaria e às normas harmonizadas afins se aplicáveis. As emissões de ruído respeitam e estão dentro das directivas para máquinas 2000/14/CE Anexo VI & 2005/88/EC, artigo 12, sendo o organismo notificado **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**

A informação técnica sobre níveis sonoros está disponível na Sede da Belle Group na morada acima mencionada.



Ondergetekende, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, verklaren hierbij dat als het product zoals beschreven in dit certificaat is gekocht van een erkende Belle Group dealer binnen de EEG, het voldoet aan de volgende EEG richtlijnen: 2006/42/CE (Deze richtlijn vervangt Richtlijn 98/37/EC), Electromagnetische Compatibilite Richtlijn 2004/108/CE (geamendeerd door 89/336/EEC, 92/31/EEC & 93/68 EEC). De afgedankte elektrische en elektronische apparatuur (AEEA) 2002/96/CE, de Laegspannings Richtlijn 2006/95/CE, BS EN ISO 12100-1:2003 Veiligheid van Machines en hieraan gekoppelde geharmoniseerde Standaarden, waar deze van toepassing is. Geluidshinder te voldoen aan de richtlijnen 2000/14/EG en 2005/88/EC bijlage VI, voor toestel onder stuk 12 naar de notified troep zit **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**

Worden de Technische Dossiers van het lawaai gehouden op het adres van het Hoofdkantoor van de Groep Belle dat hierboven ' wordt verklaard.



Vi, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, erklærer hermed, at hvis det i dette certifikat beskrevne produkt er købt hos en autoriseret Belle Group forhandler i EU, er det i overensstemmelse med følgende EØF-direktiver: 2006/42/CE (Dette direktiv erstatter direktiv 98/37/EF), 2004/108/EØF (som ændret ved 89/336/EEC, 92/31/EØF & 93/68 EØF), Afald af elektrisk og elektronisk udstyr (WEEE) 2002/96/CE, lavspændingsdirektiv 2006/95/CE, BS EN ISO 12100-1:2003 Maskinsikkerhed og tilhørende harmoniserede standarder, hvor det er relevant. Støjemission i overensstemmelse med direktivene 2000/14/EF bilag VI og 2005/88/EF, for maskiner under paragraf 12. Det bemærkede organ er **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, Storbritanien**.

De tekniske støjspecifikationer forefindes på Belle Group's hovedkantor, adressen er skrevet ovenfor.

PRODUCT TYPE	TYPE DE PRODUIT.....	TIPO DE PRODUCTO
MODEL.....	MODELE.....	MODELO
SERIAL No.....	N° DE SERIE	N° DE SERIE
DATE OF MANUFACTURE.	DATE DE FABRICATION	FECHA DE FABRICACIÓN
SOUND POWER LEVEL MEASURED /	NIVEAU DE PUISSANCE SONORE MESUREE /	NIVEL DE POTENCIA ACÚSTICA MEDIDO /
.....(GUARANTEED)(GARANTIE)(GARANTIZADO)
WEIGHT.....	POIDS.....	PESO
TIPO DE PRODUCTO	PRODUCTTYPE	PRODUKTTYPE.....
MODELO	MODEL	MODEL
NO. DE SÉRIE	SERIENUMMER	SERIENR.....
DATA DE FABRIC	FABRICAGEDATUM	FREMSTILLINGSDATO
NIVEL DE POTÊNCIA DE SOM MEDIDO /	GEMETEN GELUIDSSTERKTENIVEAU /	LYDEFEKTNIVEAU MÅLT /
.....(GARANTIDO)(GEGARANDEERD)(GARANTERET)
PESO.....	GEWICHT	VÆGT



Signed by:
Signature: 
Medido por:
Assinado por:
Getekend door:
Underskrevet af:
Ray Neilson

Managing Director - On behalf of BELLE GROUP (SHEEN) UK.
Le Directeur Général - Pour le compte de la SOCIETE BELLE GROUP (SHEEN) UK.
Director Gerente - En nombre de BELLE GROUP (SHEEN) UK.
Director-Geral - Em nome de BELLE GROUP (SHEEN) UK.
Algemeen Directeur - Namens BELLE GROUP (SHEEN) UK.
Administrerende direktør - På vegne af BELLE GROUP (SHEEN) UK.

Place of Declaration - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Lieu de déclaration - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Declaración hecha en - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Lugar de Declaração - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Plaats van de Verklaring - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Sted i erklæring - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK

Date of Declaration - 2007.....
Date de déclaration - 2007.....
Fecha de la declaración - 2007.....
Data da Declaração - 2007.....
Datum van de verklaring - 2007.....
Dato for erklæringen - 2007.....

EGKONFORMITÄTSERKLÄRUNG / DICHIARAZIONE CE DI CONFORMITÀ / EG-VERKLARING VAN OVEREENSTEMMING / EC SAMSVARERKLÆRING / EY-YHDENMUKAISUUSILMOITUS / DEKLARACJA ZGODNOSCI Z PRZEPISAMI UE

(D) Wir, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, bestätige hiermit, dass, wenn das Produkt innerhalb dieser Bescheinigung ist von einem gekauft zugelassen Belle Group-Händler innerhalb der EWG, so entspricht sie den folgenden EG-Richtlinien: 2006/42/CE (Diese Richtlinie ersetzt die Richtlinie 98/37/EEG), elektromagnetische Kompatibilität Richtlinie 2004/108/EG (geändert durch 89/336/EWG, 92/31/EWG und 93/68 EWG), Die Elektro- und Elektronik-Altgeräte (WEEE) 2002/96/CE, der Niederspannungs-Richtlinie 2006/95/CE, BS EN ISO 12100-1:2003 Sicherheit von Maschinen und der damit verbundenen harmonisierten Normen, sofern zutreffend. Geräuschemissionen entsprechen der Richtlinie 2000/14/EG Anhang VI, und 2005/88/EG, für Maschinen gemäß Artikel 12 der benannten Stelle ist **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Geräuschtechnische Dokumente stehen in unserer Zentrale unter obig angegebener Adresse zur Verfügung.

(I) Il Gruppo Belle Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB, certifica che, se il prodotto descritto nel presente certificato viene acquistato da un rivenditore autorizzato Belle gruppo all'interno della CEE, è conforme alle seguenti direttive CEE: 2006/42/CE (presente direttiva sostituisce la direttiva 98/37/CE), elettromagnetica compatibilità con la direttiva 2004/108/CE (modificata dalla 89/336/CEE, 92/31/CEE e 93/68 CEE). L' Elettro e l'Apparecchiatura Elettronica (WEEE) 2002/96/CE, la direttiva bassa tensione 2006/95/CE, BS EN ISO 12100-1:2003 Sicurezza del macchinario e le relative norme armonizzate, se del caso. Emissioni sonore conformi alla direttiva 2000/14/CE, allegato VI e 2005/88/EG, per le macchine a norma dell'articolo 12, l'organismo notificato **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Dati tecnici relativi ai livelli acustici sono disponibili su richiesta dalla sede madre Belle Group al sopra citato indirizzo.


(S) Undertecknade, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Storbritannien**, intygar härmed att ut den produkt som beskrivs i detta intyg är köpt från en auktoriserad Belle-återförsäljare inom EEG, överensstämmer med följande EEG-direktiv: 2006/42/CE (Detta direktiv ersätter direktiv 98/37/EG). Elektromagnetisk kompatibilitet 2004/108/CE (ändrat genom direktiv 89/336/EEG, 92/31/EEG och 93/68 EEC). Avfall från elektroniska och elektroniska produkter (WEEE) 2002/96/CE, lågspänningsdirektiv 2006/95/CE, BS EN ISO 12100-1:2003 Maskin säkerhet och tillhörande harmoniserade standarder, i förekommande fall. Buller följa direktiv 2000/14/EG bilaga VI och 2005/88/EG till maskinen enligt artikel 12 anmälda organet är **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, Storbritannien**.
Teknisk dokumentation vad gäller test av maskiners ljud/bullernivå finns dokumenterad hos Belle-Groups huvudkontor i Sheen, England.

(NO) Vi, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, herved bekræfte at hvis produktet er beskrevet i dette sertifikatet er kjøpt fra en autorisert Belle Group forhandler innenfor EØS, følger det med til følgende EEC direktiver: 2006/42/CE (Dette direktiv erstatter direktiv 98/37/EF). Det elektromagnetisk kompatibilitets-direktiv 2004/108/CE (endret ved 89/336/EEC, 92/31/EEC og 93/68 EEC). Avfallat Elektrisk og Elektronisk Utstyr (WEEE) 2002/96/CE, Lavspenningsdirektiv 2006/95/CE, BS EN ISO 12100-1:2003 Sikkerhet av maskiner og tilhørende harmoniserte standarder, der dette er aktuelt. Lydeffekt samsvar med direktiv 2000/14/EC vedlegg VI og 2005/88/EG, for maskiner i henhold til artikkel 12 i meldte organ er **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Lydetekniske filer er arkivert hos Bell Group Hovedkontor med adresse som nevnt ovenfor.

