

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM464801

SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		Intellectual Property Security Agreement	
CONVEYING PARTY DATA			
Name	Formerly	Execution Date	Entity Type
DYNAENERGETICS US, INC.		03/08/2018	Corporation:
RECEIVING PARTY DATA			
Name:	KEYBANK NATIONAL ASSOCIATION		
Street Address:	127 Public Square		
Internal Address:	Attn: Commercial Banking		
City:	Cleveland		
State/Country:	OHIO		
Postal Code:	44114		
Entity Type:	a national banking association: UNITED STATES		
PROPERTY NUMBERS Total: 10			
Property Type	Number	Word Mark	
Serial Number:	86371109	DPEX	
Serial Number:	86650729	DYNABLADE	
Serial Number:	86003348	DYNAENERGETICS	
Serial Number:	86258202	DYNAENERGETICS	
Serial Number:	86258167	DYNASELECT	
Serial Number:	86258183	DYNASLOT	
Serial Number:	86258145	DYNASTAGE	
Serial Number:	87102050	FRACTUNE	
Serial Number:	86839577	HALOFRAC	
Serial Number:	87363080	PYXTREME	
CORRESPONDENCE DATA			
Fax Number:	2165665800		
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>			
Phone:	2165665791		
Email:	jennifer.hardy@thompsonhine.com		
Correspondent Name:	David D. Thomas, Esq.		
Address Line 1:	3900 Key Center		
Address Line 2:	127 Public Square		

OP \$265.00 86371109

TRADEMARK

Address Line 4:	Cleveland, OHIO 44114
NAME OF SUBMITTER:	David D. Thomas
SIGNATURE:	/s/ David D. Thomas
DATE SIGNED:	03/08/2018
Total Attachments: 14 source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page1.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page2.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page3.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page4.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page5.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page6.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page7.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page8.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page9.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page10.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page11.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page12.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page13.tif source=Dynaenergetics US, Inc. - Intellectual Property Security Agreement#page14.tif	

INTELLECTUAL PROPERTY SECURITY AGREEMENT
(Borrower)

This INTELLECTUAL PROPERTY SECURITY AGREEMENT (as the same may from time to time be amended, restated or otherwise modified, this “Agreement”) is made effective as of the 8th day of March, 2018 by DYNAENERGETICS US, INC., a Colorado corporation (the “Pledgor”), in favor of KEYBANK NATIONAL ASSOCIATION, a national banking association, as the administrative agent under the Credit Agreement, as hereinafter defined (the “Administrative Agent”), for the benefit of the Administrative Agent and the Lenders, as hereinafter defined.

1. Recitals.

DMC Global Inc., a Delaware corporation, each Domestic Subsidiary Borrower, as defined in the Credit Agreement, and each Foreign Borrower, as defined in the Credit Agreement (together with their respective successors and assigns, collectively, the “Borrowers” and, individually, each a “Borrower”), are entering into that certain Credit and Security Agreement, dated as of March 8, 2018, with the lenders from time to time party thereto (together with their respective successors and assigns and any other additional lenders that become party to the Credit Agreement, collectively, the “Lenders” and, individually, each a “Lender”), and the Administrative Agent (as the same may from time to time be amended, restated or otherwise modified, the “Credit Agreement”).

The Pledgor deems it to be in the direct pecuniary and business interests of the Pledgor that the Borrowers obtain from the Lenders the Commitment, as defined in the Credit Agreement, and the Loans and Letters of Credit provided for in the Credit Agreement.

The Pledgor understands that the Lenders are willing to enter into the Credit Agreement and grant the financial accommodations provided for in the Credit Agreement only upon certain terms and conditions, one of which is that the Pledgor grant to the Administrative Agent, for the benefit of the Lenders, a security interest in the Collateral, as hereinafter defined, and this Agreement is being executed and delivered in consideration of the Lenders entering into the Credit Agreement and each financial accommodation granted to the Borrowers by the Lenders, and for other valuable consideration, the receipt and sufficiency of which is hereby acknowledged.