(SF) Me, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, todistaa, että jos tuote on kuvattu tämän todistuksen ostetaan valtuutetun Belle jälleenmyyjä ETY: n sisällä, se täyttää seuraavat EY-direktiivien: 2006/42/EY (tällä direktiivillä korvataan direktiivi 98/37/EY), sähkömagneettinen yhteensopivuutta direktiivin 2004/108/CE (muutettuna 89/336/ETY, 92/31/ETY ja 93/68 ETY). Tuhiaa Sainko ja Sähköinen Varuste (WEEE) 2002/96/CE, the matajalärmitdirektiivistä 2006/95/CE, SFS-EN ISO 12100-1:2003 Koneurvaluissa ja niihin liittyvien yhdenmukaistettujen standardien tarviassa. Melupäästöjä läytävät direktiivin 2000/14/EY liitteessä VI ja 2005/88/EG, koneiden 12 artiklan mukaisesti ilmoitetun laitoksen on **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Melumittausten teknilliset arvot ovat saatavana Belle Group pääkonttorin ylläolevasta osoitteesta.

(PL) My, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Wielka Brytania**, niniejszym poświadczamy, iż produkt opisany w tym świadectwie został zakupiony od autoryzowanej Belle Group w UE i jest zgodny z następującymi dyrektywami EU: 2006/42/EY (Niniejsza dyrektywa zastępuje dyrektywę 98/37/EC). Dyrektywa zgodności elektromagnetycznej 2004/108/CE (z poprawkami wniesionymi przez 89/336/EEC, 92/31/EEC & 93/68 EEC). Utylizacja sprzętu elektrycznego i elektronicznego 2002/96/CE, dyrektywa w sprawie niskich napięć 2006/95/CE, BS EN ISO 12100-1:2003 Bezpieczeństwo maszyn i związane z nimi harmonizacyjne, tam gdzie to ma zastosowanie. Poziom hałas jest zgodny z Dyrektywą 2000/14/EC Załącznik VI i 2005/88/EG, organizacja zawiadanioma (odnośnie zgodności) to **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, Wielka Brytania**.
Informacje Techniczne dotyczące poziomu hałasu są przechowywane w Belle Group – adres powyżej.

PRODUKTYP.....	TIPO PRODOTTO	PRODUKTYP.....	
MODELL	MODELLO	MODELL	
SERIENR.....	SERIE N°	SERIE NR.....	
HERSTELLUNGSDATU	DATA DI FABBRICAZIONE..	TILLVERKNINGSDATUM.....	
SCHALLEISTUNGSPEGEL GEMESSEN /	LIVELLO POTENZA SONORA MISURATA /	LJUDSTYRKA UPPMATT /	
.....(GARANTERT)(GARANTITA)(GARANTERAD)	
GEWICHT.....	PESO	VIKT.....	
PRODUKTYP.....	TUOTETYYPPI.....	TYP PRODUKTO.....	
MODELL	MALLI.....	MODEL.....	
SERIE NR.....	VALMISTUSNRO	Nr SERII.....	
PRODUKSJONS DATO.....	VALMISTUSPÄIVÄ	DATAPRODUKCI.....	
ÄLYDKRAFTNIVÅ MÅLT /	ÄNENVOIMAKKUUDEN TASO MITATTU /	POZIOM MOCY DŹWIĘKU ZMIERZONY /	
.....(GARANTERT)(TAATTU)(GWARANTOWANY)	
VEKT.....	MASSA	WAGA	

Unterzeichnet von:
 Firmatoda:
 Undertecknat:
 Signatur:
 Allekirjoitus:
 Podpisal:

Ray Neilson
 Generaldirektor – Im auftrag von BELLE GROUP (SHEEN) UK.
 Amministratore Delegato – Per conto di BELLE GROUP (SHEEN) UK.
 V.D. – På vägnar av BELLE GROUP (SHEEN) UK.
 Managing Director – På vegne av SOCIETE BELLE GROUP (SHEEN) UK.
 Toimitusjohtaja – BELLE GROUP (SHEEN) UK: n puolesta.
 Dyrektor Zarządzający – w imieniu BELLE GROUP (SHEEN) UK

Erklärungsort - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
 Luogo de dichiarazione - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
 Plats av Erklaring - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
 Sted av Erklaring - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
 Julistuksen paikka - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
 Miejsce deklaracji - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK

Erklärungsdatum - 2007.....
 Data de dichiarazione - 2007.....
 Datum av Erklaring - 2007.....
 Dato av Erklaring - 2007.....
 Julistuksen päivämäärä - 2007.....
 Data deklaracji - 2007.....

**СЕРТИФИКАТ СООТВЕТСТВИЯ / EÜ VASTAVUSDEKLARATSIOON / ATBILSTĪBAS
DEKLARĀCIJA / ES ATITIKTĪES DEKLARACIJA / ДЕКЛАРАЦИЯ ЗА СПАЗВАНЕ НА
ИЗИСКВАНИЯ / ΕΕ ΔΗΛΩΣΗ ΚΑΤΑΛΗΘΟΤΗΤΑΣ**

(RUS)

Мы, нижеподписавшиеся, от имени Belle Group Sheen (Великобритания), Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Великобритания, заявляем, что в случае, если описанная в данном сертификате продукция была приобретена у уполномоченного представителя Belle Group в ЕС, то она соответствует следующим директивам ЕС: 2006/42/CE (Эта директива заменяет директиву 98/37/EEC), директиве электромагнитной совместимости 2004/108/CE (дополненной 89/336/EEC, 92/31/EEC & 93/68/EEC). Утилизации электрического и электронного оборудования (WEEE) 2002/96/CE, 2006/95/CE Директива низкого напряжения, BS EN ISO 12100-1:2003 Безопасность машин и связанные с ними гармонизированные стандартов, где это применимо. Уровень шума соответствует директивам 2000/14/EC Приложение VI и 2005/88/EC, для машин, указанных в статье 12 уполномоченный орган: **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Техническая документация по данному вопросу находится в штаб-квартире Belle Group, по адресу который указан выше.

(EST)

Meie, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK17 0EU, GB**, kinnitan, et kui kirjelatud toote jooksul käesoleva sertifikaadi on ostedud lubatud Belle nimele vahendaja jooksul EMU, see vastab järgmistele EMÜ direktiividele: 2006/42/CE (käesolev direktiiv asendab direktiivi 98/37/EEK), elektromagnetilise ühilduvuse direktiivi 2004/108/CE (muudetud 89/336/EMÜ, 92/31/EMÜ ja 93/68 EMÜ), Ja elektroonikaseadmete jäätmete (WEEE) 2002/96/CE, madalpinge direktiivi 2006/95/CE, BS EN ISO 12100-1:2003 Masinate ohutus ning sellega seotud ühtlustatud standarditele, kui see on kohaldatav. Müra osas vastama direktiivi 2000/14/EB VI lisa ja 2005/88/EÜ masinate artikli 12 kohaselt teavitatud asutus on **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Dokumentid tehnilise müra kohta arhiveeritakse Belle Group peakontoris eelpoolmainitud aadressil.

(LV)

Mēs, **Belle Group Sheen UK, Nr. Buxton, Derbyshire, SK17 0EU, ar šo apliecinām**, ar šo apliecinā, ka gadījumā, ja produkts aprakstītais šajā sertifikātā ir iegādājies no pilnvarota Belle grupas dēlera teritorijā EEK, tā atbilst šādām EK direktīvām: 2006/42/CE (Šī direktīva aizvieto Direktīvu 98/37/EEK), Elektromagnētiskās saderības direktīvu 2004/108/CE (kurā grozījumi izdarīti ar 89/336/EEK, 92/31/EEK un 93/68 EEK), Elektros ir elektroniskis ierangos atlieku (EEI) atlieku, 2002/96/CE, zemsprieguma directive 2006/95/CE, BS EN ISO 12100-1:2003 Mašīnu drošība un saistītos saskāņotus standartus, ja vajadzīgs. Trokšņa emisijas neatbilst Direktīvas 2000/14/EB VI pielikumā un 2005/88/EC, mašīnu saskaņā ar 12 pilnvarotā iestāde ir **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, LIELBRITĀNIJA**.
Tehniskā dokumentācija par iekārtu trokšņu līmeni glabājas Belle Grupas galvenajā birojā, kura adrese ir norādīta augšā.

(LT)

Mes, **Belle Group Sheen UK, Sheen, Nr Buxton, Derbyshire, SK 0EU, GB**, patvirtinu, kad jei produktas, kaip aprašyta šio sertifikato pirkti iš leidžiama Belle frakcijos atstovas pagal EEB, yra atitinka šiuos EEB direktyvas: 2006/42/CE (ši direktyva pakeičia Direktivą 98/37/EB), elektromagnetinio suderinamumo direktyvos 2004/108/CE (su pakeitimais), padarytias 89/336/EEB, 92/31/EEB ir 93/68 EEB), Elektros ir elektronines įrangos atliekų (EEI) atliekų, 2002/96/CE, Žemosios įtampos įrangos direktyvą 2006/95/CE, LST EN ISO 12100-1:2003 Mašinių sauga ir susiję dariniai standartai, jei taikytina. Triukšmo emisija neatitinka Direktivos 2000/14/EB VI priede UN 2005/88/EB, už mašinos pagal 12 straipsnio nuostatas, notifikuoti įstaiga yra **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Tehninės bylos apie triukšmo skleidimą saugomos centriniame Belle Group biure (adresas nurodytas viršuje).

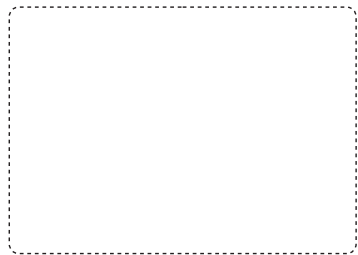
(BG)

Компанията, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, се удостоверява, че ако стоката е описано в този сертификат е закупен от оторизиран дилър Belle група в рамките на ЕИО, то отговаря на следните директиви на ЕИО: 2006/42/CE (настоящата директива заменя Директива 98/37/ЕО) , електромагнитна съвместимост Директива 2004/108/CE (както е изменен с 89/336/ЕИО, 92/31/ЕИО & 93/68 ЕИО). За отпадците от електрически и електронно оборудване (WEEE), 2002/96/CE, нискоото напрежение директива 2006/95/CE, BS EN ISO 12100-1:2003 Безопасност на машините и свързаните с тях хармонизирани стандарти, когато е приложимо. Шуми емисии съответства на Директива 2000/14/ЕО приложение VI и 2005/88/ЕО, за машини, съгласно член 12 на нотифициран орган е **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Техническите спецификации за шумови характеристики се намират на адреса на Централния офис на Бел Груп, който е посочен по-горе.

(GR)

Εμείς, η **Belle Group, Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Μεγάλη Βρετανία**, βεβαιώνω ότι, αν το προϊόν που περιγράφεται σε αυτό το πιστοποιητικό έχει αγοράστεί από εξουσιοδοτημένο αντιπρόσωπο Belle ομάδα στο εσωτερικό της ΕΟΚ, θα συμμορφώνεται με τις ακόλουθες οδηγίες ΕΟΚ: 2006/42/CE (Η παρούσα οδηγία αντικαθιστά την οδηγία 98/37/ΕΚ), Ηλεκτρομαγνητική Συμβατότητα οδηγία 2004/108/CE (όπως τροποποιήθηκε από την 89/336/ΕΟΚ, 92/31/ΕΟΚ και 93/68 ΕΟΚ). Τα Απόβλητα Ηλεκτρικού και Ηλεκτρονικού Εξοπλισμού (ΑΗΝΕ) 2002/96/CE, η οδηγία 2006/95/CE χαμηλής τάσης, BS EN ISO 12100-1:2003 Ασφάλεια μηχανών και των σχετικών ενσωματωμένων προτύπων, ανάλογα με την περίπτωση. Εκπομπές θορύβου σύμφωνα με την οδηγία 2000/14/ΕΚ παράρτημα VI και 2005/88/ΕΚ, για τις μηχανές σύμφωνα με το άρθρο 12 του κοινοποιημένου οργανισμού που είναι: **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**
Τεχνικοί φάκελοι που αφορούν τα αποτελέσματα μετρήσεων θορύβου φυλάσσονται στα κεντρικά γραφεία της BELLE, στην ανωτέρω διεύθυνση

ТИП ПРОДУКЦИИ.....	TOOTE TÛUP	ПРОДУКТА TIPS
МОДЕЛЬ.....	MUDEL	MODELIS
СЕРИЙНЫЙ НОМЕР.....	SERIANUMBER	SĒRIJAS NR.
ДАТА ВЫПУСКА	VALMISTAMISE KUUPÄEV.	IZGATAVOŠANAS DATUMS
УРОВЕНЬ ШУМА ЗАМЕР ПРОИЗВЕДЕН /(ГАРАНТИРОВАН)	HELITUGEVUSE TASE MÕÕDETVUSE /(GARANTEERITUD)	IZMĒRĪTAIS SKAŅAS JAUDAS LĪMENIS /(GARANTĒTAIS)
ЧАСТОТА	KAAL	MASA
GAMINIO TIPAS	ВИД НА ПРОДУКТА.....	Τύπος προϊόντος.....
MODELIS	МОДЕЛ	Μοντέλο
SERIJOS NR.	СЕРИЕН НОМЕР	Αριθμός Σειράς
PAGAMINIMO DATA	ДАТА НА ПРОИЗВОДСТВО..	Μετρηση
GARSO STIPRUMU LYGIS IŠMATUOTAS /(GARANTUOTAS)	НИВО НА СИЛАТА НА ЗВУКА ИЗМЕРЕНО /(ГАРАНТИРАНО)	Σταθμή Θορύβου Κατα Την Ημερομηνία Κατασκευής (Εγγυημένη)
SVORIS	ТЕОЯЛ	Βάρος.....



Подпись:
Alla kirjutanud:
Paraksts:
Pasiraše:
Подпис:
Υπογραφή:

Ray Neilson

исполнительный директор - от имени БЕЛЛЕ ГРУП ШИИИ (ВЕЛИКОБРИТАНИЯ),
Tegevdirektor - BELLE GROUP (SHEEN) UK poolt.
Vadošais direktors - Pāršāvat BELLE GROUP (SHEEN) UK.
Generalinis direktorius - BELLE GROUP (SHEEN) UK vardu.
Рей Нилсон - Управляващ директор от името на BELLE GROUP (SHEEN) UK.
Διευθύνων Σύμβουλος – εκ μέρους της BELLE GROUP (SHEEN) Μεγάλη Βρετανία.

Место декларирования - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK	Дата декларирования - 2007.....
Koht deklaratsiooni - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK	Deklaratsiooni kuupäev - 2007.....
Vietas deklarāciju - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK	Dienas deklarācija - 2007.....
Vieta deklarācijas - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK	Data deklarācijas - 2007.....
Дата на декларация - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK	Място на декларация - 2007.....
Τόπος Διακήρυξης - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK	Ημερομηνία δήλωσης - 2007.....

ES PROHLÁŠENÍ O SHODĚ / DECLARATIE DE CONFORMITATE CE / EU MEGFELELŐSÉGI NYILATKOZAT / EC UYUM BİLDİRGESİ / EC İZJAVA O USKLAĐENOSTI / PREHLÁSENIE O ZHODE

(CZ)

My, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Velká Británie**, potvrzují, že v případě výrobků uvedených v tomto osvědčení je koupil od autorizovaného dealera Belle skupinu v rámci EHS, že splňuje následující směrnice EHS: 2006/42/CE (tato směrnice nahrazuje směrnici 98/37/ES) (Elektromagnetická kompatibilita Směrnice 2004/108/CE ve znění 89/336/EEC, 92/31/EEC & 93/68 EHS). Odpadních elektrických a elektronických zařízení (OEEZ), 2002/96/CE, nízkonapětové směrnice 2006/95/CE, BS EN ISO 12100-1:2003 Bezpečnost strojních zařízení a související harmonizované normy, případně. Hlukových emisí v souladu se směrnici 2000/14/ES příloha VI a 2005/88/ES, pro stroje podle článku 12 oznámený subjekt **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, Velká Británie**.
Technické údaje ohledně hladin hluku jsou k dispozici k nahlédnutí na adrese společnosti Belle Group, která je uvedena výše.

(RO)

Noi, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, certificăm prin prezenta că în cazul în care produsul descris în cadrul acestui certificat este cumpărat de la un distribuitor autorizat Belle Group în cadrul CEE, este conformă cu următoarele directive CEE: 2006/42/CE (prezenta directivă înlocuiește Directiva 98/37/CE), de compatibilitate electromagnetică a Directivei 2004/108/CE (astfel cum a fost modificată prin 89/336/CEE, 92/31/CEE și 93/68 CEE). Deșeurile electrice și electronice (DEEE) 2002/96/CE, tensiune scăzută a Directivei 2006/95/CE, BS EN ISO 12100-1:2003 Securitatea mașinilor și asociate standardele armonizate, acolo unde este cazul. A emisiilor de zgomot în conformitate cu Directiva 2000/14/CE anexa VI & 2005/88/CE, pentru mașini în temeiul articolului 12 organismul notificat este **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**.
Fisele tehnice cu privire la emisiile de zgomot sunt pastrate la Biroul Central Belle Group care este amintit mai sus.

(HUN)

Mi, a **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, Egyesült Királyság** ezúton igazolom, hogy ha a termék leírása belül ez a bizonyítványt vásárolt engedélyezett Belle Group kereskedő az EGK, az megfelel az alábbi EEC irányelveknek: 2006/42/CE (ez az irányelv felváltja a 98/37/EK irányelv), elektromágneses kompatibilitási irányelv 2004/108/CE (módosított 89/336/EGK, 92/31/EGK és 93/68 EGK). A hulladékosztromos és elektronikus berendezések (WEEE) 2002/96/CE, kisfeszültségű irányelv 2006/95/CE, BS EN ISO 12100-1:2003 Gépek biztonságára és a kapcsolódó harmonizált szabványokra, adott esetben. Zajkibocsátás megfelel a 2000/14/EK irányelv VI és 2005/88/EK gépész a 12. cikk alapján a bejelentett szervezet: **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, Egyesült Királyság**.
A zajkibocsátási adatokat megtalálja a Belle Group fent említett központi címén.