2. Definitions. Except as specifically defined herein, (a) capitalized terms used herein that are defined in the Credit Agreement shall have their respective meanings ascribed to them in the Credit Agreement, and (b) unless otherwise defined in the Credit Agreement, terms that are defined in the U.C.C. are used herein as so defined. As used in this Agreement, the following terms shall have the following meanings:

“Assignment” means an Assignment in the form of Exhibit A attached hereto.

“Collateral” means, collectively, all of the Pledgor’s existing and future right, title and interest in, to and under (a) industrial designs, patents, patent registrations, patent applications, trademarks, trademark registrations, trademark applications, service marks, trade names, and copyright registrations and other intellectual property or registrations, whether federal, state or foreign; (b) common law trademark rights, copyrights, rights in trade dress, publicity, works of authorship and other unregistered copyrightable material, improvements, and proprietary and confidential information, including, without limitation, personal, financial, and other sensitive data, plans, know-how, processes, formulae, algorithms and inventions; (c) renewals, continuations, extensions, reissues and divisions of any of the foregoing; (d) rights to sue for past, present and future infringements or any other commercial tort claims relating to any of the foregoing; (e) licenses and all income, revenue and royalties with respect to any licenses, whether registered or unregistered and all other payments earned under contract rights relating to any of the foregoing; (f) general intangibles and all intangible intellectual or similar property of the Pledgor connected with and symbolized by any of the foregoing; (g) goodwill associated with any of the foregoing; (h) all payments under insurance, including the returned premium upon any cancellation of insurance (whether or not the Administrative Agent or any Lender is the loss payee thereof) or any indemnity, warranty or guaranty payable by reason of loss or damage to or otherwise with respect to any of the foregoing; and (i) Proceeds of any of the foregoing.

“Event of Default” means an event or condition that constitutes an Event of Default, as defined in Section 8.1 hereof.

“Intercompany Trademark Agreement” means the Trademark Agreement dated as of October 4, 2016, between DynaEnergetics GmbH & Co. KG and DynaEnergetics US, Inc., as amended or otherwise modified from time to time, and the transactions contemplated thereby.

“Obligations” means, collectively, (a) all Indebtedness and other obligations now owing or hereafter incurred by one or more Borrowers to the Administrative Agent, the Foreign Funding Agent, any Swing Line Lender, any Issuing Lender, or any Lender pursuant to the Credit Agreement and the other Loan Documents, and includes the principal of and interest on all Loans, and all obligations of the Borrowers or any other Credit Party pursuant to Letters of Credit; (b) each extension, renewal, consolidation or refinancing of any of the foregoing, in whole or in part; (c) the commitment and other fees, and any prepayment fees, payable pursuant to the Credit Agreement or any other Loan Document; (d) all fees and charges owing by any Company in connection with Letters of Credit; (e) every other liability, now or hereafter owing to the Administrative Agent or any Lender by any Company or the Pledgor pursuant to the Credit Agreement or any other Loan Document; and (f) all Related Expenses.

“Secured Obligations” means, collectively, (a) the Obligations, (b) all obligations and liabilities of the Companies owing to a Lender (or an entity that is an Affiliate of a then existing Lender) under Hedge Agreements, and (c) the Bank Product Obligations owing to a Lender (or an entity that is an Affiliate of a then existing Lender) under Bank Product Agreements; provided that Secured Obligations of a Credit Party shall not include Excluded Swap Obligations owing from such Credit Party.

“USCO” means the United States Copyright Office in Washington, D.C.

“USPTO” means the United States Patent and Trademark Office in Alexandria, Virginia.

3. Grant of Security Interest. In consideration of and as security for the full and complete payment of all of the Secured Obligations, the Pledgor hereby agrees that the Administrative Agent shall at all times have, and hereby grants to the Administrative Agent, for the benefit of the Lenders, a security interest in all of the Collateral, including (without limitation) all of the Pledgor’s future Collateral, irrespective of any lack of knowledge by the Administrative Agent or the Lenders of the creation or acquisition thereof.

4. Representations and Warranties. The Pledgor hereby represents and warrants to the Administrative Agent and each Lender as follows:

4.1. The Pledgor owns or has the right to use all of the Collateral and, whether the same are registered or unregistered, no material portion of such Collateral has been adjudged invalid or unenforceable. As of the Closing Date, Schedule 1 sets forth all of the patents, trademarks, copyrights, service marks and license agreements federally registered in the United States and owned by Pledgor.

4.2. The Collateral is valid and enforceable in all material respects, except as enforceability thereof may be limited by bankruptcy, insolvency, moratorium and similar laws.

4.3. Other than as disclosed on Schedule 2 to hereto, the Pledgor has no knowledge of any material claim that the use of any of the Collateral does or may violate the rights of any Person.

4.4. Except for (a) liens expressly permitted pursuant to Section 5.9 of the Credit Agreement, (b) inbound and outbound licenses in the ordinary course of business and (c) the Intercompany Trademark Agreement, the Pledgor is the sole and exclusive owner of the entire and unencumbered right, title and interest in and to the Collateral, free and clear of any liens, charges and encumbrances, including, without limitation, pledges, assignments, licenses, registered user agreements and covenants by Pledgor not to sue third Persons.

4.5. The Pledgor has full power, authority and legal right to pledge the Collateral and enter into this Agreement and perform its terms.

4.6. The Pledgor has used, and shall continue to use, for the duration of this Agreement, proper statutory notice in connection with its use of the Collateral, except where the failure to do so will not have a material adverse effect on the Pledgor.

5. Further Assignment Prohibited. The Pledgor shall not enter into any agreement in violation of Pledgor’s obligations under this Agreement and shall not otherwise sell or assign its interest in, or grant any license or sublicense with respect to, any of the Collateral, without the Administrative Agent’s prior written consent, except for (a) transactions constituting liens expressly permitted pursuant to Section 5.9 of the Credit Agreement, (b) inbound and outbound

licenses in the ordinary course of business and (c) the Intercompany Trademark Agreement. Absent such prior written consent, any attempted sale or license is null and void.

6. Right to Inspect. The Pledgor hereby grants to the Administrative Agent, for the benefit of the Lenders, and its employees and agents the right, during regular business hours and upon reasonable notice to the Pledgor, to visit any location as to which Pledgor has the legal right to grant such access, of the Pledgor or, if applicable, any other location as to which Pledgor has the legal right to grant such access, and to inspect the products and quality control records relating thereto at the Pledgor's expense; provided that so long as no Event of Default is continuing, the Pledgor shall only be required to reimburse the Administrative Agent for the cost of one such inspection in any fiscal year.

7. Standard Patent and Trademark Use. The Pledgor shall not use the Collateral in any manner that impairs the validity or legal status thereof. The Pledgor shall comply with all patent marking requirements as specified in 35 U.S.C. §287. The Pledgor shall use commercially reasonable efforts to conform its usage of any trademarks to standard trademark usage, including, but not limited to, using the trademark symbols ®, ™, and SM where appropriate.

8. Events of Default and Remedies.

8.1. The occurrence of an Event of Default, as defined in the Credit Agreement, shall constitute an Event of Default.

8.2. The Administrative Agent, for the benefit of the Lenders, shall at all times have the rights and remedies of a secured party under the U.C.C. as in effect from time to time, in addition to the rights and remedies of a secured party provided elsewhere within this Agreement, any Note or any other Loan Document, or otherwise provided in law or equity.

8.3. The Pledgor expressly acknowledges that the Administrative Agent, on behalf of the Lenders, shall record this Agreement with the USCO and the USPTO, as appropriate. Contemporaneously herewith, the Pledgor shall execute and deliver to the Administrative Agent the Assignment, which Assignment shall have no force and effect and shall be held by the Administrative Agent in escrow until the occurrence and during the continuance of an Event of Default; provided, that, anything herein to the contrary notwithstanding, the security interest and collateral assignment granted herein shall be effective as of the date of this Agreement. After the occurrence and during the continuance of an Event of Default, the Assignment shall immediately take effect upon certification of such fact by an authorized officer of the Administrative Agent in the form reflected on the face of the Assignment and the Administrative Agent may, in its sole discretion, record the Assignment with the USCO and the USPTO, as appropriate.