(HR)

Mi, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, ovime potvrđujemo da ako proizvod opisan unutar ovog certifikata je kupio od Belle Group ovlaštenog distributera unutar EEZ, ona odgovara sljedećim EEC smjernicama: 2006/42/CE (Ova direktiva zamjenjuje direktiva 98/37/EC), Elektromagnetska kompatibilnost Direktiva 2004/108/CE (kako je izmijenjeno 89/336/EEC, 92/31/EEC i 93/68 EEC), Otpad električne i elektroničke opreme (WEEE) 2002/96/CE, niskonaponske direktivi 2006/95/CE, BS EN ISO 12100-1:2003 Sigurnost strojeva i pridružene usklađene standarde, gdje je primjenjivo. Emisija buke u skladu s direktivom 2000/14/EC aneksi VI i 2005/88/EC, za strojeve iz članka 12, obavješteni tijelo **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**.
Tehnička dokumentacija o buci čuva se u sjedištu tvrtke Belle Group čija adresa je gore navedena.

(TR)

Biz, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, Belle Group Eđer ürün bu sertifikayı içinde açıklanan burada da tasdik AET içinde yetkili Belle Grup diler satın oludundan, aşağıdaki AET direktiflerine uyumludur: 2006/42/CE (Bu yönerge yönetmesi 98/37/EC yeline), Elektromanyetik Uyumluluk Yönetmeliği 2004/108/CE (as 89/336/EEC, 92/31/EEC ve 93/68 AET tarafından) değiştirilmiştir. Atık Elektrikli ve Elektronik Ekipman (WEEE) 2002/96/CE, alçak gerilim direktifi 2006/95/CE, BS EN ISO 12100-1:2003 Makine Güvenliği ve ilgili uyumlaştırılmış standartlar, uyulanabilir. Onaylanmış kuruluş, madde 12 altında makinelei için, gürtürlü emisyonları direktifleri 2000/14/EC Ek VI ve 2005/88/EC ile uyumlu **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**.
Ses Teknik Dosyası yukarıda adresi belirtilen Belle Group Merkez Ofisinde bulunmaktadır.

(SK)

Vi, **Belle Group Sheen UK, Sheen, Nr. Buxton, Derbyshire, SK17 0EU, GB**, potvrdzujem, že v prípade výrobkov uvedených v tomto osvedčení je kúpil od autorizovaného dealera Belle skupinu v rámci EHS, že spĺňa nasledujúce smernice EHS: 2006/42/CE (táto smernica nahradza smernicu 98/37/ES) (Elektromagnetická kompatibilita Smernica 2004/108/CE ve znění 89/336/EEC, 92/31/EEC & 93/68 EHS). Odpadových elektrických a elektronických zariadeniach (OEEZ), 2002/96/CE, nízkonapätové smernice 2006/95/CE, BS EN ISO 12100-1:2003 Bezpečnosť strojových zariadení a súvisiace harmonizované normy, prípadne. Hlukových emisii v súlade so smernicou 2000/14/ES príloha VI a 2005/88/ES, na stroje podľa článku 12 notifikovaný orgán **AVT Reliability Unit 2 Easter Court, Europa Boulevard, Warrington, Cheshire, WA5 7ZB, GB**.
Technická dokumentácia obsahujúci hladiny hluku je k dispozícii na adrese vedení spoločnosti Belle Group, ktorá je uvedená výše.

TYP PRODUKU	TIPUL PRODUSULUI	A TERMÉK TÍPUSA
MODEL	MODEL	MODELL
SERI ČÍSL	SERIA	GYÁRI SZÁM
DATUM VÝROBY	DATA FABRICARII	GYÁRTÁSI IDŐ
NAMĚŘENÁ HL. HLUKU /(GARANTOVANÁ)	NIVEL DE ZGOMOT MASURAT /(GARANTAT)	A MÉRT HANGERŐSZINT /(GARANTÁLT)
HMOTNOST	GREUTATEA	SÚLY
TIP PROIZVODA	ÜRÜN TIPI	TYP PRODUKTU
MODEL	MODEL	MODEL
SERIJSKI Br.	SERI NUMARASI	SÉRIOVÉ ČÍSLO
DATUM PROIZVODNJE	ÜRETİM TARİHI	DÁTUM VÝROBY
NIVO SNAGE ZVUKA IZMJEREN /(GARANTIRANO)	SES SEVIYE ÖLÇÜMÜ /(GARANTI EDILEN)	NAMERANA HLADINA HLUKU /(GARANTOVANÁ)
TEŽINA	AĞIRLIĞI	HMOTNOST



Podepsal:
Semnat de:
Alăturás:
Potpisao:
Imzalayan:
Podpisal:

Ray Neilson

Generální ředitel – jménem BELLE GROUP (SHEEN) UK
Director General - in numele BELLE GROUP (SHEEN), UK
Ügyvezető igazgató - A BELLE GROUP (SHEEN) UK nevében
Izvršni Direktor – U ime BELLE GROUP (SHEEN) UK
Yönetici - BELLE GROUP (SHEEN) UK adına.
Generálny riaditeľ – menom BELLE GROUP (SHEEN) UK

Místo Deklarace - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Locul declaratiei - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Kiállítás Helye - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Mjesto izjave o usklađenosti - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Declaration Yeri - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK
Miesto Deklarácie - Sheen, Nr. Buxton, Derbyshire, SK17 0EU, UK

Datum Deklarace - 2007.....
Data declaratiei - 2007.....
Kiállítás Ideje - 2007.....
Datum izjave o usklađenosti - 2007.....
Declaration Tarihi - 2007.....
Dátum Deklarácie - 2007.....



How To Use This Manual

This manual has been written to help you operate and service the Altrad Belle BHB Hydraulic Breaker safely. This manual is intended for dealers and operators of the Altrad Belle BHB Hydraulic Breaker.

Foreword

The '**Machine Description**' section helps you to familiarise yourself with the machine's layout, controls and Decals.

The '**Safety Instructions**' sections explain how to use the machine to ensure your safety and the safety of the general public.

The '**Operating Instructions**' section helps you with the setting up and use of the machine.

The '**Service & Maintenance**' section is to help you with the general maintenance and servicing of your machine.

The '**Environment**' section gives instructions on how to handle the recycling of discarded apparatus in an environmentally friendly way.

The '**Trouble Shooting Guide**' helps you if you have a problem with your machine.

The '**Warranty**' section details the nature of the warranty cover and claims procedure.

The '**Declaration Of Conformity**' section shows the standards that the machine has been built to.

Directives with regard to the notations.

Text in this manual to which special attention must be paid are shown in the following way:



CAUTION

The product can be at risk. The machine or yourself can be damaged or injured if procedures are not carried out in the correct way.



WARNING

The life of the operator can be at risk.



WARNING



WARNING

Before you operate or carry out any maintenance on this machine **YOU MUST READ** and **STUDY** this manual.

KNOW how to safely use the unit's controls and what you must do for safe maintenance.

(Be sure that you know how to switch the machine off before you switch on, in case you get into difficulty.)

ALWAYS wear or use the proper safety items required for your personal protection.

If you have **ANY QUESTIONS** about the safe use or maintenance of this unit, **ASK YOUR SUPERVISOR OR CONTACT THE** Altrad Belle +44 (0)1298 84606



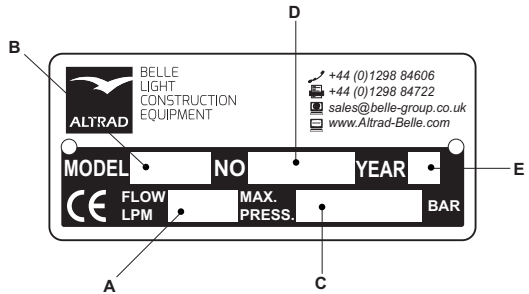
Contents

How to use this manual.....	6
Warning	6
Machine Description	7
Technical Data	8
Matching The Breaker To The Power Source	9
Safety Instructions.....	10 - 12
General Safety	13
Recommended Hydraulic Oil.....	13
Storage	13
Environment	14
Pre-Start Checks	14
Start and Stop Procedure.....	14
Operating Instructions	15 - 17
EHTMA - Code Of Practice	17
Service & Maintenance	18
Trouble Shooting Guide	19
Warranty	19
Declaration of Conformity.....	2

Altrad Belle reserves the right to change machine specification without prior notice or obligation.

Serial Plate

- A. Maximum permitted Hydraulic Oil Flow.
- B. Breaker Model.
- C. Maximum permitted Hydraulic Pressure.
- D. Serial Number.
- E. Year of Manufacture.



Decals

A. Model Decal

This Decal shows the Model Name of the Breaker. E.g 'BHB 19'

B. Noise Decal

This Decal shows the Noise Level of the machine.

C. CE Decal

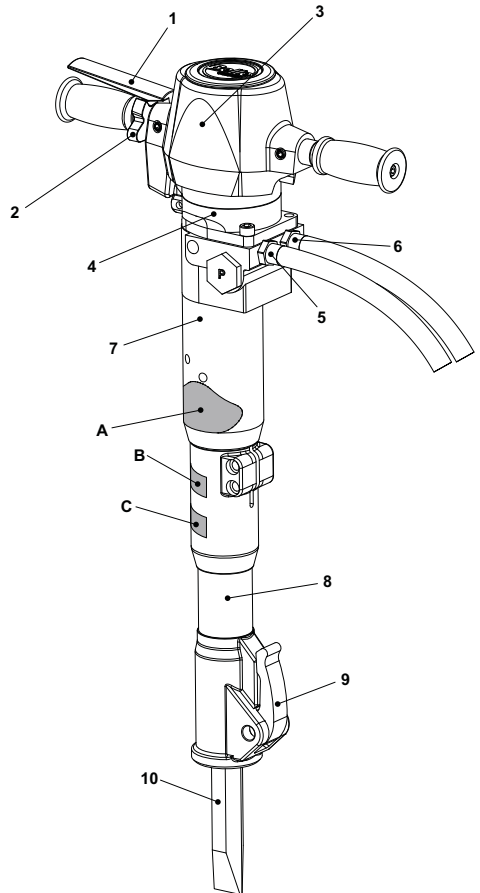
This Decal indicates whether the machine conforms to CE Regulations. The Decal will not be found on USA machines.

Machine Components

1. Trigger
2. Trigger Lock
3. Head
4. Accumulator
5. Oil In (P*)
6. Oil Return (T**) (Restrictor - Please see 'Technical Data' section)
7. Main Body
8. Nose Section
9. 'Steel' Latch
10. Steel

* P = Pressure

** T = Tank





Technical Data

Model	BHB12	BHB19	BHB19 USA	BHB23	BHB23 UC	BHB25X
Hydraulic Flowrate (Ltrs/Min)	20	20	20	20	20	20
Restrictor	Open	Open	Open	Open	Open	Open
Weight (Kg)	14	19	19	23	23	25
Working Pressure (Bar)	70 - 90	90 - 110	90 - 110	90 - 110	90 - 110	90 - 110
Max Pressure (Bar)	160	160	160	160	160	160
Max. Return Line Pressure (Bar)	10	10	10	10	10	10
EHTMA Category	C	C	C	C	C	C
Hydraulic Connections	1/2 BSP	1/2 BSP	1/2 JIC	1/2 BSP	1/2 JIC	1/2 BSP
	Flat Faced, Quick Release, Non-Drip Couplings					
Hydraulic Oil Type						
- Below 30°C	ISO VG T32					
- Above 30°C	ISO VG T46					
Blow Frequency (Blows/Min)	2400	1600	1600	1600	1600	1600
Breaking Force (Joules)	55	65	65	65	65	55
Accumulator Gas Pressure (Bar)	40	40	40	40	40	40
Steel Size (mm)	22 x 82	25 x 108	32 x 152	25 x 108	28 x 160	32 x 160
Recommended Power Pack	Midi 20/140					
Preliminary Vibration - Midi (m/s ²)	16.08	11.97	11.97	11.97	11.97	6.5
Noise Level (dB(A))	105	107	107	107	108	108

Model	BHB25	BHB27 *		BHB27X *		BHB30 USA *	
Hydraulic Flowrate (Ltrs/Min)	20	20	30	20	30	20	30
Restrictor	3.8	3.4	Open	3.4	Open	3.8	Open
Weight (Kg)	28	27	27	30	30	31.5	
Working Pressure (Bar)	105 - 125	105 - 125		105 - 125		105 - 125	
Max Pressure (Bar)	160	160		160		160	
Max. Return Line Pressure (Bar)	20	20		20		20	20
EHTMA Category	C	C	D	C	D	C	D
Hydraulic Connections	1/2 BSP	1/2 BSP		1/2 BSP		1/2 JIC	1/2 JIC
	Flat Faced, Quick Release, Non-Drip Couplings						
Hydraulic Oil Type							
- Below 30°C	ISO VG T32						
- Above 30°C	ISO VG T46						
Blow Frequency (Blows/Min)	1300	1300	2150	1300	2150	1150	1850
Breaking Force (Joules)	85	85		85		65	65
Accumulator Gas Pressure (Bar)	50	50		50		50	50
Steel Size (mm)	32 x 160	32 x 160		32 x 160		32 x 152	32 x 152
Recommended Power Pack	Midi 20/140	Midi 20/140	Major 30/140	Midi 20/140	Major 30/140	Midi 20/140	Major 30/140
Preliminary Vibration - Midi (m/s ²)	11.1	11.8	18.61	8.2	6.8	10.75	16.06
Noise Level (dB(A))	108	108		108		108	108

* **NOTE:-** Breakers are supplied with alternative return pipe restrictors. Please ensure correct restrictor is fitted for 20 or 30 Litre supply. (Restrictor size is marked on the restrictor body) **NO MARKINGS = OPEN RESTRICTOR**
More information can be found on the next page.

Matching The Breaker To The Power Pack



Restrictor / Fitting Identification

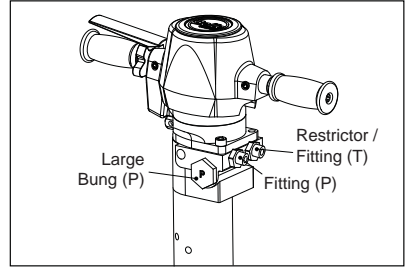
The tank Restrictors / Fittings can be identified by using this simple procedure.

Check your Breaker and identify the P and T side of the body by looking for a letter stamp on the large bung. This can be found on the side of the Breaker as shown in the diagram. This stamp also corresponds to the Restrictor / Fitting on the same side of the Breaker

For example: In the image the bung on the left hand side of the Breaker is clearly stamped with the letter P, so the fitting on the left hand side will be the Pressure Line and the right hand side will be the Tank / Return Line.

P = Pressure side of the Breaker

T = Tank / Return side of the Breaker



WARNING

You must only ever change the TANK Line Restrictor / Fitting as you may cause harm to your Breaker and Power Pack if the PRESSURE Line Fitting is changed.

BHB27, BHB27X & BHB30 USA ONLY!!

At delivery, the Breaker is intended for an oil flow of 30 Ltrs/Min (E.H.T.M.A. Category D). If the Breaker is to be connected to a Hydraulic Power Pack with an Oil Flow of 20 Ltrs/Min (E.H.T.M.A. Category C) the Restrictor / Fitting of the tank line (T) must be replaced:- See Item 6 of 'Machine Description' section.

Restrictors / Fittings

Oil Flow Rate	EHTMA Category	Part Number	Restrictor Size	Notes
20 Ltrs/Min	C	971/99061	3.4mm	Delivered with the Breaker (Loose)
30 Ltrs/Min	D	971/99006	No Restrictor (Open)	Fitted onto the Breaker



CAUTION

Connecting the Breaker to a higher oil flow rate may cause damaged to the Power Pack or to the Breaker. DO NOT attempt to change the Restrictor immediately after use as the Hydraulic Oil will be hot.

Replacing The Restrictor

1. Disconnect the Breaker from the Power Pack.
2. Fix the Breaker in vertical position to a vice or in another way so that the Breaker is fixed.
Do not place it on the Nose Section because the Breaker can tilt.
3. Remove the Tank Line Hose, leaving the Restrictor / Fitting in the Breaker body. Remember to have an oil pan ready to take the oil spill from the Breaker. Drain the oil from the T-Hose into the oil pan.
4. Loosen the Restrictor on the Breaker. Remember to have an oil pan ready to take the oil spill from the Breaker.
5. Remove the Seal from the old Fitting / Restrictor. Fit the new Restrictor using the existing Seal, ensuring that the internal Allen Key head in the Restrictor is fitted into the Breaker body first. Tighten to a Torque Setting of 90±2 Nm.
6. Refit the Hose and tighten to a Torque Setting of 50±2 Nm.
7. Reconnect the Breaker to Power Pack and check it for leakage.

NOTE:- When the Breaker is modified to another oil flow rate, do not connect a Power Pack with higher oil flow rate.

We recommend that the EHTMA Label on the Breaker is changed to Category C (Green) (Supplied loose with Breaker), if Restrictor (971/99061) is fitted. Section A of the Serial Plate (See 'Machine Description' section) should also be amended.

**WARNING**

To reduce risk of serious injury or death to yourself or others, read these safety instructions before operating the machine. Post these safety instructions at work locations, provide copies to employees, and make sure that everyone reads the safety instructions before operating or servicing the machine. Follow all safety instructions given in this manual. All the safety instructions conform to the applicable laws and directives of the European Union. You should also respect any additional national/regional directives. In countries outside the European Union, the valid local statutes and regulations shall apply. Any additional regional laws and regulations must be observed.