8.4. If an Event of Default shall occur and be continuing, the Pledgor irrevocably authorizes and empowers the Administrative Agent, on behalf of the Lenders, to terminate the Pledgor's use of the Collateral and to exercise such rights and remedies as allowed by law. Without limiting the generality of the foregoing, after any delivery or taking of possession of the Collateral, or any thereof, pursuant to this Agreement, then, with or without resort to the Pledgor

or any other Person or property, all of which the Pledgor hereby waives, and upon such terms and in such manner as the Administrative Agent may deem advisable, the Administrative Agent, on behalf of the Lenders, in its sole discretion, may sell, assign, transfer and deliver any of the Collateral, together with the associated goodwill, or any interest that the Pledgor may have therein, at any time, or from time to time. If an Event of Default has occurred and is continuing, no prior notice need be given to the Pledgor or to any other Person in the case of any sale of Collateral that the Administrative Agent determines to be declining speedily in value or that is customarily sold in any recognized market, but in any other case the Administrative Agent shall give the Pledgor no fewer than ten days prior notice of either the time and place of any public sale of the Collateral or of the time after which any private sale or other intended disposition thereof is to be made. The Pledgor waives advertisement of any such sale and (except to the extent specifically required by the preceding sentence) waives notice of any kind in respect of any such sale. At any such public sale, the Administrative Agent or any Lender may purchase the Collateral, or any part thereof, free from any right of redemption, all of which rights the Pledgor hereby waives and releases. After deducting all Related Expenses, and after paying all claims, if any, secured by liens having precedence over this Agreement, the Administrative Agent may apply the net proceeds of each such sale to or toward the payment of the Secured Obligations, whether or not then due, in such order and by such division as the Administrative Agent, in its sole discretion, may deem advisable. Any excess, to the extent permitted by law, shall be paid to the Pledgor, and the obligors on the Secured Obligations shall remain liable for any deficiency. In addition, the Administrative Agent shall at all times during the continuance of an Event of Default have the right to obtain new appraisals of the Pledgor or the Collateral, the cost of which shall be paid by the Pledgor.

9. Maintaining Collateral; Attorneys' Fees, Costs and Expenses. The Pledgor shall have the obligation and duty to perform all acts reasonably requested by the Administrative Agent to maintain or preserve the Collateral, provided that the Pledgor shall not be obligated to maintain any Collateral in the event the Pledgor determines, in the reasonable business judgment of the Pledgor, that the maintenance of such Collateral is no longer necessary in the Pledgor's business. Any and all fees, costs and expenses, of whatever kind or nature, including, without limitation, the attorneys' fees and legal expenses incurred by the Administrative Agent and the Lenders in connection with the amendment and enforcement of this Agreement, all renewals, required affidavits and all other documents relating hereto and the consummation of this transaction, the filing or recording of any documents (including all taxes in connection therewith) in public offices, the payment or discharge of any taxes, counsel fees, maintenance fees, encumbrances or otherwise protecting, maintaining or preserving the Collateral, or in defending or prosecuting any actions or proceedings arising out of or related to the Collateral, shall be borne and paid by the Pledgor, upon demand by the Administrative Agent and, until so paid, shall be added to the principal amount of the Secured Obligations.

10. The Pledgor's Obligation to Prosecute. Except (a) as otherwise agreed to by the Administrative Agent in writing or (b) if in the Pledgor's reasonable judgment such prosecution will be unsuccessful or is otherwise unwarranted or such Collateral is no longer desirable in the Pledgor's business, the Pledgor shall have the duty to prosecute diligently any patent, trademark, service mark or copyright application pending as of the date of this Agreement or thereafter until the Secured Obligations shall have been paid in full (other than contingent indemnification

obligations as to which no claim has been asserted), to file and prosecute opposition and cancellation proceedings and to do any and all commercially reasonable acts that are necessary or desirable to preserve and maintain all rights in the Collateral, including, but not limited to, payment of any maintenance fees. Any expenses incurred in connection with the Collateral shall be borne by the Pledgor. The Pledgor shall not abandon any Collateral without the prior written consent of the Administrative Agent, unless such abandonment will not have a material adverse effect on the Pledgor or such abandonment is in connection with the abandonment of a product or product line.