Machine and Tool operating Hazards

Sudden or unexpected movement of the machine may occur during operating, which may cause injuries. Furthermore, losing your balance or slipping may cause injury. To reduce risks:

- *Make sure that you always keep a stable position with your feet as far apart as the width of your shoulders, and keeping your body weight balanced out.*
- *Stand firmly and always hold on to the machine with both hands.*
- *Do not start the machine when it is lying on the ground.*
- *Make sure that the handles are clean and free from grease and oil.*

Unintentional start of the machine may cause injury!

- *Keep your hands away from the start and stop device until you are ready to start work.*

The working tool is exposed to heavy strains when the machine is used and after a certain amount of use the tool may break due to fatigue. If the tool breaks, there may be sudden or strong movements. Such sudden or strong movements may cause serious injury.

- *Make sure that you always keep a stable position with your feet as far apart as the width of your shoulders, and keeping your body weight balanced.*
- *Keep your hands and feet away from the working tool.*
- *Do not 'ride' on the machine with one leg over the handle, since you could be seriously injured if the tool were to break suddenly.*
- *Check regularly for wear to the working tool, and check whether there are any signs of damage or visible cracks.*

An incorrect dimension of the working tool's shank can result in the working tool being lost or slipping out during operation. A working tool that is lost or slips out can cause personal injury.

- *Before inserting the work tool, make sure that the shank's dimensions are correct for use in the machine.*
- *Working tools without a collar may not be used.*

If the tool retainer on the machine is not in a locked position, the tool can be ejected with force, which can cause personal injury.

- *Once the working tool has been mounted and locked, the locking function must be checked by pulling the working tool outwards forcefully.*
- *Make sure that the tool is fully inserted and the tool retainer is in the locked position before the machine is started.*
- *Never point the working tool at yourself or anyone else.*

Starting the machine while changing the working tool may cause personal injury.

- *Before changing the tool, stop the machine, switch off the hydraulic oil supply and bleed the machine by activating the start and stop device.*

A hydraulic hose that comes loose can lash around and cause personal injury or death. To reduce risks:

- *Check that the hydraulic hose and the connections are not damaged.*
- *Check that all hydraulic connections are properly attached.*
- *Never attempt to disconnect a hydraulic hose that is pressurized. First switch off the hydraulic oil flow by the power pack and then bleed the machine by activating the start and stop device.*

Accumulator Hazard

The machine has a pressure accumulator. The pressure accumulator may only be charged with nitrogen gas (N₂).

- *Only authorized personnel are qualified to work with the accumulator.*
- *Do not perform any work on the machine, the connections or any hoses, when the hydraulic system is pressurized.*

NOTE!:- If the maximum working pressure for the machine is exceeded, the accumulator can be overcharged, which can result in material damage.

- Always run the machine with the correct working pressure. See "Technical Data" section.

Hydraulic Oil and Lubrication Hazards

Thin jets of hydraulic oil under high pressure can penetrate the skin and cause permanent damage.

- *Never use your hands when searching for oil leaks.*
- *Keep your face away from any possible leaks.*
- *Immediately seek medical attention if hydraulic oil has penetrated the skin.*

Spilled hydraulic oil can cause accidents by causing slippery conditions and will also harm the environment.

- *Handle the hydraulic oil with care.*
- *Take care of all spilled oil and handle it according to your local safety and environmental regulations.*

Hot hydraulic oil can cause burns.

- *Never dismount the machine when the hydraulic oil is hot.*

Hydraulic oil can cause eczema when it comes in contact with the skin.

- *Avoid getting hydraulic oil on your hands.*
- *Always use protective gloves when working with hydraulic oil.*

Grease can cause eczema when it comes in contact with the skin.

- *Avoid getting grease on your hands.*

Explosion and Fire Hazard

Breaking, drilling and working with certain materials can cause sparks, which may ignite explosive gases and cause explosions. Explosions may cause serious injury or death. To reduce such risk of explosion:

- *Never operate the machine in any explosive environment.*
- *Do not use the machine near flammable materials, fumes or dust.*
- *Make sure that there are no undetected sources of gas.*

Electrical/Concealed Object Hazards

The machine is not electrically insulated. If the machine comes into contact with electricity, serious injuries or death may result.

- *To reduce the risk of such injury or death, never operate the machine near any electric wire or other source of electricity.*
- *Make sure that there are no concealed wires or other sources of electricity.*

During breaking, concealed wires and pipes constitute a danger that can result in serious injury.

- *Before you start breaking, check the composition of the material you are to work on.*
- *Watch out for concealed cables and pipes e.g. electricity, telephone, water, gas and sewage lines etc.*
- *If the tool seems to have hit a concealed object, switch off the machine immediately.*
- *Make sure that there is no danger before continuing.*

Projectile Hazard

During breaking, drilling or hammering, splinters or other particles from the worked material may become projectiles and cause personal injury by striking the operator or other persons.

- *Use approved personal protective equipment, including impact resistant safety glasses with side protection, to reduce the risk of being injured by a projectile.*

Noise Hazard

High sound levels may cause permanent hearing loss.

- *Use hearing protection in accordance with occupational health and safety regulations.*



Safety Instructions

Silica/Dust Hazard

Exposure to crystalline silica (sometimes called 'silica dust') as a result of breaking, drilling, hammering, or other activities involving rock, concrete, asphalt or other materials may cause silicosis (a serious lung disease), silicosis-related illnesses, cancer, or death. Silica is a major component of rock, sand and mineral ores. To reduce silica exposure:

- *Use proper engineering controls to reduce the amount of silica in the air and the build-up of dust on equipment and surfaces. Examples of such controls include: Exhaust ventilation and dust collection systems, water sprays, and wet drilling. Make sure that controls are properly installed and maintained.*
- *Wear, maintain, and correctly use approved particulate respirators when engineering controls alone are not adequate to reduce exposure below permissible levels.*
- *Participate in air monitoring, medical exams, and training programs offered by your employer and when required by law.*
- *Wear washable or disposable protective clothes at the worksite; shower and change into clean clothes before leaving the worksite to reduce exposure of silica to yourself, other persons, cars, homes, and other areas.*
- *Do not eat, drink, or use tobacco products in areas where there is dust containing crystalline silica.*
- *Wash your hands and face before eating, drinking, or using tobacco products outside of the exposure area.*
- *Work with your employer to reduce silica exposure at your worksite.*

Some dust, fumes or other airborne material created during use of the machine may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of such chemicals are:

- *Crystalline silica and cement and other masonry products.*
- *Arsenic and chromium from chemically-treated rubber.*
- *Lead from lead based paints.*

To reduce your exposure to these chemicals, work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

Machine Modification Hazard

Any machine modification not approved by Altrad Belle may result in serious injuries to yourself or others.

- *The machine must not be modified without Altrad Belles permission.*
- *Use only original parts and accessories approved by Altrad Belle.*

Vibration Hazard

Normal and proper use of the machine exposes the operator to vibration. Regular and frequent exposure to vibration may cause, contribute to, or aggravate injury or disorders to the operator's fingers, hands, wrists, arms, shoulders and/or other body parts, including debilitating and/or permanent injuries or disorders that may develop gradually over periods of weeks, months, or years. Such injury or disorder may include damage to the blood circulatory system, damage to the nervous system, damage to joints, and possibly damage to other body structures.

If numbness, tingling, pain, clumsiness, weakened grip, whitening of the skin, or other symptoms occur at any time, when operating the machine or when not operating the machine, do not resume operating the machine and seek medical attention. Continued use of the machine after the occurrence of any such symptom may increase the risk of symptoms becoming more severe and/or permanent.

The following may help to reduce exposure to vibration for the operator:

- *Let the tool do the job. Use a minimum hand grip consistent with proper control and safe operation.*
- *When the impact mechanism is activated, the only body contact with the machine you should have is your hands on the handles. Avoid any other contact, e.g. supporting any part of the body against the machine or leaning onto the machine trying to increase the feed force. It is also important not to keep the trigger engaged while extracting the tool from the broken work surface.*
- *Make sure that the inserted tool is wellmaintained (including sharpness, if a cutting tool), not worn out, and of the proper size. Working tools that are not well-maintained, or that are worn out, or that are not of the proper size result in longer time to complete a task (and a longer period of exposure to vibration) and may result in or contribute to higher levels of vibration exposure.*
- *Immediately stop working if the machine suddenly starts to vibrate strongly. Before resuming the work, find and remove the cause of the increased vibrations.*
- *Comply with the recommended hydraulic pressure when operating the machine. Either higher or lower hydraulic pressure has the potential of resulting in higher levels of vibration.*
- *Do not grab, hold or touch the inserted tool when using the machine.*
- *Participate in health surveillance or monitoring, medical exams, and training programs offered by your employer and when required by law.*

NOTE!:- See the Noise and Vibration Levels for the machine, which can be found in the Technical Data section