11. Administrative Agent's Right to Enforce. The Pledgor shall have the right to bring any opposition proceeding, cancellation proceeding or lawsuit in its own name to enforce or protect the Collateral. If an Event of Default is continuing, the Administrative Agent, on behalf of the Lenders, shall have the right, but shall have no obligation, to join in any such action. The Pledgor shall promptly, upon demand, reimburse and indemnify the Administrative Agent and the Lenders for all damages, reasonable costs and expenses, including attorneys' fees, incurred by the Administrative Agent and the Lenders in connection with the provisions of this Section 11, in the event the Administrative Agent, on behalf of the Lenders, elects to join in any such action commenced by the Pledgor.

12. Power of Attorney. The Pledgor hereby authorizes and empowers the Administrative Agent, on behalf of the Lenders, to make, constitute and appoint any officer or agent of the Administrative Agent as the Administrative Agent may select, in its exclusive discretion, as the Pledgor's true and lawful attorney-in-fact, with the power to endorse, after the occurrence and during the continuance of an Event of Default, the Pledgor's name on all applications, documents, papers and instruments necessary for the Administrative Agent, on behalf of the Lenders, to use the Collateral, or to grant or issue any exclusive or nonexclusive license under the Collateral to any third party, or necessary for the Administrative Agent, on behalf of the Lenders, to assign, pledge, convey or otherwise transfer title in or dispose of the Collateral, together with associated goodwill, to any Person or Persons. The Pledgor hereby ratifies all that such attorney shall lawfully do or cause to be done by virtue hereof. This power of attorney shall be irrevocable for the life of this Agreement.

13. Administrative Agent's Right to Perform Obligations. If the Pledgor fails to comply with any of its obligations under this Agreement, the Administrative Agent, on behalf of the Lenders, may, but is not obligated to, do so in the Pledgor's name or in the name of the Administrative Agent, on behalf of the Lenders, but at the Pledgor's expense, and the Pledgor hereby agrees to reimburse the Administrative Agent, upon request, in full for all expenses, including reasonable attorneys' fees, incurred by the Administrative Agent and the Lenders in protecting, defending and maintaining the Collateral.

14. Additional Documents. The Pledgor shall, upon written request of the Administrative Agent, enter into such additional documents or instruments as may be required by the Administrative Agent in order to effectuate, evidence or perfect the interest of the Administrative Agent and the Lenders in the Collateral, as evidenced by this Agreement.

15. New Collateral. If, before the Secured Obligations shall have been irrevocably paid in full (other than contingent indemnification obligations as to which no claim has been asserted) and the Commitment terminated, the Pledgor shall obtain rights to any new Collateral, the provisions of this Agreement hereby shall automatically apply thereto. If and to the extent that such new Collateral constitutes patents, trademarks, copyrights, service marks and/or license agreements federally registered in the United States and owned by the Pledgor, then the provisions of this Agreement shall automatically apply thereto as if the same were identified on Schedule 1 as of the date such new Collateral was obtained, and the Pledgor shall give the Administrative Agent prompt written notice thereof.

16. Modifications for New Collateral. The Pledgor hereby authorizes the Administrative Agent to modify this Agreement by amending Schedule 1 hereto to include any future Collateral constituting patents, trademarks, copyrights, service marks and/or license agreements federally registered in the United States and owned by the Pledgor as contemplated by Sections 1 and 15 hereof and, at the Administrative Agent's request, the Pledgor shall execute any documents or instruments required by the Administrative Agent in order to modify this Agreement as provided by this Section 16, provided that any such modification to Schedule 1 shall be effective without the signature of the Pledgor.

17. Notice. All notices, requests, demands and other communications provided for hereunder shall be in writing and, if to the Pledgor, mailed or delivered to it, addressed to it at the address specified on the signature page of this Agreement, if to the Administrative Agent or any Lender, mailed or delivered to it, addressed to the address of the Administrative Agent or such Lender specified on the signature pages of the Credit Agreement or, as to each party, at such other address as shall be designated by such party in a written notice to each of the other parties. All notices, statements, requests, demands and other communications provided for hereunder shall be deemed to be given or made when delivered (if received during normal business hours on a Business Day, such Business Day, otherwise the following Business Day) or two Business Days after being deposited in the mails with postage prepaid by registered or certified mail, addressed as aforesaid, or sent by facsimile or electronic communication, in each case of facsimile or electronic communication with telephonic confirmation of receipt. All notices pursuant to any of the provisions hereof shall not be effective until received.

18. No Waiver or Course of Dealing. No course of dealing between the Pledgor and the Administrative Agent or any Lender, nor any failure to exercise, nor any delay in exercising, on the part of the Administrative Agent or any such Lender, any right, power or privilege hereunder or under any of the Loan Documents shall operate as a waiver thereof; nor shall any single or partial exercise of any right, power or privilege hereunder or thereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

19. Remedies Cumulative. Each right, power or privilege specified or referred to in this Agreement is in addition to any other rights, powers and privileges that the Administrative Agent or the Lenders may have or acquire by operation of law, by other contract or otherwise. Each right, power or privilege may be exercised by the Administrative Agent and the Lenders either independently or concurrently with other rights, powers and privileges and as often and in such order as the Administrative Agent and the Lenders may deem expedient. All of the rights

and remedies of the Administrative Agent and the Lenders with respect to the Collateral, whether established hereby or by the Loan Documents, or by any other agreements or by law shall be cumulative and may be executed singularly or concurrently.

20. Severability. The provisions of this Agreement are severable, and, if any clause or provision shall be held invalid and unenforceable in whole or in part in any jurisdiction, then such invalidity or unenforceability shall affect only such clause or provision, or part thereof, in such jurisdiction, and shall not in any manner affect such clause or provision in any other jurisdiction, or any other clause or provision of this Agreement in any jurisdiction.

21. Modifications. This Agreement may be amended or modified only by a writing signed by the Pledgor and the Administrative Agent. No waiver or consent granted by the Administrative Agent and the Lenders in respect of this Agreement shall be binding upon the Administrative Agent and the Lenders unless specifically granted in writing, which writing shall be strictly construed.

22. Assignment and Successors. This Agreement shall not be assigned by the Pledgor without the prior written consent of the Administrative Agent. This Agreement shall be binding upon the Pledgor and the successors and permitted assigns of the Pledgor, and shall inure to the benefit of and be enforceable and exercisable by the Administrative Agent on behalf of and for the benefit of the Administrative Agent and the Lenders and their respective successors and assigns. Any attempted assignment or transfer without the prior written consent of the Administrative Agent shall be null and void.

23. Entire Agreement. This Agreement integrates all of the terms and conditions with respect to the Collateral and supersedes all oral representations and negotiations and prior writings, if any, with respect to the subject matter hereof.

24. Headings; Execution. The headings and subheadings used herein are for convenience of reference only and shall be ignored in interpreting the provisions of this Agreement. This Agreement may be executed by facsimile or other electronic signature, which, when so executed and delivered, shall be deemed to be an original.

25. Governing Law; Submission to Jurisdiction. The provisions of this Agreement and the respective rights and duties of the Pledgor, the Administrative Agent and the Lenders hereunder shall be governed by and construed in accordance with New York law. The Pledgor hereby irrevocably submits to the non-exclusive jurisdiction of any New York state or federal court sitting in New York County, New York, over any action or proceeding arising out of or relating to this Agreement, any Loan Document or any Related Writing, and the Pledgor hereby irrevocably agrees that all claims in respect of such action or proceeding may be heard and determined in such New York state or federal court. The Pledgor hereby irrevocably waives, to the fullest extent permitted by law, any objection it may now or hereafter have to the laying of venue in any such action or proceeding in any such court as well as any right it may now or hereafter have to remove such action or proceeding, once commenced, to another court on the grounds of FORUM NON CONVENIENS or otherwise. The Pledgor agrees that a final, nonappealable judgment in any such action or proceeding in any state or federal court in the

State of New York shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

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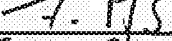
4830-5372-1950.4

JURY TRIAL WAIVER. THE PLEDGOR, TO THE EXTENT PERMITTED BY LAW, HEREBY WAIVES ANY RIGHT TO HAVE A JURY PARTICIPATE IN RESOLVING ANY DISPUTE, WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, AMONG THE BORROWERS, THE PLEDGOR, THE ADMINISTRATIVE AGENT AND THE LENDERS, OR ANY THEREOF, ARISING OUT OF, IN CONNECTION WITH, RELATED TO, OR INCIDENTAL TO THE RELATIONSHIP ESTABLISHED AMONG THEM IN CONNECTION WITH THIS AGREEMENT OR ANY NOTE OR OTHER INSTRUMENT, DOCUMENT OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH OR THE TRANSACTIONS RELATED THERETO.