General Safety



- *Machines and accessories must only be used for their intended purpose.*
- *Only qualified and trained persons may operate or maintain the machine.*
- *Learn how the machine is switched off in the event of an emergency.*
- *Release the start and stop device immediately in all cases of power supply interruption.*
- *Always inspect the equipment prior to use. Do not use the equipment if you suspect that it is damaged.*
- *Always use your common sense and good judgment.*
- *Pay attention and look at what you are doing.*
- *Do not use the machine when you are tired or under the influence of drugs, alcohol or anything else that may affect your vision, reactions or judgment.*
- *Participate in safety and training courses.*
- *Never strike or abuse any equipment.*
- *Keep the machine and tools in a safe place, out of the reach of children and locked up.*
- *Make sure that all the attached and related equipment is properly maintained.*
- *Decals bearing important information regarding personal safety and care of the machine are supplied with every machine.*
- *Make sure that the decals are always legible.*
- *New decals can be ordered from the Spare Parts list.*
- *Make sure that no unauthorized personnel trespass into the working zone.*
- *Keep the workplace clean and free from foreign objects.*
- *Never point a hydraulic hose at yourself or anyone else.*

PPE (Personal Protective Equipment)

Always use approved protective equipment. Operators and all other persons in the working area must wear protective equipment, including at a minimum:

- *Protective helmet.*
- *Safety Goggles,*
- *Gloves,*
- *Ear Defenders,*
- *Dust Mask*
- *Steel Toe capped footwear.*

Wear clothing suitable for the work you are doing. Tie back long hair and remove any jewellery which may catch in the equipment's moving parts.

Recommended Hydraulic Oil



In order to protect the environment, Altrad Belle recommends the use of biologically degradable hydraulic oil.

- *Viscosity (preferred) 20-40 cSt.*
- *Viscosity (permitted) 15-100 cSt.*
- *Viscosity index Min. 100.*

Standard mineral or synthetic oil can be used. When the breaker is used continuously, the oil temperature will stabilise at a level which is called the working temperature. This will, depending on the type of work and the cooling capacity of the hydraulic system, be between 20-40°C (68-104°F) above the ambient temperature.

At working temperature, the oil viscosity must lie within the preferred limits. The viscosity index indicates the connection between viscosity and temperature. This is the reason why a high viscosity is preferred, because then the oil can be used within a wider temperature range. The breaker shall not be used, if oil viscosity fails to remain within the permitted area, or if the working temperature of the oil does not fall between -20°C (-4°F) and 70°C (158°F).

Storage



- Disconnect the breaker's hoses from the power source. See "Start and Stop Procedure" section
- Make sure that the breaker is properly cleaned before storage.
- In case of long-term storage, the striking piston must be protected against corrosion. This is done by pressing it (through the chisel bushing) to its upper position by means of a tool placed up-side-down. As the quick-release couplings are blocked when disassembled, the striking piston must be pressed upwards with the hoses mounted but the power pack unactivated.
- Always store the machine in a dry place.



Environment



A used machine must be treated and disposed of in such a way that the greatest possible portion of the material can be recycled and any negative influence on the environment is kept as low as possible.

NOTE:-

Before a used machine is scrapped, it must be emptied and cleaned from all hydraulic oil. Remaining hydraulic oil must be deposited.



Pre-Start Checks

Pre-Start Checks

The following checks should be made each time you start to use the breaker. All these checks concern the serviceability of the breaker. Some concern your safety:

- *Clean all Decals. Replace any that are missing or cannot be read. These can be ordered from the Spare Parts list.*
- *Inspect the hoses generally for signs of damage.*
- *Inspect the working tool for wear and damage.*
- *Do not use an excessively worn or damaged tool.*
- *Connect the tool.*
- *Ensure that the hydraulic couplings are clean and fully serviceable.*
- *Do not invert the breaker without first isolating it from the power source. The working tool might be fired out while connecting it, if the breaker is connected to the power source.*
- *Ensure that any power source you plan to use is compatible with the breaker model used (see the "Technical data" section). Altrad Belle recommends using an LFD oil flow divider, if the flow from the power source can exceed the maximum allowed oil flow.*



Start and Stop Procedure

Starting

- 1) Check that the 'Steel' is in good condition and pressed fully home in the nose of the breaker.
- 2) Check that the latch is locked, so that the 'Steel' does not fall out.
- 3) Remove the protective caps from the quick-release couplings.
- 4) Clean the quick-release couplings if needed and connect the tail-hoses to the extension hoses of the power unit.
- 5) Place the breaker at a right angle on the material to be broken and activate the trigger lever.

Stopping

- 1) Release the trigger. Press the breaker against the surface, until the breaker has stopped completely.
- 2) Stop the power source.
- 3) Disconnect the hoses and fit the protective caps to the quick-release couplings.

To reduce the risk of serious injury or death to yourself or others, before operating the machine, read the Safety instructions section found on the previous pages of this booklet.

Design and Function

The Altrad Belle BHB Range of handheld Hydraulic Breakers are sturdy and reliable breakers designed for working together with Altrad Belle Hydraulic Power Packs.

The handheld Breakers are available in many different sizes with varying impact energies and commonly used tool sizes. The handheld Breakers are designed for various jobs from light brickwork and asphalt jobs to heavy duty jobs in reinforced concrete.

All Altrad Belle BHB Range handheld breakers are delivered with ½" tail-hoses with ½" Flat-Face quick-release couplings for easy connection to the Altrad Belle Hydraulic Power Packs.

Choosing the correct hydraulic breaker for a task

It is important to choose the correct size of hydraulic breaker for the work to be performed.

A hydraulic breaker that is too small means that the work will take longer.

A breaker that is too big means that there must be frequent repositioning, which is unnecessarily tiring for the operator.

A simple rule for choosing the correct size of hydraulic breaker is that a normal sized piece of broken material should be removed from the workpiece within 10–20 seconds of operation.

- If it takes less than 10 seconds a smaller hydraulic breaker should be selected.
- If it takes more than 20 seconds a larger hydraulic breaker should be selected.

Installation

Hoses

For connection of the breaker, the hydraulic hose must be approved for a working pressure of at least 200 bar (2900 psi) and have a ½" inner diameter. To resist exterior wear and tear, we recommend using a 2-layer hydraulic hose. The breaker connection marked P (pump) is oil inlet, and the connection marked T (tank) is oil outlet.

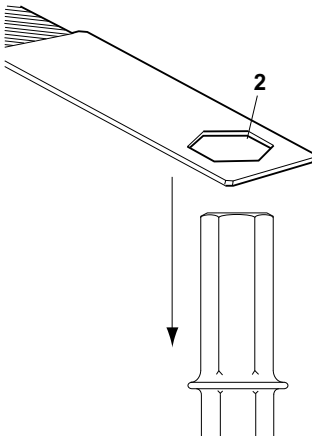
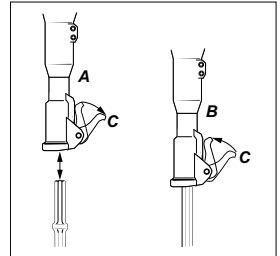
Quick-release couplings

The original Altrad Belle hydraulic hoses are fitted with Flat-Face quick-release couplings that are strong and easy to clean. The quick-release couplings are fitted so that the male connection supplies oil and the female connection receives oil.

Fitting and Removing the Breaker 'Steel'

Whenever fitting/removing the 'Steel', the following instructions must be observed:

- 1) To prevent an accidental start, switch off the oil supply. Bleed the machine by pressing the start/stop device. Disconnect the machine from the power source.
- 2) Remove the 'Steel' by swinging the latch (C) fully down (Image A).
- 3) Fit a 'Steel' by ensuring that the latch (C) is fully down. Then insert the 'Steel' in the breaker as shown and swing the latch (C) fully up (Image B).



Checking for wear

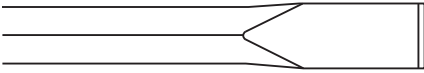
Using a working tool with a worn out shank leads to increased machine vibrations. To avoid increased vibrations, check the shank for wear before the working tool is fitted in the machine.

Use the checking gauge that corresponds to the working tool's shank dimension. If the gauge's hole (2) can be pushed down on the working tool's shank, this means that the shank is worn out and the working tool should be replaced.

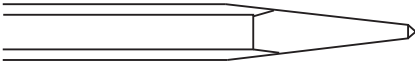
* **Note:-** The Checking Gauge is not supplied with the machine.

Choosing working tool

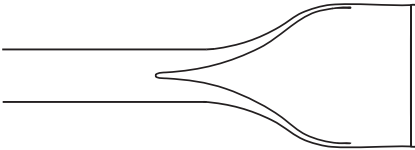
A correct working tool is a prerequisite for good operation. To avoid unnecessary machine damage, it is important to choose working tools of a high quality.



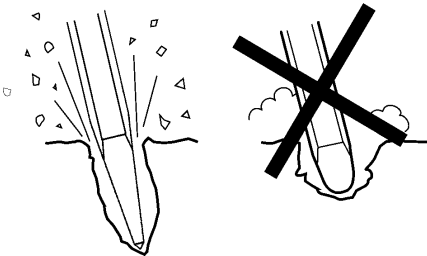
The narrow chisel should be used for demolition and cutting work in concrete and other types of hard material.