IN WITNESS WHEREOF, the undersigned has executed and delivered this Intellectual Property Security Agreement as of the date first set forth above.

Address: c/o DMC Global Inc.
5405 Spine Road
Boulder, Colorado 80301
Attention: Chief Financial Officer

DYNAENERGETICS US, INC.

By: 
Name: Frank Preiss
Title: VP & GM Americas

Signature Page to
Intellectual Property Security Agreement

TRADEMARK
REEL: 006286 FRAME: 0792

SCHEDULE 1

Trademarks/Tradenames:

Trademarks/Tradenames	Jurisdiction	Application No.	Application Filing Date	Registration No.	Registration Date
DPEX	United States	86371109	19-Aug-2014	4886613	12-Jan-2016
DYNABLADE	United States	86650729	3-Jun-2015	5156815	7-Mar-2017
DYNAENERGETICS (7 & 13)	United States	86003348	5-Jul-2013	4487994	25-Feb-2014
DYNAENERGETICS (9)	United States	86258202	21-Apr-2014	4682931	3-Feb-2015
DYNASELECT	United States	86258167	21-Apr-2014	4832803	13-Oct-2015
DYNASLOT	United States	86258183	21-Apr-2014	4983795	21-Jun-2016
DYNASTAGE	United States	86258145	21-Apr-2014	4823088	28-Sep-2015
FRAC'TUNE	United States	87102050	13-Jul-2016	5188450	18-Apr-2017
HALOFRAC	United States	86839577	4-Dec-15	5143043	
PYXTREME	United States	87363080	8-Mar-2017		

Patents:

Patent Title	Owners	Jurisdiction	Application No.	Application Filing Date	Patent No.	Issue Date
DEVICE AND METHOD FOR POSITIONING A DETONATOR WITHIN A PERFORATING GUN ASSEMBLY	DynaEnergetics GmbH & Co. KG and DynaEnergetics US, Inc.	United States	15/117,228	8 Aug 2016		

Copyrights:

None.

SCHEDULE 2

GEODynamics, Inc. vs. DynaEnergetics US, Inc. (United States District Court for the Eastern District of Texas (“District Court”)), filed July 1, 2016 by GEODynamics alleging infringement of US Patent No. 8,544,563 (the “563 patent”). Trial has been stayed pending resolution of the IPR on the 563 patent discussed below.

Inter Parties Review (IPR) (U.S. Patent Trial and Appeal Board (“PTAB”)), filed on September 20, 2016 by DynaEnergetics requesting invalidation of the 563 patent. On March 1, 2018, the PTAB issued an opinion in favor of DynaEnergetics, which decision is subject to appeal.

GEODynamics, Inc. vs. DynaEnergetics US, Inc. (District Court), filed on April 28, 2017 by GEODynamics alleging infringement of U.S. Patent No. 8,220,394 (the “394 patent”).

IPR (PTAB), filed on August 28, 2017 by DynaEnergetics requesting invalidation of the 394 patent. PTAB's decision on whether to institute the IPR is expected in mid-March 2018.

EXHIBIT A
FORM OF ASSIGNMENT

THIS DOCUMENT SHALL BE HELD BY THE ADMINISTRATIVE AGENT, FOR THE BENEFIT OF THE LENDERS, IN ESCROW PURSUANT TO AND IN ACCORDANCE WITH THE PROVISIONS OF THE INTELLECTUAL PROPERTY SECURITY AGREEMENT (THE "AGREEMENT"), DATED AS OF MARCH 8, 2018, EXECUTED BY DYNAENERGETICS US, INC., A COLORADO CORPORATION (THE "PLEDGOR"), IN FAVOR OF KEYBANK NATIONAL ASSOCIATION, AS THE ADMINISTRATIVE AGENT FOR THE LENDERS, AS DEFINED IN THE AGREEMENT (TOGETHER WITH ITS SUCCESSORS AND ASSIGNS, THE "ADMINISTRATIVE AGENT"). BY SIGNING IN THE SPACE PROVIDED BELOW, THE UNDERSIGNED OFFICER OF THE ADMINISTRATIVE AGENT CERTIFIES THAT AN EVENT OF DEFAULT, AS DEFINED IN THE AGREEMENT, HAS OCCURRED AND IS CONTINUING AND THAT THE ADMINISTRATIVE AGENT HAS ELECTED TO TAKE POSSESSION OF THE COLLATERAL, AS DEFINED BELOW, AND TO RECORD THIS DOCUMENT WITH THE UNITED STATES PATENT AND TRADEMARK OFFICE OR THE UNITED STATES COPYRIGHT OFFICE, AS APPLICABLE. UPON RECORDING OF THIS DOCUMENT WITH THE UNITED STATES PATENT AND TRADEMARK OFFICE OR THE UNITED STATES COPYRIGHT OFFICE, AS APPLICABLE, THIS LEGEND SHALL CEASE TO HAVE ANY FORCE OR EFFECT.

KEYBANK NATIONAL ASSOCIATION
as the Administrative Agent

By: _____
Name: _____
Title: _____

ASSIGNMENT

WHEREAS, DYNAenergetics US, Inc., a Colorado (the "Pledgor"), is the owner of the Collateral, as hereinafter defined;

WHEREAS, the Pledgor has executed an Intellectual Property Security Agreement, dated as of March 8, 2018 (as the same may from time to time be amended, restated or otherwise modified, the "Agreement"), in favor of KeyBank National Association, as the Administrative Agent for the Lenders, as defined in the Agreement (together with its successors and assigns, the "Administrative Agent"), pursuant to which the Pledgor has granted to the Administrative Agent, for the benefit of the Lenders, a security interest in the Collateral as security for the Secured Obligations, as defined in the Agreement;

WHEREAS, the Agreement provides that the security interest in the Collateral is effective as of the date of the Agreement; and

WHEREAS, the Agreement provides that this Assignment shall become effective upon the occurrence and during the continuance of an Event of Default, as defined in the Agreement, and the Administrative Agent's election to take actual title to the Collateral;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and intending to be legally bound hereby, the Pledgor, its successors and assigns, subject to the limitations stated in the paragraph immediately following, does hereby transfer, assign and set over unto the Administrative Agent, for the benefit of the Lenders, and their respective successors, transferees and assigns, all of the Pledgor's existing and future right, title and interest in, to and under (a) patents, patent registrations, patent applications, trademarks, trademark registrations, trademark applications, service marks, trade names, and copyright registrations, whether federal, state or foreign; (b) common law trademark rights, copyrights, improvements and inventions; (c) renewals, continuations, extensions, reissues and divisions of any of the foregoing; (d) rights to sue for past, present and future infringements or any other commercial tort claims relating to any of the foregoing; (e) all licenses and all income, revenue and royalties with respect to any licenses, whether registered or unregistered, and all other payments earned under contract rights, relating to any of the foregoing; (f) all general intangibles and all intangible intellectual or similar property of the Pledgor connected with and symbolized by any of the foregoing; (g) goodwill associated with any of the foregoing; (h) all payments under insurance, including the returned premium upon any cancellation of insurance, (whether or not the Administrative Agent or any Lender is the loss payee thereof) or any indemnity, warranty or guaranty payable by reason of loss or damage to or otherwise with respect to any of the foregoing; and (i) Proceeds of any of the foregoing (collectively, the "Collateral"), including, but not limited to, the Collateral listed on Schedule 1 hereto that is (i) registered in the United States Copyright Office in Washington, D.C., or (ii) registered in the United States Patent and Trademark Office in Alexandria, Virginia or that is the subject of pending applications in the United States Patent and Trademark Office.

This Assignment shall be effective only upon certification of an authorized officer of the Administrative Agent, as provided above, that (a) an Event of Default, as defined in the Agreement, has occurred and is continuing, and (b) the Administrative Agent, on behalf of the Lenders, has elected to take actual title to the Collateral.

IN WITNESS WHEREOF, the undersigned has caused this Assignment to be executed by its duly authorized officer on March 8, 2018.

DYNAENERGETICS US, INC.

By: _____
Name: _____
Title: _____