The moil point should only be used for creating holes in concrete and other types of hard material.



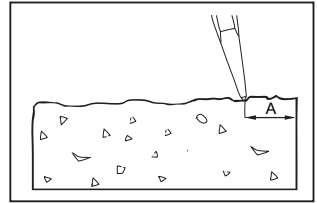
The wide chisel should be used in soft materials e.g. asphalt and frozen ground.



Always use a sharp tool to be able to work effectively. A worn out tool causes increased vibrations and the operation will take longer.

STARTING A CUT

- 1) Stand steady and make sure that your feet and hands are at a safe distance from the working Breaker.
- 2) Press the machine against the surface of the workpiece before starting.
- 3) Adjust the breaking distance (A) so that the working Breaker does not get stuck.
- 4) Do not try to cut too big a bite.
- 5) Trying to loosen a working Breaker that is stuck will expose the operator to unnecessary vibrations.



OPERATION

- 1) Let the machine do the work; do not press too hard. The vibration-absorbing handle must absolutely not be pressed all the way down to the base.
- 2) Hydraulic breakers with vibration-absorbing handles: The feed force should be adapted so that the handles are pressed down "half way". The best vibration damping and breaking effect is achieved at this position.
- 3) Avoid working in extremely hard materials e.g. granite and reinforcing iron (reinforcement bar), which would cause substantial vibrations.
- 4) Any form of idling, operating without working tool or operating without adapted feed force must be avoided.
- 5) When no feed force is applied, the start and stop device must not be activated.
- 6) Check regularly that the machine is well lubricated.

WHEN TAKING A BREAK

- 1) During all breaks you must put the machine away so that there is no risk that it will be unintentionally started.
- 2) In the event of a longer break or when leaving the workplace: Switch off the hydraulic oil supply and then bleed the machine by activating the start and stop device.

EHTMA - Code of Practice

EUROPEAN HYDRAULIC TOOL MANUFACTURERS ASSOCIATION CODE OF PRACTICE – HYDRAULIC BREAKERS

Before Starting. Refer to manufacturer's operating instructions.

Compatibility. Hydraulic Breakers are designed to operate at a specific Flow and Pressure. Equipment produced by EHTMA members carries a triangular colour coded range identification label. Check that both the Tool and Power Unit have the same identification label before operation. It is imperative that Power Units and Tools having different colour codings are not interconnected as this practice is both inefficient and dangerous.

For reference the EHTMA colour code is as follows:-

Classification	Colour Code.	Flow l/min	Max pressure Bar.
A	Yellow	5.5 – 6.5	180
B	Blue	13.5 – 16.5	172
C	Green	18.0 – 22.0	138
D	Brown	27.0 – 33.0	138
E	Red	36.0 – 44.0	138
F	Black	45.0 – 55.0	138
G	Orange	54.0 – 66.0	138
Z	Grey	9.0 – 11.0	180

If in doubt consult the equipment manufacturer.

Characteristics. Operators not familiar with the use of hydraulic tools should note the following points:-

- 1) Hydraulic breakers are usually more powerful than the equivalent weight pneumatic tools.
- 2) The body of the hydraulic breaker and the supply hoses will become quite warm during normal operation.
- 3) As the breaker has no exhaust it is generally much quieter in operation. This should not be taken as a lack of power.

Steel Selection It is essential that the correct type and size of steel is chosen if optimum performance is to be achieved, with particular reference being made to the shank length and across flat dimensions.

Recommendations as follows:-

Material.	Recommended Steel
Concrete.	Pointed or narrow bladed chisels.
Tarmac.	Sharp edged wide bladed tools with straight cutting edges.
Asphalt.	Sharp edged tools with thin section and curved cutting edges.
General Trenchwork.	Spades and Digger steels.

ALWAYS USE SHARP STEELS - Blunt steels increase vibration and reduce efficiency.

Regular maintenance is a prerequisite for keeping the machine safe and effective. Carefully follow the operating instructions. Before undertaking any maintenance or changing the working tool on hydraulic machines, always switch off the oil supply and bleed the machine by depressing the start and stop device. Then disconnect the hydraulic hose from the machine.

- Use only authorized parts. Any damage or malfunction caused by unauthorized parts will not be covered by Warranty or Product Liability.
- Change damaged parts immediately.
- Replace worn components in good time.
- Always clean the hose couplings before mounting or dismantling.
- Always plug hoses and nipples with clean and tight plugs when dismantling.
- When cleaning mechanical parts with solvent, make sure to comply with occupational health and safety regulations, and make sure that there is satisfactory ventilation.
- Inspection and service on the accumulator must only be done by a certified person.
- For major service to the machine, contact the Altrad Belle or your nearest authorised dealer.

NOTE!:- Maintenance must only be done by suitably qualified and competent persons. Before doing any maintenance, make sure that the machine is safe and correctly sited on the ground.

Routine Maintenance	Every Week	Every 3 Months	Every 600 Hrs / Yearly
Clean and inspect the machine.	✓		
Grease the Handle Guides with Silicone (E-Type Handles only)	✓		
Check Hoses and Fittings for cracks or leaks. Replace if necessary.	✓		
Inspect the 'Steel' for wear and damage. Do not use an worn or damaged 'Steel'.	✓		
Check for general damage to the machine.	✓		
If the machine is equipped with Vibration-Absorbing handles, their function should be checked.	✓		
Check that the handles are moving freely (up - down) and do not jam.	✓		
Check that the springs are not damaged.	✓		
Check tightness of nuts, bolts, screws and hose fittings.		✓	
Check the Chisel bushing in the nose for wear and damage.		✓	
Check moving parts, seals and bolts for wear and cracks. Replace if necessary.			✓
Check the function of the machine.			✓

For the machine to maintain the specified vibration values, this should always be checked:

Too big a clearance between the working tool's shank and the chisel bushing will generate increased vibrations. To avoid exposure to excessive vibrations, check the chisel bushing for wear every day. Use the gauge that corresponds to the working tool's shank dimension. If the gauge's part (A) can be pushed fully into the chisel bushing (B), the bushing is worn out and must be replaced! See also "Checking for wear" section for checking the working tool's shank.



Troubleshooting Guide



Problem	Cause	Remedy
Breaker does not work. Pressure is not built up when trigger is activated.	No or incorrect flow/pressure.	Check flow/pressure by means of test equipment.
	P and T hoses interchanged.	Check connection. Standard connection has oil flowing from male quick-release coupling (i.e. the tail-hose of the breaker P connection is fitted with female coupling).
	Insufficient activation of trigger valve.	Adjust trigger lever (if adjustable) or replace defective parts.
Breaker does not work. Pressure is built up when trigger is activated	Seals defect in spool channel of valve housing.	Dismount, check and replace seals.
	Back pressure too high.	Make direct tank connection. Max. back pressure 10-15 bar (150-200 psi) measured at breaker.
	Quick-release coupling in return line defective.	Locate and replace defective coupling.
	Striking piston sticks, possibly due to thickening of cylinder.	Push the breaker hard against the Breaker 'Steel'. Chamfer/polish the edge slightly at the cylinder dashpot (where the cylinder bore changes size). Check oil viscosity. Thin oil increases the risk of thickening.
	Spool / reversing spool or auxiliary spool sticking easily.	Dismount and check that all parts move. Polish slightly if necessary.
Breaker runs weakly or irregularly	Seals defective.	Dismount, check and replace.
	Insufficient flow.	Check flow/pressure.
	Seals defective.	Replace seals.
	Wear, internal leakage.	Dismantle, check and replace defective or worn parts. Check impurity of oil and oil viscosity at working temperature. Thin oil = increased internal leakage.
	Insufficient accumulator charge.	Recharge accumulator.
	Diaphragm defective.	Replace diaphragm.
Hoses pulsate	Accumulator defective.	Replace accumulator diaphragm and charge with nitrogen.
Oil leaking from breaker.	Seals defective.	Replace seals.
'Steel' falls out.	Worn latch.	Replace latch and roll pins.
	Worn chisel bushing or 'Steel'.	Replace bushing or 'Steel'.

Warranty



Your new Altrad Belle BHB Hydraulic Breaker is warranted to the original purchaser for a period of one-year (12 months) from the original date of purchase. The Altrad Belle warranty is against defects in design, materials and workmanship.

The following are not covered under the Altrad Belle warranty:

1. Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
2. Alterations, additions or repairs carried out by persons other than Altrad Belle or their recognised agents.
3. Transportation or shipment costs to and from Altrad Belle or their recognised agents, for repair or assessment against a warranty claim, on any machine.
4. Materials and/or labour costs to renew, repair or replace components due to fair wear and tear.

Altrad Belle and/or their recognised agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

Warranty Claims

All warranty claims should firstly be directed to Altrad Belle, either by telephone, by Fax, by Email, or in writing.

For warranty claims:

Altrad Belle Warranty Department,
Sheen, Nr. Buxton
Derbyshire
SK17 0EU
England.

Tel : +44 (0)1298 84606,

Fax : +44 (0)1298 84722

Email : warranty@belle-group.co.uk